



OPERATION DISASTER DEBRIS MANAGEMENT PLAN (COUNTY)

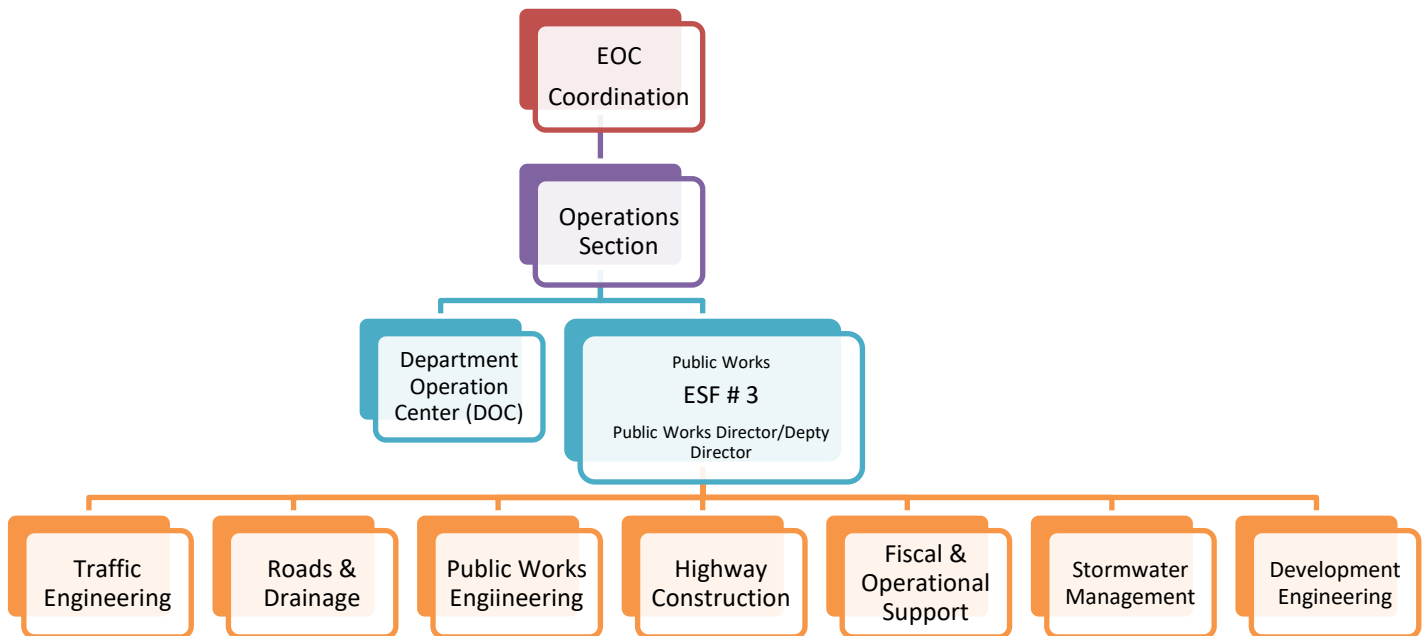
F-ROC Sample Policies

***Disclaimer:** The sample policies and language provided are for informational and reference purposes only. They are intended to act as a basis to help your organization develop your entity's plans, policies, and procedures. These samples may not fully align with your entity's specific legal, regulatory, or operational requirements. We strongly recommend that you consult with the appropriate department within your organization—such as Legal, Human Resources, or Procurement—to review, modify, and approve any language before implementation. Additionally, these sample policies are subject to updates, so we encourage you to check back periodically for new or revised materials.*

XXXXX County Public Works Department

The XXXXX County Public Works Department has primary responsibility for the infrastructure of XXXXX County. In the event of a natural or man caused disaster our employees are expected to respond. All staff of the Public Works Department are considered Emergency Essential personnel and have duties assigned to designate each function.

In the event of a natural disaster, active functions may begin up to 72 prior to the impending event. Within this manual are general functions for the Public Works Staff. Below is the organizational chart of Public Works as it functions as an ESF-3.



ESF-3 Public Works & Engineering

Primary Agency: XXXXX County Public Works Department

Responsible for providing technical advice and evaluating engineering services, construction management and inspection, emergency contracting, facilities management, emergency road and debris clearance, emergency traffic signalization and flood control. Support includes but is not limited to:

- a. Emergency clearance of debris for reconnaissance of the damaged areas and passage of emergency personnel and equipment for health and safety purposes.
- b. Temporary construction of emergency access routes which include damaged streets, roads, bridges, waterways, airfields and any other facilities necessary for passage of rescue personnel.
- c. Emergency demolition or stabilization of damaged structures and facilities designated as immediate hazards to the public health and safety, or as necessary to facilitate the execution of rescue operations.
- d. Coordination of damage assessment operation, and provision of technical assistance, including structural inspections.

Public Works Emergency Response Staff Assignments

The staff of the Public Works Department has been assigned duties and responsibilities based on their area of work responsibility. Timelines for implementation of each function have been designated by the specific divisions based on the nature of the response and type of disaster.

I. Roads & Drainage Operation Staff

The Roads & Drainage Division has established procedures for the release and call-back of staff. They are primarily responsible for the roads and drainage systems within XXXXX County. The nature of the work performed will be to open primary and secondary roads on pre-established routes.

II. Stormwater Management

The Stormwater Management Division has established procedures for the release and call-back of staff. They are primarily responsible for the drainage systems within XXXXX County. The nature of the work performed will be to address localized flooding and monitoring of lake levels within the County.

III. Traffic Engineering Operational Staff

The Traffic Engineering Division also has established procedures for the release and call-back of staff. They are primarily responsible for the traffic signals and signs or traffic maintenance system. The nature of the work performed will be to repair and replace missing signs and signal throughout the XXXXX County roadway system. This will be accomplished based on pre-established criteria.

IV. Public Works DOC

The Public Works Department Operations Center will activate at the point of activation of ESF 3. Personnel from Public Works are assigned to staff ESF 3 upon completion of the required FEMA and XXXXX County training program. This list is reviewed and updated annually.

Function of DOC

The DOC acts as the primary contact with the Emergency Operations Center (EOC). The FOC is to receive messages from the EOC and disperse them accordingly to field operations crews. In return, the DOC acts as the focal point of inquiries for field staff when coordination is required between ESF3 and the other ESF's in the EOC. The "Emergency Evaluation Team" is not a function of the DOC. They will work independently immediately after a storm event and will share the results of their window surveys with Public Works DOC Leads, Director, and Deputy Director upon completion of their assessments.

Daily Report Coordination

It is the responsibility of the DOC to prepare a daily summary of the work for which Public Works staff is conducting during an emergency event. It summarizes statistical data daily which will be used further by staff and shared with the Director and Deputy Director, EOC staff, and others. Both the DOC Staffing Administrator and the GIS Supervisor will take the lead on preparing the daily summaries. (Example 1)

The DOC will be staffed in the following manner:

DOC Manager

The DOC Managers will be the Managers of Roads & Drainage, Development Engineering, and Traffic Engineering. These managers serve as a resource for DOC staff to contact when questions arise for which they have no answer. The manager is available for support.

DOC Staffing Administrator

This position will be responsible for all personnel and the assignment of work shifts. They are responsible for the set-up and breaking down of the DOC (located in Public works Building 1, Room 317). This will include all computer, phone and technology connections. They will ensure food and other necessary office supplies are prepared and available from the point of activation to de-activation. Acts as the liaison between the shift supervisors and assigned staff with the Managers to ensure clear and concise communication and that all necessary information from the EOC is appropriately assigned and followed up on. Staff assigned to this position are updated on an annual basis and are found in Attachment ()

The Citizen Response Call Back Team is on a separate team that is dependent on the DOC for input of information into the system. Based on the 311 application, they will then be able to access the information and directly input their call back information so that DOC staff will know the citizen has been informed of the status in case of repeated calls concerning the same issues.

DOC Shift Supervisor/Leads

These individuals are the shift supervisors of the DOC and monitor the operation of the DOC team. Those individuals are assigned by Public Works Management.

DOC Team

The DOC Team is comprised of individuals who actually assist with the operations of the DOC. They are the ones who receive, sort, and disperse the messages to the proper division. In some cases they may be responsible to call back and facilitate response to Public Works EOC staff, citizens and Commissioners.

Response Team

This is a team of individuals who research and reply to inquiries received through the DOC. This team will operate in conjunction with and as support when the messages received by the DOC cannot be adequately managed.

V. Other Emergency Response Needs

Additionally, Public Works is responsible for staffing the following Emergency Response Functions to complete the infrastructure surveys, provide response to citizen inquiries, and completion of necessary documentation for submission for FEMA and FHWA reimbursements and employee tracking. These persons operate as an extension to the DOC.

Disaster Emergency Response Team (Safety Survey Teams) (See Map)

The Infrastructure Safety Survey Teams are designed to serve two functions.

Phase I

On the day immediately following a natural disaster, (or when conditions allow), the Public Works Infrastructure Safety Survey Teams will be dispatched to complete an initial rapid assessment and survey of the affected areas. Each team is to give the collector and arterial roadways first priority. These teams will be provided with GIS maps which identify pre-defined collector and arterial roadways that are to be assessed for debris, structural, and traffic control device damages. The maps will be produced in map book format. The County has been divided into thirty-eight (38) Windshield Sectors (approximately 71 lane miles). The Windshield Sectors consist of debris sectors indicated on the map in green. These represent the collector and arterial roads that should be surveyed. Areas mapped in red are the private sectors. (See Example 2: Answers to Questions) (Attachment 8) (Attachment 9)

Phase II

A second survey will be conducted by these teams when directed by County Administration. The purpose of the second survey is for the estimation of debris. Guidelines for completing this function will be provided to staff at the time of the survey.

Payroll/FEMA Paperwork Tracking Team

This team will be activated upon the activation of ESF 15, Volunteer and Donations. This is the activation of the pay plan and requires we begin tracking--it should be comprised of one (1) member from each division. All personnel not required to "clock in/out" will report their time and vehicle and equipment use number to this team.

Citizen Response Team (Call Team)

This team will be activated upon Public Works employees return to work immediately following the storm. (Note: There may be the need for this team prior to the storm to answer sandbag questions or return calls concerning potential flooding areas--based on the number of calls) This team will continue to work as long as the DOC is active and upon approval by County Administration thereafter. Members from this team may be assigned to the Debris Monitoring Oversight team to continue to assist with citizen calls and inquiries. Appendix (E)

GIS/Data Team

The GIS team is responsible for the completion of the tracking information for all hurricane response. Information will be provided to ESF 5, Information and Planning. The GIS team will receive information directly from 311, the Public Works Safety Survey Teams via GPS and direct photography. This information will be immediately placed in Public Works Hurricane Response database and available in real time to County personnel. (Attachment 11)

Procurement/Special Purchase Tracking Team

This team is responsible for tracking all P-cards and special purchases that will be attributed to the hurricanes.

Personnel assigned to these teams are reviewed on an annual basis prior to the start of hurricane season and are assigned based on area of work location and skills.

DEBRIS MANAGEMENT OVERVIEW TIMELINE

EOC LEVEL 3 ACTIVATION	• Monitoring/Debris Removal Oversight Team is notified by EOC of Level 3 Activation • Contact Debris Removal and Monitoring Contractors are notified of Level 3 Activation • Roads and Drainage prepares equipment and assigns personal to be staged at maintenance units.
EOC LEVEL 2 ACTIVATION	• Monitoring/Debris Removal Oversight team is notified by EOC of Level 2 Activation • Debris and Citizen Site Pre-Testing and Assessments Implemented (Public Works/Environmental Protection Division) • Contact Debris Removal and Monitoring Contractors are notified of potential contract activation • Staging of staff and potential release of staff • Roads and Drainage Staff complete final preparation for storm event • Purchasing Division prepares Debris Removal and Monitoring contracts Notice to Proceed for execution • Rolloff Contractors are notified by Purchasing Division • Effected County Divisions begin documenting data for future FEMA reimbursement.
EOC LEVEL 1 ACTIVATION	• Notify Debris Monitor(s) Project Manager to report to EOC (no later than 24 hrs. prior to event) – (Policy Group) ▪ Projected Damage ▪ Projected Debris Contractor Requirements • Notify Debris Removal Contactor to report to EOC within 6 hours (Policy Group) • Issue Notice to Proceed (NTP) to Debris Removal and Monitoring Contractor(s)- (Public Works/Purchasing and Contracts Manager) (Policy Group) • Roads and Drainage Staff staged at the maintenance units begin "first push" upon all clear notification from the policy group. (40 MPH or less wind) • Prepare Debris Estimate/Assessment (Policy Group)

	▪ Infrastructure Safety Survey (Public Works Department) – begin safety assessments upon storm passing area and "all clear" notice is given (5 hours to complete assessment) -Identify impacted areas. ▪ Public Works assessment teams estimate debris quantity - day two after the storm ▪ Debris Monitoring Contractor(s) to complete estimate of debris quantities. • Define Contractor Area Assignments (Policy Group) • Debris Contractor(s) open TDSRS and Citizen Sites as directed (Policy Group) ▪ Roll off sites are selected –Purchasing Division issues NTP (Policy Group) • Public Notice Signs are placed at reduction sites and citizen sites by the Traffic Engineering. • Debris Removal Process ▪ Monitoring Contractor(s) coordination of field operations; debris and citizen sites. ▪ Debris Contractor Operations Production Rates as per contract • Debris Contractor "Hot Spot" crews directed by the Monitoring Contractor(s) as needed. • Code Enforcement patrol roadways for illegal dumping and problem areas are identified. ▪ "No Dumping" Signs are installed by Traffic Engineering • Waste Haulers notified to begin weekend collections by Public Utilities • Media Team-prepares reports and begin daily meetings with Commissioners and Public Notification Announcements • "Call Back Teams" established at Public Works DOC to address citizen inquiries.
POST STORM TASKS	• Debris Site Reclamation/Restoration (30-day notification) (Policy Group) • Debris Site Post-Assessments/Testing Implemented (Public Works/Environmental Protection Division) • Claims resolution and invoicing for FEMA and FHWA reimbursement.

1.5 Alignment with Other Plans

National Response Framework

The National Response Framework¹ (NRF) provides the concept of operations for federal response to events by listing the responsibilities for each federal agency and outlining how federal agencies will interact with other public-sector agencies at all levels, the private sector, and nongovernmental organizations (NGOs). The NRF also emphasizes the importance of personal preparedness by individuals and households. This plan aligns with the Emergency Support Functions (ESF) #3: Public Works and Engineering Annex,² and ESF #14: Long-Term Community Recovery and Mitigation Annex³ of the Department of Homeland Security's (DHS) NRF by providing for

¹ <http://www.fema.gov/emergency/nrf/>

² <http://www.fema.gov/pdf/emergency/nrf/nrf-esf-03.pdf>

³ <http://www.fema.gov/pdf/emergency/nrf/nrf-esf-14.pdf>

coordination of disaster debris operations through all levels of government using the National Incident Management System⁴ (NIMS) organization structure.

State Comprehensive Emergency Management Plan

The State Comprehensive Emergency Management Plan⁵ (CEMP) provides the concept of operations for state agency response to disaster events by listing the responsibilities for each agency and outlining how state agencies will interact with each other and other regional and local public-sector agencies. This plan aligns with the CEMP ESF #3: Public Works and Engineering Annex, and ESF #14: Long-Term Community Recovery and Mitigation Annex, by providing operational instructions to organize disaster debris operations at the local level.

XXXXX County Comprehensive Emergency Management Plan

The County's Comprehensive Emergency Management Plan (CEMP) provides the concept of operations for county departments response to disaster events by listing the responsibilities for each ESF and outlining how county departments will interact with each other and other regional and local public-sector agencies. This plan aligns with the CEMP ESF #3: Public Works and Engineering Annex, and ESF #14: Long-Term Community Recovery and Mitigation Annex, by providing operational instructions to organize disaster debris operations at the local level.

XXXXX County Public Works Department Emergency Plans

This plan is designed to stand-alone, but it aligns with other plans including:

- The XXXXX County Public Works Department Comprehensive Emergency Management Plan (CEMP)
- The XXXXX County Public Works Continuity of Operations Plan (COOP)
- The Post Disaster Recovery Plan (PDRP)
- Roads & Drainage Flooding & Debris Damage Manual

1.6 Plan Maintenance and Update

This plan was assembled by the XXXXX County Public Works Department with input from multiple departments. Ongoing maintenance of the plan is the responsibility of the Fiscal & Operational Support Manager, XXXXX County Public Works Department, the Plan Manager.

Plan Revisions

Because of changes in staffing, organization, and external factors, this plan will be reviewed semiannually prior to the hurricane season (April) and during the storm season (September), and updated as needed. This semi-annual plan review schedule

⁴ <http://www.fema.gov/emergency/nims/index.shtm>

⁵ http://floridadisaster.org/documents/CEMP/Final%20Draft_2012%20Basic%20CEMP%20and%20Annexes.pdf

aligns with the UASI Regional Disaster Debris Management Plan review schedule. To the extent possible, mid-review period changes to the plan will be avoided. In the event a revision is required outside of the normal review period, it is the responsibility of the Plan Manager to ensure that revised pages are distributed to plan holders. During plan review, specific attention will be directed to key plan components, including specific assigned roles and responsibilities, reviewing and updating contracts contact information for internal staff and external resources, and the location and status of identified Debris Management Sites (DMS).

