

Volusia County, Florida Disaster Debris Management Plan

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ABBREVIATIONS

44 CFR	Title 44 of the Code of Federal Regulations
CE	Construction and Engineering Division
County	Volusia County
County Manager	County Manager's Office
C&D	Construction and Demolition
EM	Emergency Management Division
DES	Department of Environmental Services
DDIR	Detailed Damaged Inspection Reports
DSG	Disaster Specific Guidance
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
ER	Emergency Relief Program
FCO	Federal Coordinating Officer
FDEM	Florida Division of Emergency Management
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FEMA 325	Debris Management Guide – FEMA Publication 325
FFWCC	Florida Fish and Wildlife Conservation Commission
FHWA	Federal Highway Administration
GIS	Geographic Information Systems
GPS	Global Positioning System
Handbook	FEMA Applicant Handbook
HHA	Hold Harmless Agreements
HHW	Household Hazardous Waste
HOA	Homeowner's Associations
MOU	Memorandum of Understanding
NOAA	National Oceanic and Atmospheric Agency
NRCS	Natural Resources Conservation Service
OSHA	Occupational Safety and Health Administration
PA	Public Assistance
PAO	Public Assistance Officer

DEFINITIONS

PIO	Public Information Officer
Plan	Disaster Debris Management Plan
PO	Purchase Orders
PSA	Public Service Announcements
Purchasing	Purchasing and Contracts Division
PW	Project Worksheets
RCRA	Resource Conservation and Recovery Act
RFB	Request for Bids
RFP	Request for Proposals
ROE	Right-of-Entry
ROW	Right-of-Way
State	State of Florida
SW	Solid Waste Division
SWMCO	Solid Waste Management Compliance Officer
TDSRS	Temporary Debris Storage and Reduction Sites
USACE	United States Army Corps of Engineers
VC	Volusia County
VCPW	Volusia County Public Works
WRU	Water Resources and Utilities Division

DEFINITIONS

Applicant – State agency, local government or eligible private nonprofit organization that intends on applying for Federal Emergency Management Agency (FEMA) Public Assistance (PA) grants.

Code of Federal Regulations – Title 44 – Emergency Management and Assistance – The Code of Federal Regulations – Title 44 Emergency Management and Assistance (44 CFR) provide procedural requirements for the PA Program operations. 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

Construction and Demolition Debris – FEMA 325 defines construction and demolition (C&D) debris 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, plastic pipe, concrete, fully cured asphalt, heating, ventilation and air conditioning systems and their components, light fixtures, small consumer appliances, equipment, furnishings and fixtures. Current eligibility criteria include:

- Debris must be located within a designated disaster area and be removed from an eligible applicant’s improved property or right-of-way;
- Debris removal must be the legal responsibility of the applicant; and
- Debris must be a result of the major disaster event.

Debris Removal Contractor – The debris removal contractor is contracted by Volusia County to remove and dispose of debris that is a result of a severe debris-generating event.

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

FEMA Publication 322 – Public Assistance Guide – Provides a general overview of the FEMA PA Program protocol 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 any special considerations that 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 who are considering applying for reimbursement following a disaster through the PA Program. 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 and identifies information that is critical to ensure reimbursement.

FEMA Publication 325 – Debris Management Guide – This publication is specifically dedicated to the rules, regulations and policies associated with the debris clean-up process. Familiarity with this publication and any revisions, can aid a local government to limit the amount of non-reimbursable expenses. The Debris Management Guide provides the framework for the debris removal process authorized by the Stafford Act including:

- The elimination of immediate threats to lives, public health and safety;
- Elimination of immediate threats of significant damage to improved public or private property; or
- Ensuring the economic recovery of the affected community to the benefit of the community-at-large.

Hanger – A hanger is a hazardous limb that poses significant threat to the public. The current eligibility requirements for leaning trees according to FEMA 325 are:

- The limb must be greater than two inches in diameter;
- The limb is still hanging in a tree and threatening a public-use area; and
- The limb is located on improved public property.

Hazardous Stump – A stump is defined as hazardous and eligible for reimbursement if all of the following criteria are met:

- The stump has 50 percent or more of the root-ball exposed;
- The stump is greater than 24 inches in diameter when measured 24 inches from the ground;
- The stump is located on a public right-of-way; and
- The stump poses an immediate threat to public health and safety.

Household Hazardous Waste – The Resource Conservation and Recovery Act defines hazardous wastes as materials that are ignitable, reactive, toxic or corrosive. Examples of household hazardous waste (HHW) include items such as paints, cleaners, pesticides, etc. Due to the nature of hazardous waste certified technicians must be used to handle, capture, recycle, reuse and dispose of hazardous waste. The eligibility criteria for HHW are as follows:

- HHW must be located within a designated disaster area and be removed from an eligible applicant's improved property or right-of-way;
- HHW removal must be the legal responsibility of the applicant; and
- HHW must be a result of the major disaster event.

Leaner – A tree is considered hazardous and defined as a “leaner” when the tree's present state is caused by a disaster, the tree poses a significant threat to the public and

the tree is six inches in diameter or greater and measured two feet from the ground. The current eligibility requirements for leaning trees according to FEMA 325 are:

- The tree has more than 50 percent of the crown damaged or destroyed (requires written documentation from an arborist);
- The tree has a split trunk or broken branches that expose the heartwood;
- The tree has fallen or been uprooted within a public use area; or
- The tree is leaning at an angle greater than 30 degrees.

Monitoring Firm – The monitoring firm is an organization under contract with Volusia County to monitor debris removal operations. The monitoring firm ensures the debris removal contractor is working within the scope-of-work contracted by the County and documents debris removal operations.

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

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

Vegetative Debris – As outlined in FEMA 325, vegetative debris consists of whole trees, tree stumps, tree branches, tree trunks and other leafy material. Vegetative debris will largely consist of mounds of tree limbs and branches piled along the public right-of-way by residents and volunteers. Current eligibility criteria include:

- Debris must be located within a designated disaster area and be removed from an eligible applicant's improved property or right-of-way;
- Debris removal must be the legal responsibility of the applicant; and
- Debris must be a result of the major disaster event.

White Goods – As outlined in FEMA 325, 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. White goods can contain ozone-depleting refrigerants, mercury or compressor oils that the federal Clean Air Act prohibits from being released into the atmosphere. The Clean Air Act specifies that only certified technicians can extract refrigerants from white goods before they can be recycled. The eligibility criteria for white goods are as follows:

- White goods must be located within a designated disaster area and be removed from an eligible applicant's improved property or right-of-way;
- White goods removal must be the legal responsibility of the applicant; and

- White goods must be a result of the major disaster event.

Section 1 INTRODUCTION

Background

Volusia County, Florida (County) encompasses 1,207 square miles, with 16 incorporated municipalities. As a coastal community, the County is especially susceptible to tropical systems from the Atlantic and even the Gulf of Mexico. On August 13, 2004 Hurricane Charley made landfall in Punta Gorda, Florida and continued to travel northeast across the state, heavily impacting the County. Hurricane Charley, and later Hurricanes Frances and Jeanne, served as a reminder of how vulnerable the County is to tropical systems.

Other debris-generating events such as tornadoes also affect the County. On the morning of February 2, 2007, the County was awoken by early morning tornadoes, subsequently referred to as the “Groundhog Day Tornadoes.” Thousands of houses were damaged, significant debris was generated and lives were lost. During the recovery efforts following the Groundhog Day Tornadoes, over 116,377 cubic yard of vegetative debris and over 20,355 cubic yard of construction and demolition debris were collected. The 2004 hurricane season and the “Groundhog Day Tornadoes” of 2007 generated debris in the County, demonstrating the need for a working plan to quickly and effectively respond to future debris-generating events.

Purposes of the Plan

Volusia County Public Works Department (VCPW) is the primary agency responsible for the recovery and restoration of public infrastructure for the unincorporated areas of Volusia County following a disaster. The purpose of this Disaster Debris Management Plan (Plan) is to:

- Provide organizational structure and guidance, and outline the key areas of responsibility;
- Standardize procedures for the clearance, removal and disposal of debris caused by a 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 designed to mitigate the threat to the health, safety and welfare of County residents;
- Coordinate partnering relationships through communications and pre-planning with local, state and federal agencies involved with debris management responsibilities;

- Implement and coordinate private sector debris removal and disposal contracts to maximize cleanup efficiencies;
- Identify important rules, regulations and guidelines enacted by Federal Emergency Management Agency (FEMA) and other agencies governing the disaster debris removal process; and
- Identify key steps (in the form of checklists and an operational plan) that the County will need to take prior to a threat of disaster and during a disaster debris management effort.

General Approach and Assumptions

This Plan provides a coordinated response blueprint for the County, the County's monitoring firm and the County's debris removal contractor. To assist the County in expeditiously recovering from a debris-generating event, the approach of this Plan will be to outline pre-event preparations during times of normalcy, operations immediately prior to a known disaster threat, operations following the disaster event and demobilization and close-out following completion of debris removal efforts.

With regards to debris removal efforts, this Plan assumes the following:

- The County's greatest threat of a debris-generating event is in the form of a severe weather system, such as a hurricane;
- The response and recovery outlined in this Plan is designed for a Category 3 or greater system as described on the Saffir-Simpson Scale;
- This Plan is also applicable to smaller debris-generating events such as a Category 1 or 2 system or tornado;
- In the event of a debris-generating event, the County will activate one or more of its pre-positioned debris removal contractors;
- In the event of a debris-generating event, the County will activate its pre-positioned monitoring firm;
- If warranted, the County through the state will request federal assistance from FEMA; and
- The County will be operating under the current Public Assistance (PA) guidelines for reimbursement as described in the Stafford Act. Changes to the PA Program or published program-specific guidance's may result in a revision to the debris management plan or its implementation.

Authority

Volusia Code Chapter 46 Article V provides authority for the County Manager to declare a state of emergency.

Chapter 46 EMERGENCY SERVICES

ARTICLE V. EMERGENCY MANAGEMENT SERVICES GROUP

Sec. 46-141. Title established.

In order to provide effective and orderly governmental control and coordination of emergency operations in times of emergencies or disasters, there is established, pursuant to F.S. § 252.38, an emergency management agency known as the "Volusia County Emergency Management Services Group." This agency shall be the coordinating agency for all activity in connection with emergency operations and shall be the instrument through which the county manager shall exercise his authority under the laws of the state in times of emergencies.

(Ord. No. 96-1, § I, 3-14-96)

Sec. 46-142. Director's office established.

There is further established the office of the emergency management services director. The director, who will supervise the day-to-day operations of the emergency management services group, shall be appointed by the county manager to serve at his pleasure and subject to his direction and control. The director shall be directly responsible for the organization, administration, and operation of the emergency management services group. He shall coordinate emergency management activities, services, and programs within the county and shall serve as a liaison to the state division of emergency management of the department of community affairs, or the successor to that division, and to other local emergency management agencies and organizations.

(Ord. No. 96-1, § II, 3-14-96)

Sec. 46-143. Quorum; power and authority.

If a quorum of the county council is unable to meet for such purpose, the chairman of the council shall have the power and authority to request state assistance or invoke emergency-related mutual aid assistance by declaring a state of local emergency in the event of an emergency affecting the county. By law the duration of such state of local emergency is limited to seven days; however, it may be extended, as necessary, in seven-day increments. In the event that the chairman is unavailable during an emergency situation, then the vice-chairman of the county council shall assume the authority and responsibilities of the chairman. In the event that both the chairman and vice-chairman are unavailable during such an emergency situation, then any available member of the county council, beginning with the county council member who has served for the longest continual period, shall assume said authority and responsibilities. Precedence shall be given between council members with equal terms of service to that councilmember whose surname begins with the earlier letter in the alphabet. In the event that all of the county council members are unavailable during such an emergency situation, then the authority and responsibilities of the chairman shall be exercised and discharged by the county manager or, in his absence, the chief operating officer. The individual occupying the position of interim chairman shall exercise the powers and discharge the duties of the position until such time as a preceding named official becomes available to exercise the powers and discharge the duties of interim chairman.

(Ord. No. 96-1, § III, 3-14-96)

Sec. 46-146. Same--Power and authority.

In a declared state of local emergency, the emergency management services director, subject to the immediate direction and control of the county manager, shall have the power and authority to:

- (1) Expend appropriated funds; make contracts; obtain and distribute equipment, materials, and supplies for emergency management purposes; provide for the health and safety of persons and property, including emergency assistance to the victims of any emergency; and direct and coordinate the development of emergency management plans and programs in accordance with the policies and plans set by the federal and state emergency management agencies.*
- (2) Appoint, employ, remove, or provide, with or without compensation, coordinators, rescue teams, fire and police personnel, and other emergency management workers.*
- (3) Establish, as necessary, a primary and one or more secondary emergency operating centers to provide continuity of government and direction and control of emergency operations.*
- (4) Assign and make available for duty the offices and agencies of the county, including the employees, property, or equipment thereof relating to firefighting, engineering, rescue, health, medical and related services, police, transportation, construction, and similar items or services for emergency operations purposes, as the primary emergency management forces of the county for employment within or without the county.*

(Ord. No. 96-1, § VI, 3-14-96)

Sec. 46-147. Same--Authority to waive procedures and formalities.

Upon declaration of a state of local emergency, the emergency management services director, subject to the immediate direction and control of the county manager, has the power and authority to waive the procedures and formalities otherwise required of the county by law pertaining to:

- (1) Performance of public work and taking whatever prudent action is necessary to ensure the health, safety, and welfare of the community.*
- (2) Entering into contracts.*
- (3) Incurring obligations.*
- (4) Employment of permanent and temporary workers.*
- (5) Utilization of volunteer workers.*
- (6) Rental of equipment.*
- (7) Acquisition and distribution, with or without compensation, of supplies, materials, and facilities.*
- (8) Appropriation and expenditure of public funds. (Ord. No. 96-1, § VII, 3-14-96)*

Section 2

ROLES AND RESPONSIBILITIES

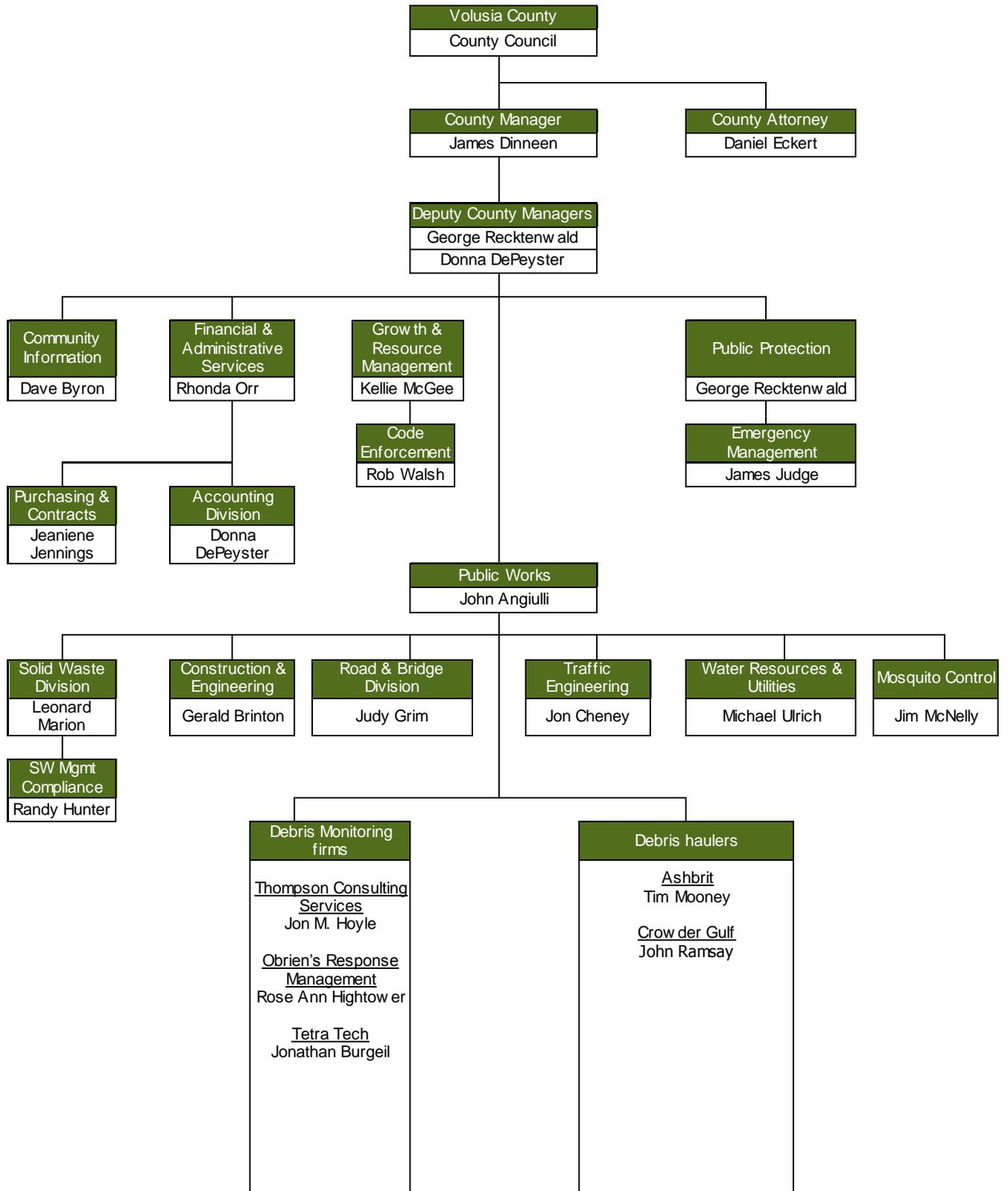
Lead Agencies

VCPW is the primary agency responsible for debris removal, disposal and the restoration of the public infrastructure for the unincorporated areas of Volusia County following a disaster. VCPW's Road and Bridge Division (R&B) is responsible for emergency debris clearance of essential transportation routes and other critical public facilities based on pre-established list of priorities and recommendations from the Volusia County Emergency Operations Center (EOC). The VCPW Director is responsible for the implementation of debris removal, disposal and monitoring actions. The VCPW's Solid Waste (SW) Division is also responsible for coordinating the temporary storage, permanent storage and final disposal of all disaster-related debris and managing any debris recycling, white goods and household hazardous waste disposal actions on SW permitted sites.

The organization structure for debris management is described in Figure 2-1. Each agency's role in managing the debris cleanup process has been summarized below.

ROLES AND RESPONSIBILITIES

Figure 2-1 Organizational Chart



County Manager

The County Manager's office (County Manager) will provide a degree of oversight for the debris removal activities. Through the Community Information Officer, the County Manager will provide information to the public regarding the progress of the disaster recovery efforts.

Emergency Management Division

The Emergency Management Division (EM) regulates all emergency management preparedness, response and recovery activities. The EM will be responsible for opening and coordinating the EOC, and leading any emergency response activities.

Public Works Department

VCPW is a lead agency for the debris removal process. The primary point of contact is the Department Director, however, the Department Director may consider appointing one or more individuals to coordinate the debris removal operations. VCPW's responsibilities are to administer and manage the debris removal, reduction and disposal activities. These responsibilities include but are not limited to:

- Coordinating with designated County departments prior to and after the event;
- Acting as the County representative in debris related discussions and meetings with municipal jurisdictions and other entities;
- Communicating with various state and federal agencies (i.e., FEMA, FHWA, and FDOT);
- Scheduling all training activities and meetings regarding the debris management;
- Activating and overseeing all private contractors including hauling and monitoring firms through the duration of the debris removal and disposal process;
- Coordinating with FEMA regarding Project Worksheet (PW) development;
- Coordinating with the County's monitoring firm with regards to contractor invoice reconciliation; and
- Providing County management, elected officials, and the public with information regarding the progress of the debris removal effort.

Road and Bridge Division

R&B is responsible for the initial emergency road clearing (cut and push) activities during the first 70 hours following a hurricane. R&B will stage equipment in strategic locations throughout the County to allow for the cut and push crews to begin work immediately after the disaster. Primary transportation arteries leading to hospitals, shelters and designated emergency facilities will be identified and cleared as soon as possible. R&B is also responsible for managing the debris removal and the disposal process by coordinating meetings as needed with in-house forces, private debris

contractors including hauling and monitoring firms through the duration of the debris removal and disposal process.

Solid Waste Division

SW is responsible for debris disposal activities. SW is a supporting agency responsible for coordinating the temporary storage, permanent storage, and final disposal of all disaster-related debris. SW is also responsible for managing any debris recycling, white goods and household hazardous waste disposal actions. SW Management Compliance Officer (SWMCO) is responsible for the investigation of illegal dumping of storm related debris. The ineligible debris piles are tagged, the individuals responsible for the illegal dumping are notified of the violation and the piles monitored for resolution or further enforcement action. The SWMCO also assists in the determination of debris on private property that is a public nuisance and/or presents public health and safety issue.

Construction Engineering Division

The Construction Engineering Division (CE) will be involved in the initial damage assessment and debris estimation immediately following the hurricane. The damage assessment and debris estimates will be used to determine the financial impact and scope of the disaster. The data collected can be used to develop preliminary FEMA PWs and the Federal Highway Administration (FHWA) Detailed Damaged Inspection Reports (DDIR). CE will also be responsible for beach ramp and bridge damage assessment and repair activities.

Water Resources and Utilities Division and Mosquito Control Division

The Water Resources and Utilities Division (WRU) and the Mosquito Control Division (MC) are supporting agencies. These divisions will coordinate with R&B to assist in the debris removal from canal, ditches, retention pond and applicable waterways.