Section 2: Situation and Assumptions

This chapter provides an overview of the types, amounts, and distribution of natural or human-caused incidents that may occur in XXXXX County. It also provides tools to estimate debris volumes following an incident. Finally, it provides a list of the planning assumptions that were used to develop this plan.

2.1 Types of Hazards

XXXXX County is susceptible to a variety of natural or human-caused incidents that may create disaster debris. A listing of potential debris causing incidents and the types of most common debris are listed in Table 2-1.

TABLE 2-1

Characteristics of Disaster Events Possible in XXXXX County

Incident	Debris Characteristics	Regional Probability	Debris Impact
Wind Storm	Primarily vegetative waste; may also include construction/demolition materials from damaged or destroyed structures, some municipal solid waste from damaged structures. Extended power outages may result in large amounts of putrescible waste from private homes and grocery stores.	High	Moderate
Flooding	Construction/demolition waste, municipal solid waste, and problem waste, including sediment, vegetative waste, animal carcasses, and hazardous materials deposited on public and private property. Much of the debris from flooding events may be considered problem waste because of contamination from wastewater, petroleum, or other substances.	High	Moderate
Tornado	Primarily vegetative waste; may also include construction/demolition materials from damaged or destroyed structures, some municipal solid waste from damaged structures. Extended power outages may result in large amounts of putrescible waste from private homes and grocery stores.	Moderate	High
Urban, Wildland, Wildland/Urban Interface Fires	Burned vegetative waste, burned construction/demolition waste, and problem waste, including ash and charred wood waste and ash-covered items.	Moderate	Low
Hurricanes	Primarily vegetative waste; may also include construction/demolition materials from damaged or destroyed structures, some municipal solid waste from damaged structures. Extended power outages may	High	High

TABLE 2-1

Characteristics of Disaster Events Possible in XXXXX County

Incident	Debris Characteristics	Regional Probability	Debris Impact
	result in large amounts of putrescible waste from private homes and grocery stores.		
Plant Disease	Variable amounts of vegetative debris that might require special handling as problem waste with specific disposal characteristics.	Low	Moderate
Animal Disease	Variable amounts of putrescible waste that might require special handling as problem waste with specific disposal instructions.	Low	Moderate
Nuclear, Chemical, or Biological Accident	Various amounts of contaminated soil, water, construction/demolition waste, and/or municipal solid waste that would require special handling as problem waste with specific disposal instructions.	High	Moderate
Nuclear, Chemical, or Biological Attack	Various amounts of contaminated soil, water, construction/demolition waste, and/or municipal solid waste that would require special handling as problem waste with specific disposal instructions.	Moderate	High

2.2 Debris Estimates

The types and amounts of debris produced by an incident depend on the magnitude, duration, and intensity of the incident itself. The potential impacts resulting from two different debris scenarios were considered when creating this plan. The first is a wind storm that has the potential to create a low to medium amount of debris, and the second is a significant earthquake that has the potential to create a high amount of debris.

Hurricanes

2019 hurricanes season is predicted to be “slightly less active” in the Atlantic. This year’s forecast is around normal. The effects of El Nino for 2019 lead to a normal prediction of storm in the Atlantic Ocean and Caribbean Sea

Three elements contribute to the degree to which communities experience hurricane damage: (1) the level of exposure, (2) physical susceptibility to the hurricane, and (3) the hurricane’s frequency and intensity. Each element is comprised of several indicators that represent characteristics of risk. The seven indicators that we employ are: population, number of housing units, house value, probability of hurricane strike, building code effectiveness, building age, and vulnerability to sea-level rise.

The United States Army Corps of Engineers (USACE) has developed the following rules to consider when estimating vegetative debris quantities:

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

In 2004 three hurricanes impacted the area in a span of less than six weeks. This resulted in approximately 2.6 M cubic yards of vegetative debris. Through the implementation of this plan, XXXXX County in conjunction with its contractors removed the majority of the debris in less than 100 days.

In 2017, Hurricane Irma impacted XXXXX County along with all 67 Counties in the state. This resulted in approximately 1.2 M cubic yards of vegetative debris. However due to the implementation of this plan, XXXXX County in conjunction with its contractors removed the majority of the debris in 90 days.

Windstorm Debris Events

Historically, wind storms occur one to two times a year in XXXXX County. These events can create a low to medium amount of debris made up predominantly of vegetative waste, but may also include overhead wire service components, construction and demolition debris, white goods, and vegetative depending on the size of the event and secondary impacts such as power outage.

XXXXX County contains a mix of urban and rural land that will create different amounts of vegetative debris during a wind storm event. Historically, XXXXX County has created the highest volumes of debris following similar events as recently at March 2013. In 2004 three hurricanes impacted the area in a span of less than six weeks. This resulted in approximately 2.6 M cubic yards of vegetative debris. Through the implementation of this plan, XXXXX County in conjunction with its contractors removed the majority of the debris in less than 100 days.

Tornados

An average of 49 tornadoes per year occur on the Florida peninsula as a result of both severe thunderstorms and more serious hurricanes creating perfect conditions for this dangerous weather phenomena.

Situation and Assumptions

This section describes the situation and assumptions that were used during the development of this plan.

Situation

The plan situation is made up from known facts or observations used to develop the plan. The following situation factors were considered when developing this plan:

- Natural and man-made disasters such as hurricanes, fires, wind storms, flooding, industrial accidents, and terrorist attacks precipitate a variety of debris that includes, but is not limited to trees and other vegetative organic matter, building/construction material, appliances, personal property, and sediment.
- The quantity and type of debris generated from any particular disaster will be a function of the location and kind of event experienced, as well as its magnitude, duration, and intensity.
- 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, including how quickly the problem can be addressed, and the associated costs that will be incurred.

Assumptions

Assumptions are unknown but expected events or actions that are used to develop the plan. The following assumptions were made during the development of this plan:

- A major natural disaster may require the removal of debris from public or private lands.
- The amount of debris resulting from a major natural disaster may exceed XXXXX County's removal and disposal capabilities.
- If a debris event should occur, an accurate assessment of the disaster must be made as soon as practical.
- The XXXXX County Public Works Department may contract for additional resources to assist in the debris removal and monitoring, reduction, and disposal capabilities.
- Local, state, and federal agencies may have difficulty in locating staff, equipment, and funds to devote to debris removal, in the short- as well as long-term, following a major natural disaster.

Section 3: Applicable Rules and Regulations

This chapter provides an overview of the state and local regulations and policies that affect how XXXXX County handles disaster debris including debris reduction and Debris Management Site (DMS) and neighborhood collection site operations. This chapter also addresses the environmental and policy considerations for reducing, recycling and disposing of the disaster debris at the DMS staging area.

3.1 Planning

XXXXXX County has identified seven (7) DMSs and seven (7) neighborhood collection sites within its jurisdictional boundaries. A representative from the local environmental protection division, Public Works and the State environmental protection division have reviewed the DMS locations on a preliminary basis, and authorize their use on an annual basis prior to the start of hurricane season. And prior to engaging in debris removal operations.

Debris Processing Sites are established on an annual basis prior to the start of Hurricane season. A county team consisting of Public Works, Environmental Protection, Parks and Recreation, Traffic Engineering, a representative from each current debris removal contractor and each monitoring contractor shall visit each site to determine needs. These should include but are not limited to:

- A Full Site Assessment
- Entrance/Exit Points
- EPD Issues/Concerns
- Risk Management Issues
- Defining of Site Challenges
- Determination of Traffic Signage and Maintenance of Traffic

A meeting with all selected contractors will be scheduled at the start of each hurricane season. The purpose of this meeting is to schedule the site visits and review contract specifications.

Debris sites may consist of county owned property, school sites, additional landfills, and private sites with signed agreements.

Roll-offs

Roll-offs may be used at selected locations which are typically park sites. This will be determined at the beginning of each season and governed by contract. The selected sites should be included on the debris collection site maps. This effort is coordinated through Public Works, Parks and Purchasing.

Maps

Maps of all debris sites should be generated at the start of each season. These maps are to identify all selected sites and indicate whether they are citizen or contractor sites. These maps should be provided upon activation to ESF 14-Public Information team for distribution to the media. Publication of these sites is restricted until opened for emergency response.

Insert Debris Site Map Here:

Site Sampling

Sampling of each site will be completed by the XXXXXXXX County Public Works in conjunction with XXXXXX County Environmental Protection Division based on division protocol prior to the debris site opening.

*Insert County Environmental
Protection Division
Debris Site Sampling (Optional)*

3.2 Response

XXXXXX County Public Works will initiate DMS preparation activities during the response phase. A preliminary plan will be developed for reducing, recycling and disposing of the debris based on general estimates of the type of material generated by the event. XXXXXX County has made a policy decision to reduce the debris via grinding. This plan is communicated to the environmental officials for their guidance on the applicability of regulations to the operations and monitoring of the DMSs and disposition of the disaster debris.

The site preparation activities will be initiated by the Debris Removal Manager. In the event that disaster debris crosses jurisdictional boundaries, the Debris Removal Manager will contact their counterparts within neighboring jurisdictions and the County to coordinate efforts in understanding the rules and regulations that will affect operations at the DMSs.

3.3 Recovery

This section summarizes rules and regulations that apply to the recovery phase of disaster debris management.

Waste Management Priorities and Recycling

XXXXXX County Public Works will make reduction and recycling the highest priorities for managing disaster debris. The Debris Removal Manager will coordinate with the debris hauling contractors to ensure maximum segregation for recyclable materials, and make sure that debris reduction equipment (chipping/grinding/) is operating properly and within the regulations of XXXXX County and the State of Florida.

Household Hazardous Waste Management

XXXXXX County will set up household hazardous waste, appliance and special waste collection areas. Household hazardous waste should be collected separately and disposed of at a licensed disposal facility. Contractors listed with the county household hazardous waste management program will be contacted for safely disposing of household hazardous debris. These contractors are listed in Appendix A, *Debris Resources*.

White good debris that contains ozone depleting refrigerants, mercury, or compressor oils need to have such materials removed by a certified technician before recycling. White goods will be properly disposed of by a licensed disposal company.

The Air Quality Regulatory Agency will have regulatory authority over the demolition of structures that contain asbestos or lead-based paint.

Section 4: Concept of Operations

This section provides information on how XXXXXX County Public Works will carry out debris management operations, including: response levels, organization, roles and responsibilities, communications strategies, and health and safety strategies.

4.1 Plan Activation

This plan will be used by XXXXXX County staff when a command structure is established in response to a debris-causing incident that impacts all or part of the jurisdiction or neighboring jurisdictions.

4.2 Debris Management Response Levels

Debris management operations are categorized into three response levels. The current response level of XXXXXX County will be established by the Incident Commander or Debris Manager, and is triggered by the geographic scope and impact of an actual or anticipated incident.

Level One: Routine Operations

A level one incident corresponds to day-to-day emergencies requiring minimal coordination and assistance. These include incidents such as minor flooding, or a building collapse. The situation can be efficiently and effectively supported with existing resources and there is no foreseen need to proclaim a local emergency.

Level Two: Medium Impact Disaster

Level two incidents are situations requiring more than routine coordination and assistance, and generally involving multiple jurisdictions. These include incidents such as moderate windstorms, minor or moderate flooding in multiple locations, and tropical storms, or high winds. The situation may require mutual aid or contract resources, and it may be necessary to proclaim a local emergency.

Level Three: High Impact Disaster

Level three incidents are incidents that require a high degree of coordination and generally involve state and federal assistance. These include incidents such as large hurricanes, severe flooding, or tornadoes. In most cases, a local emergency will be proclaimed.

Level Four: Catastrophic Disaster

Level four incidents are incidents that result in the partial or complete destruction of local government and require state and federal assistance. These include incidents such as catastrophic hurricanes, extremely severe flooding, or catastrophic human-caused attacks. This would always require a local proclamation of emergency and in most cases a Federal disaster declaration.

4.3 Debris Management Operational Phases

Response to debris management events are characterized by the three phases described below and may overlap based on the incident.

Increased Readiness

XXXXXX County will move to the increased readiness phase when a natural or human-caused incident capable of creating disaster debris threatens the region. During this time, staff will complete the following tasks:

- Review and update plans, standard operating procedures, generic contracts, and checklists relating to debris removal, storage, reduction, and disposal operations.
- Alert local departments and contractors that have debris removal responsibilities to ensure that personnel, facilities, and equipment are ready and available for emergency use.
- Relocate personnel and resources out of harm's way and stage in areas where they can be effectively mobilized.
- Review potential local, and regional, debris management sites that may be used in the response and recovery phases in the context of the impending threat.
- Review resource listing of private contractors who may assist in debris removal process. Make necessary arrangements to ensure their availability in the event of the disaster.

Response

Debris management response operations are designed to address immediate or short-term effects of a debris causing incident. During the response phase, staff will initiate the following tasks:

- Activate debris management plan and coordinate with damage assessment team.
- Activate debris removal and monitoring contractors
- Begin documenting costs.
- Begin debris clearance from transportation routes, based on debris removal priorities.
- Coordinate and track resources (public and private).
- Establish priorities regarding allocation and use of available resources.
- Activate temporary debris storage and reduction sites (local and regional).
- Address any legal, environmental, and health issues relating to the debris removal process.
- Continue to keep public informed through the PIO.

Recovery

Debris management response operations are designed to return the community to normalcy following a debris causing incident. During the recovery phase, staff will initiate the following tasks:

- Continue to collect, store, reduce, and dispose of debris generated from the event in a cost-effective and environmentally responsible manner.
- Continue to document costs.
- Upon completion of debris removal mission, close out debris sorting and reduction sites by developing and implementing the necessary site restoration actions.

- Perform necessary audits of operation and submit claim for federal assistance.

4.4 Incident Command System

XXXXXX County will use the Incident Command System to structure debris management response, as outlined in XXXXXX County's Comprehensive Emergency Management Plan. Based on the size and scope of the incident, debris management staff may act in multiple roles. In an incident that predominantly entails debris operations, for instance, the Debris Manager may act as the Incident Commander or Operations Section Chief. During larger and more complex incidents, the Debris Manager may be assigned to the Operations Section as a branch director or group supervisor.

4.5 Roles and Responsibilities

This section identifies roles and responsibilities for internal and external agencies during a disaster debris incident.

Debris Management Team

The Debris Management Team as established by XXXXXX County will be lead by the Public Works Director and consist of members from the following departments/divisions as assigned by the respective Department Directors/Division Managers. This team meets on a scheduled basis throughout hurricane season and upon activation of ESF 3 will meet on a daily basis. In the event of a natural/manmade disaster, the team will meet daily with the monitoring and debris removal contractors following the storm. In the event of a manmade or other natural disaster which generates the need for debris removal, Immediately following a disaster event, the Debris Management team will convene as a group within the operations section to facilitate successful coordination following a said event. Each member of the team is responsible for implementing debris operations in accordance with the planned goals and objectives, and in compliance with Federal, State, and local laws. The debris management team will be lead by the debris management group leader, who will identify staff for the group. The following staff participates as part of the debris management team:

- Team Leader (Public Works Assigned Staff)
- EPD
- Utilities
- Real Estate Management
- Parks
- Roads & Drainage
- Engineering
- Fiscal Staff Person (FEMA and Invoice Tracking)
- Citizen Response Team (Ensure call backs)
- PIO
- GIS member
- Planning
- Purchasing
- Code Enforcement

Jurisdiction Departments

Supporting disaster debris management operations will involve multiple departments and divisions within XXXXXX County Government. This section outlines the roles and responsibilities for each involved agency.

Public Works: The Public Works Department is the lead department responsible for pre-event debris management planning. Public Works staff will direct debris operations during response and recovery.

I. Roads & Drainage Operation Staff

The Roads & Drainage Division has established procedures for the release and call-back of staff. They are primarily responsible for the roads and drainage systems within XXXXX County. The nature of the work performed will be to open primary and secondary roads on pre-established routes.

II. Traffic Engineering Operational Staff

The Traffic Engineering Division also has established procedures for the release and call-back of staff. They are primarily responsible for the traffic signals and signs or traffic maintenance system. The nature of the work performed will be to repair and replace missing signs and signal throughout the XXXXX County roadway system. This will be accomplished based on pre-established criteria.

III. Public Works DOC

The Public Works Field Operations Center will activate at the point of activation of ESF 3. Personnel from Public Works are assigned to staff ESF 3 upon completion of the required FEMA and XXXXX County training program. This list is reviewed and updated annually.

Office of Emergency Management: The Office of Emergency Management will coordinate activities and resource needs through the EOC. This department is also the applicant agent for FEMA reimbursement.

External Agencies

State Department of Environmental Protection: Environmental Protection is responsible for the protection of the state's environment. Ecology provides statewide regulation of municipal solid waste and hazardous waste. During a disaster, Environmental Protection may also issue temporary permits or recommend to the governor that certain regulations be suspended, if necessary, to hasten response and recovery.

State Department of Health (DOH): The DOH manages programs and creates regulations to protect citizens' health by limiting exposure to environmental hazards. During a debris-causing incident, DOH will assist local health authorities, as requested, to ensure appropriate steps are being taken to maintain the health of the state's citizens and workers.

State Emergency Management Division (EMD): The EMD may assist local jurisdictions by facilitating the governor's disaster proclamations, facilitating EMAC

requests, requesting Federal Disaster Declarations, and administering FEMA public and individual assistance requests. During the response phase of debris management, the EMD can ensure that facilities are operating in compliance with federal and state regulations and can determine priorities for handling and removal.

United States Department of Agriculture (USDA): The USDA Natural Resource Conservation Service (NRCS) provides technical and financial assistance to private land owners, land users, communities, and state and local governments in planning and implementing conservation systems that conserves soil, water, and other natural resources. NRCS is limited in its authority with debris-related activities; it is limited to either runoff retardation or soil erosion prevention in response to an imminent threat to life or property resulting from a sudden impairment in the watershed. Typically, this includes debris within, or in close proximity, to a channel.

The USDA Animal, Plant and Health Inspection Service (APHIS) may provide support under the Veterinary Service Program and the Plant Protection and Quarantine Program. Both public and private lands are eligible under these programs, which provides assistance to federal and state agencies, tribes, local jurisdictions, and private landowners to manage animal and plant health. This is accomplished by collecting and providing information, conducting or supporting treatments, and providing technical assistance for planning and program implementation (removal).

United States Department of Defense (DOD): The UASI Region has numerous DOD facilities with equipment and personnel that may be requested in response to a debris-causing incident. Requests for these assets are coordinated through the State Military Department Division of Emergency Management and are only available after all local private and public resources have been nearly or completely exhausted.

United States Army Corps of Engineers (USACE): The USACE is the lead agency for ESF #3, Public Works and Engineering, of the NRF, which includes debris management. During a Presidentially declared disaster, the USACE may supply technical assistance to local responders for completing debris removal. The USACE also has contract resources available to support local debris management operations.

United States Environmental Protection Agency (EPA): EPA may provide technical assistance and advice on collection, reduction, and disposal of contaminated debris and other hazardous materials during debris management operations. EPA also has contract resources available to assist with collection, management, and disposal of hazardous materials.

Federal Emergency Management Agency (FEMA): FEMA is the federal agency charged with coordinating emergency management functions in the federal government. In catastrophic disasters, FEMA may provide direct federal assistance to support performance of local, tribal, and state governments activities related to debris clearance, removal, and disposal. The response capabilities of local, tribal, and state governments must be exceeded before this level of assistance can be provided. Following a Presidential declaration, FEMA may elect to use its mission assignment authority to task other federal agencies with debris clearance, including the USACE and EPA.

Federal Highway Administration (FHWA): FHWA is a federal agency charged with the support of the State highway systems by providing financial assistance for the construction, maintenance and operations of the Nation's 3.9 million-mile highway network, including the Interstate Highway system, primary highways, and secondary local roads.

Contractors and Vendors

Contractors and vendors are often used to augment local resources in support of debris management operations.

1. Solid Waste Collection Companies

Solid waste collection companies are private entities that provide daily municipal solid waste service through the transportation and/or disposal of solid waste. During debris-causing incidents, these companies can be tasked with maintaining existing municipal solid waste service, as well as potentially providing additional resources to assist with debris clearance, processing, and disposal activities.

2. Debris Management Contractors

Debris management contractors provide additional resources to assist with debris clearance, removal, separation, and disposal during debris-causing incidents. These contractors can be put under contract prior to an incident to ensure efficient response during or after an actual incident or event. Federal agencies, such as the United States Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (EPA), may also have contract resources available to assist with debris management operations.

3. Debris Management Monitoring Contractors

Debris monitoring contractors provide oversight and documentation of debris management operations. This may include supervising other debris management contractors, documenting debris clearance and disposal operations for potential reimbursement, and operations of temporary debris sorting and reduction sites. XXXXX County has competitively bid the responsibilities for professional/consultation services in the area of Disaster Debris Monitoring. One (1) monitoring contractor is on contract with the County and may be activated based on the level of the disaster. Currently under contract:

- XXXXX

In addition, the County has two (2) debris removal contracts in place to be activated based on level of disaster.

- XXXXXX
- XXXXXX

4.6 Additional Resources

This section lists additional resources that are available to support jurisdictional debris management resources.

Local, County, and State Resources

Additional resources may be available from neighboring jurisdictions and county departments. Section 5.5 lists potential mutual aid agreements that can be utilized to obtain additional resources.

Federal Resources

When an impacted state or local government does not have the regional capability required to respond to a presidentially declared disaster, a request for Technical or Direct Federal Assistance may be made. The approved request is called a Mission Assignment, and can only be requested by State. A Mission Assignment is a work order issued by FEMA to another federal agency directing completion of a specific assignment in anticipation of, or response to, a Presidential declaration of a major disaster or emergency.

There are three Emergency Support Functions (ESFs) that perform debris-related activities under FEMA Mission Assignments:

- **ESF #3 – Public Works and Engineering** is responsible for infrastructure protection, emergency repair, and restoration. This group provides engineering services and construction management, and serves as a critical infrastructure liaison. The United States Corps of Engineers is the lead agency for ESF #3.
- **ESF #10 – Oil and Hazardous Material Response** is responsible for responding to oil and hazardous material issues, environmental safety, and short- and long-term cleanup. The two most commonly deployed agencies that deal with these debris-related activities are the United States Environmental Protection Agency (EPA) and the United States Coast Guard (USCG).
- **ESF #11 – Animal and Plant Disease and Pest Response** is responsible for coordinating an integrated Federal, State, Tribal, and local response to an outbreak of a highly contagious or economically devastating zoonotic (animal) disease, an outbreak of a highly infective exotic plant disease, or an economically devastating plant pest infestation. This ESF is coordinated by the United States Department of Agriculture (USDA).

All Mission Assignments have the following requirements:

- The community must demonstrate that required disaster-related efforts exceed state and local resources.
- The scope of work must include specific quantifiable measurable tasks.
- FEMA must issue the Mission Assignment.

4.7 Emergency Communications Strategy

XXXXX County's debris management staff will utilize the following methods to communicate with their own jurisdiction as well as others, during a debris-causing event:

1. XXXXX County radio system
2. Cellular phones
3. Email
4. Short Message Service (SMS) messages (*i.e. text messages*)

4.8 Health and Safety Strategy

Debris operations involve the use of heavy equipment to move and process various types of debris. Many of these actions can pose safety hazards to emergency response and recovery personnel as well as the public. In addition to those safety hazards, exposure to certain types of debris, such as building materials that contain asbestos and mixed debris that contains hazardous materials, can pose potential health risks to emergency workers.

All debris operations shall be done in compliance with the health and safety requirements found in the XXXXX County Safety and Health Manual. A copy of this plan can be found on the County's website at: (XXXXXXX.com) The Health and Safety plan enables the agency and their contractors to avoid accidents during debris recovery operations and to protect workers from exposure to hazardous materials. The health and safety strategy establishes minimum safety standards for the agency and contractor personnel to follow. In addition, the strategy provides emergency workers with information on how to identify hazardous conditions and specific guidelines on the appropriate and proper use of personal protective equipment (PPE).

To facilitate compliance, the health and safety strategy specifies how the safety information will be disseminated to all emergency XXXXX County employees and contractors, and how compliance with minimum safety standards will be monitored. The strategy also includes specific corrective actions to be taken if workers do not comply with the minimum safety standards.

Section 5: Current Resources

This chapter identifies the internal and external resources that XXXXX County has for debris clearance, removal, and disposal.

5.1 Staff

Debris operations staff are responsible for directing debris operations during and after an incident. The size and composition of staff needed to deal with debris clearance, removal and disposal depends on the magnitude of the disaster. Debris removal staff likely will be comprised of a combination of full-time personnel, personnel from other agencies, and/or contractors depending on the requirements of the incident.

The following table is a summary of the Debris positions and the staff that will fill the role during a disaster debris incident.

TABLE 5-1
Debris Roles, Responsibilities and Training

Debris Management Position	Roles and Responsibilities	Primary and Alternate Staff Identified for Position	Recommended Training and Qualifications
Disaster Removal Manager	Coordinates all debris removal activities related to an incident. Activities include communication among other members of the disaster management team, communication of project status activity and reporting, and dissemination and implementation of policy directives to debris removal personnel.	Public Works Director/Deputy Solid Waste Manager	IS-630, IS-631, IS-632, ICS 300 and 400
Debris Collections Supervisor	Oversees collection activities prior to debris arrival at the disposal site and coordinates the debris routing, staffing, and field reporting activities.	Public Works Supervisor Solid Waste Supervisor	IS-630, IS-631, IS-632, E-202 ICS 300 and 400
Debris Management Site Supervisor	Manages one or more Debris Management Sites (DMS) and is responsible for overseeing waste separation and environmental protection concerns, as well as filling out paperwork and reporting documentation.	XXXXXX County Debris Monitoring Contractor(s)	IS-630, IS-631, IS-63 ICS 300 and 4002
Finance, Admin, and Logistics Staff	Track time for personnel, equipment, and incident costs. These positions also assist with contracting and purchasing resources, completing documentation required for reimbursement of expenses, and provides check-in for demobilizing resources.	XXXXXX County Debris Removal and Monitoring Contractors & Identified Staff	IS-630, IS-631, IS-632, IS-703 ICS 300 and 400

Quality Assurance	Ensures the debris operations are cost effective. They do this by monitoring the type and amount of debris during collection, sorting, reduction, and disposal.	Contractors & Identified Staff	IS-631, IS-632 ICS 300 and 400
Structural Engineer	Oversees, inspects, and assesses impacted structures and makes appropriate recommendations on building condemnation and demolition.	Engineering Staff Contracted Engineer	IS-631, IS-632
Debris Management Subject Matter Expert (SME):	Provides information and advice to command staff working in the operations and planning sections to help guide disaster operations.	Public Works Department & Debris Management Team	IS-630, IS-631, IS-632, E-202 ICS 300 and 400
Public Information Officer	A Public Information Officer (PIO) familiar with debris management issues should be assigned to the Incident Commander or Joint Information Center (JIC), as necessary. Responsibilities include coordinating with PIOs of other agencies to keep the public informed about all debris removal activities and schedules. Immediately after a disaster and throughout the removal and disposal operation, the PIO is responsible for arranging for public notification of all ongoing and planned debris clearance, removal, and disposal activities.	Appointed Jurisdiction Representative Public Works Staff assigned	G-290, E-388, P-403 ICS 300 and 400
Legal Staff	Conducts reviews and manages all legal matters in the debris management planning process. In addition to advising the debris management planning staff, the legal department may also perform the following tasks: Contract review Rights of entry permits Community liability Indemnification Condemnation of buildings Land acquisition for DMSs Site closure/restoration and insurance	Jurisdiction Legal Staff	IS-632 ICS 300 and 400

5.2 Equipment

During an incident, agency equipment such as trucks, rubber tire loaders, graders, chippers, chain saws, small cranes, dozers and backhoes may be needed to assist with debris clearance and removal operations. Most often these resources will be used for debris clearance from public rights of way in cooperation with the jurisdiction's contract solid waste hauler(s).

Appendix A, *Debris Resources*, includes a listing of XXXXX County Public Works Department equipment available for debris operations. Equipment needs will depend on the debris causing incident and will be dictated by the Operations Section and Planning Section during the incident.

5.3 Technology

XXXXX County has a variety of tools that can be used to assist with debris operations. Each tool or capability is described in detail below:

GIS Mapping and Modeling: Geographic Information System mapping and modeling is used to estimate debris volumes and distributions, plan debris clearance operations, and identify debris clearance priorities.

Smart Phone Devices used for debris estimation and debris collection.

Appendix A, *Debris Resources*, provides specific contact information for these resources.

5.4 Contract Resources

During an incident it may be necessary to contract with other resource providers to augment the jurisdiction's debris management staff and equipment. These resources can be used to assist with specific tasks such as debris clearance or DMS management, or can be hired to manage the entire debris removal and disposal process. Contractors **CAN NOT** be awarded 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.

5.5 Mutual Aid and Interlocal Agreements

There are a variety of agreements XXXXX County has in place and can enact to ensure adequate resources and staffing are available during a debris incident. Agreements applicable to a debris incident are listed in table 5-1 (below), including details on how the agreement is activated and what requirements are placed on both parties.

TABLE 5-2
Existing Agreements

Agreement	Type	Participation Requirement	Service Requirement	How Activated	Types of Resources Available
Public Works Emergency Response Mutual Aid Agreement	Mutual Aid	Voluntary	Voluntary	Plans will be negotiated during the response phase of an activation depending on the magnitude of the storm. DMT reaches out to small municipalities	Public Works equipment and staff

Agreement	Type	Participation Requirement	Service Requirement	How Activated	Types of Resources Available
				in XXXXX County prior to the start of each hurricane season to determine need for assistance or joint use agreements.	
Emergency Management Assistance Compact	Mutual Aid	Voluntary	Assistance is obligatory "provided that it is understood that the state rendering aid may withhold resources to the extent necessary to provide reasonable protection for such state."	Governor declares state of emergency, resources requested through EMD.	All types of resources, including debris clearance equipment and staff
State Inter county Mutual Aid Agreement	Mutual Aid	Voluntary	Lending county acts as an independent contractor of borrowing county in the performance of voluntary emergency assistance during any type of emergency. Reimbursement will be made by Borrower to Lender for costs and labor incurred by Lender beyond the first 8 hours of an asset's use.	Requests for emergency assistance shall be directed to the designated contact person(s) on the contact list provided by the Party Counties.	Equipment, supplies, personnel, or direct provision of services
State Fire Mobilization Plan	Mutual Aid		Voluntary	The local fire chief, through the regional coordinator, makes a request for mobilization to the State Emergency Operations Center. The chief of the State Patrol makes a decision on mobilization in consultation with the governor's chief of staff.	Firefighters and equipment needed to manage fires, disasters, or other incidents – this is an all-risk agreement.

Agreement	Type	Participation Requirement	Service Requirement	How Activated	Types of Resources Available
				Reimbursement by the WSP will take place for any labor or resources expended after a mobilization is declared. Plan expressly notes that it is not a replacement for local mutual aid agreements and the resources available from such agreements must be expended before a mobilization request will be granted.	
State Law Enforcement Mobilization Plan	Mutual Aid	Unknown	Unknown	Unknown	Unknown

5.6 Disposal Facilities

During an incident it may be necessary to utilize a variety of resources to dispose of different types of debris. Appendix A, *Debris Resources*, lists regional disposal resources that can be used during debris operations. Keep in mind that the amount and type of debris each facility accepts may change based on the size and severity of the incident.

5.7 Recycling and Composting Facilities

During an incident it may be necessary to utilize a variety of resources to recycle, compost, or otherwise reduce different types of debris. These resources provide an alternative to divert waste from landfills and may provide additional economic and environmental benefits. Appendix A, *Debris Resources*, lists regional debris processing resources that can be used during debris operations. Keep in mind that the types of waste each facility accepts or is approved to accept may change based on the size and severity of the incident.

Section 6: Debris Collection and Hauling Operations

This section provides information on disaster debris response and recovery operations, including: damage assessment, debris collection, and the establishment of debris management sites (DMS).

6.1 Damage Assessment and Debris Estimates

Damage assessment is the systematic process of gathering preliminary estimates of disaster debris quantities and composition; damage costs; and general descriptions of the locale, type, and severity of damage sustained by both the public and private sectors. Initial damage assessments are usually completed within 36 hours of an incident by local, state, federal, and volunteer organizations and provide an indication of the loss and recovery needs. The initial damage assessment is the basis for determining the level of state and federal assistance needed, as well as the types of assistance necessary for recovery. The assessment and may take longer depending on XXXXX County's or the Region's ability to respond to life, safety, and property concerns. The debris assessment should accomplish all of the following:

- Estimate the quantity and mix of debris.
- Estimate damage costs.
- Determine impact on critical facilities.
- Identify impact on residential and commercial areas.
- Identify what additional resources are needed for response and recovery.

Damage Assessment Operations

Damage assessors will be used to identify estimated debris volumes and geographic dispersion. Damage assessors may also inspect infrastructure and identify other hazards under direction of the Operations Section chief or their designee. In addition software tools including Geographic Information System (GIS) can be used to estimate debris volumes. As identified in Section 4.5, Roles and Responsibilities, XXXXX County Public Works Department is responsible for directing damage assessment operations. The following resources will be used to perform damage assessment and are outlined in Appendix F.

On the day immediately following a natural disaster, (or when conditions allow), the Public Works Infrastructure Safety Survey Teams will be dispatched to complete an initial rapid assessment and survey of the affected areas. Each team is to give the collector and arterial roadways first priority. These teams will be provided with GIS maps which identify pre-defined collector and arterial roadways that are to be assessed for debris, structural, and traffic control device damages. The maps will be produced in map book format. The County has been divided into forty (40) Windshield Sectors (**approximately -- lane miles**). The Windshield Sectors consist of debris sectors indicated on the map. These represent the collector and arterial roads that should be surveyed.

A second survey will be conducted by these teams when directed by County Administration. The purpose of the second survey is for the estimation of debris. Guidelines for completing this function will be provided to staff at the time of the survey.

FEMA Preliminary Damage Assessment

A preliminary damage assessment (PDA) report is a more detailed assessment that is completed following the initial damage assessment if it is suspected that the incident has, or will, overwhelm local resources and require federal assistance. The PDA serves two purposes, as follows:

- The PDA provides reliable damage estimates, which are used as a basis in applying for assistance and, where justified, the governor's request for a Presidential Disaster Declaration.
- The PDA provides for the effective implementation of state and federal disaster relief programs, if a Declaration is made.