Interdepartmental Coordination

VCPW will coordinate with various County departments who will assist in the cleanup effort. The primary roles and responsibilities for each department have been summarized below. Each department or division will be responsible for appointing a primary point of contact to interface with the VCPW debris manager.

County Attorney

The role of the County Attorney is to ensure the legality of all debris removal activities. The County Attorney reviews all contracts, Right-of-Entry/Hold

Harmless/Subrogation of Insurance, and any contracts for the use of private land for temporary debris locations.

The County Attorney is also involved in any updates to County condemnation or nuisance ordinances that may be used in the Right-of-Entry process to clear debris from private property.

Purchasing and Contracts Division

The primary responsibility of the Purchasing and Contracts Division (Purchasing) is to work with VCPW during the debris removal contractor and debris monitoring request for proposal (RFP) process. Their expertise is necessary to ensure that the RFP abides by all local and state requirements. Purchasing is responsible for the development of all forms and standard contractual language, the advertisement and notification to prospective contractors, pre-bid meetings, and contract negotiations. VCPWs will coordinate with Purchasing to issue purchasing orders (PO) to pre-positioned contracts for debris removal and monitoring activities.

On February 13 2015, Volusia County Purchasing and Contracts Division issued **RFP # 15-P-54DJ – Request for Proposal for Disaster Management Services**, and **EXHIBIT A- DISASTER DEBRIS MANAGEMENT AND SUPPORT SERVICES**, copies of which are included separately with this document. Through this competitive procurement process, the following firms were selected to provide contracted full-scope Debris Management Services to Volusia County in the event of a debris-causing event:

Tetra Tech

Witt O’Briens

Thompson Consulting Services

Community Information Division

The Community Information Division will be responsible for coordinating all press releases to the public regarding the debris removal process. The focus of the press releases will be to provide the public with information on:

- Debris eligibility criteria;
- Public rights-of-way;
- Debris removal process and timeframes;
- Debris separation and stacking requirements;
- White goods and household hazardous waste;
- Debris removal deadlines;
- Debris disposal sites; and
- Debris hotline number.

Accounting Division

The Accounting Division (Accounting) is responsible for processing all debris removal and debris monitoring contractor invoices for payment. The County's debris monitoring contractor will review, validate and resolve debris removal invoice discrepancies prior to submittal of a recommendation to pay to VCPWs. VCPW's will process debris removal and debris monitoring invoices to Accounting, who will ensure that the County's contractors are paid in a timely fashion. Accounting may also employ consultant services to assist in debris related invoice reconciliation and project worksheet development.

Code Enforcement Activity

The Code Enforcement Activity works in conjunction with SWMCO to identify private property debris that is causing a public nuisance and/or creating a public health and safety concern. Code Enforcement will work closely with the Community Information Department to inform the citizens of the issues and potential consequences.

ROLES AND RESPONSIBILITIES

**Table 2-1
County Departments' and Divisions' Roles and Responsibilities**

Department/Division	Primary Roles/Responsibilities
Lead Department	
County Manager	<ul style="list-style-type: none"> ▪ Provides a degree of oversight for all phases of debris removal operation ▪ Provides information to the public on status of debris removal operations
Emergency Management Division	<ul style="list-style-type: none"> ▪ Operates and coordinates all activities at the EOC ▪ Regulates all emergency management preparedness, response and recovery activities
Public Works Department	<ul style="list-style-type: none"> ▪ Lead agency during the debris removal process ▪ Provides oversight for all phases of debris removal operation ▪ Coordinates with designated County Departments prior to and after an event ▪ Acts as the County's representative in debris related discussions and meetings with municipal jurisdictions and other entities ▪ Communicates with various state and federal agencies ▪ Schedules all training activities and meetings regarding debris management ▪ Activates and oversees all private contractors related to debris removal and monitoring ▪ Coordinates with FEMA regarding PW development ▪ Coordinates with the debris removal monitoring firm with regard to invoice reconciliation ▪ Provides County management, elected officials and the public with information regarding the process of the debris removal effort
Road and Bridge Division	<ul style="list-style-type: none"> ▪ Coordinates and manages emergency roadway clearance activities (70 hour push) ▪ Stages equipment prior to an event to assist in emergency clearance activities following a disaster event
Solid Waste Division	<ul style="list-style-type: none"> ▪ Responsible for coordinating the Temporary Debris Storage and Reduction Site (TDSRS), permanent storage and final disposal of all disaster-related debris ▪ Monitors and investigates illegal dumping of storm related debris ▪ Assists in determining if debris on private property is a public nuisance and/or presents public health and safety issues

ROLES AND RESPONSIBILITIES

Department/Division	Primary Roles/Responsibilities
Construction Engineering Division	<ul style="list-style-type: none"> ▪ Conducts damage assessments immediately following a debris-generating event ▪ Responsible for beach ramp and bridge damage assessment and repair activities
Water Resources and Utilities Division Mosquito Control Division	<ul style="list-style-type: none"> ▪ Assists in the debris removal from canal, ditches, retention pond and applicable waterways
Support Departments	
County Attorney	<ul style="list-style-type: none"> ▪ Provides oversight regarding the legality of all debris removal activities ▪ Reviews all contracts including, ROE/Hold Harmless/Subrogation of Insurance, and any contracts for the use of private land for TDSRS
Purchasing and Contracts Division	<ul style="list-style-type: none"> ▪ Coordinates with VCPW during the contractor request for proposal process ▪ Generates contractor purchase orders as necessary throughout the clean-up and restoration process
Community Information Division	<ul style="list-style-type: none"> ▪ Provides information to the public regarding debris removal operations
Accounting Division	<ul style="list-style-type: none"> ▪ Processes all debris removal and debris monitoring contractor invoices for payment.
Code Enforcement	<ul style="list-style-type: none"> ▪ Coordinates with SWMCO to identify private property debris that is causing a public nuisance and/or creating a public health and safety concerns

External Agencies

Following a disaster event federal, local, quasi-governmental entities and agencies will be involved in the debris removal and management process. Table 2-2 summarizes the roles and responsibilities of external agencies during the debris removal process. Representatives from these groups should be contacted annually so that the County is aware of any changes as they relate to debris removal. In the event of a disaster, some or all of the agencies listed below may require weekly or bi-weekly meetings to be held in order to update the agencies on the debris clean-up progress.

**Table 2-2
External Agencies' Roles and Responsibilities Table**

Agency	Primary Duties/Responsibilities
Federal Highway Administration (FHWA)	<ul style="list-style-type: none"> ▪ Responsible for the funding of debris clearance and removal on federal aid highways <i>(FHWA will reimburse for first pass of debris removal on federal aid highways)</i>
Federal Emergency Management Agency (FEMA)	<ul style="list-style-type: none"> ▪ Provides assistance to eligible applicants in debris removal efforts from public and private property following a Presidential disaster declaration
Environmental Protection Agency (EPA)	<ul style="list-style-type: none"> ▪ Responsible for authorities related to the clean-up of mixed debris (debris with oil or hazardous material) ▪ Responsible for the establishment of standards for proper management of debris
Florida Department of Environmental Protection (FDEP)	<ul style="list-style-type: none"> ▪ Approves the use of land as TDSRS ▪ Assists in closure of TDSRS and verifies remediation of land to original state
Florida Department of Transportation (FDOT)	<ul style="list-style-type: none"> ▪ Maintains road clearance responsibility for all state and federal roads
Florida Division of Emergency Management (FDEM)	<ul style="list-style-type: none"> ▪ Manages the overall response and recovery efforts to natural and technological disaster response in Florida
Natural Resource Conservation Service (NRCS)	<ul style="list-style-type: none"> ▪ Provides assistance in debris clean-up for runoff retardation or soil erosion prevention that causes an impairment in watershed and is an imminent threat to life or property

Section 3

ACTION PLAN

This section provides guidance required for all phases of a debris-generating event. For the purposes of this Plan, four phases are discussed: Normal Operations, Pre-Event Preparation, Post-Event Response and Post-Event Recovery.

Situation

Natural disasters such as hurricanes, tornadoes and flooding precipitate a variety of debris that include, but are not limited to, such things as trees and other vegetative organic matter, building/construction material, appliances, personal property, sand, mud and sediment. The quantity and type of debris generated from any particular disaster will be a function of the location, storm path at impact and kind of event experienced, as well as its magnitude, duration and intensity. This Plan is based on the debris-generating capacity of a Category 3 Hurricane with wind speeds in excess of 111 miles per hour and heavy rainfall. A Category 3 Hurricane will cause extensive damage to large trees and shrubs in addition to structural damage to homes and commercial property. Mobile homes will be destroyed. Storm surge will push sea levels 9-12 feet above normal resulting in shoreline flooding, significant beach erosion and flooding of low lying inland areas. The quantity and type of debris generated, its location and the size of the area over which it is dispersed will have a direct impact on the type of removal and disposal methods utilized to address the debris problem, associated costs incurred and how quickly the problem can be addressed.

A major natural disaster that requires the removal of debris from public or private lands and waters could occur at any time. The amount of debris resulting from a major natural disaster will exceed VCPW removal, recycling and disposal capabilities. VCPW will contract for additional resources to assist in the debris removal, reduction, recycling and disposal process.

Debris Volume Estimate

Based on the United States Army Corps of Engineers (USACE) Debris Estimating Model, a Category 3 tropical system (particularly a tropical system impacting the County from the Atlantic Ocean) could generate more than 2,900,000 cubic yards of debris, as shown in Table 3-1, Debris Volume and TDSRS Acreage Requirement by Category - Unincorporated. Table 3-1 contains a breakdown of the debris estimate in cubic yards for Category 1-5 tropical systems and the respective TDSRS acreage needed to support debris removal and reduction operations. Table 3-2 estimates debris volumes that could be generated by the County including the incorporated portions. The guidance that follows applies to all debris-generating events that may affect the County.

**Table 3-1
Debris Volume and TDSRS Acreage Requirement by Category¹ - Unincorporated**

Strength	Cubic Yards	Acreage
Category 1	220,000	11
Category 2	890,000	46
Category 3	2,900,000	149
Category 4	5,570,000	286
Category 5	8,910,000	458

**Table 3-2
Debris Volume and TDSRS Acreage Requirement by Category – Incorporated Included**

Strength	Cubic Yards	Acreage
Category 1	880,000	45
Category 2	3,500,000	180
Category 3	11,380,000	585
Category 4	21,890,000	1,126
Category 5	35,030,000	1,802

Normal Operations

This Plan is a dynamic document that must be updated periodically and exercised to maintain maximum preparedness. During times of normalcy this Plan will be reviewed and updated every five years prior to the State of Florida VCEM Comprehensive Emergency Management Plan review cycle. The Normal Operations Checklist is also provided in Appendix P.

Normal Operations Checklist

- Update contact lists;
- Evaluate TDSRS;
- Review and update road list and road maps;
- Establish and maintain pre-positioned contracts;

¹ See Appendix C for detailed Category models.

- Establish and maintain inter-local or mutual aid agreements; and
- Review FEMA guidance.

Update Contact Lists

Table 3-3, Key Personnel and Contact List, will be updated bi-annually to reflect changes in personnel or contact information.

Evaluate TDSRS

Locations identified to serve as TDSRS following a debris-generating event are reevaluated annually to ensure they still remain viable candidates for TDSRS operations. Likewise, additional TDSRS may be identified as the development and landscape of the County progresses over time. See Appendix D for current sites pre-approved by the Florida Department of Environmental Protection (FDEP) and FDEP Guidance for Establishment, Operation and Closure of Staging Areas for Hurricane-generated Debris. Currently the County has received pre-approval from FDEP for temporary storage of vegetative and C&D debris at Plymouth Avenue Landfill and Tomoka Farms Road Landfill.

Review Road List and Road Maps

Changes or updates relating to road segments and applicable maintenance responsibility amongst local, state and federal agencies are critical for reimbursement through the PA Grant Program and the FHWA Emergency Relief Program. The County reviews and updates road lists and maps at least annually. Updated and accurate road lists and maps will assist in documenting debris removal operations and thereby assist the County during the reimbursement process.

Establish and Maintain Pre-Positioned Contracts

During times of normalcy, the County has established and maintains pre-positioned contracts for debris monitoring and debris removal services. The procurement of such services is compliant with the County Purchasing Manual (See Appendix K) and the procurement competition requirements specified in current FEMA guidance.

Review FEMA Guidance

Rules and regulations dictating operational procedures change periodically, the information in the Plan is reviewed and updated bi-annually to reflect such changes.

Pre-Event Preparation

The County begins pre-event preparations when a debris-generating event is moving toward the coast of Florida and the County has been placed in the National Oceanic and Atmospheric Agency (NOAA) five-day forecast map. Key County personnel and representatives of involved outside agencies (see Table 3-3) are put on alert and monitor the progress of the storm event to gauge where and when it might strike, the

likely area of impact and with what severity. All relevant parties will be briefed of their specific duties as outlined in Table 2-1.

The availability of pre-selected/pre-approved TDSRS locations will be evaluated by VCPW. Alternate locations will be considered by prioritizing potential alternate sites if one or more pre-approved sites are not available. VCPW representatives contact the pre-positioned monitoring firm and debris removal contractors to place them on stand-by.

Pre-Event Checklist

- Download most recent road list and relevant documents to a CD;
- Alert key personnel and place monitoring firm and debris removal contractors on stand-by;
- Review Plan with key personnel;
- Stage emergency road clearing equipment in strategic locations; and
- Issue pre-event media press releases.

The checklist performed during pre-event preparation is critical in assembling a coordinated response. The checklist is a valuable tool to ensure that proper steps are taken in a time of extreme duress. The Pre-Event Checklist is also provided in Appendix P.

Download Most Recent Road List and Relevant Documents to a CD

VCPW will acquire and download to a CD the most recent road list and maps of the County prior to the debris-generating event. Many of the computers and servers that store this information may be unavailable immediately after the event. Having this information on-hand ensures that debris collection operates properly and commences in a timely manner. The most recent road list has been downloaded to CD and is attached to this Plan. The County will provide updates of the road list to their monitoring firm and debris removal contractors when needed.

Copies of the CD are stored at the VCPW building and in a safe location outside the projected path of the debris-generating event.

Alert Key Personnel and Place Monitoring Firm and Debris Removal Contractors on Stand-By

Prior to a debris-generating event, County contacts listed in the Key Personnel and Contact Information table (Table 3-3) are put on alert by VCPW. VCPW will contact key County personnel via verbal and/or electronic communication informing them of information needed to begin the response and recovery process. In addition, VCPW conducts a meeting with the key personnel to discuss emergency road clearing and response activities.

The County’s monitoring firm and debris removal contractors are put on alert by VCPW that their contracts may be activated. Discussions with the monitoring firm and debris removal contractors address the following key issues:

- Availability and amount of assets that will be dedicated to debris removal operations;
- Estimated time of mobilization;
- Exchange of mobile contact information;
- Identification of staging area(s) for truck certification; and
- Identification of staging area(s) for debris monitors.

**Table 3-3
Key Personnel and Contact Information**

Name	Title	Office	Cell
Volusia County Contacts			
James Dinneen	County Manager	386-736-5920	
Mary Anne Connors	Deputy County Manager	386-736-5920	
John Angiulli	Public Works Director	386-736-5965	386-717-4399
John Gamble	Public Works Operations Manager	386-736-5965 Ext. 15527	386-717-1850
Arden Fontaine	Public Works Activity Project Manager	386-736-5965 Ext. 15621	
Leonard Marion	Public Works – Solid Waste Director	386-947-2952	386-527-6332
Judy Grim	Public Works - Roads and Bridges Director	386-822-6422	386-561-0233
Regina Montgomery	Public Works – Solid Waste Fiscal Resource Manager	386-943-7889	386-527-6343
James Judge	Emergency Management Director	386-254-1500	
David Byron	Community Information Director	386-822-5062	
Tetra Tech			
Chuck McLendon	Chief Operating Officer	407-803-5750	407-353-0342
Kerri Genden	Project Manager	407-803-5715	407-803-3584
Phil Ivey	Operations Manager	407-803-5700	850-777-0279
Crowder-Gulf			
John Ramsay	President	800-992-6207	

Name	Title	Office	Cell
Thompson Consulting Services			
Jon M. Hoyle	President	407-792-0018	

Review Plan with Key Personnel

Once an initial meeting is scheduled with all of the County’s key contacts, VCPW, its monitoring firm and debris removal contractors will review the County’s Plan. The initial meeting should focus on key activities that need to occur immediately following the storm including damage assessments and emergency road clearing activities. During the initial meeting, the County’s Workplace Safety Program Guidelines and the Health and Safety Strategy located in Appendix H and I respectively will also be reviewed by the County and modified as necessary.

Stage Emergency Road Clearing Equipment in Strategic Locations

In order to facilitate emergency road clearing following a debris-generating event, R&B will strategically place equipment throughout the County.

Pre-event Media Press Release

The Community Information Division will issue a pre-event media press release preparing residents for the potential debris removal operation. The press releases assure the public that the County is prepared and has a plan in place to immediately respond to an event. The press releases include information on County facilities closure times/dates and information regarding changes in garbage and recycle collections. In addition, the County will provide information on proper curbside debris procedures and estimates on when the clean-up process will begin. A draft press release for this scenario is included in Appendix B, Press Releases.

Post-Event Response (70-Hour Push)

The 70-Hour Push encompasses the period of time that roadways are cleared of scattered debris, leaning trees and other obstructions in roadways for emergency response vehicles. This response phase is generally defined as the first 70 working hours following a debris-generating event. This operation is reimbursable by FEMA

on a time and materials basis. It is critical that all labor, types of equipment and the amount of time the equipment is used are documented with detail and accuracy. (Please note that the reimbursement criteria and duration for time and materials work is subject to change following a disaster.) During this phase, R&B will initiate emergency roadway clearing operations. If necessary, the County may request additional resources for emergency road clearance operations from its debris removal contractors. Road clearance priorities are pre-established to allow access to critical public facilities such as: fire stations, police stations, hospitals, emergency supply centers and other critical facilities. Concurrent to emergency push operations, the County's debris removal contractors and SW are performing necessary preparation work to open TDSRS locations.

The following response checklist is critical in assembling a coordinated response. The checklist is a valuable tool to ensure that proper steps are taken in a time of extreme duress. The Response Checklist is also provided in Appendix P.

Response Checklist

- Begin emergency roadway debris clearance.
- Conduct damage assessment.
- Activate monitoring firm and debris removal contractors.
- Begin truck certification.
- Prepare TDSRS based on concentration of debris.
- Conduct meetings/briefings with key personnel.
- Review debris volume and collection cost assessment;
- Request contact information and meeting with FEMA PAO and other Federal agencies.
- Issue media press release.

Begin Emergency Roadway Debris Clearance

The VCPW will commence with road clearance of priority transportation routes and "cut and toss" activities. R&B will utilize internal labor and equipment to assist with emergency cut and toss activities. These operations will focus on major transportation arteries leading to storm shelters, hospitals, fire stations, police stations, supply points and other critical locations throughout the County.

Conduct Damage Assessment

Damage assessments are necessary to determine the extent and the location of the debris. CE will conduct windshield surveys of the County to communicate critically damaged areas to VCPW and assist in prioritizing road clearance efforts. Additional surveys may be conducted by helicopter in order to obtain an aerial view of damaged

areas within the County. CE will assist in the development of debris estimates for PW development and planning debris contractor asset levels and response configuration.

Activate Monitoring Firm and Debris Removal Contractors

VCPW will utilize the damage assessments to determine whether to activate the County's monitoring firm and debris removal contractors. VCPW will inform the County Manager, EM Director and the Purchasing & Contracts Director when this decision is made. The activation of a monitoring firm and debris removal contractors are required if the tropical disturbance makes landfall as a Category 3 hurricane or greater. Once the monitoring firm and debris removal contractors are activated, each contractor will receive an updated road list, debris collection zone map (Appendix O), the County's Workplace Safety Program Guidelines (Appendix H) and the Health and Safety Strategy (Appendix I). The monitoring firm and debris removal contractors will begin logistical coordination and equipment ramp-up immediately upon receiving a Notice-to-Proceed.

■ Monitoring Function:

Upon activation, the monitoring firm deploys an on-site project manager and staff to support truck certification, collection and disposal monitoring functions. The monitoring firm will orient employees with operational procedures and refresh staff with the field training program on current debris removal eligibility, FEMA and FHWA requirements, County debris removal contract requirements and safety procedures. Collection monitors must carefully document debris collection information to demonstrate eligibility and ensure proper debris removal contractor payments and FEMA /FHWA reimbursement. The documentation should include:

- Location of debris, including full address and zone;
 - Time and date of collection;
 - Name of contractor;
 - Name and unique employee number of monitor;
 - Truck certification number;
 - Truck Capacity (disposal site monitor will fill out load call [%] information);
 - Debris classification; and
 - Disaster declaration number.
- #### ■ Monitoring Function:

■ Debris Removal Contractor Function:

Upon activation, the debris removal contractor mobilizes staff and equipment to the event location. Equipment will be certified as required by the monitoring firm. TDSRS site preparation is initiated, including logistical setup and monitoring tower construction. The contractor will orient subcontractors with operational procedures and refresh staff with current debris removal eligibility,

FEMA/FHWA requirements, County debris removal contract requirements and safety procedures.

Begin Truck Certification

VCPW, the monitoring firm and the debris contractors initiate the truck certification process. All debris removal trucks hauling debris under a volumetric contract with the County must have their capacity and dimensions measured, sketched, photographed and documented on a truck certification form (See Appendix E, Field Documents). Each debris removal truck will be assigned a unique number for debris tracking and invoice reconciliation purposes. The debris monitoring firm will ensure the accuracy of all truck certification documentation.

- Truck certifications will contain:
 - Unique truck number;
 - Driver name and contractor name;
 - Driver phone number;
 - License number, State issued, and expiration;
 - Tag number, State issued, and expiration; and
 - Vehicle measurements.

Prepare TDSRS Based on Concentration of Debris

VCPW, monitoring firm and debris removal contractors will meet to discuss the opening and operation of pre-identified TDSRS locations. If TDSRS locations have not already been pre-approved by FDEP, SW or the debris removal contractor must obtain FDEP approval prior to site preparations.

The following items are taken into consideration when opening and operating a TDSRS:

- Qualification criteria:
 - Current availability;
 - Duration of availability;
 - Prior use, history or environmental concerns of the site;
 - Ingress/Egress;
 - Concentration of debris relative to each site; and
 - Geographic location within the County.

- Reduction Method:

VCPW will utilize a combination of incineration, chipping and grinding for vegetative debris reduction. C&D debris that is received at the TDSRS will be hauled to a final disposal facility to be recycled or crushed.

- **Incineration** – Open burning of hurricane-generated debris must receive prior authorization from the Division of Forestry². The burning of vegetative debris typically results in a reduction ratio of 20:1. The leftover ash may be hauled to a final disposal facility or be incorporated in a land application.
- **Chipping and Grinding** – Using this method, vegetative debris is chipped or ground and typically results in a reduction ratio of 4:1. The leftover mulch is either hauled to a final disposal facility or recycled.
- **Crushing** – The crushing of vegetative debris is the least effective reduction method and results in a reduction ratio of 2:1. Crushing is an appropriate reduction method for C&D debris that cannot be recycled.
- **Recycling of Debris:**
 Common recyclable materials that are a result of a debris-generating event include wood waste, metals and concrete. The following are potential uses for each of the materials:
 - **Wood Waste** – Vegetative debris that is reduced through chipping or grinding results in leftover mulch. The remaining mulch can be used for agricultural and landscape purposes or as alternate daily cover for the landfill.
 - **Metals** – Metal debris such as white goods, aluminum screened porches, etc. that may result from a debris-generating event can be recycled. Certain metals such as aluminum and copper are highly valuable to scrap metal dealers.
 - **Concrete** – Concrete, asphalt and other masonry products that may become debris as a result of a debris-generating event can be crushed and potentially used for road construction projects or as trench backfill.

There is a multitude of information available regarding the recycling and selling of solid waste debris. An example of such resource is the Southern Waste Information eXchange, Inc. Web site (<http://www.wastexchange.org/>) which is a non-profit clearinghouse with information regarding the recycling of solid waste. Table 3-4 is a list of possible end users for recyclable debris.

**Table 3-4
Recyclable Materials and End Users**

Commodity	Market	Name	Contact
Mulch	Biomass	Ridge Generating Station	3131 K-ville Ave. Auburndale, FL 33823 (863) 665-2255
Mulch	Biomass	Okeelanta Cogeneration Plant	8001 Highway 27 South Palm Beach, FL 33493

² See County Approved TDSRS and FDEP Guidance for TDSRS, Appendix D

Commodity	Market	Name	Contact
			(561) 993-1003
Mulch	Biomass	Telogia Power, LLC	P.O. Box 199 Telogia, FL 32360 (850) 379-8341
Vegetative Debris	Mulch	DeLand Landfill, Inc.	1988 W. Plymouth Ave. Deland, FL 32720 (386) 736-1261
Vegetative Debris, Metal, Concrete	Wood, fines, concrete/brick, asphalt, steel, aluminum	Samsula Landfill	363 S State Road 415, New Smyrna, FL 32168 (386) 423-6769
Vegetative Debris, Metal, Concrete	Wood, fines, concrete/brick, asphalt, steel, aluminum r	Four Jays Recycling, Inc.	425 S State Road 415 New Smyrna, FL 32168 (407) 330-1905
Metal	Ferrous and Non-Ferrous Metals	Almet Recycle & Surplus	407 Flomich St. Holly Hill, FL 32117 (386) 673-1281
Metal	Ferrous and Non-Ferrous Metals	Trademark Metals Recycling LLC	402 3rd St. Holly Hill, FL 32117 (386)-255-1453
Metal	Ferrous and Non-Ferrous Metals	Gel Corporation	1990 Tomoka Farms Rd. Port Orange, FL 32128

■ **TDSRS Preparation:**

After a review of the availability and suitability of TDSRS, the debris removal contractor can begin site preparation. As part of the preparation, baseline data will be gathered from the site to document the state of the land before debris is deposited. The following action items are recommended to compile baseline information:

- **Photograph the Site** – Digital photos will be taken to capture the state of the site before debris reduction activities begin. Photos should be updated periodically throughout the project to document the progression of the site.
- **Record Physical Features** – Records will be kept detailing the physical layout and features of the site. Items such as existing structures, fences, landscaping, etc. should be documented in detail.
- **Historical Evaluation** – The past use of the site area will be researched. Issues relating to historical or archeological significance or other environmental concerns of the site must be cleared prior to use.
- **Sample Soil and Water** – If possible and deemed necessary soil and groundwater samples will be taken before debris reduction activities

commence. Samples will help ensure the site is returned to its original state. Typically soils and groundwater samples should be analyzed for total Resource Conservation and Recovery Act (RCRA) metals, volatile organic compounds and semi-volatile organic compounds using approved Environmental Protection Agency (EPA) methods.

The VCPW, SW and monitoring firm will oversee the debris removal contractor's activities to ensure that they are in compliance with their contractual obligations, environmental standards and acting in the best interest of the County and its residents. FDEP will be contacted to provide final approval under an emergency declaration for the TDSRS locations. FDEP Guidance for Establishment, Operation and Closure of Staging Areas for Hurricane-Generated Debris is included in Appendix D.

■ Disposal Monitoring:

The primary function of the monitoring firm with regards to disposal monitoring is to document the disposal of disaster debris at approved TDSRS and final disposal locations. Monitors perform Quality Assurance/Quality Control (QA/QC) checks on all load tickets and haulout tickets to ensure that information captured by collection monitors is complete. This QA/QC includes but is not limited to:

- Inspection of truck placards for authenticity and signs of tampering;
- Inspection of disposal vehicles for signs of modifications of certified storage capacity;
- Inspection of disposal vehicles for safety concerns;
- Verification that placard information is documented properly; and
- Verification that all required fields on the load ticket have been completed.

Afterwards, the disposal monitor will document the amount of debris collected by making a judgment call on vehicle fullness (typically on a percentage basis). The percentage documented for each debris removal vehicle is later applied to the calculated cubic yard capacity of the vehicle to determine the amount of debris collected. The disposal monitor's responsibilities include, but are not limited to:

- Completing and physically controlling load tickets;
- Ensuring debris removal trucks are accurately credited for their loads;
- Ensuring trucks are not artificially loaded (i.e., debris is not wet or compacted);
- Ensuring hazardous waste is not mixed in with loads;
- Ensuring all debris is removed from the debris removal trucks before exiting the TDSRS or final disposal site; and
- Ensuring only debris specified within the County's scope of work is collected.

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

- Ensuring all debris is disposed at a properly permitted landfill; and
- Matching landfill receipts and/or scale house records to haulout tickets.

Conduct Meetings/Briefings with Key Personnel

Coordination meetings and briefings with key personnel will be conducted to update the status of the road clearance efforts, TDSRS openings, contractor asset ramp-up and pertinent public information for press releases.

Daily meetings held each morning at a location determined by the County will include key personnel from the County, monitoring firm and debris removal contractors. The purpose of daily meetings is to focus on daily objectives and include a discussion of operational progress, issues and concerns, and best practices moving forward. During the meeting the County will also review real time statistics and completion maps that reflect operations through the end of the previous day.

Review Debris Volume and Collection Cost Assessment

VCPW, monitoring firm and debris removal contractors will meet to review the debris volume and collection cost assessment. The topics of discussion in this meeting may include, but are not limited to:

- Amount of debris generated - total cubic yards;
- Type of debris generated - vegetative, C&D, sand or other miscellaneous debris;
- Number and estimated date of arrival for assets – trucks, loaders, monitoring personnel;
- Estimated number of TDSRS locations necessary;
- Preliminary scope of debris removal efforts; and
- Estimated cost of the debris removal efforts.

Following this meeting, the County and/or monitoring firm will begin to collect required documentation for the development of FEMA PWs.

Request Contact Information and Meeting with FEMA Public Assistance Officer

This request is made through FDEM.

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

- Summarize the County's debris removal operations to date;
- Review debris and cost estimates for the County;

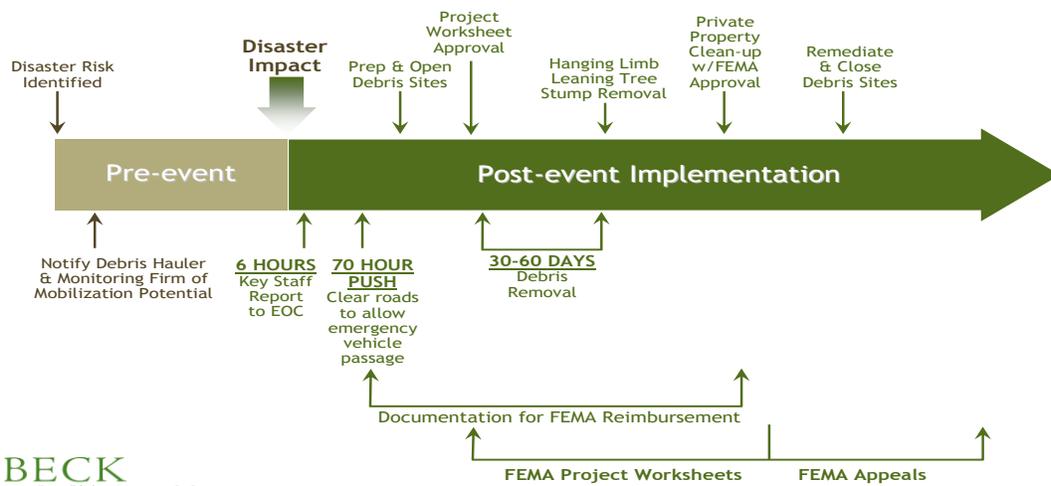
- Review any Disaster Specific Guidance (DSG) documents issued by FEMA;
- Examine the County’s debris removal plan;
- Provide contact information for all County monitoring firm and debris removal contractors and key personnel; and
- Determine additional information the PAO will need to generate PWs for the County. In order for FEMA to generate a Category A, debris removal and debris monitoring PW, it will require the following information:
 - Copy of the debris removal contractor contract(s);
 - Copy of the debris monitoring firm contract(s);
 - Information on the procurement process of the debris removal and monitoring contracts;
 - Address (if available) and GPS coordinates for all TDSRS;
 - Debris volume and costs estimates (using USACE model and damage assessment reports);
 - Monitoring cost estimate (based on budgeted labor hours); and
 - Brief debris removal plan overview.

Issue Media Press Release

A press release from the Community Information Division to various media sources should be issued within the first three days following the debris-generating event. The content of the press release will be to reassure and comfort the public that the County is responding to the event and has activated its monitoring firm and debris removal contractors to begin debris removal activities. (Sample press releases are located in Appendix B, Press Releases.)

**Figure 3-1
Disaster Recovery Timeline**

Disaster Recovery Timeline



Post-Event Recovery

For the purpose of debris management, the post-event recovery phase is marked by the debris removal contractor collecting and reducing debris from the public right-of-way (ROW).

Concurrent to the commencement of ROW debris removal operations, the County will be evaluating the need for contract debris removal on private property, parks and waterways. The County is also responsible for beach remediation which will be evaluated and addressed at this time. As noted in the Disaster Recovery Timeline (Figure 3-1), these specialized debris removal operations typically do not begin until roughly 60 days following a debris-generating event. Specialized debris removal operations are often governed by DSGs and require some level of FEMA pre-validation. However, if the County determines that there is an immediate and imminent threat to public health and safety, these programs can be expedited.

The following Recovery Checklists are critical in expediting and ensuring proper steps are taken during the debris removal process. The Recovery Checklists are also included in Appendix P. The Recovery Checklists are subdivided into the following time periods:

- 2 Days – 2 Weeks;
- 2 Weeks – 1 Month;
- 1 Month – 3 Months; and
- 3 Months – Project Completion.

Recovery Checklist: 2 Days – 2 Weeks

- Open TDSRS.
- Evaluate debris removal zones, prioritize roads/areas.
- Issue press release regarding curbside collection guidelines.
- Begin ROW/Curbside debris removal.
- Open citizen drop-off stations.
- Perform parks damage assessment.
- Begin environmental monitoring program of TDSRS.
- Coordinate with external agencies.
- Conduct coordination meetings and initiate discussions with FEMA and FHWA.
- Obtain FEMA guidance for gated community and private property debris removal.

Open TDSRS

TDSRS will be opened, beginning with sites closest to the most heavily impacted areas of the County. Monitoring towers will be located at the ingress and egress of the TDSRS. Monitoring towers will be high enough so that tower monitors can verify the contents of the debris removal trucks.

Prioritize Roads/Areas

After reviewing damage assessments and the concentration of debris within the County, the preliminary zone map included in Appendix O may be sub-divided into smaller work zones and recorded on the County's GIS data.

Issue Press Release Regarding Curbside Collection Guidelines

Issue second press release regarding curbside collection guidelines for residents to follow. Topics such as public ROW, stacking, segregation of vegetative, C&D, Household Hazardous Waste (HHW) and white goods, disposal sites and operating hours, critical dates and hotline numbers will be addressed.

Begin ROW/Curbside Debris Removal

The County will allow the debris removal contractors to proceed with limited curbside collection of public ROWs. A decision will be made by VCPW to delay first pass collection if it will allow residents sufficient time to move debris to the public ROW to maximize collection. The County will document start and end dates for first pass and subsequent debris removal passes for proper record keeping and reimbursement from all appropriate agencies. Curbside collection entails residents piling their disaster-related debris along the public ROW. It is critical that residents segregate their debris in categories such as vegetative, C&D, HHW and white goods. This will help prevent the contamination of debris loads and expedite the clean-up process. The processes for HHW and white goods clean-up are outlined below.

■ Household Hazardous Waste Clean-Up

HHW includes gasoline cans, aerosol spray cans, paint, lawn chemicals, batteries, fire extinguishers, fluorescent lamps, household electronic tires, etc.

HHW will be collected separately and disposed of at the County's HHW recycling facility or buried in the Class 1 landfill. Collection of HHW may be conducted internally or contracted out on a unit rate basis. The actions taken by the County with regards to HHW removal include but are not limited to:

- Communicate to County residents HHW eligibility following an event.
- The importance that residents separate HHW from other debris to ensure that HHW does not enter the debris stream at TDSRS locations.
- Decide whether to establish HHW drop-off sites to augment or replace HHW curbside collection.

- Coordinate with the debris removal contractor and the monitoring firm to identify, segregate and dispose of intermingled HHW at TDSRS locations.
- Interface with the FDEP. Describe the HHW collection program and permitted facilities to be used for disposal or recycling.

■ **White Goods Clean-Up**

White goods include refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, etc.

White goods will be collected separately and disposed of at the County's white goods recycling facility. White goods debris that contains ozone depleting refrigerants, mercury or compressor oils will have such materials removed by a certified technician before recycling. All state and federal laws will be followed regarding the final disposal of removed refrigerants, mercury, or compressor oils. Collection of white goods can be conducted internally, or contracted out on a unit rate basis. The actions taken by the County with regards to white goods removal include but are not limited to:

- Communicate to County residents white goods eligibility following an event.
- The importance that residents separate white goods from other debris to ensure that white goods are not mixed with C&D or vegetative debris during collection.
- Interface with FDEP. Describe the white goods collection program and permitted facilities to be used for disposal of recovered refrigerants, mercury or compressor oils. (See Appendix D for potential final disposal sites)

■ **Load Tickets**

For the debris categories outlined above, pre-printed load tickets will be used as reimbursement documentation for the County. An example of a load ticket is located in Appendix E, Field Documents. The top portion of the ticket will be filled out by the collection monitor at the beginning of each load. The address field will be completed when the debris removal contractor has completed work. The collection monitor will also ensure the debris removal contractor is working within the scope of the contract with the County. The load ticket will then be given to the debris removal vehicle driver to turn in to the disposal monitor upon arrival at the TDSRS or final disposal site. The disposal monitor will complete the remaining portion of the load ticket. The disposal monitor documents the amount of debris collected by making a judgment call reflecting the vehicle's fullness (typically on a percentage basis). The percentage documented for each debris removal vehicle is later applied to the calculated cubic yard capacity of the vehicle to determine the amount of debris collected.

Open Citizen Drop-Off Stations

Citizen drop-off stations accommodate residents eager to remove debris from their property. Site security, published hours of operation, and closure dates will be established to avoid illegal dumping.

Perform Parks Damage Assessment

VCPW will coordinate with the Parks, Recreation, & Culture Division to assist if necessary with the removal of safety hazards from County parks. VCPW and Parks, Recreation, & Culture Division must first identify vegetative hazards that require removal within the parks. When surveying damages, it is extremely important for the County and its monitoring firm and debris removal contractors to be fully cognizant of all FEMA issued DSGs. Current eligibility criteria include:

- Leaning trees 24 inches in diameter or greater;
- Hanging limbs two (2) inches in diameter or greater; and
- Uprooted stumps 24 inches in diameter or greater.

Begin Environmental Monitoring Program of TDSRS

Throughout the duration of the project, the County's debris removal contractor will be monitoring and collecting data as needed for use in any remediation and close-out of the TDSRS. Collected data should be compared to previous data to establish any remediation actions necessary to return the site to its original state. The following items will be included in an environmental monitoring program:

- **Sketches or Photographs of Site Operations** – During the course of the project, operations at the TDSRS may expand, condense or shift. Changes to the site should be documented along with the locations of debris reduction activity. The documentation will assist in determining areas of concern that may need additional sampling and testing during site closure.
- **Documentation of Issues at the Site** – Records will be kept documenting issues such as petroleum spills, hydraulic spills or the discovery of HHW within debris at the site. This documentation will assist in the remediation of the site.
- **Environmental Considerations and Other Regulatory Requirements** - For all debris related projects the local, State and Federal regulations need to be addressed and followed with regards to potential Environmental and Historic Preservation issues. "Special Considerations" is a term given to describe issues related to the environmental and historic preservation (EHP) review. Volusia County has a key role in resolving special consideration issues by identifying possible problems as early as possible and providing necessary information for a streamlined EHP review. Volusia County Environmental Management will coordinate with the Florida Department of Environmental Protection prior to any debris removal from beaches to ensure protected habitats such as sea turtle nesting sites and other protected areas will not be negatively impacted. Some additional common debris-related special considerations issues are listed below.

- **Coastal Barrier Resource System Unit/Otherwise protected area:** Coastal Barrier Resource Systems are undeveloped coastal barriers (and other areas) located on the coasts of the United States that are depicted on FEMA flood maps and the U.S. Fish and Wildlife Service maps. Similar to the Floodplains/Wetlands consideration, debris removal from protected coastal areas is a common activity but debris sites may not be placed on these areas. **The Coastal Barrier Resources Act (CBRA)** restricts Federal expenditures and financial assistance that encourage development of coastal barriers so that damage to property, fish, wildlife, and other natural resources associated with the coastal barrier is minimized. Coastal barriers are located along the Atlantic and Gulf Coasts and along the Great Lakes. They are identified on FEMA's Flood Insurance Rate Maps as Coastal Barrier Resources System (CBRS) units. Costs for debris removal and emergency protective measures in designated CBRS units may be eligible for reimbursement under the Public Assistance Program provided the actions eliminate an immediate threat to lives, public health and safety, or protect improved property.

- **The National Environmental Policy Act (NEPA):** Requires every Federal agency to follow a specific planning process to ensure that agency decision-makers and applicants have considered and the general public is fully informed about, with the opportunity to comment on, the environmental consequences of a Federally funded action. This review and consultation process is used to evaluate the impact a project and its alternatives may have on the environment. The review process required by NEPA is usually the vehicle through which FEMA addresses other environmental laws and regulations; however, FEMA is provided with statutory exclusions under Section 316 of the Stafford Act. These exclusions exempt certain actions from the NEPA review process and generally include debris removal, clearance of roads, and demolition of unsafe structures. If an action is not statutorily excluded, the appropriate level of NEPA review must be determined. FEMA makes the statutory exclusion determinations. It should be noted that compliance with other individual laws such as the Endangered Species Act, the National Historic Preservation Act, the Clean Air Act, and the Clean Water Act is still required, even when a project is statutorily excluded from NEPA review. Environmental laws and regulations that may impact debris operations are briefly described in the following sections.

- **The Coastal Zone Management Act:** The Coastal Zone Management Act (CZMA) encourages the management of coastal zone areas and provides grants to be used in maintaining coastal zone areas. It requires that Federal agencies be consistent in enforcing the policies of State coastal zone management programs when conducting or supporting activities that affect a coastal zone. It is intended to ensure that Federal activities are consistent with State programs for the protection and, where possible, enhancement of the nation's coastal zones.

- **Endangered Species Act:** The Endangered Species Act (ESA) prohibits Federal actions that cause unnecessary harm to species listed as threatened or endangered, or the destruction or adverse modification of the habitat for these species. Endangered species include mammals, fish, birds, reptiles, and amphibians, as well as plants and

insects. If a project involves the known habitat of a threatened or endangered species, FEMA must consult with the United States Fish and Wildlife Service and the National Marine Fisheries Service before approving funding for that project.