The PDA is completed by a team of officials from FEMA, the State Emergency Management Division, county and local officials, and the U.S. Small Business Administration. Usually it takes approximately thirty days to complete and compile a PDA and route it through the Governor's office to FEMA.

6.2 Debris Clearance and Removal Guidelines

XXXXX County has developed the following guidance for prioritizing debris removal:

1. Life Safety
2. Situation Stabilization

3. Property Protection
4. Economic Stability and Environmental Protection

These guidelines will dictate planning, response, and recovery during disaster debris creating events.

6.3 Debris Removal Priorities

XXXXXX County has developed the priorities for debris clearance. Circumstances, such as crime scene preservation and accident investigation, may require a delay of debris clearing during disaster operations until approved can be obtained from local or federal law enforcement officials.

1. **Clear Emergency Access Routes – Lifelines.** Lifelines are those routes in a traffic network that provide access for emergency responders, alternate and evacuation routes, and damage assessment routes. Lifelines should include areas identified for potential staging, temporary shelters, and other resources available in the community that support emergency response. XXXXX County Public Works will work closely with the other county departments and neighboring jurisdictions to identify priorities for clearing transportation access routes.
2. **Clear Access to Critical Facilities and Infrastructure.** Assets, systems, and networks, whether physical or virtual, so vital that their incapacitation or destruction would have a debilitating effect on security, economic security, public health or safety. These typically include hospitals, fire stations, police stations, and emergency operation centers, as well as cellular and land-line telephone services, drinking water and power utilities, and sanitation facilities.
3. **Clear Major Freeways or Arterial Routes.** Major freeways and arterial routes are portions of the public transportation network that are needed to aid in response and recovery operations, but may not have been cleared as an emergency access route.
4. **Clear Areas Necessary for Movement of Goods and Services/Economic Restoration.** These areas include those portions of the public transportation network necessary for effectively transporting goods and services throughout the Region that are not included in one of the previous categories. These may include access to warehouses, airports, seaports, and major business districts.
5. **Clear Minor Arterial Routes.** These routes include those portions of the public transportation network that receive moderate traffic flows, but are not included in one of the previous categories.
6. **Clear Local Routes.** These areas include those portions of the public transportation network in residential neighborhoods that are not included in one of the previous categories.

6.4 Debris Operations

Debris-clearing and removal operations predominately focus on public roads and other critical infrastructure; they should be prioritized based on the methodology listed in Section 6.3 of this plan.

6.5 Debris Clearance

Initial debris clearance will focus on removing debris from public property based on the priorities listed in Section 6.3. Additional debris clearance from private or commercial property may be necessary if the debris presents a health or safety risk to the community. Typically private sector and commercial property are responsible for their own clean ups.

Appendix A, *Debris Resources*, lists additional resources that can be used to clear and haul disaster debris following an incident. Items to be considered during debris clearance and collection include the following:

- **Debris composition:** Commingling of debris creates problems with reduction and recycling techniques, which may impact future reimbursement. Whenever possible, immediate action should be taken to prevent or reduce commingling of debris during debris collection operations.
- **Location of debris:** There will often be different reimbursement and operational guidelines for debris clearance on public property, private residential, and private commercial property. While debris clearance on private property is not usually a reimbursable expense, some jurisdictions have cleared debris from private property in the past when it presented a health or safety risk to the community.

Collection Methods

Based on the types and distribution of debris, several collection methods are available during a debris causing incident:

Solid Waste Pick-up: Upon declaration, Utilities mayl activate Saturday pick-up services of standard yard and garbage waste. This will be coordinated by the Solid Waste Division.

Curbside: Residents may be asked to place their debris at the edge of the right of way for pickup. If curbside pickup is used, residents should be instructed to separate their debris into multiple categories including municipal solid waste, vegetative waste, construction and demolition debris, household hazardous waste, and putrescible.

DMS or Dumpsters: Residents may be asked to bring disaster debris to collection sites to temporarily store, segregate, and process debris before it is hauled to its final disposal site. If possible, the sites should remain at the same location for each debris-causing incident and should be included in the incident communication strategy. Facilities that can be used for drop-off's include debris drop boxes, DMSs, landfills, and transfer stations.

6.6 Debris Management and Neighborhood Collection Sites

XXXXXX County has identified two classes or sites for use during debris management operations.

- A **neighborhood collection site** is a temporary solid waste handling site used to consolidate debris within a local jurisdiction or area for transfer to a debris management site (DMS) or a permanent solid waste handling facility.
- A **debris management site** is a temporary solid waste handling site used to collect, sort, and reduce debris, including special waste, prior to final recycling or disposal.

Site Management

DMS preparation and operation will be managed by XXXXX County Public Works and our debris removal contractor(s). To meet overall debris management strategy goals and to ensure that the site operates efficiently, a site manager, debris monitoring personnel, and safety personnel should be assigned for each site.

Appendix A, *Debris Resources*, lists the competitively bid contracts awarded and executed by XXXXX County and the personnel identified for staffing of each of these positions, with responsibilities as follows:

- **Site Manager:** The site manager is responsible for supervising day-to-day operations, maintaining daily logs, preparing site progress reports, and enforcing safety and permitting requirements during site operations. The site manager is also responsible for scheduling the environmental monitoring and updating the site layout. The site manager has oversight of the activities of the debris removal contractors and the onsite debris processing contractors to ensure that they comply with the terms of their contracts.
- **Monitoring Staff and Assignments:** Regional monitors (whether jurisdiction employees or contractors) should be placed at ingress and egress points to quantify debris loads, issue load tickets, inspect and validate truck capacities, check loads for hazardous waste, and perform quality control checks. The specific duties of the monitors would depend on how debris is collected.
- **Safety Personnel:** Safety personnel are responsible for traffic control and ensuring that site operations comply with local, state, and federal occupational safety regulations.

Establishment and Operations Planning

Whenever possible, DMSs should be identified and established prior to an incident to allow appropriate planning and permitting to be completed. Appendix B, *Debris Management Site Operating Plans*, contains draft operating plans for potential debris management sites and neighborhood collection sites XXXXX County have identified.

Permits

Section 3, *Applicable Rules and Regulations*, provides a discussion of the applicable permits necessary for establishing and operating DMSs.

Debris Management and Neighborhood Collection Site Locations

XXXXX County Jurisdiction has located seven (7) DMS and seven (7) neighborhood collection sites for use during disaster debris operations that meet the criteria discussed below. The map below provides a list of DMSs currently identified and information on locating additional Debris Management Sites.

PLACE MAP HERE

6.7 Debris Reuse, Reduction, and Disposal Methods

Numerous methods are available that reduce the overall volume of disaster debris and limit the amount of debris remaining for landfill disposal.

Recycling and Reuse

Recycling and reuse strategies involve diverting material from the disposal stream and reusing it. The recycling and reuse of disaster debris is most often limited to metals, soils, and construction and demolition debris. Appendix A, *Debris Resources*, has a list of contractors that can provide these services during an incident. Recycling and reuse debris types are described below.

- **Metals:** Most nonferrous and ferrous metal debris is suitable for recycling. Metal maulers and shredders can be used to shred trailer frames, trailer parts, appliances, and other metal items. Ferrous and nonferrous metals are separated using an electromagnet and then sold to metal recycling firms.
- **Soil:** Soil can be combined with other organic materials that will decompose over time. This procedure produces significant amounts of material, which can be sold, recycled back into the agricultural community, or stored onsite to be used

as cover when the site is returned to its pre-incident state. In agricultural areas where chemical fertilizers are used heavily, recovered soil may be too contaminated for use on residential or existing agricultural land. Jurisdictions should consult with their local health department to establish what monitoring and testing is necessary to ensure that soil is not contaminated with chemicals. If the soil is not suitable for agricultural or residential use, it may ultimately need to be disposed of at a permitted landfill.

- **Construction and Demolition:** Concrete, asphalt, and masonry products can be crushed and used as base material for certain road construction products, or as trench backfill. Debris targeted for base materials needs to meet certain size specifications as determined by the end user. Clean wood products used in construction can also be chipped or ground and used as mulch or hog fuel.
- **Composting:** Composting is the controlled decomposition of organic materials, such as leaves, grass, wood, and food scraps, by microorganisms. The result of this decomposition process is compost, a crumbly, earthy smelling, soil-like material. Yard trimmings and food scraps make up about 25 percent of the waste generated in the average household; composting can greatly reduce the amount of waste that ends up in landfills or incinerators. A section of DMSs should be reserved to receive compost material after a disaster. Composting can be used not only for backyard garden soil additives, farmlands, highways, and other landscaping projects, they can also be put to many innovative uses. Jurisdictions using composting to reduce organic material need to be aware of, and prepared to mitigate, several hazards, which include spontaneous combustion of piles and vector control for rodents.

Volume Reduction Methods

Volume reduction methods reduce the volume of disaster debris to decrease impact on disposal facilities or create opportunities to reuse debris. Appendix C, *Debris Resources*, has a list of contractors that can provide these services during an incident. Descriptions of volume reduction methods are as follows:

- **Chipping and Grinding:** Chipping and grinding reduces the volume of some debris types by as much as 75 percent. This method is commonly used to reduce the volume of disaster debris, including vegetative debris, construction demolition debris, plastics, rubber, and metals. Clean wood can also be reduced and used for mulch. The ability to use recycled wood chips as mulch for agricultural purposes, fuel for industrial heating, or in a cogeneration power plant helps to offset the cost of the chipping and grinding operations. Jurisdictions using chipping and grinding to reduce the volume of vegetative debris must be careful to ensure that contaminants such as plastics, soils, rocks, and special wastes are not present in the vegetative debris to be processed. Care must also be taken when reducing construction and demolition debris to ensure that it does not contain hazardous materials.
- Appendix A, *Debris Resources*, lists resources that provide chipping and grinding services.

Problem Waste Processing and Disposal

Problem waste, such as pathogenic waste; white goods; household hazardous waste; or biological or nuclear waste, requires additional handling before it can be processed or disposed of and will vary depending on the type and scope of the debris-causing incident. During debris processing, problem waste should be removed and stored in a secure location until it can be disposed of properly. Because of their prevalence during debris-causing incidents, several types of waste warrant further discussion:

- **Household Hazardous Waste (HHW):** HHW has been prevalent during past disaster debris causing incidents. Strategies need to be developed to collect and store HHW during disaster debris operations.
- **White Goods:** White goods (including refrigerators) are commonly discarded after debris-causing incidents because they no longer function or as a result of extended power outages that cause their contents to decompose. Refrigerators are often processed in groups to remove the refrigerant along with any food waste, before being recycled.
- **Electronic Waste (E-waste):** E-waste may contain a variety of potentially toxic chemicals, including heavy metals and polychlorinated biphenyls (PCBs). EPA has specifically classified cathode ray tube (CRT) monitors as hazardous waste, and other electronic components may also qualify. Whenever possible, E-waste should be separated from other waste and recycled by an E-waste processor.
- **Treated Wood:** Treated wood includes different types of building material, including telephone poles, railroad ties, fence posts, and wood used to construct docks. Care needs to be taken to ensure treated wood is not chipped, shredded, mulched, composted, incinerated, or disposed of in unlined landfills during processing and disposal.
- **Gypsum Drywall:** When gypsum deteriorates in landfills it can create hydrogen sulfide gas, which poses an explosion and inhalation hazard. Large amounts of drywall are often created during storms and floods. Landfill managers must be aware of this and implement the proper precautions. If possible, gypsum drywall should be recycled rather than disposed of in a landfill.
- **Asbestos:** Regulations for asbestos handling are well established by several different local, state, and federal agencies, including Environmental Protection Agencies. After a major debris-causing incident, asbestos inspections may not be possible prior to demolition, resulting in an increased risk to public health. Jurisdictions should work with the Clean Air Regulatory Agency and local public health agencies to ensure waste that possibly contains asbestos is properly handled and disposed of.
- **Human Waste:** Following a disaster that disables water, sewer, or septic systems, citizens may have human waste stored in containers that requires disposal. This is considered biohazardous waste that cannot be included in the debris stream. Close cooperation is necessary between emergency managers, local public health officials, and utility personnel to properly collect and dispose of this waste.

Whenever possible, jurisdictions should attempt to segregate hazardous substances from the waste stream as early in processing as possible in order to prevent contamination of larger amounts of waste. Jurisdictions undergoing any cleanup effort that includes hazardous waste should consult with their local hazardous waste staff, public health officials, and EPA to ensure the protection of public health. A list of contractors who process and dispose of problem waste is included in Appendix A, *Debris Resources*, of this plan.

Debris Sorting and Diversion

When establishing and operating debris management and neighborhood collection sites the site manager is responsible for ensuring appropriate staff are available to monitor debris and ensure debris are sorted into appropriate categories for recycling, reuse, special waste processing, and disposal.

6.8 Debris Management Operations Monitoring

Debris monitoring operations document the debris clearance and removal operations, including the location and amount of debris collected. Monitoring is needed to ensure that any debris removal contractor(s) are performing the scope of work required by the contract. To ensure the debris removal process is meeting established contracted goals:

- Debris and Monitoring Contractors attend daily meetings with Public Works staff and provide daily reports on progress of work
- DMSs have been identified for activation based on severity and location of storm debris
- Initial Communication meeting are set for the start of each hurricane season to inform the Commissioner aids of preparedness status
- Following a debris generating event, daily meetings will be held with the Commissioner staff by the Public Works Department Information Officer
- Gated Communities will be contacted for coordination of debris removal
- Contact personnel identified to work with communities for debris removal coordination following a storm

Debris monitoring can be accomplished by XXXXX County staff, or by a debris monitoring contractor hired by XXXXX County. Contact information for debris management contractors is included in Appendix A, *Debris Resources*.

The key elements to observe and record when monitoring and documenting debris operations include:

- Type of debris collected
- Amount of debris collected
- Original collection location
- Equipment usage
- Staff labor hours
- Amount processed and final disposition for each type of debris (reuse, recycle, special waste, etc).

Documentation and Reporting Requirements

During the operation of DMSs, any operations that will have a bearing on site closeout need to be documented, such as petroleum spills at fueling sites; hydraulic fluid spills at equipment breakdowns; discovery of household hazardous waste; and commercial, agricultural, or industrial hazardous and toxic waste storage and disposal. This information will be used during site closeout operations.

6.9 Debris Management Contractor Monitoring

XXXXX County through its competitively bid contract has established a contract monitoring plan. The purpose of this plan is to accurately track costs and protect the jurisdiction's financial interest. Monitoring debris removal operations achieves two objectives:

- Verification that the work completed by the contractor is in the contract scope of work
- Documented justification, as required, for Public Assistance grant reimbursement

Contractor monitoring can be accomplished by XXXXX County Public Works Department staff, or by a separate contract company. Sample debris monitoring forms are included in Appendix D, *Debris Management Monitoring Forms*.

Considerations for Unit Price Contracts

A unit price contract requires that all trucks be accurately weighed, or measured and numbered, and that all truckloads be documented. Full-time trained contract monitors are usually necessary for this type of contract to keep an accurate account of the actual quantities of debris transported (in either cubic yards or tons). Monitors must be available at debris pickup locations to ensure the debris being picked up is eligible. In addition, this type of contract requires the contractor to provide or construct an observation stand at all reduction and disposal sites so the contract monitor can certify the load. If scales are used, monitors must also ensure that proper weights are registered before and after trucks have been emptied. The following conditions for unit price payments also apply:

- If unit price payments are based on weight, a truck scale must be available at the disposal site for weighing trucks. The weight of an empty truck must also be confirmed.
- If unit price payments are based on volume, monitors must verify truck capacities and inspect trucks for proper loading and compaction.

Load Tickets

The term "load ticket" refers to the primary debris-tracking document. A load ticket system tracks the debris from the original collection point to the DMS or landfill. By positioning debris monitors at each point of the operations (collection, DMS, and/or final disposition), the eligible scope of work can be properly documented. This process enables the jurisdiction to document and track debris from the initial collection location, to the DMS, and to final disposal locations. If a jurisdiction uses a contract hauler, this ticket often verifies hauling activities and can be used for billing purposes. Load tickets should be multi-copy and sequentially numbered. All copies

of load tickets presented for payment must match in order for payments to be made. A sample load ticket is included in Appendix H, *Sample Debris Management Monitoring Forms*.

Truck Certification and Periodic Recertification

Prior to beginning contract work, each truck must be certified. Certification includes a record of the following:

- Volume of the truck bed in cubic yards or empty truck weight
- Truck license number
- Any identification number assigned by the owner
- A short description of the truck

Monitors may need to be trained in order to measure truck capacities for certification purposes. Recertification of the hauling trucks on a random and periodic basis should be implemented for contract compliance and reimbursement considerations. A listing of certified trucks should be maintained by debris monitors to ensure that truck identifications have not been altered. A sample truck certification form is included in Appendix I, *Sample Debris Management Monitoring Forms and Contracting Considerations*.

Section 7: Contracted Resources

This section provides information on establishing and maintaining contracts for debris management services including debris clearance, removal, processing, and disposal.