- **National Historic Preservation Act (NHPA):** All projects must be reviewed for compliance with the NHPA, which requires agencies take into account the effects a project may have on historical resources that are on (or are eligible to be on) the National Register of Historic Places. This consideration is usually encountered when selecting temporary or permanent debris sites, or the removal of debris from a historically or culturally significant site. The National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties. Federal agencies must consult with parties who have an interest in the effects of the undertaking in order to identify the affected historic properties, assess the effect of the undertaking on historic properties, and seek ways to avoid, minimize, or treat any adverse effects on historic properties. FEMA complies with NHPA and its implementing regulations in 36 CFR Part 800, either by executing Statewide programmatic agreements or by following standard regulatory procedures, commonly referred to as the Section 106 Process. Historic properties include districts, buildings, structures, objects, landscapes, archaeological sites, and traditional cultural properties that are included in, or eligible for inclusion in, the National Register of Historic Places. These properties are not just old buildings or well-known historic sites, but places important in local, State, or national history. Facilities as diverse as bridges and water treatment plants may be considered historic. The National Register of Historic Places is a list of recognized historic properties. However, this list is not complete, and states may have additional properties with historic significance. Through the use of programmatic agreements, FEMA has delegated the identification and evaluation tasks to State Historic Preservation Officers (SHPO) in many States.
- **The Clean Air Act:** The Clean Air Act was established to protect the nation's air through the reduction of smog and atmospheric pollution. Several State and local governments have enacted similar legislation, either implementing Federal programs or implementing more stringent air quality requirements within their jurisdictions. Projects that are funded under the Public Assistance Program such as debris clearance, removal, disposal, recycling, reduction, and demolition, must comply with the air quality standards required by the Federal, State, or local regulatory agencies.
- **The Wild and Scenic Rivers Act:** The Wild and Scenic Rivers Act (WSRA) was established by Congress to preserve selected rivers in its free-flowing condition in order to protect the water quality and fulfill other national conservation purposes. These rivers are considered protected, much like a national wildlife refuge. Federal agencies may not fund projects that would have a direct and adverse effect on the values for which a river was designated. If a proposed project is located on a river designated as wild and scenic, FEMA must review it for compliance with WSRA.
- **Hazardous Materials:** Hazardous materials encountered in debris projects must be removed and disposed of safely, as mandated in the Resource Conservation and Recovery Act (<http://www.epa.gov/agriculture/lrca.html>). This consideration will

require documentation that the hazardous materials were handled by specialists, segregated if necessary, and properly disposed of at an approved facility.

- **EO 12898 – Environmental Justice:** Requires Federal agencies to evaluate actions for disproportionately high and adverse effects on minority or low-income populations and to find ways to avoid or minimize these impacts where possible. Field personnel should identify any neighborhoods or communities with minority or low-income populations prior to beginning activities which may adversely impact those areas. <http://www.fema.gov/executive-order-12898-environmental-justice-low-income-minority-populations-1994>
- **EO 11988** – Requires Federal agencies to undertake certain responsibilities for floodplain management. FEMA’s procedures for complying with this EO are outlined in 44 CFR Part 9. <http://www.archives.gov/federal-register/codification/executive-order/11988.html>
- **EO 11990** – Outlines the protection of wetlands and requires a planning process that considers alternatives and evaluates impacts to wetlands. The process for complying with this EO is similar to that for complying with EO11988 and is outlined in 44 CFR Part 9. <http://www.archives.gov/federal-register/codification/executive-order/11990.html>
- **Beach Restoration:** Beaches and shore lines may be eligible for emergency sand placement or permanent restoration. Project location, scope of work, sand source, and potential impacts to flora and fauna are all important components to be considered. Since these areas may be environmentally sensitive, coordination with multiple agencies may be required. These agencies may include:
 - U.S. Army Corps of Engineers
 - National Marine Fisheries Service
 - U.S. Fish and Wildlife Conservation Service
 - Florida Department of Environmental Protection
 - Florida Fish and Wildlife Conservation Commission
 - FEMA
 - Environmental Protection Agency

The goal of restoring the sand to the beach should not just be to return it there, but also to ensure that this sand is free of contaminants. Especially after being washed up on shore where flooding may have uprooted significant amounts of garbage, trash and debris such as shattered glass, wood, and other materials from the storm’s destruction. The sand that is returned to the beach must be cleaned. In order to ensure that the newly-placed beach sand is free of contaminants, debris must be removed from the sand while it is being replaced, not after all the sand has been put back on the beach. Spread the sand back on the beach and clean it in layers. It may be helpful to use a tractor loader with a grapple or rock bucket to remove very large debris.

EHP Checklist

“Yes” indicates that the environmental regulation or statute may apply to your project.

Environmental Regulation or Statute		Yes	No
National Historic Preservation Act			
1.A	Would the proposed project affect, or is the proposed project in close proximity to, any buildings or structures 50 years or more in age?		
1.B	Will the proposed project involve disturbance of ground?		
Endangered Species Act and Wildlife Coordination Act			
2.A	Are federally listed or endangered species, or their critical habitat, present in or near the project area and, if so, which species are present?		
2.B	Will the proposed project remove or affect vegetation?		
2.C	Is the proposed project in or near (within 200 feet), or likely to affect, any type of waterbody or body of water?		
Clean Water Act, Rivers and Harbors Act			
3.A	Will the proposed project involve dredging or disposal of dredged material, excavation, the addition of fill material, or result in any modification to water bodies or wetlands designated as “waters of the United States” as identified by the U.S. Army Corps of Engineers or on the National Wetland Inventory?		
Executive Order 11988 (Protection of Floodplains) and Executive Order 11990 (Protection of Wetlands)			
4.A	Does a Flood Insurance Rate Map, Flood Hazard Boundary Map, hydrological study, or some other source indicate that the project is located in, or will affect, a 100-year floodplain, a 500-year floodplain (if a critical facility), an identified regulatory floodway, or an area prone to flooding?		
4.B	Is the proposed project located in, or will it affect, a wetland as listed in the National Wetland Inventory?		
4.C	Will the proposed project alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation?		
4.D	Is the proposed project located in, or will it affect, a floodplain or wetland? If yes, the 8-step process summarized in Appendix J must be completed.		
Coastal Zone Management Act			
5.A	Is the proposed project located in the State’s designated coastal zone?		
Farmland Protection Policy Act			
6.A	Will the proposed project convert more than 5 acres of “prime or unique” farmland outside city limits to a non-agricultural use?		
Resource Conservation Recovery Act and Comprehensive Environmental Response, Compensation, and Liability Act			
7.A	Is there reason to suspect there are contaminants from a current or past use on the property associated with the proposed project?		
7.B	Are there any studies, investigations, or enforcement actions related to the property associated with the proposed project?		
7.C	Will any project construction or operation activities involve the use of hazardous or toxic materials?		

Coordinate with External Agencies

The County coordinates with FDOT, FHWA, FDEP, USACE, FFWCC, FEMA, EPA and other relevant agencies to ensure all County road segments are moving forward with debris removal operations.

Conduct Coordination Meetings and Initiate Discussions with FEMA and FHWA

Daily meetings held each morning at a location determined by the County will include key personnel from the County, monitoring firm and debris removal contractors. The purpose of daily meetings is to focus on daily objectives and include a discussion of operational progress, issues and concerns, and best practices moving forward. During the meeting the County will also review real time statistics and completion maps that reflect operations through the end of the previous day. VCPW, debris removal contractor and the monitoring firm will communicate debris removal plans and operations with assigned FEMA and FHWA representatives. Clear communication fosters a coordinated effort that enhances the transparency of the operation for auditors and ensures maximum FEMA and FHWA reimbursement.

Obtain FEMA Guidance for Gated Community and Private Property Debris Removal

Eligibility of gated community and private property debris removal will be determined by FEMA on a case-by-case basis following an event. The debris and devastation must be so widespread that debris removal from private property becomes a “public interest.” Using current FEMA 325 guidelines, debris removal from private property is defined as a public interest when operations:

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

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

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

If private property debris removal is authorized by FEMA, the County will be prepared to provide the following documentation:

Right-of-Entry and Hold Harmless Agreements – The County will attain signed Right-of-Entry (ROE) and Hold Harmless Agreements (HHA) documents holding the federal government and the County harmless from any damages caused to private property. A sample ROE/HHA agreement is included in Appendix G. The County may execute ROE and HHA forms prior to a disaster under the condition that the ROE and HHA form do not reference a particular event or disaster number. In the event that the owner of the property cannot be located then the Federal Coordinating Officer may make a decision to authorize the work based on the severity of the threat to the surrounding population and properties posed by the debris.

- **Photos** – Photographs will be taken of the conditions of private property before and after debris removal is completed. The photos will assist in the verification of address and scope-of-work on the property.

- **Private property debris removal assessment** – The assessment will be a property specific form to establish the scope of eligible work on the property. The assessment can be in the form of a map or work order, as long as the scope of work can be clearly identified. Volusia County is in the final stages of developing an ordinance that addresses debris removal on private property. A copy of the draft ordinance is included following Appendix P.

- **Documentation of environmental and historic review** – Debris removal efforts on private property must comply with all review requirements under 44 CFR (specifically parts 9-Floodplain management and protection of wetlands and 10-Environmental Considerations).

- **Volusia County Code Chapter 58 Articles II and III** apply –

ARTICLE II. - LOT MAINTENANCE

Sec. 58-31. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Adjacent lot and *lot adjacent* means the lot immediately adjoining or contiguous to or abutting the right-of-way immediately opposite the lot that is subject to review under this article.

Building means any structure as defined within the Standard Building Code, section 201.2. The word "building" includes the word "structure".

Correction period means the time period specified in section 58-37 herein.

Developed lot means any lot on which a structure is located.

Dune means a mound or ridge of loose sediments, usually sand-sized, deposited by natural or artificial means, which lies landward of the Atlantic Ocean and east of State Road A-1-A, South Atlantic Avenue (County Road 4075) or County Road A-1-A.

Land development code means appendix B, Land Development Code, of the Code of Ordinances of Volusia County, Florida.

Lot means

- (1) An area of land which abuts a street and which either complies with or is exempt from the Subdivision Regulations contained in the Volusia County Land Development Code, and is sufficient in size to meet the minimum area and width requirements for its zoning classification as established in the Volusia County Zoning Ordinance; or
- (2) A portion of a subdivision or other tract or parcel of land, including the air space above or contiguous thereto, intended as a unit for transfer of ownership, or for development, or both.

(3)

The word "lot" includes the word "plot," "tract" or "parcel," when designated in the Zoning Ordinance as R-1 through R-9, MH-1, MH-2, MH-5 through MH-7, B-1 through B-9, BPUD, I-1 through I-4, IPUD, MPUD or RPUD or as an approved community development plan.

Natural state means vacant land that has never been cleared or which has not been maintained for a period of three or more years.

Nuisance weeds means grass, weeds, brush and undergrowth (specifically excluding trees, planted ornamental shrubs or garden and landscape plants, and saw palmettos) which have grown in an uncontrolled manner or which have not been cared for or regularly maintained, and which have reached a height in excess of 12 inches.

Record owner means the owner of record of a Lot, as such appears in the official records of the Volusia County Property Appraiser.

Rubble and debris means waste materials resulting from the construction or demolition of structures or buildings, which are not usable for future construction or demolition.

Tree means any woody plant or palm which in its mature state, under normal growing conditions, reaches a height of ten or more feet.

Waste means:

- (1) Garbage, rubbish and refuse from residential, commercial or industrial activities, including but not limited to kitchen, table food, animal, or vegetative

waste that is attendant with or results from the storage, preparation, cooking or handling of food material; or

- (2) Paper, wood scraps, cardboard, cloth, glass, rubber, plastic; discarded automobiles, tires or automobile parts or fixtures; discarded household goods, appliances, or consumer products, toys, tools or equipment; and similar materials.

Yard trash means:

Vegetative material from landscaping, maintenance or land clearing operations, including but not limited to tree and shrub trimmings, glass clippings, palm fronds, tree limbs, tree stumps and similar materials; excluding vegetative material which has been ground into mulch and which is currently in use for mulching purposes.

Zoning enforcement official means the director of the Building and Zoning Division or his/her duly authorized representative.

Zoning ordinance means appendix B, Zoning Ordinance, of the Code of Ordinances of Volusia County, Florida.

(Ord. No. 86-35, § 101, 12-18-86; Ord. No. 91-5, § I, 4-18-91; Ord. No. 96-5, § I, 3-28-96; Ord. No. 2005-18, § 1, 11-3-05)

Cross reference— Definitions and rules of construction generally, § 1-2.

Sec. 58-32. - Penalties.

Any person in violation of any provision of this article, or any lawful order of the county council or zoning enforcement official, shall be punished in accordance with section 1-7 of the Code of Ordinances of the County of Volusia.

(Ord. No. 86-35, § 114, 12-18-86; Ord. No. 91-5, § XII, 4-18-91; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-33. - Civil remedies.

The county council may institute in any court, or before any administrative board or agency of competent jurisdiction, an action to prevent, restrain, correct or abate any nuisance or violation of this article, or of any order or regulations made in connection with its administration or enforcement, and any court or administrative board having jurisdiction of the matter may order the entry of an injunction or any other remedy allowed by law or otherwise adjudged to be proper under existing law, this article and all the facts and circumstances of the case, in order to fully effectuate this article and any orders or rulings made pursuant thereto.

(Ord. No. 86-35, § 113, 12-18-86; Ord. No. 91-5, § XI, 4-18-91; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-36. - Violations and declaration of nuisance.

It is hereby declared and determined by the county council that the following shall each, individually or in any combination, constitute a violation of this article and a nuisance:

- (1) Any lot upon which nuisance weeds are found to impair the economic value of, or to create a fire or health hazard upon, developed adjacent property.
- (2) Any lot upon which waste, yard trash, or rubble and debris have accumulated;
- (3) Any lot which, as the result of waste, yard trash, and/or rubble and debris, may harbor rats or dangerous snakes or serve as breeding grounds for insects or other disease vectors.

(Ord. No. 86-35, § 103, 12-18-86; Ord. No. 91-5, § III, 4-18-91; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-37. - Nuisance abatement requirements.

Any violation of this article and any nuisance declared herein shall be corrected or abated in its entirety within 15 days following delivery to the record owner of the notice described at [section 58-39](#) below.

(Ord. No. 86-35, § 104, 12-18-86; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-38. - Enforcement.

The zoning enforcement official shall:

- (1) Inspect any lot on which a violation of, or nuisance as declared in, this article is suspected to exist;
- (2) Receive complaints of any such violation or nuisance;
- (3) Enter upon any real property in the conduct of official business pursuant to this article;
- (4) Provide all notices required by this article; and
- (5) Take such other action as may be reasonably necessary to accomplish the purposes of this article.

(Ord. No. 86-35, § 104, 12-18-86; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-39. - Notice to correct violation.

(a) The record owner of any lot in violation of, or declared to be a nuisance by, this article, shall be issued a violation notice. The violation notice shall be served by registered or certified mail, return receipt requested; by hand delivery; or by posting the lot as provided in subsection [58-41\(2\)\(b\)](#) below.

(b) The violation notice shall be mailed or delivered to the last available address of the record owner, as found in the records of the Volusia County Property Appraiser, and shall specify:

- (1) The nature of the violation or nuisance;
- (2) What action must be taken to correct the violation or abate the nuisance;
- (3) That unless the violation is corrected or the nuisance abated within 15 days from delivery of the violation notice, the zoning enforcement official will correct the violation and abate the nuisance, and that a lien for the costs and administrative expenses of said action shall be recorded as a lien against the property;
- (4) That the record owner may, within 15 days after delivery of the violation notice, appeal to the county council the determination of the zoning enforcement official that a violation has occurred or that a nuisance exists, upon payment of the appeals fee in accordance with [section 58-40](#) below.

(Ord. No. 86-35, § 106, 12-18-86; Ord. No. 91-5, § V, 4-18-91; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-41. - Posting of lot; correction of violation by county.

In the event no appeal is filed as provided in [section 58-40](#) above, or the notice is returned to the zoning enforcement official as undelivered, then:

- (1) Upon expiration of the corrections period, the zoning enforcement official shall reinspect the lot to ascertain whether or not the violation has been corrected or the nuisance has been abated.
- (2) If it has not been corrected or abated, the zoning enforcement official may, at his/her discretion, enter upon the lot and take such steps as are reasonably necessary to correct the violation or abate the nuisance, provided that at the time of entry:
 - a. The subject lot remains a nuisance or in violation; and
 - b. The record owner has been notified of the violation as provided in [section 58-39](#) above, provided that if notice was mailed but returned undelivered, and no hand delivery was made, the zoning enforcement official shall post a copy of the violation notice on the lot in a conspicuous place, and an additional ten days shall be added to corrections period.
- (3) The zoning enforcement official shall not be required to correct any violation or abate any nuisance, on any one lot, more than two times per year.

(Ord. No. 86-35, § 108, 12-18-86; Ord. No. 91-5, § VII, 4-18-91; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-42. - Assessment of costs of correction or abatement; imposition of lien.

(a) Whenever the zoning enforcement official corrects a violation or abates a nuisance pursuant to [section 58-41](#), he/she shall invoice the lot owner the estimated

costs of such correction, plus an additional \$200.00 per lot to defray administrative and operating expenses. The invoice shall be served by registered or certified mail, return receipt requested; hand delivery; or by posting the lot as provided in subsection [58-41](#)(2)(b).

(b) The invoiced amount shall be due and payable upon the date of the mailing of said invoice.

(c) If the invoice remains unpaid for a period of 30 days after mailing, the zoning enforcement official shall levy a special assessment lien against each lot upon which a violation was corrected or nuisance abated, in the amount of the invoice plus an additional administrative expense fee of \$100.00 per lot.

(d) Such lien shall describe the lot and show the total of the invoiced amount plus the additional administrative fee, as immediately due and payable.

(e) Until payment is made in full, the lien, shall be a legal, valid and binding obligation upon the property.

(f) Thirty days after the filing of the lien, interest shall begin to accrue at the rate of 12 percent per annum on any unpaid portion thereof.

(Ord. No. 86-35, § 109, 12-18-86; Ord. No. 91-5, § VIII, 4-18-91; Ord. No. 96-5, § III, 3-28-96; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-43. - Notice of lien.

The zoning enforcement official shall mail a copy of the recorded special assessment lien to the record owners of each lot described in the lien, by certified mail, return receipt requested, to the address which appears in the records of the Volusia County Property Appraiser.

(Ord. No. 86-35, § 110, 12-18-86; Ord. No. 91-5, § IX, 4-18-91; Ord. No. 96-5, § IV, 3-28-96; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-44. - Recording of lien.

The zoning enforcement official shall cause a certified copy of the special assessment lien to be recorded in the official records of the county in the office of the clerk of the circuit court in and for Volusia County.

(Ord. No. 86-35, § 111, 12-18-86; Ord. No. 96-5, § V, 3-28-96; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-45. - Effect of lien.

The property lien created under the provisions of this article shall be effective as of the date of recording. Such assessments and lien, together with interest thereon, may be enforced by civil action in any court having jurisdiction thereof. A lien created pursuant to this article shall be a first lien equal to a lien for nonpayment of property

taxes, on any property against which such lien has been filed, and shall continue in full force and effect until discharged by satisfaction.

(Ord. No. 86-35, § 112, 12-18-86; Ord. No. 2005-18, § 1, 11-3-05)

Sec. 58-46. - Satisfaction of lien.

Upon satisfaction of the lien created under this article, the zoning enforcement official shall file an order of satisfaction, release and dismissal of lien with the clerk of the circuit court.

(Ord. No. 91-5, § X, 4-18-91; Ord. No. 2005-18, § 1, 11-3-05)

ARTICLE III. - UNSAFE OR DILAPIDATED BUILDINGS

Sec. 58-80. - Definitions.

The following words, terms and phrases, when used in this article, will have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Building shall have the same meaning as set forth in the Florida Building Code, as it may be amended from time to time.

Building official means the chief building official of the county or his duly authorized representative.

Contractor Licensing & Construction Appeals Board (CLCA) shall mean the board created pursuant to [chapter 22](#), article V, section 22-5-1-1.

County council means the seven duly constituted members of the county council.

Owner means any person, group of persons, firm or firms, joint venture, corporation or corporations, or any other legal entity having legal title to the real property on which a building or structure is subject to the terms of this article.

Person aggrieved means a person whose legal right is invaded by a decision complained of, or whose pecuniary interest is directly affected by a decision. The person's interest must be specific and personal, not common to all members of the community.

Structure shall have the same meaning as set forth in the Florida Building Code, as it may be amended from time to time.

(Ord. No. 00-20, § II, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-81. - Applicability.

This article shall be applicable to the unincorporated areas of the county.

(Ord. No. 00-20, § III, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-82. - Enforcement official.

The building official is hereby designated as the investigating and enforcing authority pursuant to the provisions of this article. The building official is hereby directed and empowered to inspect land on which the building exists, to receive all complaints of a violation of this article, and to enter upon any real property in the conduct of official business pursuant to this article. The building official shall be responsible for providing all notices to affected property owners required by this article and to take such other action as is reasonably necessary to accomplish the purpose of this article.

(Ord. No. 00-20, § IV, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-83. - Purpose.

(a) There exist in the County of Volusia buildings that are, or may become, unsafe or dilapidated due to lack of maintenance or damage caused by weather, fire, vandalism, vermin, insects, or other conditions. Such buildings constitute a menace to the health, safety, welfare, and reasonable comfort of citizens of the County of Volusia. The existence of such buildings, if not remedied, creates blighted areas, curtails investments and tax revenues, and impairs economic values.

(b) All buildings or structures of any kind, including all electrical, gas, mechanical, or plumbing systems which are unsafe, unsanitary, constitute a fire hazard, or are dangerous to human life or a hazard to safety or health, shall be abated by repair and rehabilitation or by demolition, in accordance with the provisions herein.

(Ord. No. 00-20, § V, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-84. - Unsafe and dilapidated buildings prohibited.

(a) A building is unsafe or dilapidated when any of the following conditions exist:

(1) There is an unusual sagging or leaning out of plumb of the building or any parts of the building and such effect is caused by deterioration or over-stressing to such an extent that there is a reasonable likelihood that the walls or other structural members may fall or give way.

(2) The building has improperly distributed loads upon the floors or roofs, or the same are overloaded or have insufficient strength to be reasonably safe for the purpose used.

(3) The building has been damaged or destroyed by fire, wind, or other causes and has become dangerous to life, safety, or the general health and welfare of people within or nearby the structure.

(4) The building is so dilapidated, decayed, unsafe, unsanitary, or so utterly fails to provide the amenities essential to decent living that it is unfit for human habitation or occupancy, or is likely to cause sickness or disease, so as to injure the health, safety, or general welfare.

(5) The building has parts that are so attached that there is a reasonable likelihood they may fall and injure members of the public or property in general.

(6) The building is vacant and not sufficiently secured to prevent easy access to trespassers and vagrants, or is otherwise untended or unkempt to the extent that it poses a general health or safety hazard for neighboring people or property.

(7) The electrical or mechanical installations or systems create a hazardous condition contrary to the standards of the Florida Building Code.

(8) An unsanitary condition exists by reason of inadequate or malfunctioning sanitary facilities or waste disposal systems.

(b) A building that is unsafe or dilapidated constitutes a nuisance. No person shall permit an unsafe or dilapidated structure to exist on property under his or her ownership or control.

(Ord. No. 00-20, § VI, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-85. - Notice of determination that a building is unsafe or dilapidated.

(a) Upon identification of a building as unsafe or dilapidated by the building official, a notice shall be sent by the building official to the owner or owners of the building as listed on the most recent available tax rolls, by registered or certified mail, return receipt requested, or by hand delivery by the said building official or deputy sheriff, directing that it be repaired or demolished. Also, said notice shall be posted on the building. Failure of any person to receive notice shall not invalidate any proceedings under this section. Evidence of an attempt to serve notice, and proof of posting, shall be sufficient to show that these notice requirements have been met. Proof of posting with date and place of its posting shall be by affidavit of the person posting the notice. Attached to the affidavit shall be a copy of the notice posted.

(b) As applicable, the notice should contain generally the following information:

(1) The name of the person upon whom the notice is served.

(2) The street address of the building and the legal description of the property on which it is located.

(3) That the building has been determined to be unsafe or dilapidated, and in a summary manner, the conditions upon which the determination is based.

(4) If repairs or alterations will remedy the conditions, the summary nature and extent of the repairs or alterations necessary.

(5) If the conditions are of such a character that repairs or alterations are not feasible or reasonably expected to remedy the conditions, notice that the building must be demolished.

(6) That within forty-five (45) days from sending the notice, a complete building permit application for necessary repairs must be submitted and repairs commenced, or the building must be demolished.

(c) If the conditions are not remedied within 45 days after the notice of determination is sent, or a building permit for repairs is not applied for and repairs not completed within a reasonable period of time, the determination shall be referred by the building official to the CLCA for a condemnation public hearing concerning the subject building. The owner or owners shall be notified by the building official of the time, place and purpose of the public hearing. Also, said notice shall be posted on the building. Failure of any person to receive notice shall not invalidate any proceedings under this section. Evidence of an attempt to serve notice, and proof of posting, shall be sufficient to show that these notice requirements have been met. Proof of posting with date and place of its posting shall be by affidavit of the person posting the notice. Attached to the affidavit shall be a copy of the notice posted.

(Ord. No. 00-20, § VII, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-86. - Condemnation by the CLCA.

(a) If the owner of any building has failed to remedy unsafe or dilapidated conditions as provided in [section 58-85\(c\)](#), after the expiration of the 45-day period, the CLCA shall consider condemning the building.

(b) Each case before the CLCA shall be presented by the building official or other county staff. At the hearing, the CLCA shall proceed to hear evidence and testimony on the cases before the CLCA. All testimony shall be under oath and shall be recorded. The board shall take testimony from the building official or county staff, the property owner and other witnesses called by either the county staff or the property owner. Formal rules of evidence shall not apply, but fundamental due process shall be observed and shall govern the proceedings.

(c) After hearing evidence and/or testimony on the case at said public hearing conducted by said board CLCA that any building is unsafe or dilapidated in accordance with subsection [58-84\(a\)](#), the CLCA may adopt a resolution condemning it, requiring the owner to remedy the conditions by repair or removal by a date set by the CLCA, and providing that failure of the owner to do so will result in the CLCA authorizing the building official to take action to remedy the conditions and charging all expenses thereof against the real property. The CLCA may also take any other appropriate action to carry out the purpose and intent of this article. The CLCA, the building official or his duly authorized representative or the

property owner may request a postponement or continuance of a scheduled public hearing.

(d) If the conditions are not remedied within the time established by the board, the building official shall take whatever action determined necessary and appropriate to remedy the conditions, including vacating, fencing, securing, demolishing, or removing the unsafe or dilapidated building. In the event demolition or removal of the unsafe or dilapidated building is required by the building official, the building official shall notify the county council prior to said demolition or removal of said building.

(Ord. No. 00-20, § VIII, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-87. - Notice of condemnation.

(a) A certified copy of the resolution of condemnation, together with a copy of the notice of determination containing information as provided in subsections [58-85\(a\)](#) and (b), shall be sent by the building official, to each owner as listed on the most recent available real property tax rolls, by registered or certified mail, return receipt requested, or by hand delivery by the building official or deputy sheriff.

(b) In addition, a certified copy of the resolution of condemnation, together with a copy of the notice of determination, shall be posted on the building following the adoption of the resolution of condemnation. Said notice shall be posted on the building following adoption of said resolution.

(c) Failure of any person to receive notice shall not invalidate any proceedings under this section. Evidence of an attempt to serve notice, and proof of posting, shall be sufficient to show that these notice requirements have been met. Proof of posting with the date and place of its posting shall be by affidavit of the person posting the notice. Attached to the affidavit shall be a copy of the notice posted.

(Ord. No. 00-20, § IX, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-88. - Repairs after condemnation.

After the CLCA has condemned a building, no building permit application shall be accepted or permit issued for repairs of the building except as follows:

- (1) The building official shall review any application for a permit to repair a condemned building, and shall determine whether repairs are feasible.
- (2) If the proposed repairs are not reasonably expected to resolve the conditions or are otherwise not feasible, the permit shall be denied.
- (3) If the repairs are feasible and are reasonably expected to resolve the conditions, a permit shall be issued only upon written condition that the owner or authorized agent specify the nature of the repairs, the date on which the repairs shall be complete, and that failure to complete the repairs within the time provided shall result in the building official taking remedial action with attachment of a lien for all costs or other action authorized by law.

(Ord. No. 00-20, § X, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-89. - Appeals to the county council.

(a) The county council has the sole authority to hear and decide appeals from the decision or determination of the CLCA pursuant to the CLCA's authority under this article. Appeals may be taken by any person aggrieved or by any officer, board, department or agency of county government adversely affected by the decision or determination of the CLCA. An appeal shall be taken within ten working days after rendition of said decision or determination, by filing with the building official and with the legal department, a written notice of appeal specifying its grounds. The appeal shall be on a form prescribed by the building official.

Upon receipt of the notice of appeal, the building official shall transmit to the county council all documents, plans, papers, minutes, applications, recommendations or other materials relating to the appealed decision. The appeal of any decision of the CLCA shall be on evidence made on the record made before it.

(b) *Public hearing.* The county council shall hold a hearing on said appeal after publication of notice stating the time, place and purpose of the hearing in a newspaper of general circulation in the county at least ten days before said hearing. The applicant or his duly authorized agent shall also post, at least ten days prior to the date of such hearing, a notice provided by the building official in a conspicuous place or places on the building or structure involved in the hearing. In all cases, affidavit proof with the date and place of the required publication and posting of the notices shall be present at the hearing. The county council shall decide the appeal within a reasonable time. It may, upon appeal, reverse, affirm or modify any order, decision or determination of the CLCA. If the county council finds that the county should pay the costs of an appeal, it may so authorize. No appeal shall be granted in whole or in part unless four members of the county council concur.

(Ord. No. 00-20, § XI, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-90. - Administrative action.

The decision of the county council shall be final administrative action, reviewable by certiorari in circuit court as provided by law.

(Ord. No. 00-20, § XII, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-91. - Assessment of costs of abatement; imposition of lien.

Any costs incurred by the County of Volusia to correct dilapidated unsafe conditions pursuant to this provision shall be charged to the owner of the property, and shall constitute a lien against the property in favor of the County of Volusia. The lien shall be entitled to the same priority as a lien for special assessments with the same rights of collection, foreclosure and sale, and lien shall be superior to all others except

taxes. Until payment is complete, such assessment shall be a legal, valid, binding obligation upon the real property. Thirty days after filing the lien, interest shall accrue at the rate of 12 percent per annum.

(Ord. No. 00-20, § XIII, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-92. - Recording of lien.

As soon as possible after the assessment has been made as provided in this article by the building official, a certified copy of the special assessment lien shall be recorded in the official records of the county in the office of the clerk of the circuit court in and for the county, and the lien shall become effective as of the date of filing such copy with said clerk of the circuit court. The building official after recording of said lien, shall forward to the owner or owners a copy of the recorded lien by registered or certified mail, return receipt requested, or by hand delivery, by the building official or deputy sheriff.

(Ord. No. 00-20, § XIV, 5-18-00; Ord. No. 2006-05, § I, 3-2-06)

Sec. 58-93. - Satisfaction of lien.

Upon satisfaction of the lien created under this article, the building official shall file an order of satisfaction, release and dismissal of lien with the clerk of the circuit court.

Recovery Checklist: 2 Weeks – 1 Month

- Maintain and evaluate ROW clean-up.
- Begin ROW stump removal as necessary.
- Open additional TDSRS as necessary.
- Continue coordination meetings, including FEMA and FHWA.
- Begin beach scrape and screen process if necessary and approved by FEMA.
- Begin debris removal from private property and gated communities.
- Communicate project close-out to residents via press release.

Maintain and Evaluate ROW Clean-Up

Information on debris collection (vegetative, C&D, white goods, HHW, etc.) and completion progress will be documented by the monitoring firm and provided to the County on a daily basis. The County will document start and end dates for first pass and subsequent debris removal passes for proper record keeping and reimbursement from all appropriate agencies.

Begin ROW Stump Removal as Necessary

Following initial ROW debris removal efforts, the County may determine a significant threat remains to the County public in the form of hazardous stumps along the ROW. Before ROW stump removal operations commence all applicable DSG criteria or FEMA Publication 325 guidelines for eligibility will be reviewed. FEMA's Recovery Policy for Hazardous Stump Extraction and Removal Eligibility is included in Appendix F. Current FEMA Publication 325 defines a stump as hazardous if all of the following criteria are met:

- The stump has 50 percent or more of the root-ball exposed;
- The stump is greater than 24 inches in diameter when measured 24 inches from the ground;
- The stump is located on a public ROW; and
- The stump poses an immediate threat to public health and safety.

The County will ensure FEMA is involved for eligibility determination prior to implementing a stump removal process.

Open Additional TDSRS Locations as Necessary

If the initial TDSRS are approaching maximum capacity, additional TDSRS may need to be prepared. The same procedures taken to open and monitor the initial TDSRS will be applied to any additional TDSRS the County may utilize.

Continue Coordination Meetings, Including FEMA and FHWA

Daily meetings held each morning at a location determined by the County will include key personnel from the County, monitoring firm and debris removal contractors. The purpose of daily coordination meetings is to focus on daily objectives and include a discussion of operational progress, issues and concerns, and best practices moving forward. During the meeting the County will also review real time statistics and completion maps that reflect operations through the end of the previous day. VCPW, debris removal contractor and the monitoring firm will coordinate debris removal plans and operations with assigned FEMA and FHWA representatives. It is critical to maintain timely communication with the County's assigned FEMA and FHWA representatives. The daily meetings help to ensure maximum coordination and assist to expedite resolving any operational problems that may occur.

Begin Beach Scrape and Screen Process if Necessary and Approved by FEMA

If the concentration of debris found along the beach is significant enough to warrant a threat to human health and safety, the debris removal contractor may be authorized to commence with the scrape and screen operation. This operation involves scraping sand (up to one foot deep) on each beach beginning at the private property line and ending at mean high water mark. The sand is then screened to remove debris and the cleaned sand is placed back on the beach to bring beach elevation back to pre-scrape

level. Screen rejects will be hauled off the beach as debris to the TDSRS or final disposal site.

If the debris is dispersed and minimal in nature, the County may use internal forces to perform spot debris removal. In either case, the County will review prevailing DSG and seek authorization from FEMA and FDEP prior to commencement of removal activities.

Begin Debris Removal from Private Property and Gated Communities

If approved, debris removal from private property and gated communities will be coordinated with the debris monitoring firm and debris removal contractors.

Communicate Project Close-Out to Residents via Press Release

The debris removal project close-out press release will focus on clarifying any ineligible debris confusion and communicating a curbside debris collection deadline to minimize illegal dumping. Protocol for leaners/hangers and private property/gated community debris removal programs, if applicable, will be communicated at this time. Depending on the severity of the debris-generating event, project close-out may be further away.

Recovery Checklist: 1 Month – 3 Months

- Maintain and evaluate ROW clean-up.
- Begin ROW leaners/hangers program.
- Begin ROE sand recovery process if necessary and approved by FEMA.
- Initiate haulout.
- Continue Coordination Meetings.

Maintain and Evaluate ROW Clean-Up

Information on debris collection and completion progress will be documented by monitoring firm and provided to the County on a daily basis. During this period, the County will announce the completion of second pass and establish tentative deadlines for residential curbside debris removal on the ROW, as well as a for the County's debris removal contractor to complete third pass.

Begin ROW Leaners/Hangers Program

A ROW leaners/hangers program will be initiated to remove leaning trees and hanging limbs along the public ROW that pose a danger to transportation routes, pedestrians and/or public/private structures. The threat will be identified and verified against DSG criteria and coordinated with FEMA for eligibility prior to the commencement of work to ensure maximum reimbursement. The County may utilize internal forces, the debris removal contractor or a combination to perform leaner/hanger removal.

Currently FEMA Publication 325 provides the following guidance on eligibility requirements for leaners and hangers.

Leaner – A tree is considered hazardous and defined as a “leaner” when the tree’s present state is caused by a disaster, the tree poses a significant threat to the public and the tree is at least six (6) inches in diameter measured at chest height. In addition, one or more of the following FEMA Publication 325 criteria must be met:

- The tree has more than 50 percent of the crown damaged or destroyed (requires written documentation from an arborist);
- The tree has a split trunk or broken branches that expose the heartwood;
- The tree has fallen or been uprooted within a public use area; or
- The tree is leaning at an angle greater than 30 degrees.

Hanger – A hanger is a hazardous limb that poses a significant threat to the public. The current eligibility requirements for hangers according to FEMA Publication 325 are as follows:

- The limb must be greater than two (2) inches in diameter;
- The limb is still hanging in a tree and threatening a public-use area; and
- The limb is located on improved public property.

Unit Rate Tickets

Unit rate tickets will be used as reimbursement documentation for the County’s Leaners/Hangers Program. An example of a unit rate ticket is located in Appendix E, Field Documents. To ensure maximum reimbursement, debris monitors will use GPS devices to document the GPS coordinates of tree or hanger removals and take digital photos of the work done.

Begin ROE Sand Removal/Recovery Process if Necessary and Approved by FEMA

The storm surge associated with a major debris-generating event may be significant enough to displace sand from the beach onto the public ROW and private property. The County will utilize internal forces, the debris removal contractor or a combination to perform sand removal/recovery activities. Removed sand will be screened and used for beach re-nourishment. If the sand displaced on private property is an adequate quantity for beach re-nourishment purposes, the County will evaluate the cost of removing, screening and replacing displaced sand on private property versus the cost of removing displaced sand as debris and securing clean sand from a remote location.

- To ensure maximum FEMA reimbursement for beach restoration activities, the County will review all applicable DSGs and coordinate with FEMA representatives prior to implementing any sand removal/recovery activities.

Initiate Haulout

Reduced debris at the TDSRS will be hauled to a final disposal site or recycled. Generally for final disposal purposes, the most environmentally responsible and cost-effective method is for the County to recycle reduced debris. The County will utilize its Tomoka Landfill, located at 1990 Tomoka Farms Road, Daytona Beach, Florida for final disposal. The County could utilize alternate sites for recycling and/or final disposal. See Table 3-4 for recycling options and Table 3-5 for other potential final disposal sites

**Table 3-5
Potential Final Disposal Landfills**

Name	Location
DeLand Landfill, Inc.	1988 W. Plymouth Ave. Deland, FL 32720
Samsula Landfill	363 S State Road 415, New Smyrna, FL 32168
Four Jays Recycling, Inc.	425 S State Road 415, New Smyrna, FL 32168

The County and the monitoring firm will ensure the debris removal contractor attains proper disposal tipping fee documentation. Appendix E contains a sample haulout ticket that will be used by the monitoring firm and debris removal contractor as reimbursement documentation for the County.

Continue Coordination Meetings

Coordination meetings with key personnel from the County, monitoring firm, debris removal contractors and FEMA will continue to be held. The frequency may be reduced from daily depending upon the debris removal progress and outstanding issues. The purpose of the meeting is to ensure timely communication for maximum coordination and guidance to expedite resolving any operational problems that may occur as the debris removal operations concludes.

Recovery Checklist: 3 Months – Project Completion

- Complete all debris recovery activities.
- Ineligible debris on ROW.
- Complete the disposal of reduced debris.
- Close-out and remediate TDSRS.
- Conduct project close-out meetings with FEMA and external agencies.

Complete All Debris Recovery Activities

The County's debris monitoring contractor and debris removal contractor will identify eligible debris piles. The debris removal contractor will ensure the eligible debris piles are removed promptly.

Ineligible Debris on ROW

Ineligible debris on the public ROW that has been identified will be removed by the County in one of three ways:

- Hold individual homeowners responsible for the disposal of ineligible debris; or
- Task the County debris removal contractor with the removal of ineligible debris and incur the associated cost. This debris will be hauled directly to final disposal/recycling at Tomoka Landfill to reduce associated handling costs.
- County will use internal forces to remove ineligible debris and dispose/recycle at the Tomoka Landfill.

Complete the Disposal of Reduced Debris

Reduced debris at the TDSRS will be hauled to a final disposal site or recycled. . Generally for final disposal purposes, the most environmentally responsible and cost-effective method is for the County to recycle reduced debris. The County will utilize its Tomoka Landfill, located at 1990 Tomoka Farms Road, Daytona Beach, Florida for final disposal. The County could utilize alternate sites for recycling and/or final disposal. See Table 3-4 for recycling options and Table 3-5 for other potential final disposal sites

Close-Out and Remediate TDSRS

FDEP will be contacted before final closure of the TDSRS to ensure all required actions are taken. Generally the TDSRS must be returned to their original environmental state. Restoration of the TDSRS includes removing all remnants of operations and the remediation of any contamination that may have occurred during operations. A final sample of environmental data will be collected to ensure the site is returned to its original state. Final closure of the TDSRS will require written notice to the FDEP. The results of any required environmental samples will be included with the written notice.

Conduct Project Close-Out Meetings with FEMA and External Agencies

The County will receive detailed data from the monitoring firm regarding the debris removal operations within the County prior to the project close-out meeting. The County will compile all contractor invoices, contracts and other documentation supporting debris removal operations in preparation of the project close-out meeting.

Section 4

OVERVIEW OF RULES AND REGULATIONS

The documents described in this section provide the legal authority for local governments to engage in debris clean-up operations and seek reimbursement from the federal government. The County will review each of these documents on an annual basis to familiarize themselves with the governing statutes, but also to identify any changes to the regulations and guidelines.

Federal Emergency Management Agency Guidelines

Under the current federal system, FEMA coordinates the response and recovery efforts for all Presidential declared disasters. FEMA provides guidance documents for local governments to be used for disaster planning and response. Three guidance documents that are generally associated with debris recovery have been summarized below.

FEMA Publication 322 – Public Assistance Guide

The PA Guide provides a general overview of the 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.

An electronic version of FEMA Publication 322 is available through the following hyperlink:

<https://www.fema.gov/media-library/assets/documents/25651>

FEMA Publication 323 – Applicant Handbook

The Applicant Handbook (Handbook) is the official “how to” for local governments who are considering applying for reimbursement following a disaster through the PA Program. This Handbook should be used in conjunction with this 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.