7.1 Existing Debris Management and Solid Waste Contracts

Section 5, *Current Resources*, lists current contracts XXXXX County can use to augment their existing resources during a debris creating incident. Prior to engaging additional resources for debris collection and hauling it is imperative that XXXXX County Utilities Department consult with its current solid waste collection company(s) and identify their available resources.

7.2 Contract Debris Management Resource Needs

Based on the current resources identified in Section 5, *Current Resources*, XXXXX County Public Works has identified that additional resources may be needed in these areas to support a disaster debris operations:

- Right of Way (ROW) vegetative debris removal
- ROW construction and demolition debris removal
- ROW household hazardous waste collection and disposal
- ROW tree trimming and clearing
- General debris collection
- General debris hauling
- Debris processing and reduction
- Commercial and private property demolition and debris removal
- Commercial and private property sediment removal
- Debris Management Site (DMS) management
- Debris monitoring and inspection

Contracts have been awarded to address these needs.

7.3 Emergency Contracting and Procurement Procedure

Contracts for debris management resources are competitively bid through the County's Purchasing guidelines prior to a debris causing incident. If emergency contracts have to be established during an event the following general emergency contract rules apply:

- The contractor must be licensed and bonded
- The contractor must have adequate insurance
- The contract must comply with state and Federal procurement standards including provisions of 44 CFR Part 13

- The contractor cannot be on the State Department of Labor and Industries Debarred Contractors list

Emergency contracting procedures are followed based on the County's emergency purchasing guidelines. A Procurement and Special Purchases tracing team is assigned by XXXXX County Public works Fiscal & Operational Support Division to track all P-card and special purchases during a debris generating event.

Types of Contracts

The type of contract used to supply debris management services will vary depending on the type of work to be performed and how soon after the incident the work is planned. The three recommended contract vehicles for debris operations are:

Time and Materials Contract: Under a time and materials contract, the contractor is paid based on time spent and resources used in accomplishing debris management tasks. Time and materials contracts are extremely flexible and especially suitable for early debris right-of-way clearance jobs and hot spot cleanups. It is recommended that the use of time and materials contracts be limited to the first 70 work hours after a disaster.

Unit Price Contract: A unit price contract is based on weight (tons) or volume (cubic yards) of debris hauled. This kind of contract should only be used when the scope of work is not well defined. It requires close monitoring of debris collection, transportation, and disposal to ensure that quantities are accurate. A unit price contract may be complicated by the need to segregate debris for disposal.

Lump Sum Contract: A lump sum contract is used when the scope of work is clearly defined and the areas of work are specifically quantified. Lump sum contracts require the least monitoring by the contracting Jurisdiction.

The following contract vehicles are not recommended:

Cost plus Percentage of Cost: A cost-plus-percentage-of-cost contract is one whereby the contractor is compensated for work performed, such as a time and materials contract, but also compensated an additional percentage of that compensation.

Conditional upon Federal Reimbursement: This kind of contract only reimburses contractors if the region receives federal funding.

Piggyback Contracts: When a Jurisdiction uses another Jurisdiction's contract it is referred to as "piggybacking" on their contract. Variables associated with scopes of work and costs generally make this an option to be avoided.

Competitive Bid Process

During an emergency it is possible to develop an expedited process to competitively bid work. In the past Jurisdictions have developed scopes-of-work, identified contractors that can do the work, made telephone invitations for bids, and received competitive bids.

It is also important to note that in Jurisdictions where solid waste collection is regulated by the WUTC, contracting with additional resources for debris collection and hauling may only be pursued if the WUTC-certified hauler is unable to provide service, and only after the replacement contractor has been issued a temporary garbage certificate by the WUTC. The provision of temporary garbage certificates is discussed in RCW 81.77.110.

Section 8: Private Property Demolition and Debris Removal

Private property debris removal refers to the demolition and removal of disaster debris on private commercial or residential property. Generally, removal of debris from private property is not recommended. The following section provides information on the process to demolish and remove disaster debris on private property with or without owner consent and outlines the procedures that XXXXX County will need to follow in order to potentially receive expense reimbursement through the Public Assistance Program.

Gated Communities

The process of handling debris/disaster removal/response for the citizens of XXXXX County will be reviewed each year by the Disaster Recovery and Debris Removal Policy Team. As necessary, Board review and policy may need to be enacted. Information will be provided to Gated Communities on an annual basis at the beginning of each hurricane season. This information will be sent via e-mail and in print. Gated Communities will be instructed to contact 311 for updates on how debris/disaster recovery will be handled.

Section 9: Public Information Strategy

The goal of the public information strategy is to ensure that the residents are given accurate and timely information for their use and their own individual planning purposes. If information is not distributed quickly, rumors and misinformation spread and erode confidence in applicant management of the recovery operations. This section provides information on the XXXXX County Public Information Strategy to assist in debris management operations.

9.1 Public Information Officer

The incident command structure for all debris incidents should include a Public Information Officer (PIO) to distribute information and educate citizens about the debris operations. Section 5, *Current Resources*, contains a description of the role and responsibilities of a PIO. XXXXX County Public Works staff that can assume the position in the event of an emergency are listed in Appendix A, *Debris Resources*.

9.2 Communication and Public Education Strategy Prior to an Incident

XXXXX County has developed a public information campaign around disaster debris causing incidents. The campaign is a coordinated effort to provide information to jurisdiction employees, stakeholders, and the public prior to, during, and after a debris causing incident. The campaign introduces debris-causing incidents and includes the following elements:

XXXXX County is committed to keeping its citizens informed of the progress of clean-up following a disaster. To that end a comprehensive communications plan has been developed that will include: print, video and audio media coverage. In addition, contact with each County Commissioners' office should be established. The communication plan will be reviewed and coordinated upon activation with ESF 14. Personnel assigned to this function should be well versed in dealing with the public and county personnel.

9.3 Special Waste Considerations

Special waste items are those that need special handling, treatment, and disposal due to their hazardous potential, large volumes, or other problematic characteristics. Pre-scripted messages have been developed to provide the public with information on:

- How to identify Special Waste
- Why they should separate Special Waste
- Precautions to be taken if placing Special Waste in the Right of Way

9.4 Public Information Strategy during an Incident

- XXXXX County's public information staff will provide information to media outlets and the public during an incident. These activities may be provided solely by XXXXX County or through the cooperation of multiple jurisdictions. In addition, prior to a debris generating natural event, a communication video is prepared and available for viewing on County website

Coordination with the Joint Information Center (JIC)

Communications should be coordinated through the Joint Information Center (JIC) or Joint Information System (JIS); if a JIC or JIS has not been established, coordination should take place through each jurisdiction's PIOs.

If a JIC is established during a debris-causing incident, an XXXXX County Public Works Department debris liaison or technical specialist will report to the JIC to assist the PIOs. The debris operations liaison will provide current information on such topics as:

- Cleanup instructions
- Status of cleanup
- Locations of drop-off or collection sites
- How to source-separate waste
- Handling procedures
- Illegal dumping provisions
- Addressing complaints regarding debris piles or illegal dumping

Staff who can act as a debris liaison or technical specialist are included in Appendix A, *Debris Resources*.

Pre-scripted Information

Debris management public information products should use various types of information vehicles (print, radio, internet, etc.) and include pre-scripted information concerning topics, such as:

- Debris pick-up schedules
- Disposal methods and ongoing actions to comply with federal, state, and local environmental regulations
- Disposal procedures for self-help and independent contractors
- Restrictions and penalties for creating illegal dumps
- Curbside debris segregation instructions
- Public drop-off locations for all debris types
- Process for answering the public's questions concerning debris removal

Appendix E contains pre-scripted messages for debris management.

Distribution Strategy

The public information strategy should include methods to disseminate the prepared information to the general public. This can be accomplished in a number of ways. The following are suggested vehicles for dissemination of information:

- **Media** – Local television, radio, newspapers, or community newsletters
- **Internet Site** – ocfl.net or other jurisdictional websites
- **Public Forums** – Interactive meetings at town hall or shopping mall kiosks

- **Direct Mail Products** – Door hangers, direct mail, fact sheets, flyers within billings, and billboards
- **Telephone Information Hotline** – Pre-identified telephone number that citizens can call to get recorded information.

Local media outlets will be used to distribute information during recovery operations, along with social media.

The public information staff must take advantage of every information vehicle available if power, utilities, and other infrastructure have been damaged. Often, the best carriers of information are the responders in the field. The general public recognizes their role and frequently asks questions regarding the operations. Stocking the equipment and trucks with flyers, pamphlets, and other print media allows responders to perform their duties while also satisfying the public's need for information.

Message Maps

Message mapping is a process by which users can predict 95 percent of questions likely to be asked by the media and others. In preparation of an incident, XXXXX County Public Works has prepared answers to anticipated questions along with supporting information; effective message delivery is practiced before a crisis occurs.

Appendix E contains message maps developed for use in debris management operations.

Developing Messages in Alternate Languages and Formats

Message materials have been developed in alternate languages that are spoken in the community. Based on community demographics in XXXXX County, messages may need to be developed in the following languages:

- Spanish
- Creole
- Alternate formats or message materials have also been developed to assist the special needs population within the community. The following resources are available to develop messaging materials for alternate language and special needs communities:

Alternate Language/Translation Resources

- Staff

Special Needs Message Development Resources

- Center for Independent Living

Section 10: Training and Exercises

This section summarizes training and exercise components necessary to support disaster debris operations. XXXXX County Public Works Department staff participating in disaster debris management operations should have emergency management and position-specific training, depending on their expected role during a debris causing incident. Public Works conducts an annual exercise and training for new staff as well as required annual trainings.

General Emergency Management Training

General emergency management training requirements are developed as part of National Incident Management System (NIMS). The online courses and additional NIMS and FEMA courses and information are at <http://training.fema.gov/>. It is recommended that identified staff complete the following courses:

- IS-700 NIMS: An Introduction (available online at <http://training.fema.gov/IS/>)
- IS-800 NRF: An Introduction (available online at <http://training.fema.gov/IS/>)
- ICS-100: Introduction to NIMS ICS for Operational First Responders (available online at <http://training.fema.gov/IS/>)
- ICS-200: Basic All-Hazards NIMS ICS for Operational First Responders (available online at <http://training.fema.gov/IS/>)
- ICS-300: Intermediate NIMS ICS⁶ (classroom)
- ICS-400: Advanced NIMS ICS¹ (classroom)

These requirements are listed as part of the current NIMS Training Requirements and the NIMS Training Plan. Additional information on position-based NIMS training requirements is available from FEMA's Emergency Management Institute⁷ and the State Department Emergency Management Division.

Position-Specific Training

Specific training is available for staff that will support debris management operations. This includes:

Those are the minimum for all staff, as you progress up the chain of command there are more.

All Staff - IS-100.PWb Introduction to the Incident Command System (ICS 100) for Public Works

⁶ ICS-300 and ICS 400 are recommended for Command and General staff, strike team leaders, task force leaders, unit leaders, division/group supervisors, and branch directors, and is recommended for emergency operations center staff

⁷ <http://training.fema.gov/>

IS-200.b - ICS for Single Resources and Initial Action Incidents -
IS-700.a - National Incident Management System (NIMS) An Introduction
IS-800.b - National Response Framework, An Introduction

Foremen and above –

IS-100.PWb - Introduction to the Incident Command System (ICS 100) for Public Works
IS-200.b - ICS for Single Resources and Initial Action Incidents -
IS-700.a - National Incident Management System (NIMS) An Introduction
IS-800.b - National Response Framework, An Introduction
IS-01 - Emergency Program Manager, An Orientation to the Position

Chief Engineers (Acting as Assistant Manager), Assistant Managers, Managers, Deputy Directors, Directors and above –

IS-100.PWb - Introduction to the Incident Command System (ICS 100) for Public Works

IS-200.b - ICS for Single Resources and Initial Action Incidents -
IS-700.a - National Incident Management System (NIMS) An Introduction
IS-800.b - National Response Framework, An Introduction
IS-01 - Emergency Program Manager, An Orientation to the Position
ICS-300 - Intermediate Incident Command System for Expanding Incidents
ICS-400 - Advanced Incident Command System, Command and General Staff-Complex Incidents

Any employees working the DOC must have - ESF-900 EOC Operations Course

Any employee working the EOC must have - ESF-900 EOC Operations Course and ESF-601 Operations (Infrastructure)

To be eligible for emergency pay (exempt employees) must have –

IS-100.PWb - Introduction to the Incident Command System (ICS 100) for Public Works
IS-200.b - ICS for Single Resources and Initial Action Incidents -
IS-700.a - National Incident Management System (NIMS) An Introduction
IS-800.b - National Response Framework, An Introduction
IS-01 Emergency Program Manager, An Orientation to the Position
ESF-900 - EOC Operations Course

And be assigned as a lead person (person giving assignments)

Exercises

Procedures for disaster debris removal can be tested through discussion-based and operational-based exercises, as defined in the Homeland Security Exercise and

Evaluation Program⁸. The purpose of conducting exercises is to determine the overall efficiency and effectiveness of the XXXXX County Public Works Operational Disaster Debris Management Plan or a subset of the plan in a disaster scenario. These procedures can be exercised specifically using a debris management scenario, or as part of another exercise. At minimum, operational exercises involving the debris management plan will be conducted annually.

The plan will be modified based on after action reports (AARs) and improvement plans (IPs) from exercises, as well as actual events.

The exercises may be developed and executed individually and through collaboration with other regional stakeholders. Regional stakeholders that will be considered include:

- Federal Agencies
 - U.S. Army Corps of Engineers
 - Federal Emergency Management Agency
 - Environmental Protection Agency
- State Agencies
 - Emergency Management Division
 - Department of Ecology
- Local and Regional Jurisdictions
 - County Agencies
 - Local Health Department/District
 - Neighboring Jurisdictions

APPENDIX A

1. Road Clearance Priorities and Critical Facilities

During a storm emergency, the primary responsibility of the Maintenance Facility is to open the roadways in the County for emergency responders and clear obstructions from critical public facilities. Maintenance facilities are responsible first for clearing the main roads to/from emergency service facilities, followed by the clearing of secondary routes for shelters, fire stations, hospitals, and other critical facilities. The following map shows the location of these critical facilities (i.e., fire stations, hospitals and shelters) as well as the road clearance priorities for each of the critical facility types.

Priorities are set by the Roads & Drainage Division and are detailed in their section of the report.

APPENDIX B

DEBRIS CLEARANCE PRIORITIES – DEBRIS MANAGEMENT SITES

Debris Processing Sites are established on an annual basis prior to the start of Hurricane season. A county team consisting of Public Works, Environmental Protection, Parks and Recreation, Traffic Engineering, a representative from each current debris removal contractor and each monitoring contractor shall visit each site to determine needs. These should include but are not limited to:

- A Full Site Assessment
- Entrance/Exit Points
- EPD Issues/Concerns
- Risk Management Issues
- Defining of Site Challenges
- Determination of Traffic Signage and Maintenance of Traffic

A meeting with all selected contractors should be scheduled at the start of each hurricane season. The purpose of this meeting is to schedule the site visits and review contract specifications.

Debris sites may consist of county owned property, school sites, additional landfills, and private sites with signed agreements.

Roll-offs

Roll-offs may be used at selected locations which are typically park sites. This will be determined at the beginning of each season and governed by contract. The selected sites should be included on the debris collection site maps. This effort is coordinated through Public Works, Parks and Purchasing. **(Attachment 2)**

Maps

Maps of all debris sites should be generated at the start of each season. These maps are to identify all selected sites and indicate whether they are citizen or contractor sites. These maps should be provided upon activation to ESF 14-Public Information team for distribution to the media.

APPENDIX C

Debris Monitoring Contract #Y19-131, is for Debris Monitoring and was awarded through a competitively bid process. This contract is available for review.

APPENDIX D

Debris Removal Contracts XXX and XXX are for debris removal. These contracts were awarded through a competitively bid process and are available for review.