An electronic version of FEMA Publication 323 is available through the following hyperlink:

<http://www.fema.gov/public-assistance-policy-and-guidance>

FEMA Publication 325 – Debris Management Guide

The Debris Management Guide is a publication specifically dedicated to the rules, regulations, and policies associated with the debris clean-up process. Familiarity with this publication and any revisions, can aid a local government in limiting the amount of non-reimbursable expenses. The Debris Management Guide provides the framework for the debris removal process authorized by the Stafford Act including:

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

An electronic version of FEMA Publication 325 is available through the following hyperlink:

<http://www.fema.gov/public-assistance-policy-and-guidance>

Disaster Specific Guidance

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

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

Other Relevant Documents

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

Robert T. Stafford Disaster Relief and Emergency Assistance Act

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

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

An electronic version of the Stafford Act is available through the following hyperlink:

<http://www.gpo.gov/fdsys/pkg/CFR-2002-title44-vol1/content-detail.html>

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

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

An electronic version of 44 CFR: Title 44 is available through the following hyperlink:

<http://www.gpo.gov/fdsys/pkg/CFR-2002-title44-vol1/content-detail.html>

Appendix A

MONITORING FIRMS AND DEBRIS REMOVAL CONTRACTORS

Monitoring Firms

Tetra Tech, Inc. (formerly Beck Disaster Recovery)	2301 Lucien Way, #120 Maitland, FL 32751	Betty Kamara 407-803-2551
Thompson Consulting Services	1135 Townpark Ave #2101 Lake Mary FL 32746	Jon M. Hoyle 407- 792-0018
O'Brien's Response Management	1501 M. Stree, NW Washington DC 20005	Rose Ann Hightower 407-702-1172

Debris Removal Contractors

Ash Britt, Inc.	565 E. Hillsboro Blvd., Deerfield Bch., FL 33441 Tim Mooney 954-545-3535
Crowder-Gulf	5435 Business Parkway Theodore, AL 36582 John Ramsay 800-992-6207

Appendix B

SAMPLE PRESS RELEASES

For Immediate Release

Volusia County, Fla. – The potential for dangerous hurricane conditions is eminent for Volusia County and its residents. In anticipation of a likely large debris-generating storm, residents are asked to secure or store all yard items that may become damaging projectiles. Once dangerous conditions subside and roads have been cleared of obstructions, residents should bring any debris to the public right-of-way for removal.

The public right-of-way is the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement. Residents should separate clean, vegetative debris (woody burnable debris such as limbs and shrubbery) from construction and demolition debris. Do not mix hazardous material, such as paint cans, aerosol sprays, batteries, or appliances with construction and demolition debris. Household garbage, tires or roof shingles cannot be combined with any storm debris.

Do not place debris near any water meter vault, fire hydrant or any other above-ground utility. Only debris placed on the public right-of-way will be eligible for collection until further notice.

If all debris is not picked up during the initial pass, residents should continue to push remaining debris to the public right-of-way for collection on subsequent passes. Residential debris drop-off locations may be available within Volusia County. Check the Volusia County Web site (**INSERT WEB SITE**) for the location of these sites and the hours of operation or call **INSERT NUMBER**. Disposal of all reconstruction debris (debris resulting from rebuilding) is the responsibility of the homeowner.

Volusia County residents are encouraged to stay indoors until dangerous winds have passed. Please tune into local news channels for updated weather information.

####

For Immediate Release

Volusia County, Fla. – Volusia County is beginning its recovery process in the wake of **INSERT EVENT**. Volusia County residents are asked to place any storm-generated debris on the public right-of-way.

The public right-of-way is the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement. Keep vegetative debris (woody burnable debris such as limbs and shrubbery) separated from construction and demolition debris, as they will be collected separately. Bagged debris should not be placed on the public right-of-way, only loose debris will be collected. Any roof shingles or tires resulting from **INSERT EVENT**, may be eligible for removal and should be separated at the curb.

Do not place debris near any water meter vault, fire hydrant or any other above-ground utility. Only debris placed on the public right-of-way will be eligible for collection until further notice. Household hazardous waste may be dropped off at the Tomoka Landfill and/or the West Volusia Transfer Station.

If all debris is not picked up during the initial pass, please continue to push remaining debris to the right-of-way for collection on subsequent passes. Household garbage collection will resume to its normal schedule on **INSERT DATE AND TIME**. Please check the Volusia County Web site (**INSERT WEB SITE**) for additional information and updates on the debris removal process.

For more information, please call the County's debris hotline at **INSERT NUMBER**.

####

For Immediate Release

Volusia County, Fla. – Final preparations are being made for the third and potentially final pass for debris removal in the wake of **INSERT EVENT**.

Volusia County residents should have all storm-generated debris in front of their homes on the public right-of-way (the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement) no later than **INSERT DATE** to be eligible for pick-up.

Volusia County will not be able to guarantee that debris placed on the public right-of-way after the specified deadline will be removed.

Residents should continue to separate vegetative debris (woody burnable debris such as limbs and shrubbery) and construction and demolition debris. Do not place debris near any water meter vault, fire hydrant or any other above-ground utility. Hazardous household chemicals such as paint cans and batteries may be deposited at the **INSERT LOCATION**.

You can follow the debris removal efforts in your neighborhood and the rest of the County by going to the Volusia County Web site (**INSERT WEB SITE**), or by calling **INSERT NUMBER**.

####

Appendix C

DEBRIS ESTIMATE MODELS

Table C-1
Category 1

Debris Volume Estimate Report		
<p>Volusia County Florida Category 1</p>		
<u>Cubic Yardage Estimate</u>		
Estimated 2007 Households	54,906	
Storm Category	1	
Vegetation Characteristic	Medium	
Commercial/Industrial Density	Medium	
Storm Precipitation Characteristic	Heavy	
<p>Q = H (C)(V)(B)(S) where:</p>		
Q = quantity of debris in cubic yards	220,000	
H = number of households	= 54,906	
C = storm category factor in cubic yards	= 2	
V = vegetation characteristic multiplier	= 1.30	
B = commercial/business/industrial multiplier	= 1.20	
S = storm precipitation characteristic multiplier	= 1.30	
Clean Woody Debris	154,000	
Mixed C&D Debris	66,000	
Total Debris	220,000	
<u>Cost Estimate</u>		
<u>Debris Storage Site Requirements</u>		
AC	One Acre	4,840.00 Square Yards (SY)
20	Foot Stack Height	6.67 Yards
	Volume Per Acre	32,267 CY/AC
	Total Debris Estimate	220,000
	Debris Storage Requirement	6.82 AC
	Road and Buffer Factor	1.66
	Estimated Storage Requirements	11.32 AC
<p><u>Notes:</u></p> <p>[1] Source: USACE Hurricane Debris Estimating Model.</p> <p>[2] Estimated number of households is based off a 2% increase per year</p>		

Table C-2
Category 2

Debris Volume Estimate Report		
Volusia County Florida		
Category 2		
		
<u>Cubic Yardage Estimate</u>		
Estimated 2007 Households	54,906	
Storm Category	2	
Vegetation Characteristic	Medium	
Commercial/Industrial Density	Medium	
Storm Precipitation Characteristic	Heavy	
<p>Q = H (C)(V)(B)(S) where:</p> <p>Q = quantity of debris in cubic yards = 890,000 H = number of households = 54,906 C = storm category factor in cubic yards = 8 V = vegetation characteristic multiplier = 1.30 B = commercial/business/industrial multiplier = 1.20 S = storm precipitation characteristic multiplier = 1.30</p>		
Clean Woody Debris	623,000	
Mixed C&D Debris	267,000	
Total Debris	890,000	
<u>Cost Estimate</u>		
<u>Debris Storage Site Requirements</u>		
AC	One Acre	4,840.00 Square Yards (SY)
20	Foot Stack Height	6.67 Yards
	Volume Per Acre	32,267 CY/AC
	Total Debris Estimate	890,000
	Debris Storage Requirement	27.58 AC
	Road and Buffer Factor	1.66
	Estimated Storage Requirements	45.79 AC
<p><u>Notes:</u></p> <p>[1] Source: USACE Hurricane Debris Estimating Model.</p> <p>[2] Estimated number of households is based off a 2% increase per year</p>		

Table C-3
Category 3

Debris Volume Estimate Report	
Volusia County Florida Category 3	
<u>Cubic Yardage Estimate</u>	
Estimated 2007 Households	54,906
Storm Category	3
Vegetation Characteristic	Medium
Commercial/Industrial Density	Medium
Storm Precipitation Characteristic	Heavy
Q = H (C)(V)(B)(S) where:	
Q = quantity of debris in cubic yards	2,900,000
H = number of households	= 54,906
C = storm category factor in cubic yards	= 26
V = vegetation characteristic multiplier	= 1.30
B = commercial/business/industrial multiplier	= 1.20
S = storm precipitation characteristic multiplier	= 1.30
Clean Woody Debris	2,030,000
Mixed C&D Debris	870,000
Total Debris	2,900,000
<u>Cost Estimate</u>	
<u>Debris Storage Site Requirements</u>	
AC One Acre	4,840.00 Square Yards (SY)
20 Foot Stack Height	6.67 Yards
Volume Per Acre	32,267 CY/AC
Total Debris Estimate	2,900,000
Debris Storage Requirement	89.88 AC
Road and Buffer Factor	1.66
Estimated Storage Requirements	149.19 AC
<u>Notes:</u>	
[1] Source: USACE Hurricane Debris Estimating Model.	
[2] Estimated number of households is based off a 2% increase per year	

Table C-4
Category 4

Debris Volume Estimate Report		
Volusia County Florida Category 4		
		
<u>Cubic Yardage Estimate</u>		
Estimated 2007 Households	54,906	
Storm Category	4	
Vegetation Characteristic	Medium	
Commercial/Industrial Density	Medium	
Storm Precipitation Characteristic	Heavy	
<p>Q = H (C)(V)(B)(S) where:</p>		
Q = quantity of debris in cubic yards	5,570,000	
H = number of households	= 54,906	
C = storm category factor in cubic yards	= 50	
V = vegetation characteristic multiplier	= 1.30	
B = commercial/business/industrial multiplier	= 1.20	
S = storm precipitation characteristic multiplier	= 1.30	
Clean Woody Debris	3,899,000	
Mixed C&D Debris	1,671,000	
Total Debris	5,570,000	
<u>Cost Estimate</u>		
<u>Debris Storage Site Requirements</u>		
AC	One Acre	4,840.00 Square Yards (SY)
20	Foot Stack Height	6.67 Yards
	Volume Per Acre	32,267 CY/AC
	Total Debris Estimate	5,570,000
	Debris Storage Requirement	172.62 AC
	Road and Buffer Factor	1.66
	Estimated Storage Requirements	286.56 AC
<p><u>Notes:</u></p> <p>[1] Source: USACE Hurricane Debris Estimating Model.</p> <p>[2] Estimated number of households is based off a 2% increase per year</p>		

Table C-5
Category 5

Debris Volume Estimate Report		
Volusia County Florida Category 5		
		
<u>Cubic Yardage Estimate</u>		
Estimated 2007 Households	54,906	
Storm Category	5	
Vegetation Characteristic	Medium	
Commercial/Industrial Density	Medium	
Storm Precipitation Characteristic	Heavy	
<p>Q = H (C)(V)(B)(S) where:</p>		
Q = quantity of debris in cubic yards	8,910,000	
H = number of households	= 54,906	
C = storm category factor in cubic yards	= 80	
V = vegetation characteristic multiplier	= 1.30	
B = commercial/business/industrial multiplier	= 1.20	
S = storm precipitation characteristic multiplier	= 1.30	
Clean Woody Debris	6,237,000	
Mixed C&D Debris	2,673,000	
Total Debris	8,910,000	
<u>Cost Estimate</u>		
<u>Debris Storage Site Requirements</u>		
AC	One Acre	4,840.00 Square Yards (SY)
20	Foot Stack Height	6.67 Yards
	Volume Per Acre	32,267 CY/AC
	Total Debris Estimate	8,910,000
	Debris Storage Requirement	276.14 AC
	Road and Buffer Factor	1.66
	Estimated Storage Requirements	458.39 AC
<p><u>Notes:</u></p> <p>[1] Source: USACE Hurricane Debris Estimating Model.</p> <p>[2] Estimated number of households is based off a 2% increase per year</p>		

Appendix D

COUNTY APPROVED TDSRS AND FDEP GUIDANCE FOR TDSRS



ELECTRONIC MAIL
JAngiulli@co.volusia.fl.us

Mr. John V. Angiulla
Interim Director
Volusia County Solid Waste Division
3151 E. New York Avenue
DeLand, Florida 32724

OCD-SW-07-0383

Florida Department of Environmental Protection

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

Volusia County– SW
Plymouth Avenue Landfill Staging Area – WACS # 27539
Tomoka Farms Road Landfill Staging Area – WACS # 27540
Pre-Approval for Temporary Debris Staging Sites

Dear Mr. Angiulla:

Based on a review of the information submitted by Jennifer Stirk on behalf of Volusia County the Central District Waste Program approves the staging sites listed below for the temporary storage of storm related debris. All staging sites must be managed as directed by Attachment 1 and all Emergency Final Orders issued by the state of Florida.

1. Plymouth Avenue Landfill Staging Area
2. Tomoka Farms Road Landfill Staging Area

You have indicated that the staging sites will be primarily used for the temporary storage of vegetative waste. The only other type of waste authorized to be stored at the staging sites is construction and demolition (C&D) type waste. If the County does store both vegetative and C&D waste at a single staging site the two waste types must be stored separately.

If you have any questions or need further information, please contact Jeff Waters at (407) 893-3328 or by e-mail at jeff.t.waters@dep.state.fl.us. Thank you for your effort to help prepare for the 2007 hurricane season.

Sincerely,

F. Thomas Lubozynski, P.E.
Waste Management Administrator

Date: September 21, 2007

FLT/jtw

cc : Jennifer Stirk, Volusia County Solid Waste Division, JStirk@co.volusia.fl.us
Attachments:1. Guidance for Establishment, Operation and Closure of Staging Areas for
Hurricane-generated Debris

"More Protection, Less Process"
www.dep.state.fl.us

Guidance for Establishment, Operation and Closure of Staging Areas for Hurricane-generated Debris

Updated: November 19, 2004

General Information

1. The Department understands that in addition to other requirements by the Federal Emergency Management Agency (FEMA), staging areas must be approved by the Department in order for the owner/operator of the staging area to receive Public Assistance funds from FEMA. Field authorizations for staging areas by the Department may be issued prior to or following a site inspection by Department personnel for staging areas to be used for temporary storage and processing of Hurricane-generated debris.

2. Field authorizations for staging areas may be requested by providing oral or written notice to the Department containing the following information.

- A description of the staging area design: For example, is the staging area an open field or paved? Is it near bodies of water or potable wells? What areas would be used for staging debris and for processing?
- Plans for operation of the staging area: For example will it be used for staging only or also processing? What wastes will be managed and what are the anticipated operating hours and days of the week when the site will be open? Who can bring wastes to the site? If processing occurs, what type is expected?
- The location of the staging area should be provided including the address and if possible, its latitude and longitude or directions from major roadways.
- The name, address, and telephone number of the site manager should be provided.

3. The Department prefers that requests for approval of staging areas be made by solid waste officials in the county or city where the staging area is located. Such staging areas do not need to be owned by the local government but must have county or city (or its designated contractors) oversight and management. The Department may consider approving the private operation of staging areas on a case-by-case basis.

4. The owner or operator of each staging area should keep records of the amount and type of waste received, waste sent off-site for disposal or recycling, and waste left on-site. Such records can be very valuable for demonstrating that the staging area has been operated in accordance with applicable regulations and orders. These records should be kept at a location designated by the site manager and made available for review by Department staff upon request.

Location of Staging Areas

5. If possible, it is advisable to test the soil, groundwater and/or surface water at a proposed staging area prior to receipt of Hurricane-generated debris to establish pre-existing conditions.

6. Staging areas for debris other than yard trash and uncontaminated vegetative debris must not be located within 500 feet of a potable water well, unless otherwise approved by the Department. Staging areas for yard trash and uncontaminated vegetative debris must not be located within 100 feet of a potable water well, unless otherwise approved by the Department.

7. Staging areas for debris other than yard trash and uncontaminated vegetative debris must not be located within 200 feet of a natural or artificial body of water, unless otherwise approved by the Department. Staging areas for yard trash and uncontaminated vegetative debris must not be located within 50 feet of a natural or artificial body of water, unless otherwise approved by the Department.

8. In no case should a staging area be located in wetlands or a water body.

COUNTY APPROVED TDSRS AND FDEP GUIDANCE FOR TDSRS

Operation of Staging Areas

9. Staging areas should have:
- stormwater controls, such as silt fences, to prevent discharge of contaminated runoff into water bodies where such discharge may cause violations of Department standards (example: turbidity);
 - some method to control the offsite migration of dust, wood chips or other debris residuals from vehicular traffic and from the handling of debris and ash;
 - some type of access control to prevent unauthorized dumping and scavenging; and,
 - spotters to correctly identify and segregate waste types for appropriate management.
10. Only construction and demolition debris, land clearing debris, yard trash, vegetative waste, or Class III waste may be stored at the staging area. Class I waste (such as household garbage, putrescible waste, or mixed wastes containing these materials) must be removed from the staging areas and disposed of as soon as practicable to prevent odor, vectors and sanitary nuisances. Again, spotters should be used during waste pickup and/or at the staging areas to correctly identify and segregate waste types for appropriate management. The following management options for the Hurricane-generated debris must be followed.
- Class I wastes, including all mixed wastes, must be disposed of at a Class I landfill or, except for asbestos-containing materials, in a waste-to-energy facility.
 - Non-recyclables and residuals generated from segregation of Hurricane-generated debris shall also be disposed of in a Class I landfill or waste-to-energy facility.
 - Uncontaminated yard trash may be disposed of in permitted lined or unlined landfills, permitted land clearing debris facilities or permitted construction and demolition debris disposal facilities.
 - Uncontaminated yard trash and clean wood may be processed at a registered yard trash processing facility.
 - Construction and demolition debris that is mixed with other Hurricane-generated debris need not be segregated from other solid waste prior to disposal in a lined landfill. Construction and demolition debris that is either source-separated or is separated from other Hurricane-generated debris at an authorized staging area may be managed at a permitted construction and demolition debris disposal or recycling facility upon approval by the Department of the methods and operational practices used to inspect the waste during segregation.
 - Unsalvageable refrigerators and freezers containing solid waste such as rotting food that may create a sanitary nuisance may be disposed of in a Class I landfill; provided, however, that chlorofluorocarbons and capacitors must be removed and recycled to the greatest extent practicable using techniques and personnel meeting the requirements of 40 CFR Part 82.
11. Burning of Hurricane-generated yard trash, other vegetative debris, and in some cases demolition debris, provided reasonable efforts are made to limit the demolition debris being burned to untreated wood, is allowed in air curtain incinerators (ACIs) if the conditions of the Emergency Order¹, OGC No. 04-1659, are followed. The following additional information is provided for operation of the ACIs and management of the ash residue.
- The ACI burn area should have a minimum setback distance of 100 feet from the debris piles and 1000 feet from the nearest building, or as required by the local Fire Department.
 - Ash should be removed from the ACI burn pit when the level reaches approximately two feet below the lip of the burn pit and the burn should be extinguished 2 hours before removal of the ash.
 - As required in the Order, ash residue from the combustion of yard trash or clean wood wastes may be disposed of in a permitted disposal facility, or may be land spread in

¹ The Emergency Order can be obtained from the Department's website at the following address: <http://www.dep.state.fl.us/mainpage/em/hurricane04.htm>. The Emergency Order also has additional information on the management of domestic wastewater residuals.

COUNTY APPROVED TDSRS AND FDEP GUIDANCE FOR TDSRS

any areas approved by local government officials except in wellfield protection areas or water bodies.

- As required in the Order, ash from the combustion of other Hurricane-generated debris shall be disposed of in a Class I landfill. Metals or other non-combustible materials segregated from the ash residue may also be disposed of in an unlined, permitted landfill.

12. Open burning of Hurricane-generated vegetative debris must receive prior authorization from the Division of Forestry. Ash from this burning may be disposed or used as described above for ACIs.

13. Chipping and/or grinding of Hurricane-generated vegetative debris is encouraged to help reduce the volume of the material. The Department recommends the following guidelines for managing the volume reduced material.

- In accordance with National Fire Protection Association², mulch and chip piles should not exceed 18 feet in height, 50 feet in width and 350 feet in length. Piles should be subdivided by fire lanes having at least 25 feet of clear space at the base around each pile. These piles should not be compacted.
- Smoking should only be allowed in designated areas well away from the combustible material.
- Possible uses of the size reduced material include: (1) a soil amendment where it is disked into the soil or mixed with potting soil; (2) as mulch for weed control, moisture retention, soil temperature control, erosion control or slope stabilization; (3) fuel; (4) feedstock for composting operations; (5) animal bedding material; and (6) pulp wood.
- Use of the size reduced material as a soil amendment must be at normally accepted agronomic rates as determined by industry practice. Recommendations for appropriate application rates by the Institute of Food and Agricultural Sciences³ (IFAS) may be used, and can be obtained from the local IFAS Agricultural Extension agent.
- The use of mulch must be considered beneficial rather than disposal. Mulch must not be placed in water bodies or on wetlands.

Closure of Staging Areas

14. Staging areas for Hurricane-generated debris are temporary locations that can be used for the duration of the Emergency Order or as otherwise approved by the Department. The following guidelines apply to the closing of temporary staging areas.

- Owner/operators of the staging areas must contact the Department prior to closing a staging area to discuss and coordinate what will be required for closure including environmental sampling, if needed.
- All Hurricane-generated debris must be removed by the expiration of the Emergency Order, unless otherwise approved by the Department.
- Mulch produced from processing vegetative debris may be left on-site if prior approval is obtained from the Department. The Department will consider these requests on a case-by-case basis.
- Areas that were only used to stage vegetative debris, or ash from burning solely vegetative debris, will not require any environmental sampling after the debris or ash is removed unless there is reason to believe that the area may have become contaminated (e.g., significant visible staining or known contaminant releases in the area).
- Areas that were used to stage mixed debris, or ash from burning mixed debris, will normally require environmental sampling after the debris or ash is removed unless there is reason to believe that no contamination of the area occurred (e.g., the area is paved with asphalt or concrete and there is no visible evidence of staining or known contaminant releases).

² NFPA 230, "Standard for the Fire Protection of Storage"

³ The web address for IFAS is <http://www.ifas.ufl.edu/>

COUNTY APPROVED TDSRS AND FDEP GUIDANCE FOR TDSRS

- When environmental sampling for soils and groundwater is needed, it should typically include at least one soil sample and one groundwater monitoring well in areas showing significant visible staining or areas believed to be impacted by the staged waste or ash. Unless otherwise approved by the Department, these samples should normally be analyzed for total RCRA metals, volatile organic compounds and semi-volatile organic compounds using approved EPA methods. The Department can also require other approaches to conducting environmental sampling at staging areas on a case-by-case basis.

15. The Department must be informed in writing when all closure activities at the staging area are completed. If environmental sampling was conducted as part of the closure activities, then the closure notice should include the results of this sampling, unless otherwise approved by the Department.

Appendix E FIELD DOCUMENTS

 BECK DISASTER RECOVERY, INC.		LOAD TICKET # _____
Applicant:		Disaster #
Program:		Contractor:
Truck # :		Truck Capacity:
House # :	Street Name:	Zone #:
Debris Classification:		
<input type="checkbox"/> Vegetative/Woody	<input type="checkbox"/> Mixed	
<input type="checkbox"/> Construction & Demolition	<input type="checkbox"/> White Goods	
<input type="checkbox"/> Household Hazardous Waste	<input type="checkbox"/> Animal Carcasses	
<input type="checkbox"/> Hazardous Materials / Toxic	<input type="checkbox"/> Other: _____	
Driver's Name:		Loading Odometer:
Loading Time:		Loading Date:
Monitor Signature:		I.D. #
TDSRS / Disposal Site Location:		
Load Call (%):		Disposal Odometer:
Disposal Time:		Disposal Date:
Monitor Signature:		I.D. #
Contractor Signature:		I.D. #
Notes:		
<i>White - Applicant Yellow and Blue - Contractor Pink and Green - Driver Gold - Site Copy</i>		
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		HAULOUT TICKET #
Applicant:	Disaster #	
Program:	Contractor:	
Truck # :	Truck Capacity:	
TDSR Site:		
Haulout Debris Classification:		
<input type="checkbox"/> Vegetative Mulch	<input type="checkbox"/> White Goods	
<input type="checkbox"/> Ash	<input type="checkbox"/> Hazardous Materials / Toxic	
<input type="checkbox"/> C & D Mulch	<input type="checkbox"/> Household Hazardous Waste	
<input type="checkbox"/> C & D Compacted	<input type="checkbox"/> Other: _____	
Driver's Name:	Loading Odometer:	
Loading Time:	Loading Date:	
Monitor Signature:	I.D. #	

Disposal Site Location:	Disposal Odometer:	
Load Call (%):	Weight (tons / lbs.)	
Disposal Time:	Disposal Date:	
Monitor Signature:	I.D. #	
Contractor Signature:	I.D. #	
Notes:		
<i>Khaki - Applicant Yellow and Blue - Contractor Pink and Green - Driver Gold - Site Copy</i>		
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		UNIT RATE TICKET #
Applicant:		Disaster #
Program:		
<input type="checkbox"/> Parks	<input type="checkbox"/> Right-of-Entry	<input type="checkbox"/> Time & Materials
<input type="checkbox"/> ROW Lean/Hanger	<input type="checkbox"/> Stumps	<input type="checkbox"/> _____
Contractor:		Crew #:
Survey Item # :		GPS:
		N: _____ W: _____
House # :	Street Name:	Zone #:
Parcel # :		ROE # :
Contract Rate Code:		
1	3	5
2	4	6
7	8	9
Other: _____		
Contract Rate Sub-Code		
A	C	E
B	D	F
G	H	I
Other: _____		
Unit Count:		Measurement:
Start Time:	A P	End Time: A P
		Date:
Monitor Signature:		I.D. #
Contractor Signature:		I.D. #
Notes:		
<i>White - Applicant Yellow and Blue - Contractor Pink and Green - Driver Gold - Site Copy</i>		
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FIELD DOCUMENTS



TRUCK CERTIFICATION

CAPACITY	VEHICLE I.D.

GENERAL INFORMATION					
Applicant:	Disaster #	Cert. Location:			
Contractor:	Subcontractor:	Date:	Time:	A P	
Driver Name:	License #	State:	Expiration:		
Driver Phone:	Tag #	State:	Expiration:		
Vehicle Type:	<input type="checkbox"/> Dump Truck <input type="checkbox"/> Hydraulic Dump Trailer <input type="checkbox"/> Non-hydraulic Dump Trailer				
	<input type="checkbox"/> Semi-Trailer <input type="checkbox"/> Self-Loading Truck <input type="checkbox"/> Other: _____				
Features:	<input type="checkbox"/> Sideboards <input type="checkbox"/> Dog Box <input type="checkbox"/> Curved/Angled Sides/Floor				
	<input type="checkbox"/> Tail Gate Extension <input type="checkbox"/> Wheel Wells <input type="checkbox"/> Other: _____				
MEASUREMENT INFORMATION					
Primary Interior Dimensions:	L ₁	x W ₁	x H ₁	= V ₁	Cubic Feet (to 0.1)
Modifications to Overall Interior Dimensions					
Circle "+" for Addition or "-" for deduction					
Type Code: 1 = Box Shape; 2 = Sideboards; 3 = Tail Gate Extension; 4 = Dog Box; 5 = Wheel Wells; 6 = Other					
Type Code ₂ :	L ₂	x W ₂	x H ₂	= V ₂	CF (to 0.1) + -
Type Code ₃ :	L ₃	x W ₃	x H ₃	= V ₃	CF (to 0.1) + -
Type Code ₄ :	L ₄	x W ₄	x H ₄	= V ₄	CF (to 0.1) + -
Type Code ₅ :	L ₅	x W ₅	x H ₅	= V ₅	CF (to 0.1) + -
V _{total} = Primary Interior Cubic Feet +/- Modification Cubic Feet				= V _{total}	CF (to 0.1) CYD
CYD = V _{total} / 27 (rounded to the nearest whole number)					
VEHICLE SKETCH					
<p>Primary (Side View)</p>			<p>Primary (End View)</p>		
<p>Type Code₂: (if applicable)</p>	<p>Type Code₃: (if applicable)</p>	<p>Type Code₄: (if applicable)</p>	<p>Type Code₅: (if applicable)</p>		
Measured by:	I.D. #	Calculated by:	I.D. #	Checked by:	I.D. #
Applicant Representative (print):			I.D. #	Contractor Representative (print)	
Signature:			Signature:		
White - Applicant Yellow and Blue - Contractor Pink and Green - Driver Gold - Site Copy					
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Appendix F

HAZARDOUS STUMP EXTRACTION AND REMOVAL ELIGIBILITY



FEMA

RECOVERY POLICY - RP9523.11

I. TITLE: Hazardous Stump Extraction and Removal Eligibility

II. DATE: May 1, 2006

III. PURPOSE:

Establish criteria used to reimburse applicants for removing eligible hazardous stumps from public or, where authorized, private property.

IV. SCOPE AND AUDIENCE:

The policy is applicable to all major disasters and emergencies declared on or after the date of publication. It is intended for all personnel involved in the administration and execution of the Public Assistance Program, including applicants.

V. AUTHORITY:

Sections 403 and 407 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121-5206, as amended.

VI. BACKGROUND:

Public Assistance regulations authorize reimbursement for the removal of debris from public and private land when it is in the public interest. Such removal is in the public interest when it is necessary to: eliminate immediate threats to life, public health and safety, or eliminate immediate threats of significant damage to improved public or private property; or to ensure economic recovery of the affected community to the benefit of the community at large. Trees that are uprooted during a disaster event such that all or part of their roots are exposed may pose an immediate threat to public health and safety.

VII. POLICY:

A. When a disaster event uproots a tree or stump (i.e., 50% or more of root ball is exposed) on a public right-of-way, improved public property or improved property owned by certain private nonprofit organizations, and the exposed root ball poses an immediate threat to life, public health and safety, FEMA may provide supplemental assistance to remove, transport, dispose, and provide fill for the root cavity of an eligible uprooted tree or stump. The Federal Emergency Management Agency (FEMA) will reimburse applicants reasonable costs for this type of work only when uprooted stumps are more than 24 inches in diameter (measured two

HAZARDOUS STUMP EXTRACTION AND REMOVAL ELIGIBILITY



FEMA

RECOVERY POLICY - RP9523.11

feet from the ground), with the consensus of the Applicant and the State, and is approved in advance by FEMA, using the attached Hazardous Stump Worksheet.

1. If it is necessary to remove an uprooted stump before it can be inspected by FEMA because it poses a threat that must be dealt with immediately, the applicant must submit documentation, to FEMA including photographs, that establishes its location on public property, specifics on the threat, stump diameter measured two feet up the trunk from the ground, quantity of material to fill the hole, and any special circumstances.

2. FEMA will reimburse applicants for extraction, transport and disposal of stumps with a diameter of 24 inches or smaller at the unit cost rate for regular vegetative debris, using the attached Stump Conversion Table, as such stumps do not require special equipment.

3. FEMA will reimburse applicants at the unit cost rate (usually cubic yards) for normal debris removal for all stumps, regardless of size, placed on the rights-of-way by others (i.e., contractors did not extract them from public property or property of eligible Private Non Profit organization). In such instances, applicants do not incur additional cost to remove these stumps – the same equipment is used to pick up “regular” debris can be used to pick up these stumps.

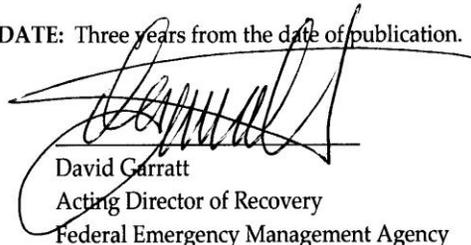
4. If an applicant incurs additional costs in picking up large stumps (over 24 inches in diameter) from rights-of-way, it should complete the Hazardous Stump Worksheet and present documentation to FEMA in advance for consideration.

5. Stumps with less than 50% of their root ball exposed should be cut flush at ground level, and the cut portion included with regular vegetative debris. Straightening or bracing of trees is not eligible for reimbursement.

VIII. ORIGINATING OFFICE: Recovery Division (Public Assistance Branch)

IX. SUPERSESSION: This Policy Directive supersedes all previous guidance on this subject.

X REVIEW DATE: ~~Three years from the date of publication.~~


David Garratt
Acting Director of Recovery
Federal Emergency Management Agency

HAZARDOUS STUMP EXTRACTION AND REMOVAL ELIGIBILITY

Stump Conversion Table

Diameter to Volume Capacity

The quantification of the cubic yards of debris for each size of stump in the following table was derived from FEMA field studies conducted throughout the State of Florida during the debris removal operations following Hurricanes Charley, Frances, Ivan and Jeanne. The following formula is used to derive cubic yards:

$$\frac{[(\text{Stump Diameter}^2 \times 0.7854) \times \text{Stump Length}] + [(\text{Root Ball Diameter}^2 \times 0.7854) \times \text{Root Ball Height}]}{46656}$$

0.7854 is one-fourth Pi and is a constant.

46656 is used to convert cubic inches to cubic yards and is a constant

The formula used to calculate the cubic yardage used the following factors, based upon findings in the field:

- Stump diameter measured two feet up from ground
- Stump diameter to root ball diameter ratio of 1:3.6
- Root ball height of 31"

Stump Diameter (Inches)	Debris Volume (Cubic Yards)	Stump Diameter (Inches)	Debris Volume (Cubic Yards)
6	0.3	46	15.2
7	0.4	47	15.8
8	0.5	48	16.5
9	0.6	49	17.2
10	0.7	50	17.9
11	0.9	51	18.6
12	1	52	19.4
13	1.2	53	20.1
14	1.4	54	20.9
15	1.6	55	21.7
16	1.8	56	22.5
17	2.1	57	23.3
18	2.3	58	24.1
19	2.6	59	24.9
20	2.9	60	25.8
21	3.2	61	26.7
22	3.5	62	27.6
23	3.8	63	28.4
24	4.1	64	29.4
25	4.5	65	30.3
26	4.8	66	31.2
27	5.2	67	32.2
28	5.6	68	33.1
29	6	69	34.1
30	6.5	70	35.1
31	6.9	71	36.1
32	7.3	72	37.2
33	7.8	73	38.2
34	8.3	74	39.2
35	8.8	75	40.3
36	9.3	76	41.4
37	9.8	77	42.5
38	10.3	78	43.6
39	10.9	79	44.7
40	11.5	80	45.9
41	12	81	47
42	12.6	82	48.2
43	13.3	83	49.4
44	13.9	84	50.6
45	14.5		

HAZARDOUS STUMP EXTRACTION AND REMOVAL ELIGIBILITY

Hazardous Stump Worksheet

Applicant: _____ Date: _____

Applicant Representative: _____ Signature: _____

FEMA Representative (if available) _____ Signature: _____

State Representative (if available): _____ Signature: _____

	Physical Location (i.e., Street address, road, cross streets, etc.)	Description of Facility (ROW, Park, City Hall, etc.)	Hazard		GPS (decimal degrees, 00.0000000)		Tree Size (Diameter)	Eligible		Fill For Debris Stumps	Comments (See attached sketch, photo, etc.)
			Yes	No	Latitude (N)	Longitude (W)		Yes	No		
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

Appendix G

SAMPLE RIGHT-OF-ENTRY AGREEMENT

ROE Number:

RIGHT OF ENTRY AGREEMENT

Volusia County, Florida

I/We _____, the owner(s) of the property _____ commonly _____ identified as _____, County of _____,

State of Florida, do hereby request aid in removing debris to prevent further damage to my/our property and therefore grant and give freely and without coercion, the right of access and entry to said property to Volusia County, or the United States Government, its employees, agents, contractors, and subcontractors thereof, pursuant to all applicable laws for the purpose of removing and clearing any or all storm-generated debris of whatever nature from the above described property.

It is fully understood that this permit is not an obligation to perform debris clearance. The undersigned agrees and warrants to hold harmless, Volusia County, State of Florida and the United States Government, their agencies, contractors, and subcontractors, for damage of any type, whatsoever, either to the above described property or persons situated thereon and hereby release, discharge and waive any action, either legal or equitable that might arise out of any activities on the above described property. The property owner(s) will mark any storm damaged sewer lines, water lines and other utility lines located on the described property.

I/We (have ____, have not ____), (will ____, will not ____) receive(d) any compensation for debris removal from any other source including SBA, NRCS, private insurance, individual and family grant program or any other PA Program. I will report any insurance settlements made to me or my family for debris removal on this property that has been performed at government expense. I am fully aware that an individual who fraudulently or willfully misstates any fact in connections with this agreement shall be subject to a fine of not more than \$10,000 or imprisoned for not more than one year or both.

STRUCTURAL DEMOLITION/REMOVAL

I/We (do _____, do not _____) request demolition and/or removal of unsafe structures on the described property, and upon request, certify that I/we have dwelling and/or appurtenant structures located on the property that are storm damaged to the extent to be unsafe, uninhabitable and beyond reasonable repair. If Volusia County's debris removal program allows structural demolition and/or removal of unsafe structures by this request, I/we extend right of entry for such

HAZARDOUS STUMP EXTRACTION AND REMOVAL ELIGIBILITY

purpose. By this authorization I/we state all personal effects of value to me/us have been removed from the property. I/We understand that the County is not obligated to demolish or remove structures as part of the debris removal program, and that any structures that may be removed under the program are recognized to be unsafe.

For the considerations and purposes set forth herein, I hereby set my hand this _____ day of _____, 20_____.

Owner Signature: _____ Owner Signature: _____

Printed Name: _____ Printed Name: _____

Address Telephone

Witness (Signature/Printed Name): _____

Address: _____

Appendix H

WORKPLACE SAFETY PROGRAM GUIDELINES

Workplace safety program guidelines are available at the following hyperlink:

https://www.osha.gov/pls/osha/web/owadisp.show_document?p_table=federal_register&p_id=12909

Appendix I

HEALTH AND SAFETY STRATEGY

Health and Safety Strategy

Purpose

The purpose of this health and safety strategy is to supplement the existing *County Workplace Safety Program Guidelines* with regards to debris removal activities. These are recommended baseline safety provisions. Ultimately, health and safety is the responsibility of the contracted parties involved in debris removal activities. This document will outline some of the general steps necessary to provide a safe work environment for monitoring firm and debris removal contractors' employees. In addition, this document will identify some representative work hazards and the appropriate measures to reduce risk of injury.

1.0 Dissemination of Information

The monitoring firm and debris removal contractors' project managers will be provided with this document and will be expected to disseminate the information and guidelines to their respective personnel. A copy of the document should be available for consultation. In addition, elements of the document will be reviewed from periodically during the project to increase worker awareness.

2.0 Compliance

The monitoring firm and debris removal contractors' project managers are responsible for health and safety compliance of their respective personnel and subcontractors. Any crews or individuals that are not compliant shall be suspended from debris removal activities until the situation is remedied. Frequent offenders of safety policies and procedures will be dismissed from the project entirely.

3.0 Job Hazard Assessment

Though debris removal activities are fairly similar among events, assessing the particular hazards of each disaster is an important part of maintaining health and safety for the debris removal workers. At a minimum, the following areas of focus should be considered as part of job hazard assessment:

- **Disaster Debris** – Disasters that result in property damage typically generate large quantities of debris which must be collected and transported for disposal. The type of debris varies depending on the characteristics of the region (e.g. terrain, climate, dwelling and building types, population, etc.) and the debris-

generating event (e.g. type, event strength, duration, etc.). In addition, the disaster debris produces a host of uneven surfaces, which must be negotiated.

- **Debris Removal** – Often the removal of disaster debris involves working with splintered, sharp edges of vegetative or construction material debris. Many disasters involve heavy rains or flooding. Consequently, disaster debris is damp and heavier than usual. As weights increase, so does the risk of injury.
- **Removal Equipment** – In most disasters, debris must be removed from the public ROW to provide access for emergency vehicles and subsequent recovery efforts. Debris collection and removal requires the use of heavy equipment and power tools to trim, separate and clear disaster debris.
- **Traffic Safety** – The ROW is located primarily on publicly-maintained roads. As a result, much of the debris removal process takes place in traffic of varying levels of congestion. In addition, disasters often damage road signs, challenging safety on the road.
- **Wildlife Awareness** – Disasters are traumatic events for people as well as wildlife. Displaced animals, reptiles and insects pose a hazard to debris removal workers.
- **Debris Disposal** – After disaster debris is collected it is often transported to a Temporary Disposal, Storage and Reduction Site (TDSRS). Upon entry to a TDSRS, the monitoring firm will assess the volume of disaster debris being transported. The collection vehicle will then dispose of the disaster debris and the debris will be reduced either through a grinding operation or incineration. The TDSRS is a common area for injury. Response and recovery workers in this environment are more likely to be exposed to falling debris, heavy construction traffic, noise levels, dust and airborne particles from the reduction process.
- **Climate** – Debris-generating disasters often occur in areas or seasons with extreme weather conditions. The effects of temperature and humidity on physical labor must be monitored, and proper work-rest intervals must be assessed.

4.0 Administrative and Engineering Controls

The use of administrative and engineering controls can greatly reduce the threats to public health and safety in debris removal activities. Some common administrative and engineering controls used in the debris removal process are:

Collection Operations

- Conduct debris removal operations during daylight hours only.

- Limit clean-up operations to one side of the road at a time.
- Limit collection work under overhead lines.
- Inspect piles before using heavy equipment to remove them to ensure that there are no hazardous obstructions.
- Make sure that all collection vehicles have properly functioning lights, horns and back-up alarms.
- Load collection vehicles properly (not overloaded or unbalanced).
- Cover and secure loads, if necessary.
- When monitoring the collection process, stay alert in traffic and use safe driving techniques.

Power Tools

- Inspect all power tools before use.
- Do not use damaged or defective equipment.
- Use power tools for their intended purpose.
- Avoid using power tools in wet areas.

Debris Reducing Machinery (Grinders/Wood Chippers)

- Do not wear loose-fitting clothing.
- Follow the manufacturer's guidelines and safety instructions.
- Guard the feed and discharge ports.
- Do not open access doors while equipment is running.
- Always chock the trailer wheels to restrict rolling.
- Maintain safe distances.
- Never reach into operating equipment.
- Use lock out/tag out protocol when maintaining equipment.

TDSRS/Disposal Operations

- Use jersey barriers and cones to properly mark traffic patterns.
- Use proper flagging techniques for directing traffic.
- Monitor towers must not exit into traffic and should have hand and guard rails to reduce trips and falls.
- Monitor towers must have properly constructed access stairways with proper treads and risers and proper ascent angle (4:1 height/width ratio).
- Monitor towers must be surrounded by jersey barriers which protect the tower and monitors from being struck by inbound or outbound collection vehicles.
- Monitor towers should be located upwind from dust- and particulate generating activities.
- A water truck should spray the site daily to control airborne dust and debris.