APPENDIX E

CALL PROCESS AND MAPPING

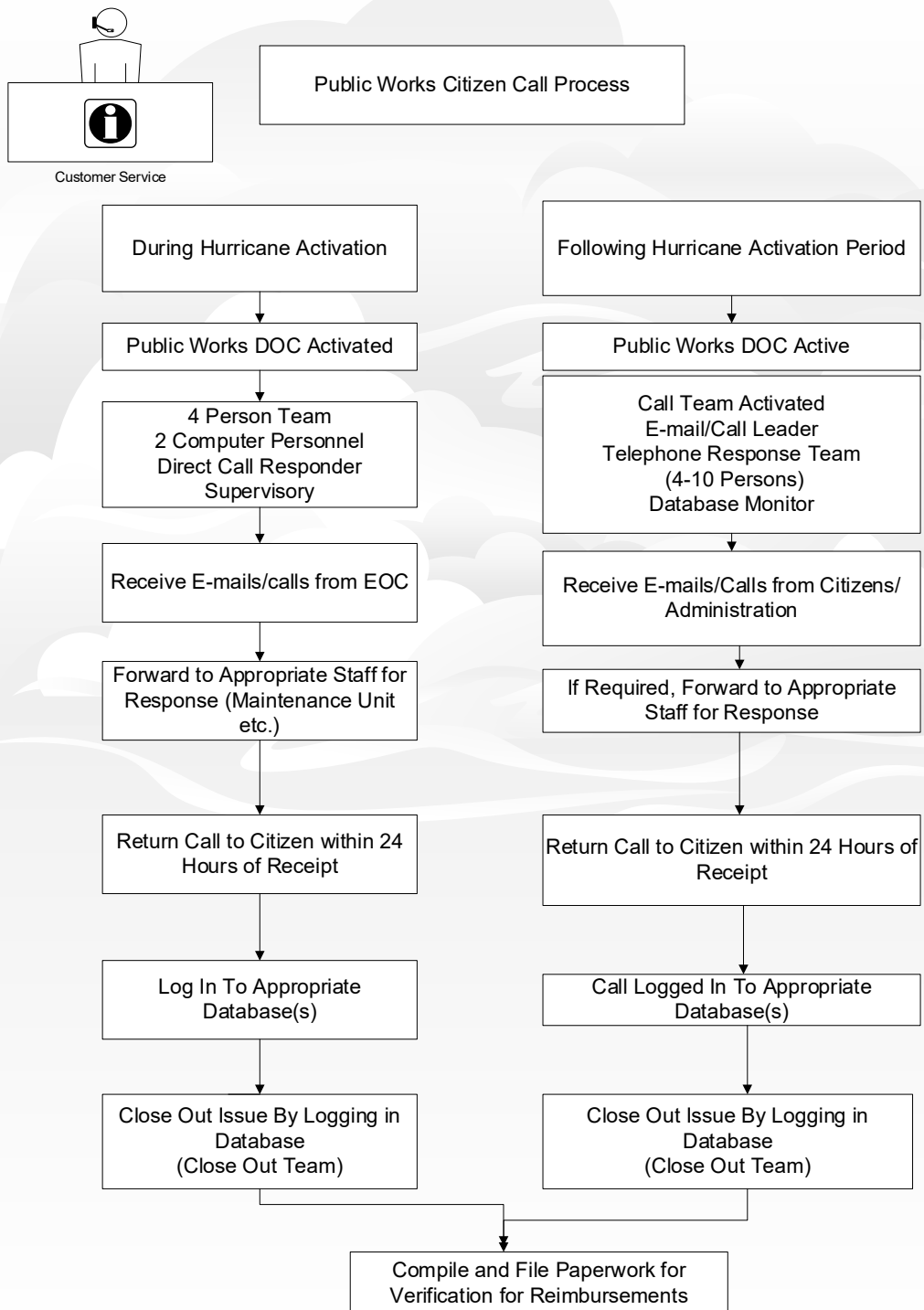
Public Works Citizen Call Process

Following Hurricane Activation

1. Public Works DOC will remain active for a time period to be determined by County Administration.
2. During such time, duties should be divided as follows:
 - a. DOC Staff may continue to receive e-mails/calls in the formal DOC
 - b. Normal Staffing should consist of 4 Persons
 - i. Supervisor
 - ii. Two Computer Personnel
 - iii. One Person Assigned for Phone Coverage
3. In the event Call backs to Citizen's is required:
 - a. A Call Team Shall be Activated that will consist of:
 - i. E-mail/Call Leader (Computer)
 - ii. Telephone Response Team
 1. Consisting of 4-10 Persons Based on Call Volume
 - iii. Database Monitor
 - b. These persons will act as a part of the DOC but may be stationed at various locations within the Public Works Administration Building
 - c. All Inquiries shall be funneled through the E-mail/Call Leader and distributed to the Telephone Response Team members
 - d. All Inquiries will be responded to within a 24 hour period from the time of receipt by Public Works
 - e. All Inquiries will be input into a central database by the Database Monitor
4. Once Inquiries have been completed, sheets shall be forwarded to the Close Out Teams for Appropriate documentation in Database(s)
 - a. Close Out Teams Shall Consist of the Following
 - i. Roads & Drainage Close Out Team of 3-4 Persons
 - ii. Other Issues (Debris) Close Out Team of 1-2 Persons

Note Team sizes may vary depending on the severity of the situation.

Processes and Scripts for Public Works DOC Callers



Return Calls to Citizen's With Debris Concerns

Step 1

Determine area in which citizen resides according to Map Dated: XXXXX(Green or Blue) Be Sure Residence is located in Unincorporated XXXXX County---

Step 2

Return Call

If in Green Area:

Good Afternoon/Morning,

I am calling from XXXXX County Public Works. Your name and phone number are a part of our citizen debris issue database. I am calling to see if your debris issue has been resolved?

(Answer No, then continue).....Our contractors are currently working in your community and should complete the first pass in your area by Date:XXXXX During the first pass, vegetative debris will be collected. Lighter debris (shrubby and smaller logs) may be picked up before the heavier trunks and stumps.

Also, as a reminder, there are (number determined based on storm severity) FREE citizen debris drop-off sites which are open seven (7) days a week from 7 a.m. until 7 p.m. You may refer to the map on the XXXXX County Website for locations of the citizen drop-off sites ([Website](#)) (If they do not have web access see map on table for nearest site.)

(Answer is Yes) I am glad to hear that and thank you for your time.

If in Blue Area:

Good Afternoon/Morning,

I am calling from XXXXX County Public Works. Your name and phone number are a part of our citizen debris issue database. Debris removal will begin in your area in the next two weeks. The first pass is scheduled to be completed by October 15th. During the first pass, vegetative debris will be collected. Lighter debris (shrubby and smaller logs) may be picked up before the heavier trunks and stumps.

Also, as a reminder, there are (number determined based on storm severity) FREE citizen debris drop-off sites which are open seven (7) days a week from 7 a.m. until 7 p.m. You may refer to the map on the XXXXX County Website for locations of the citizen drop-off sites (www.county website) (If they do not have web access see map on table for nearest site.)

If in XXXXX Area:

Good Afternoon/Morning,

I am calling from XXXXX County Public Works. Your name and phone number are a part of our citizen debris issue database. Our records indicate that the first pass has already been completed in your area. This means that vegetative debris has been collected which includes the lighter debris (shrubby and smaller logs) and may not have included heavier trunks and stumps.

If you have collected additional debris, you may wait for the second pass, which will begin after (insert date) or you may use one of the (number determined based on storm severity) FREE citizen debris drop-off sites which are open seven (7) days a week from 7 a.m. until 7 p.m. You may refer to the map on the County Website for locations of the citizen drop-off sites (www.county website) (If they do not have web access see map on table for nearest site.)

a) Call Directly From Citizen

Determine area in which citizen resides according to Map Dated: XXXXXXXX (Green or Blue) **Be Sure Residence is located in Unincorporated XXXXX County---**

If in Green Area:

Good Afternoon/Morning,

Our contractors are currently working in your community and should complete the first pass in your area by (insert date). During the first pass, vegetative debris will be collected. Lighter debris (shrubby and smaller logs) may be picked up before the heavier trunks and stumps.

Also, as a reminder, there are (number determined based on storm severity) FREE citizen debris drop-off sites which are open seven (7) days a week from 7 a.m. until 7 p.m. You may refer to the map on the XXXX County Website for locations of the citizen drop-off sites (www.county website) (If they do not have web access see map on table for nearest site.)

If in Blue Area:

Good Afternoon/Morning,

Debris removal will begin in your area in the next two weeks. The first pass is scheduled to be completed by. During the first pass, vegetative debris will be collected. Lighter debris (shrubby and smaller logs) may be picked up before the heavier trunks and stumps.

Also, as a reminder, there are sixteen FREE citizen debris drop-off sites which are open seven (7) days a week from 7 a.m. until 7 p.m. You may refer to the map on the XXXXX County Website for locations of the citizen drop-off sites (www.email_address.com) (If they do not have web access see map on table for nearest site.)

If in XXXXX Area:

Good Afternoon/Morning,

Our records indicate that the first pass has already been completed in your area. This means that vegetative debris has been collected which includes the lighter debris (shrubby and smaller logs) and may not have included heavier trunks and stumps.

If you have collected additional debris, you may wait for the second pass, which will begin after October 15th or you may use one of the sixteen FREE citizen debris drop-off sites which are open seven (7) days a week from 7 a.m. until 7 p.m. You may refer to the map on the XXXXX County Website for locations of the citizen drop-off sites (www.county_webiste) (If they do not have web access see map on table for nearest site.)

Reminders:

- **Be Courteous to Citizen**
 - **Listen for Other Issues and Record (i.e.: Drainage/Flooding Concerns)**
 - **See Information for Citizens who are Residents of Municipalities**
 - **Gated Community Calls should be forwarded to Public Works Department Contact**
- 4. See Attached Maps (Will be provided to callers upon activation)**

Debris Removal Map (Blue/Green/XXXXX)
Citizen Drop-off Site Map (Paper Listing)

21 Hurricane Season Windshield Assessment Team Instructions

The purpose of this assessment is to determine which areas of XXXXX County were negatively affected by the hurricane. Each team will drive the arterial, collector and subdivision roads highlighted on your sector map and report *MAJOR* damage via the Survey 123 phone application. There will be a limited time for each team to complete this task and return to Public Works.

Team Pre-meeting - Day Before Hurricane

Team Pre-meeting - An email notification of date and time for team pre-meeting will be sent to all team members; the meeting location is Public Works First Floor Main Conference Room.

Instructions During Team Pre-meeting

- Meet your team partner and exchange current phone numbers.
- Confirm your meeting location with your team partner.
- Confirm the location of where your team member will ride out the storm and notify your team leader of any changes.
- **Use TEXT MESSAGING when communicating with your team leader.**
- **If your team member is on vacation or unavailable, contact your team leader by text message; contact numbers are listed below.**

TEAMS TEAM LEADER COUNTY CELL#

Team Packet

Each team member A and 8 will receive a Hurricane Windshield Assessment packet at the team pre-meeting. Assigned team numbers are listed on outside of each team member's packet.

Information included in each team member's packet:

- Windshield Assessment Team instructions.
- Sector map.
- Phone instructions.
- Public Works radioguide.
- Mileage form.
- Paper reporting form (in case application is not transmitting).

Night before hurricane:

- Charge your County cell phone and County radio.
- Gas up your County vehicle and relocate County vehicle to designated location.
- Take your County cell phone, County radio and Hurricane Windshield Assessment packet with you to the location where you will be riding out the storm.

After the Hurricane passes:

- A phone tree will be utilized to inform teams when to start. (Ralphetta Aker will activate the phone tree.)
- Teams will start when winds are below 35 mph.
- Meet your team member at the designated meeting location.
- Check-In: Text your team leader **when starting Hurricane Windshield Assessment.**

IMPORTANT

<u>TEAMS TEAM LEADER</u>	<u>COUNTY CELL #</u>	<u>TEAMS TEAM LEADER</u>	<u>COUNTY CELL #</u>
---------------------------------	-----------------------------	---------------------------------	-----------------------------

If you or your team member cannot participate due to personal damage, danger or loss, contact your team leader by TEXT MESSAGE and wait for further instructions. If you do not receive a return text message or call within one hour, report to the Public Works First Floor Main Conference Room with your Windshield Assessment Packet and speak to your team leader for further instructions.

- Record your START TIME and MILEAGE using mileage form in packet, then travel to your designated Windshield Survey Sector.
- Drive the roads highlighted on sector map.
- DO NOT LEAVE YOUR VEHICLE.
- Dial 911 for emergency situations that affect life, health and safety of citizens, for example:
 - Injury to citizens or power lines down –appearing either active or inactive.
 - Traffic signal not working at intersections with no patrolmen directing traffic.
- After driving all the highlighted roads or the designated time has passed, return to Public Works.
- Record your Mileage and End Time on Mileage Form.
- Both team members report to designated Conference Room with COMPLETE PACKET and sign-in.
- Transfer your mileage form information onto current FEMA form.
- Each team will be informed if reports transmitted correctly; in cases where reports did not transmit correctly, further instructions will be provided.
- Receive instructions for the next day and both team members must sign-out.

Windsheild Assessment Test 311 Application Instructions am

- Open the 311 Application on County Cell Phone



- My Info
 - Enter the below listed information
 - Team #, County email and County Cell Phone
 - Uncheck the Submit as Anonymous box
 - Once complete hit <My Contact Info to return to main screen

A screenshot of the 'My Contact Info' form within the 311 app. The form has a title bar with a back arrow and the text 'My Contact Info'. It contains several input fields: two for 'Team #' (the second is empty), an email field with 'sample@ocfi.net', and a phone number field with '3213541234'. Below these is a checkbox labeled 'Submit as Anonymous' which is currently unchecked. At the bottom, there is a note: 'Your information is important in case we need more details to process this report. Providing your email'.

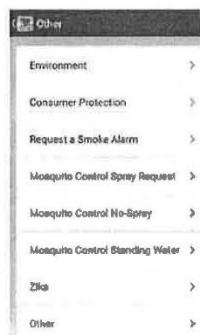
- Go to New Report



- Select Other



- Select Other



- New Report – Click on Camera to take picture – select New Photo then capture picture.
- Click on Location – automatically maps your location, click on the check mark to accept. ☒ If the location is incorrect, select the GPS symbol  for your phone to find your location. Then you will need to drag the red pin  to the location the GPS has located. Then select the check mark to accept. ☒
- In the Description – Type in the word **TEST** – then describe the picture category such as Traffic Signal Down etc. Also add nearest intersection.
- Click Submit
- If you receive an error message stating the application failed or the application stopped working – please submit a new ticket and in the description – note this is a duplicate due to an error received. This way we can document errors with the application and not think didn't take a picture or submitted a duplicate.

*The only way to exit a report is to hit the back key. *

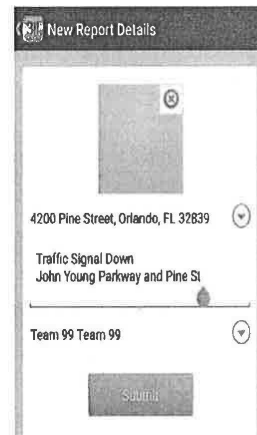
New Report / Picture



Location



Submit

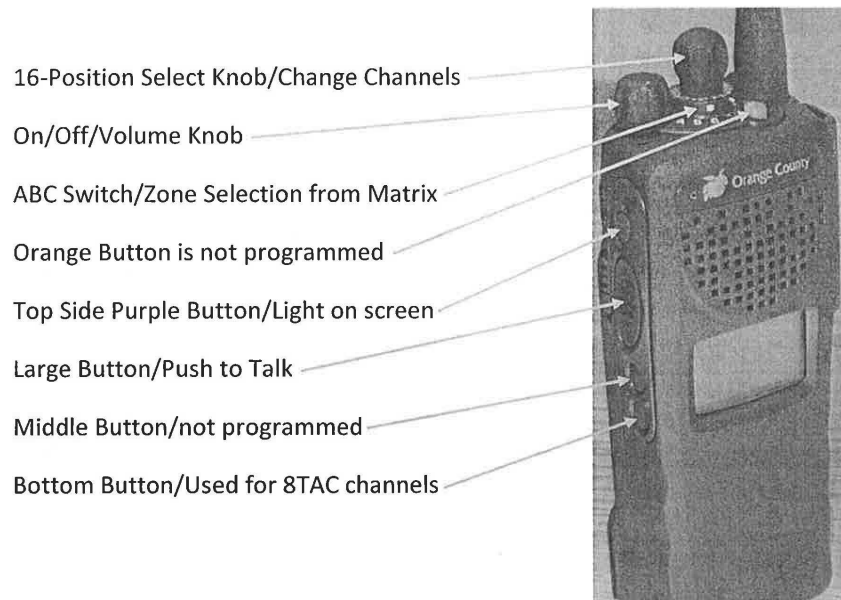


- Once you Submit you can view your submitted report under My Reports to confirm it was completed



- You can use Open Camera or the Regular Camera Application for this test. Whichever your phone defaults to.

Public Works Radio Guide Zone B, Station 2



When the radio is on, for this exercise, Public Works will be on the B Zone, Station 2.

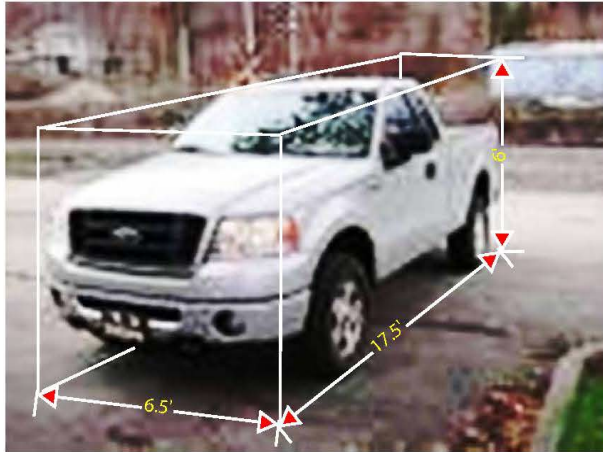
When talking on the radio, push down the Push to Talk Button (large button on the side) and hold it down while you talk, when done talking let the button go and you will be able to hear other radio traffic. When you push the button, there will be a quick chirping sound, after that sound is when you can start talking or part of your transmission will be cut off.

If you hear a long low tone, you are out of range. You can wait for the radio to get back into range or turn it off and then back on.

If you hear random chirping noises, check for the battery to be low. You will see a small battery flashing in the upper right corner of the screen.