5.0 Personal Protective Equipment

Personal Protective Equipment (PPE) is the last resort to providing a safe working environment for workers. PPE does not eliminate or even reduce hazards as

HEALTH AND SAFETY STRATEGY

administrative and engineering controls do. PPE works to reduce the risk of injury by creating a protective barrier between the individuals and work place hazards.

Proper use of PPE includes using PPE for its intended purpose. For example, using the wrong type of respirator might expose the worker to carcinogenic particulates. Properly fitting the equipment to the user may require examination by a medical professional. PPE that does not fit well will not provide maximum protection and will decrease the likelihood of the individual continuing to use the equipment. In addition, improper use may result in serious injury or death. The proper use of the equipment is outlined in detail in the manufacturer's instructions.

The following PPE may be applicable in standard ROW, ROE, and vegetative and construction and demolition debris removal activities:

- **Head Protection** – Equipment designed to provide protection for an individual's head against hazards such as falling objects or the possibility of striking one's head against low hanging objects. PPE used to protect the head must comply with ANSI Z89.1-1986, "American National Standard for Personnel Protection - Protective Headwear for Industrial Workers – Requirements."
- **Foot Protection** – Equipment designed to provide protection for an individual's feet and toes against hazards such as falling or rolling objects, objects that may pierce the sole or upper section of the foot, etc. PPE used to protect the feet and toes must comply with ANSI Z-41-1991, "American National Standard for Personal Protection-Protective Footwear."
- **Hand Protection** – Equipment designed to provide protection for an individual's hands against hazards such as sharp or abrasive surfaces. The proper hand protection necessary is dependent upon the situation and characteristics of the gloves. For instance, specific gloves would be used for protection against electrical hazards while the same gloves may not be appropriate in dealing with sharp or abrasive surfaces.
- **Vision/Face Protection** – Equipment designed to provide protection for an individual's eyes or face against hazards such as flying objects. PPE used to protect eyes and face must comply with ANSI Z87.1-1989, "American National Standard Practice for Occupational and Educational Eye and Face Protection." Again, the proper eye/face protection necessary is dependent upon the situation and characteristics of the equipment. For instance, eye and face protection used by individuals who are welding may not be appropriate for individuals operating a wood chipper.
- **Hearing Protection** – Equipment designed to provide protection for an individual's hearing against prolonged exposure to high noise levels. According to OSHA, the permissible level of sound is an average of 90

decibels over the course of an eight hour work day. Above the sound exposure level, hearing protection is required. PPE used to protect hearing must comply with ANSI S3.19-1974, “American National Standard Practice for Personal Protection - Hearing Protection.”

- **Respiratory Protection** – Equipment designed to provide protection for an individual’s respiratory system against breathing air contaminated with hazardous gases, vapors, airborne particles, etc. PPE used to protect the respiratory system must comply with ANSI Z88.2-1992. In addition, the use of respiratory protection requires a qualitative fit test and in some cases a pulmonary fit test by a licensed medical professional.

6.0 PPE Debris Removal Activity

PPE requirements are made based upon the results of the job hazards assessment. The following list of PPE is organized by debris removal activity and is meant to be a representative list. Specific PPE requirements vary from location to location. In general, individuals involved in the debris removal process should personally monitor water consumption to avoid dehydration and use appropriate skin protection (breathable clothes, light colors, sunscreen, etc.). Ultimately, the selection of PPE is the responsibility of the monitoring firm and debris removal contractors’ project managers.

Debris Collection Monitoring

The hazards of disaster debris collection monitoring include, but are not limited to: struck by vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps. PPE requirements include:

- Reflective vest;
- Foot protection (rugged shoes or boots, steel toe and shank if required); and
- Long pants.

Debris Disposal Monitoring

The hazards of disaster debris disposal monitoring include, but are not limited to: struck by or caught in/between vehicles, falls or trips on stairs or uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps and struck by falling disaster debris. Monitor towers must be equipped with a first aid kit. PPE requirements include:

- Reflective vest;
- Foot protection (rugged shoes or boots, steel toe if required);
- Long pants; and
- Hard Hat.

Debris Removal

The hazards of disaster debris removal include, but are not limited to: struck by vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps and airborne debris. In addition, PPE requirements include:

- Reflective vest;
- Vision and hearing protection;
- Foot protection (rugged shoes or boots, steel toe and shank if required); and
- Long pants.

Debris Disposal and Reduction

The hazards of disaster debris disposal and reduction include, but are not limited to: struck by or caught in/between vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps, struck by falling disaster debris and airborne particles. PPE requirements include:

- Reflective Vest;
- Foot protection (rugged shoes or boots, steel toe if required);
- Vision and hearing protection;
- Long pants; and
- Hard Hat.

Debris Cutting and Trim Work

The hazards of disaster debris cutting and trimming work include, but are not limited to: struck by or caught in/between vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from power tools, vegetative or C&D sharps, struck by falling disaster debris and airborne particles. PPE requirements include:

- Reflective Vest;
- Hand and Foot protection (rugged shoes or boots, steel toe if required);
- Vision and hearing protection;
- Long pants;
- Gloves; and
- Hard Hat.

For additional information regarding health and safety requirements, please contact OSHA:

Health and Safety Contact Information	
Occupational Safety & Health Administration	1-800-321-6742

Appendix J

FEMA FACT SHEET RP9580.201



FEMA

RECOVERY DIVISION

FACT SHEET

RP9580.201

DEBRIS REMOVAL APPLICANT'S CONTRACTING CHECKLIST

Overview

To be eligible for reimbursement under the Public Assistance Program, contracts for debris removal must meet rules for Federal grants, as provided for in 44 CFR Part 13.36 *Procurement* (http://www.access.gpo.gov/nara/cfr/waisidx_04/44cfr13_04.html). Public Assistance applicants should comply with their own procurement procedures in accordance with applicable State and local laws and regulations, provided that they conform to applicable Federal laws and standards identified in Part 13. The following guidance is provided to assist Public Assistance applicants in the procurement process.

Contracting Process Checklist

- Use competitive bidding procedures. Complete and document a cost analysis to demonstrate price reasonableness on any contract or contract modification where adequate price competition is lacking, as detailed in 44 CFR 13.36(f).
- Provide a clear and definitive scope of work and monitoring requirements in the request for proposals/bids. Use acceptable emergency contracting procedures that include an expedited competitive bid process only if time does not allow for more stringent procedures.
- Require bidders to provide copies of references, licenses, financial records, and proof of insurance and bonding.
- Obtain review from your legal representative of your procurement process and any contract to be awarded to ensure they are in compliance with all Federal, State, and local requirements.
- Document procedures used to obtain/award contracts (procurement information, bid requests and tabulations, etc).
- Use load ticket requirement to record with specificity (e.g., street address) where debris is picked up and the amount picked up, hauled, reduced and disposed of.

FEMA will, when requested by applicants, assist in the review of debris removal contracts. However, such a review does not constitute approval.

Prepared By: Public Assistance Branch - Date Prepared: August 30, 2006 - Page 1 of 4



FEMA

RECOVERY DIVISION

FACT SHEET

RP9580.201

DEBRIS REMOVAL APPLICANT'S CONTRACTING CHECKLIST

Contract Provisions Checklist - Continued

All contracts must contain/reflect the following provisions:

- Requirement that all contract amendments and modifications be in writing.
- Requirement that contractor obtain adequate payment and performance bonds and insurance coverage.

Pre-Disaster and Stand-By Contracts Checklist

- It is recommended that you pre-qualify contractors prior to an event and solicit bid prices from this list of contractors once an event has occurred.
- The solicitation for pre-qualifying contractors must adequately define in the proposed scope of work all the potential types of debris, typical haul distances, and size of events for which a contract may be activated.
- To ensure reasonable debris removal costs, award debris removal contracts based on unit prices (volume or weight).
- If the contract is awarded on a time and material basis, it should be limited to no more than 70 hours of actual clearance and removal operations.
- After the initial 70-hour period, payment should be on a unit price basis (volume or weight).



FEMA

RECOVERY DIVISION

FACT SHEET

RP9580.201

DEBRIS REMOVAL APPLICANT'S CONTRACTING CHECKLIST

Avoidance Checklist

- DO NOT:** Award a debris removal contract on a sole-source basis.
- DO NOT:** Sign a contract (including one provided by a contractor) until it has been thoroughly reviewed by your legal representative.
- DO NOT:** Allow any contractor to make eligibility determinations, since only FEMA has that authority.
- DO NOT:** Accept any contractor's claim that it is "FEMA certified." FEMA does not certify, credential, or recommend debris contractors.
- DO NOT:** Award a contract to develop and manage debris processing sites unless you know it is necessary, and have contacted the State for technical assistance concerning the need for such operations. Temporary debris storage and reduction sites are not always necessary.
- DO NOT:** Allow separate line item payment for stumps 24 inches and smaller in diameter; these should be treated as normal debris.
- DO NOT:** "Piggyback" or utilize a contract awarded by another entity. Piggybacking may be legal under applicable state law; however, the use of such a contract may jeopardize FEMA funding.
- DO NOT:** Award pre-disaster/stand-by contracts with mobilization costs or unit costs that are significantly higher than what they would be if the contract were awarded post-disaster. Such contracts should have variable mobilization costs depending upon the size of the debris work that may be encountered.

Appendix K PURCHASING MANUAL

REV. 11/14/2014

Purchasing Procedures



PURCHASING & CONTRACTS' PROCEDURES MANUAL

MAY 29, 2012

P:\Office\PURCHASING MANUAL\P&C Manual FINAL, Rev. 11-14-14.docx

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Appendix L

RFP 15-P-54JD FOR DEBRIS MANAGEMENT SERVICES

Double-click on the document below to open the RFP. A copy is included separately on the disc.



**REQUEST FOR PROPOSAL
FOR
DEBRIS MANAGEMENT SERVICES**

RFP NO. 15-P-54JD

Closing Date: Thursday, March 26, 2015

**DO NOT RESPOND TO THIS SOLICITATION ON LINE
SEE SECTION 3.4, DELIVERY OF PROPOSALS**

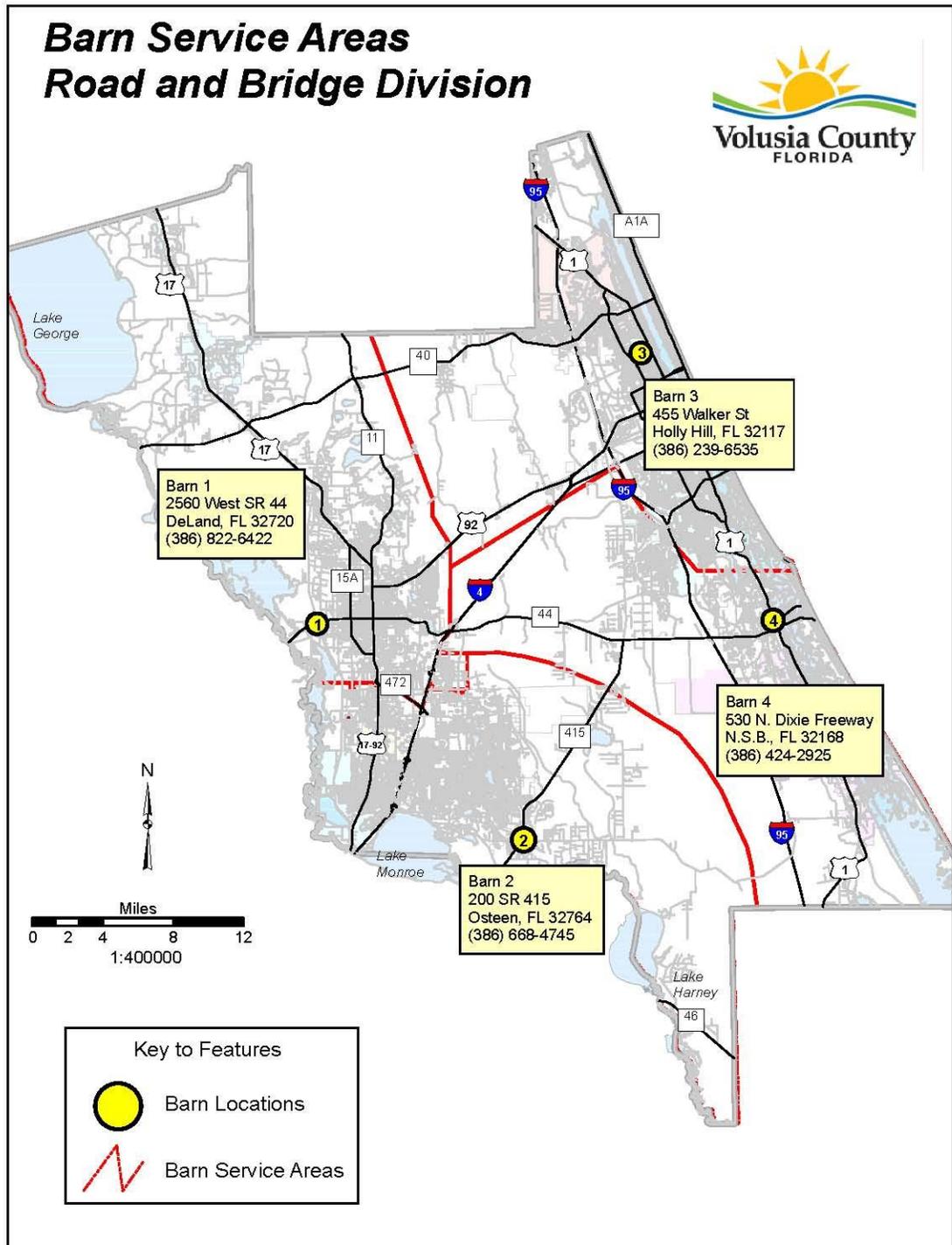
Purpose of RFP

**The purpose of this Request for Proposal (RFP) is to solicit competitive sealed proposals
for Disaster Management Services for the County of Volusia, Florida.**

Appendix N CONTRACTS

Refer to RFP 15-P-54JD.

Appendix O ZONE MAP



Appendix P

DEBRIS MANAGEMENT CHECKLISTS

Normal Operations Checklist

- Update contact lists.
- Evaluate TDSRS.
- Review and update road list and road maps.
- Establish and maintain pre-positioned contracts.
- Establish and maintain inter-local or mutual aid agreements; and
- Review FEMA guidance.

Completed By: _____

Date Completed: _____

Pre-Event Checklist

- Download most recent road list and relevant documents to a CD.
- Alert key personnel and place monitoring firm and debris removal contractors on stand-by.
- Review plan with key personnel.
- Stage emergency road clearing equipment in strategic locations.
- Issue pre-event media press releases.

Completed By: _____

Date Completed: _____

Response Checklist

- Begin emergency roadway debris clearance.
- Conduct damage assessment.
- Activate monitoring firm and debris removal contractors.
- Begin truck certification.
- Prepare TDSRS based on concentration of debris.
- Conduct meetings/briefings with key personnel.
- Review debris volume and collection cost assessment.
- Request contact information and meeting with FEMA PAO.
- Issue media press release.

Completed By: _____

Date Completed: _____

Recovery Checklist: 2 Days – 2 Weeks

- Open TDSRS.
- Evaluate debris removal zones, prioritize roads/areas.
- Issue press release regarding curbside collection guidelines.
- Begin ROW/curbside debris removal.
- Open citizen drop-off stations.
- Perform parks damage assessment.
- Begin environmental monitoring program of TDSRS.
- Coordinate with external agencies.
- Conduct coordination meetings and initiate discussions with FEMA and FHWA.
- Obtain FEMA guidance for gated community and private property debris removal.

Completed By: _____

Date Completed: _____

Recovery Checklist: 2 Weeks – 1 Month

- Maintain and evaluate ROW clean-up.
- Begin ROW stump removal as necessary.
- Open additional TDSRS as necessary.
- Continue coordination meetings, including FEMA and FHWA.
- Begin beach scrape and screen process if necessary and approved by FEMA.
- Begin debris removal from private property and gated communities.
- Communicate project close-out to residents via press release.

Completed By: _____

Date Completed: _____

Recovery Checklist: 1 Month – 3 Months

- Maintain and evaluate ROW clean-up.
- Begin ROW leaners/hangers program.
- Begin ROE sand recovery process if necessary and approved by FEMA.
- Initiate haulout.
- Continue coordination meetings.

Completed By: _____

Date Completed: _____

Recovery Checklist: 3 Months – Project Completion

- Complete all debris recovery activities.
- Ineligible debris on ROW.
- Complete the disposal of reduced debris.
- Close-out and remediate TDSRS locations.
- Conduct project close-out meetings with FEMA and external agencies.

Completed By: _____

Date Completed: _____

DEBRIS REMOVAL FROM PRIVATE STREETS, ROADS, ROADWAYS AND PRIVATE PROPERTY

Intent and Purpose.

After declaration of a disaster in accordance with Code #, the primary mission of the County will be to protect lives and property, restore governmental services and clear public streets. Depending on the magnitude of the disaster and after accomplishment of the primary mission, resources may be available to the County that may not be available to a private property owner. The intent and purpose of this part is to establish a process by which the County may evaluate and, if necessary, remove Debris from along privately owned streets, roads, roadways, and other private property in the event of an immediate threat to life, public health and safety after a significant disaster. While the County recognizes that, as a general proposition, the removal of Debris from private property is the responsibility of the property owner, there are occasions when, because of the magnitude of the disaster and the threat posed to life, health, and safety, there may be a compelling need to remove Debris from private streets, roads, and roadways and other private property as described in this Part.

Definitions.

As used in this Part, the following terms shall have the following meanings, unless the context clearly otherwise requires:

- (a) "Access Properties" means access to the properties adjacent to roads that are classified as "No County Maintenance" per the Road & Bridges Division's street maintenance dataset. This dataset, stored in the ESRI GIS format, shall be amended from time to time. Access shall be provided if: (1) the County is undertaking to clear and push Debris.
- (b) "Debris" shall include, but is not limited to, displaced, broken, or discarded building and construction materials, garbage, vegetative matter and spoiled or ruined household goods or materials.
- (c) "Private Property" means all property that is not owned or controlled by a governmental entity.
- (d) "Private Streets, Roads and Roadway" shall include the rights-of-way as well as the improved surface that provides access to residential and commercial areas as identified as "private roadways" in the Maintained Roads Map.

(Ord. No.###)

Private roadways.

The County shall remove Debris from Private Roadways when such Debris is determined to pose an immediate threat to the health, safety and welfare of the community. Pursuant to Code Section #(a), the County Manager shall determine whether there is an immediate threat to the public health, safety, and welfare sufficient to warrant removal of said Debris in accordance with any 1 of the following standards:

- (a) There is a significant likelihood that rescue vehicles will be significantly hindered from rendering emergency services to residential and commercial property should the Debris be allowed to remain in place absent County removal.
- (b) The type of Debris is such that it may reasonably cause disease, illness, or sickness which could injure or adversely affect the health, safety, or general welfare of those residing and working in the area if it is allowed to remain.
- (c) The clearing is necessary to effectuate orderly and expeditious restoration of County-wide utility services including, but not limited to, power, water, sewer, and telephone.
- (d) The Debris is determined to be dangerous or hazardous.
- (e) The Debris prevents garbage collection thereby creating a public health hazard.

Volusia County, FL Code of Ordinances

- (f) The Debris contains contaminants which have a reasonable likelihood of leeching into the soil and/or aquifer of the County.
- (g) The Debris has a substantial negative impact in preventing or adversely affecting emergency repairs to buildings and/or property.
- (h) The Debris presents a reasonable danger of being transported by wind and/or water into the surrounding areas of the County and thereby increasing the cost of recovery and removal.
- (i) The Debris poses a significant likelihood of, if left over time, producing mold which would be injurious to public health.
- (j) The presence of the Debris significantly adversely impacts the County's recovery efforts.
- (k) The Debris significantly interferes with drainage or water runoff, so as to be a significant hazard in the event of significant rainfall.
- (l) The sheer volume of the Debris is such that it is impractical and unreasonable to remove in an orderly and efficient manner absent action by the County.
- (m) The type, extent and nature of the Debris is such that it would cause much greater damage if the Debris was not removed immediately.
- (n) Commercial or other specific areas will be cleared if, in the opinion of the County Manager, the clearance will aid the County's recovery operations or aid the health, safety, or welfare of the residents of the County.

(Ord. No.###)

Waiver.

With regard to eligibility for Federal funding, the Federal Emergency Management Agency (FEMA) may waive the requirement for the County to establish the criteria listed in Code #as a condition precedent to County action depending on the severity of the situation.

(Ord. No.###)

Indemnification and Hold Harmless.

Prior to removal of Debris by the County as contemplated herein on Private Roadways and Private Property, or clearance by the County of Private Property as provided herein, the private property owner shall indemnify and hold harmless, to the maximum extent permitted by law, the Federal, State, and local government and all employees, officers and agents of the Federal, State, and local government connected with the rendering of such service.

(Ord. No.###)

Emergency Roadway Clearance.

Nothing herein shall preclude a first response by the County to clear and push Debris from all roadways (both public and private) including Access Properties necessary for the movement of emergency vehicles including police, fire and ambulance within the first 70 hours after a disaster declaration.

(Ord. No.###)

Private property.

Nothing herein shall require the County to remove Debris from Private Property other than the Private Roadways identified above except where the severity of the situation is of such magnitude or the Debris is so widespread that it is determined by the County Manager to be a significant immediate threat to the health, safety and welfare of the County and in the overriding public interest of the County to remove Debris from such areas.

(Ord. No.###)