APPENDIX G

DEBRIS INFORMATION SHEET



Using a Ford F-150 as standard, the dimensions of the truck are as follows:

$$\frac{6' \text{ high} \times 6.5' \text{ wide} \times 17.5' \text{ long}}{27} = 25 \text{ CY}$$

The volume of this type of vehicle is **approximately 25 CY**.
Use this visual image to estimate a **truck's worth** of debris, not truck loads of debris.



The dimensions of the transformer are as follows:

$$\frac{3' \text{ high} \times 3' \text{ wide} \times 3' \text{ long}}{27} = 1 \text{ CY}$$

The volume of this type of transformer is **approximately 1 CY**.



The dimensions of the Port-a-Potty are as follows:

$$\frac{7.5' \text{ high} \times 3' \text{ wide} \times 3' \text{ long}}{27} = 2.5 \text{ CY}$$

The volume of this type of port-a-potty is **approximately 2.5 CY**.

APPENDIX H

DMS Site Inventory

Site Name:				
Site Address:			Site Coordinates:	N
Estimated Property Size:		acres	W	
Site Owner:				
Ownership Type:	☐ Jurisdiction Property	☐ County Property	☐ Private Property	
☐ Other (describe)				
Owner Address:				
Owner Phone:				
Owner Email:				

Site and Neighboring Properties Characterization

Characteristic	Comments
Current Use	
Proposed Future Land Use	
Current Land use/Zoning	
Restoration Time Requirements	
Proximity to School, Church, or Community Center	
Property Topography	
Environmental Considerations	
Open Water or Wetlands	
Ground Water Wells	
Within 100-year floodplain	
Soil/Slope Integrity	
Surface Water Drainage	
Suitable for use in wet weather	
Prevailing Wind Direction	
Brownfield Site	
Superfund Site	
Archeological or Historic Properties or Artifacts	
Underground Utilities (water, wastewater, natural gas, electricity)	
Noise Control Buffer	
Adjacent to Airport/Airfield	
Access to Electrical Service	
Access to Water Service	
Access to Sewer Service	
Existing Lighting	
Traffic Ingress/Egress Capacity	
Capable of Accepting Heavy Trucks (site and neighboring roads)	
Proximity to Major Roadway	

Fencing and Other Security Features	
-------------------------------------	--

Site Preparation Level of Effort ☐ High

☐ Medium

☐ Low

Suitability to Wet Weather ☐ High

☐ Medium

☐ Low

Ability to Serve Spatial Area ☐ High

☐ Medium

☐ Low

List Jurisdictions that could utilize this site:

Closest Landfill Available to This Site:

Recommended Uses for This Site:

C&D

☐ Vegetative

☐ White Goods

☐ Hazardous Waste

☐ Other (describe)

Reduction Methods Acceptable for This Site:

☐ Grinding

Site Map Sample:

Date of Site Survey:



Picture Numbers Taken During Site Survey:

Potential Site Rating ☐ Primary ☐ Secondary ☐ Tertiary

Locating Additional Debris Management Sites

When identifying additional DMSs, planning staff should first consider sites that already have solid waste handling permits and, secondly, public lands to avoid costly land leases. Existing disposal or recycling facilities close to lifelines and major access routes are ideal DMSs. Jurisdiction-owned sites that will not require extensive repair costs, such as parks, vacant lots, or sports fields, should be considered as well. State-to-state or county-to-county agreements may provide solutions for public land use; however, if these are not available, planning staff should develop criteria for identifying potential private property locations for the DMSs. Private land easements should be reviewed by the legal staff to avoid extensive damage claims upon site closeout. Additional selection considerations for DMSs include the following:

- Proximity to the sources of disaster debris; as close as possible
- Large enough to accommodate a storage area, a sorting area, and volume reduction operation area
- Hard, preferably non-porous, surface such as a paved parking lot
- Accessible by main transportation routes with good ingress and egress to accommodate heavy truck traffic
- Outside of environmentally sensitive areas, such as wetlands or well-fields
- Reuse and recycling possibilities, including: timber agreements, mulch and chip disposal in the agriculture community and fuel sources for incinerators or heating. Recycling success will depend on the types of debris and the local recycling environment.

Appendix X, Debris Management Site and Neighborhood Collection Site Inventory, should be used to evaluate new debris sites.

a) **Site Preparation:**

Develop a Memorandum of Understanding, a Memorandum of Agreement, or lease/use agreement, if required. Establish lined temporary storage areas for materials (including ash, household hazardous waste, fuels, and other materials) that can contaminate soils, groundwater, and surface water. When possible, set up plastic liners under stationary equipment, such as generators and mobile lighting plants. This should be included as a requirement in the scope of work if DMS preparation will be contracted out. The topography and soil/substrate conditions should be evaluated to determine the best site layout. When planning for site preparation, the designer should consider ways to make site closure and restoration easier. Upon site closeout, the uncontaminated soil can be re-spread to preserve the integrity of the tillable soils. Operations that modify the landscape, such as substrate compaction and over-excavation of soils when loading debris for final disposal, adversely affect landscape restoration. Identify who would be responsible for updating the initial baseline data and develop an operation layout to include ingress and egress routes.

b) **Site Layout**

The efficiency and the overall success of the DMS operations are determined by how the site is designed. Significant accumulation of debris should not be allowed to occur at temporary storage sites because of environmental and safety concerns, such as the risk of fire. Moreover, permits for such sites may impose maximum capacity restrictions. While FEMA recommends 100 acres as the minimum size for DMS, this may be altered due to facility availability. Additional debris management sites may be necessary if actual debris quantities flowing into the site are greater than the site storage and processing capacity.

Operational Boundaries

Operational boundaries are the boundaries or areas that clearly define the different use areas on the DMS. In establishing the operational boundaries, the DMS design staff may consider using earthen berms, temporary barriers, or other physical restrictions. This aids traffic circulation and keeps the backlog of debris to a minimum.

Common operational areas include the following:

- Reduction
- Recycling
- Tipping areas (unloading)
- Loading areas for processed debris to go to its final disposition
- Drop-off centers for the public (this may include vegetative, recycling, or construction and demolition debris)
- Household hazardous waste storage
- Monitoring tower and/or scale locations at both the ingress and egress points
- Equipment, fuel, and water storage

Separation of the areas listed above should be clearly delineated and defined. Maximum separation helps to reduce conflicts in use. As operations proceed, these areas may change with the various types of debris. The reduction, recycling, tipping, and loading areas need ample room for large equipment operations. The design should consider the possibility of multiple pieces of equipment engaging in the same activity at one time. Depending on the scale of operations, each debris stream may have its own tipping area and should be designed accordingly.

General public drop-off areas for recycling, reduction, and construction and demolition debris may be included within a DMS. These public use areas should be carefully designed for passenger vehicle traffic and public safety. Account for all weight or volume of materials received from public drop-off to ensure accurate and complete records for all debris received to the site by source.

Household hazardous waste storage should be located in a safe location close to the public drop-off center, yet restricted, so that qualified personnel can process the waste appropriately. The design staff may consider constructing an impermeable lining and earthen berms to contain spills and prevent surface water runoff from leaving the area.

Monitoring towers should be located at ingress and egress points. Monitoring towers should be constructed of durable structural materials. The structures should be designed to withstand active and static loads. A stepladder is not an acceptable monitoring tower.

Equipment and fuel should have a designated storage area and signs posted appropriately. The fuel storage areas need to be designed to contain spills. For dust and fire suppression, water should be readily available throughout the site at all times and must be identified appropriately.

Traffic Patterns

Traffic circulation should be well defined throughout the entire DMS. Although traffic signs and barricades aid in directing traffic, the planning staff may also consider flag personnel to help direct traffic. Drivers unfamiliar with the new environments, routes, and rules will need assistance to safely navigate through the site.

Optimally, the designed traffic pattern should allow trucks to enter and exit through different access points, as long as each is monitored. Haulers are typically paid by the volume or weight of a load. The load is evaluated when entering the site, based on a percentage of the full capacity of the truck. Stationing monitors at ingress and egress points ensures that every truck

releases the entire load prior to leaving the site. This prevents debris left in a truck from a previous load from being counted again in a subsequent load. The empty trucks that enter the site to remove the processed (reduced) debris should enter and exit through an access point other than that of all other traffic. This reduces the site management and debris monitor confusion regarding debris being deposited or removed from the site.

c) Environmental Monitoring Program:

Additional data should be collected on a continuous basis during site operations to support site closeout and quality assurance. The data can be compared to the previously established information in order to determine any remediation that may be necessary.

DMS operations may expand, contract, or shift on the site. It is important to track reduction, hazardous waste collection, fuel, and equipment storage in order to sample soil and water for contaminants. Periodically, map or sketch out activity locations so that areas of concern can be pinpointed later for additional sampling and testing.

If the site is also an equipment staging area, monitor fueling and equipment repair to prevent and mitigate spills (e.g., petroleum products and hydraulic fluids). Include clauses in the contract scope of work to require immediate cleanup by the contractor.

d) Site Closure

After the site operations are complete, the property (either jurisdiction-owned or leased) must be restored to its pre-activity environmental state. Restoration of a site involves removing all traces of the operations and possible remediation of any contamination that may have taken place during the operations. Debris, processing equipment, storage tanks, protection berms, and other structures constructed on the site should be removed from the site upon completion of all debris removal and processing operations.

e) Site Evaluation and Restoration

Final restoration of the landscape must be acceptable to the landowner, within reasonable expectations. Therefore, plan the landscape restoration as early as possible, preferably incorporating provisions within the lease.

The final environmental site evaluation is an extension of the environmental monitoring program. Testing, similar to that which is done for the baseline study, should be conducted to confirm that the site has been returned to its pre-activity state. Test samples should be taken at the same locations as those of the initial assessment and monitoring program. However, if warranted, additional test samples may be needed at other locations on, or adjacent to, the site.

Based on the results of the testing, additional remediation may be required before the owner takes final acceptance of the site. The lease agreement should have provisions to release the jurisdiction from future damages when the site is returned to its original condition, or when final acceptance is received from the owner.

f) Awareness of Improper Unit Price Contractor Strategies

Monitors must be aware of the following techniques, which have been used by contractors to take advantage of unit price contracts during the debris cleanup process:

- Reporting improper truck volumes
- Adding improper debris to a load to increase weight (i.e., steel, boulders, excess soil, or concrete)
- Soaking debris with water
- Tipping half of the load
- Switching a truck number
- Using large fuel tanks that are almost empty on initial weigh-in and full when delivering debris
- Adding steel plates or other weights to the bottom of the truck bed
- Only FEMA has the authority to make debris eligibility determinations not the contractor

Considerations for Time and Materials Contracts

For time and materials contracts, jurisdictions must document the length of time that equipment and personnel is used, and must ensure that equipment and personnel are being used efficiently.

Considerations for Debris Monitoring Contracts

Debris monitoring contractors can be used to monitor and document debris operations, to manage other debris management contractors, or to operate a jurisdiction's complete debris management operation.

When developing scopes of work for debris management contractors, or when evaluating their performance, the following should be considered and evaluated:

- Documentation of the type of debris collected
- Documentation of the amount of debris collected
- Documentation of the original collection location
- Measurement and certification of truck capacities (recertify on a regular basis)
- Completion and physical control of load tickets (in monitoring towers and the field)
- Validation of hazardous trees, including hangers, leaners, and stumps (use appropriate documentation forms)
- Confirmation that trucks are accurately credited for their load.
- Confirmation that trucks are not artificially loaded to maximize reimbursement (e.g., debris is wetted or debris is fluffed instead of compacted)
- Confirmation that hazardous waste is not mixed in with loads.
- Confirmation that all debris is removed from trucks at the DMS
- Notification to project manager if improper equipment is mobilized and used
- Notification to project manager if contractor personnel safety standards are not followed
- Notification to project manager if general public safety standards are not followed

- Notification to project manager if completion schedules are not on target
- Confirmation that only debris specified in the scope of work is collected and identification of work as potentially eligible or ineligible
- Monitoring of site development and restoration of the DMS
- Confirmation that daily loads meet permit requirements
- Confirmation that work stops immediately in an area where human remains or potential archeological deposits are discovered
- Notification to project manager if debris removal work does not comply with all local ordinances, as well as state and federal regulations
- Completion of a pre- and post-event environmental assessment of each DMS

EXAMPLE OF DAILY OPERATIONAL REPORT

CONTRACT NO. _____

DAILY REPORT						
CONTRACTOR: CONTRACT NO:					DATE OF REPORT:	
Truck No.		Location of Work	Landfill Trips	Tonnage Totals	Local Collection Site Trips	Tonnage Totals
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
		DAILY TOTALS				

EXAMPLE OF DAILY OPERATIONAL REPORT

CONTRACT NO. _____

[illegible]



Debris Load Ticket Guidance & Sample



Event Name: _____ Applicant Name: _____ Date: _____

The loading site monitor will complete the Ticket information and Collection information section of the load ticket (Figure below) for all contractor debris-hauling vehicles. For paper tickets the monitor will keep one copy and give the original and remaining copies to the truck driver. The load tickets issued by the loading site monitors are the basis for debris contractor payments. The Unloading Information section is to be filled out by the tower monitor at the Debris Management Site/Final Disposal Site. The monitor's copies will be submitted to the debris monitoring contractor's Data Entry Supervisor or designated representative daily. Load ticket information will be entered into a database by the monitoring contractor's data entry staff.

Load Ticket		Ticket Number	
Ticket Information			
Applicant			
Event		Truck Number	
Contractor		Truck Capacity	
Subcontractor		Truck Driver	
Collection Information			
Loading Date/Time		GPS (decimal degrees)	
Street Address & ZIP Code		Monitor Name	
<u>Debris Type</u>		<u>Debris Location</u>	
Vegetation	☐	Public ROW	☐
C&D	☐	Private Property	☐
White Goods	☐	Waterway	☐
HHW	☐	Other	☐
Other	☐		
"Other" Debris Type Information			
Unloading Information			
Unloading Date/Time		GPS (decimal degrees)	
Unloading Site Name		Load Call	
Street Address & ZIP Code		Monitor Name	
Tipping Ticket Number		Notes	





Debris Load Ticket Guidance & Sample



Ticket Information

- Ticket Number- Unique number that belongs only to one ticket
- Event- Should reference the disaster that deposited the debris
- Applicant- Name of the applicant legally responsible for removing debris in question
- Contractor- The prime contractor responsible for debris hauling operations
- Subcontractor- Name of the subcontractor hauling this specific load. Only used if the prime contractor for hauling operations sub-contracted out
- Truck Number- To be consistent with truck number on truck placard and truck certification form
- Truck Capacity- This information comes from the truck certification
- Truck Driver- Print clearly and legibly the name of the driver

Collection information

- Loading Date/Time- Date and time debris was collected. Please use military time
- Street Address & Zip Code- Physical address debris was picked up from
- GPS- GPS coordinates debris was picked up from in decimal format to the fifth decimal
- Monitor Name- Name of monitor issuing this ticket. Print legibly

Unloading Information

- Unloading Date/Time- Date and time debris was unloaded. Please use military time
- Unloading Site Name-Name of debris management site or final disposal location (whichever the debris was taken to)
- Street Address & Zip Code- Physical address debris was unloaded
- Ticket Tipping Number- the number of the tipping ticket if taken to a facility which weighs upon entry and exit (ie, landfill)
- GPS- GPS coordinates of the facility debris was unloaded at
- Load Call- Weight or cubic yardage call given by the monitor as the debris enters the facility. If the contract is by volume, the load call is typically written as a percentage
- Monitor Name- Name of monitor at the unloading site (typically a tower monitor). Print legibly.





Debris Load Ticket Guidance & Sample



Load Ticket	Ticket Number												
Ticket Information													
Applicant													
Event	Truck Number												
Contractor	Truck Capacity												
Subcontractor	Truck Driver												
Collection Information													
Loading Date/Time	GPS (decimal degrees)												
Street Address & ZIP Code	Monitor Name												
<table><tr><td>Debris Type</td><td>Debris Location</td></tr><tr><td>Vegetation ☐</td><td>Public ROW ☐</td></tr><tr><td>C&D ☐</td><td>Private Property ☐</td></tr><tr><td>White Goods ☐</td><td>Waterway ☐</td></tr><tr><td>HHW ☐</td><td>Other ☐</td></tr><tr><td>Other ☐</td><td></td></tr></table>		Debris Type	Debris Location	Vegetation ☐	Public ROW ☐	C&D ☐	Private Property ☐	White Goods ☐	Waterway ☐	HHW ☐	Other ☐	Other ☐	
Debris Type	Debris Location												
Vegetation ☐	Public ROW ☐												
C&D ☐	Private Property ☐												
White Goods ☐	Waterway ☐												
HHW ☐	Other ☐												
Other ☐													
"Other" Debris Type Information													
Unloading Information													
Unloading Date/Time	GPS (decimal degrees)												
Unloading Site Name	Load Call												
Street Address & ZIP Code	Monitor Name												
Tipping Ticket Number	Notes												





Truck Placard Example



Truck Number		Truck Capacity	
Applicant Name	Contractor/ Subcontractor Name(s)	Last Truck Certification Date	Truck Tag Number





Leaner-Hanger Summary



Purpose:

Used to document all debris tickets associated with the removal of hazardous leaning trees and hanging branches. Refer to the following documents for more information about eligibility requirements:

- FDEM Leaner-Hanger-Stump Guidance (FROC-GUI-005)
- FEMA Public Assistance Debris Monitoring Guide (March 2021)
- FEMA Public Assistance Program and Policy Guide (Version 4)
- Public Assistance Debris Removal Tips Fact Sheet (August 2017)
- Public Assistance Private Property Debris Removal (PPDR) Fact Sheet (August 2019)

Fields:

- Ticket Number: Issued by the debris monitor at the work site
- Ticket Date: Date the ticket was created
- Ticket Time: Date the ticket was created
- Contractor: Name of the contractor responsible for the work
- Physical Address/Location: Street address, City, and ZIP code (if applicable) or specific location description
- GPS Latitude (decimal degrees): Global Positioning System latitude coordinate in decimal degrees (i.e., 00.000000).
- GPS Longitude (decimal degrees): Global Positioning System longitude coordinate in decimal degrees (i.e., 00.000000)
- Photos provided (Yes or No): Confirmation that photographs have been taken that show the leaner/hanger posed an immediate threat and that required FEMA eligibility requirements have been met. Photos should be provided for all work.
- Comment documenting threat: Description of how the leaner/hanger posed an immediate threat



Leaner-Hanger Summary



Ticket Number	Ticket Date	Ticket Time	Contractor	Physical Address/Location	GPS Latitude (decimal degrees)	GPS Longitude (decimal degrees)	Photos Provided	Comment Documenting Threat



Stump Summary

**Purpose:**

Used to document all debris tickets associated with the removal of hazardous tree stumps. Refer to the following documents for more information about eligibility requirements:

- FDEM Leaner-Hanger-Stump Guidance (FROC-GUI-005)
- FEMA Public Assistance Debris Monitoring Guide (March 2021)
- FEMA Public Assistance Program and Policy Guide (Version 4)
- Public Assistance Debris Removal Tips Fact Sheet (August 2017)
- Public Assistance Private Property Debris Removal (PPDR) Fact Sheet (August 2019)

Fields:

- Ticket Number: Issued by the debris monitor at the work site
- Ticket Date: Date the ticket was created
- Ticket Time: Date the ticket was created
- Contractor: Name of the contractor responsible for the work
- Physical Address/Location: Street address, City, and ZIP code (if applicable) or specific location description
- GPS Latitude (decimal degrees): Global Positioning System latitude coordinate in decimal degrees (i.e., 00.000000).
- GPS Longitude (decimal degrees): Global Positioning System longitude coordinate in decimal degrees (i.e., 00.000000)
- Hazard (Yes or No): Confirmation that the stump has been designated a hazard.
- Fill Material Quantity (CY): Volume in cubic yards of material used to fill the root ball hole
- Fill Material Location: location of material used to fill the root ball hole
- Fill Material Source: source of material used to fill the root ball hole
- Photos provided (Yes or No): Confirmation that photographs have been taken that show the diameter of the stump, demonstrate that the stump posed an immediate threat, and that required FEMA eligibility requirements have been met





Stump Summary



Ticket Number	Ticket Date	Ticket Time	Contractor	Physical Address/Location	GPS Latitude (decimal degrees)	GPS Longitude (decimal degrees)	Hazard (Y or N)	Fill Material Quantity (CY)	Fill Material Location	Fill Material Source	Photos Provided (Y or N)



Tower Monitor Summary



Event Name: _____

Applicant Name: _____

Date: _____

Purpose:

Used by monitor at the entrance to debris management site or temporary debris managing site to capture information for debris coming into the facility and make a load call based on the weight/volume of the debris collected.

Fields:

- Date & Time: Date and time the tower monitor made load call
- Category: Right of Way, PPDR, TDMS
- Contractor: Name of the contractor responsible for the debris hauling truck
- Ticket Number: Issued by the tower monitor at the load site
- Truck Number: Identification number for hauling truck, as per debris hauler
- Truck Capacity: Truck capacity in cubic yards; needs to match capacity of the truck as per the truck certification
- Load Call: Volume in cubic yards given to the load by the tower monitor
- Debris Type: Type of debris as per the PAPPG (e.g., Vegetative, C&D, White Goods, Mixed load, etc.)
- Picture Number(s)
- Comments



Tower Monitor Summary



Incident Name: _____

Tower Monitor Name: _____

Tower Number: _____

Date	Time	Category	Contractor	Ticket Number	Truck Number	Truck Capacity (Volume, CY)	Load Call (Volume, CY)	Debris Type	Picture Number(s)	Comments

APPENDIX I

Sample Health and Safety Plan Supplement

B. Purpose

The purpose of this Health and Safety Supplement is to support the existing XXXXX County safety plan and/or procedures in 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 debris removal and monitoring employees. In addition, this document will identify some representative work hazards and the appropriate measures to reduce risk of injury.

C. Dissemination of Information

The debris hauling contractor and monitoring firm 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 periodically during the project to increase worker awareness.

D. Compliance

The debris hauling contractor and monitoring firm 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. Offenders of safety policies and procedures will be dismissed from the project entirely.

E. 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.), age and use of structure 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 Right-of-Way (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 (rodents), reptiles and insects pose a hazard to debris removal workers.
- **Debris Disposal** – After disaster debris is collected it is often transported to a debris management site (DMS). Upon entry to a DMS, 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 or sent offsite for recycling. The DMS 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, high noise levels, dust and airborne particles from the reduction process. Load spotters will be trained to watch for hazardous waste and other items that do not belong at the DMS.
- **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.

F. 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 (unless site are fully lit for nighttime operations).
- Limit clean-up operations to one side of the road at a time.
- Limit collection work under overhead lines Work with PUD to clear fallen lines prior to working in that area..

- 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.
- Watch for hazardous waste, white goods, propane tanks and other hazardous materials.

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.

DMS/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 as necessary to control airborne dust and debris.

G. 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

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, Right-of-Entry (ROE), and vegetative and construction & 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 (8) 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 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.

H. 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 debris hauling contractor and monitoring firm 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, Reduction, and Recycling

The hazards of disaster debris disposal, recycling, 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, hazardous waste, 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;
- Gloves; 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; and
- Hard Hat

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

Sample of Agreement for Removal of Debris From County Property

TO:

FROM: Director, Public Works Department

SUBJECT: Debris Removal from County Property

XXXXX County Public Works now has three Hurricane Debris Removal Contractors and three Debris Monitoring contractors for the 2017 hurricane season.

As we previously agreed, each of your respective departments/divisions will use these contractors if a need arises. In order to coordinate the contractors work amongst all of us, we would like for each of you to identify a contact person who will act as your liaison with Public Works during an emergency. Please send the names to XXXXXXXXXX, Manager Fiscal & Administration.

Attached is a Standard Operating Procedure we have developed to coordinate the debris clean up activities for your review. If you would like a meeting to discuss the process, we are available.

cc: XXXXX County Personnel

***Debris Coordination
Standard Operating Procedure
Between Public Works and County Departments/Divisions***

Purpose:

To ensure coordination among County Departments in the removal of debris from County owned facilities and property during declared emergency events.

Contacts:

To be assigned by each Department/ Division.

Coordination Process:

- Departments/Divisions using the debris removal contractors should contact the XXXXX County Public Works Coordinator to schedule a walk through with the respective personnel (to include the Contractor) at each facility.
- Areas for stockpiling the debris will be identified and the debris moved to the designated areas by County staff or existing County contractors for the debris removal contractor to pick up and complete disposal.
- Upon completion of the stockpiling operation by the division, times for debris removal pick up will be schedules 24 to 48 hours through Public Works contact staff.

Division Responsibilities:

The respective division will have the responsibility to contact Public Works to schedule the Department/Division initial walk through of the area for pick-up of debris and confirm pick-up time once stockpiling process is complete.

Public Works Contacts:

1 Introduction	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
Does the document contain a purpose statement that contains valuable goals and explains why the plan was developed?	Yes No	1.1 Purpose		Section 1 Instructions, Goals from other Jurisdiction Emergency Plans (Comprehensive Emergency Plan, Emergency Response Plan, Continuity of Operations Plan, etc.)
Does it have a mission statement that explains what the plan does?	Yes No	1.2 Mission		Section 1 Instructions,
Does the plan's Scope refer to both the geographic boundaries and political or organizational boundaries the plan covers? Does it also define, in general terms, what the plan does not cover or include.	Yes No	1.3 Scope		Section 1 Instructions,
Does the plan describe its alignment with other plans including the Jurisdiction's comprehensive emergency management plan (CEMP) and/or Recovery plan?	Yes No	1.4 Alignment with Other Plans: Jurisdiction Emergency Plans		Section 1 Instructions,
Does the plan identify how it was developed, and how it will be updated and maintained to ensure its accuracy?	Yes No	1.5 Plan Maintenance and Update: Introduction and Plan Revisions Sections		Section 1 Instructions, Information will be based on the plan development strategy used by the jurisdiction

2 Situation and Assumptions	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
Does the plan identify the potential debris causing hazards for the jurisdiction?	Yes No	2.1 Types of Hazards		Jurisdiction Hazard Identification and Vulnerability Assessment (HIVA) and UASI Regional Disaster Debris Management Plan

Does the plan have a section that contains debris volume estimates specific to the jurisdiction for two events; a low-medium debris impact wind storm, and a medium to high debris impact earthquake?	Yes No	2.2 Debris Estimates: Wind Storm event Earthquake event		HIVA, HAZUS Model, FEMA 325
Does the plan describe any known situation or assumption information that was used during the development of the plan?	Yes No	2.3 Situation and Assumptions		N/A

3 Applicable Rules and Regulations	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
Does the plan identify the regulations and policies that affect disaster debris operations, including the selection of debris management sites?	Yes No	Section 3.1 Planning		FEMA 325
Does the plan have a section that states that during the response phase of a disaster, the jurisdiction will contact the environmental officials who have regulatory authority for the operations and monitoring of the debris management sites and the disposition of the disaster debris?	Yes No	Section 3.2 Response		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan identify the state and local regulations and policies that shape how disaster debris will be managed at the debris management sites?	Yes No			
Does the plan identify the legislation/policies	Yes No	Section 3.2 Response		UASI Regional Disaster Debris

that give management and staff authority to act to in a disaster/emergency?				Management Plan, Jurisdiction Comprehensive Emergency Management Plan
Does the plan identify procedures for acquiring required regulatory permits or other approvals?	Yes No	Section 3.3 – Recovery Appendix X, Debris Management Site Operating Plan		Consult local regulatory Agency
Does the plan emphasize debris separation to maximize recycling, composting, and other diversion from disposal throughout all stages of debris management?	Yes No	Section 6.6 Debris Reuse, Reduction, and Disposal Methods: Debris Sorting and Diversion		

4 Concept of Operations	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
Does the plan describe the three different levels (Routine, Medium Impact, and High Impact) that the jurisdiction will use to characterize debris management operations?	Yes No	4.1 Debris Management Response Levels		UASI Regional Disaster Debris Management Plan
Does the plan describe the steps the jurisdiction will take to prepare for, respond to, and recover from a debris causing incident?	Yes No	4.2 Debris Management Operational Phases		UASI Regional Disaster Debris Management Plan
Does the plan explain that the jurisdiction will use the incident command system to organize debris management operations?	Yes No	4.3 Incident Command System		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan describe the roles and responsibilities that departments/divisions within the jurisdiction will have relating to debris management?	Yes - No	4.4 Roles and Responsibilities		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan provide details on additional resources that can be	Yes No	4.5 Additional Resources		FEMA 325, UASI Regional Disaster

used to support debris management operations?				Debris Management Plan
Does the plan have a section that outlines the strategy that the jurisdiction will use to communicate during an event?	Yes No	4.6 Emergency Communication Strategy		UASI Regional Disaster Debris Management Plan
Does the plan have a section that outlines the health and safety strategy for the jurisdiction?	Yes No	4.7 Health and Safety Strategy		FEMA 325 Template Appendix X – Health and Safety Supplement
Does the plan establish a debris management team?	Yes No	4.4 Roles and Responsibilities		FEMA 325

5 Current Resources	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
Does the plan identify staff roles that may be needed for debris management operations?	Yes No	5.1 Staff		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan identify equipment that may be available for debris management operations?	Yes No	5.2 Equipment		UASI Regional Disaster Debris Management Plan
Does the plan identify types of technology tools that may be available for debris management operations?	Yes No	5.3 Technology		HAZUS Home Page: http://www.fema.gov/plan/prevent/ha-zus/index.shtm
Does the plan identify contract resources that are available to assist with debris management operations?	Yes No	5.4 Contract Resources		FEMA 325, UASI Regional Disaster Debris Management Plan

Does the plan identify any mutual aid or inter-local agreements that could be utilized to support debris management operations?	Yes No	5.5 Mutual Aid Agreements		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan identify facilities that are available for disposal of disaster debris?	Yes No	5.6 Disposal Facilities		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan identify recycling/composting facilities that are available for processing disaster debris?	Yes No	5.7 Recycling/Composting Facilities		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan identify equipment and other resources that could be shared among neighboring municipalities?	Yes No	5.5 Mutual Aid		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan estimate staffing requirements for diversion programs as part of staffing needed for overall recovery programs?	Yes No	5.1 Staff		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan list all possible sources for obtaining additional staffing?	Yes No	5.1 Staff		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan list the local landfill's locations, capacity and debris accepted?	Yes No	Appendix A Additional Debris Resources		UASI Regional Disaster Debris Management Plan
Does the plan contain or reference an	Yes No	Appendix X: Employee Contact List		UASI Regional Disaster Debris Management Plan

emergency contact list of employees?				
Does the plan contain a contact list of debris contractors?	Yes No	Appendix A Additional Debris Resources		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan specify that contractors CAN NOT be awarded 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?	Yes No	5.4 Contracted Resources		FEMA 325, FEMA suggests that this language be included in your plan.

6 Debris Collection and Hauling Operations	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
Does the plan describe the federal and state processes for damage assessment?	Yes No	6.1 Preliminary Damage Assessment and Debris Estimates: FEMA Preliminary Damage Assessment		FEMA 325
Does the plan summarize the jurisdictions guidelines for establishing debris removal priorities?	Yes No	6.2 Debris Clearance and Removal Guidelines		UASI Regional Disaster Debris Management Plan
Does the plan have a section that uses the guidelines referenced in Section 6.2 to develop debris removal priorities?	Yes No	6.3 Debris Removal Priorities		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan describe how debris clearance, removal, and collection will be accomplished in the jurisdiction?	Yes No	6.4 Debris Operations		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan describe the number, and location, or neighborhood collection sites and	Yes No	6.5 Debris Management and Neighborhood Collection Sites:		FEMA 325

debris management sites that jurisdiction has identified?		Establishment of Operations Planning		
Does the plan provide extensive detail on the identification, development, operation, and close-out of Debris Management Sites (DMS)?	Yes No	6.5 Debris Management and Neighborhood Collection Sites: Establishment of Operations Planning		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan explain staff roles necessary to operate a debris management site?	Yes No	6.5 Debris Management and Neighborhood Collection Sites: Site Management		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan outline procedures for debris reduction techniques such as grinding, chipping, or recycling?	Yes No	6.6 Debris, Reuse, Reduction, and Disposal Methods: Recycling and Reuse Volume Reduction Methods		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan specify how the materials will be collected using the following procedures: - o Curbside? - o Drop Box? - o Debris Management Site?	Yes No	6.4 Debris Operations: Collections Methods		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan determine how materials amounts and types will be identified such as geographic information system, windshield assessment, or hotline for public calls?	Yes No	6.1 Preliminary Damage Assessment and Debris Estimates: Damage Assessment Operations		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan list the area lifeline transportation routes?	Yes No	Appendix X List of Lifeline Routes		UASI Regional Disaster Debris Management Plan
Does the plan include methods to monitor and enforce recycling and diversion guidelines?	Yes No	6.6 Debris, Reuse, Reduction, and Disposal Methods: Debris Sorting and Diversion		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan include tracking system to verify amounts and types of materials diverted and disposed	Yes No	6.7 Debris Management Operations Monitoring: Documentation and		FEMA 325, UASI Regional Disaster Debris Management Plan

to document FEMA reimbursement?		Reporting Requirements		
Does the plan identify a process for the collection and management of any materials that require separation (e.g., hazardous waste, white goods, asbestos)?	Yes No	6.6 Debris Reuse, Reduction, and Disposal Methods: Problem Waste Processing and Disposal		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan explain how debris monitoring will occur at debris management sites, neighborhood collection sites, or curbside pickup, and special monitoring issues (switched identification markers, excessive dirt, ineligible debris, ect)?	Yes No	6.8 Debris Management Contractor Monitoring: Awareness of Improper Contractor Strategies		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan contain documentation procedures for debris contractor management?	Yes No	6.7 Debris Management Operations Monitoring: Documentation and Reporting Requirements		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan specify that only FEMA has that authority to make debris eligibility determinations NOT the contractor?	Yes No	6.8 Debris Management Contractor Monitoring: Awareness of Improper Contractor Strategies		FEMA 325, FEMA suggests that this language be included in your plan.

7 Contracted Resources	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
Does the plan identify what additional resources existing solid waste companies have available for debris clearance and removal activities, beyond their normal capacity to maintain municipal solid waste services?	Yes No	7.1 Existing Debris Management and Solid Waste Contracts		UASI Regional Disaster Debris Management Plan
Does the plan list pre-establish contracts for additional resources to support response and recovery operations	Yes No	Appendix A Debris Resources		FEMA 325, UASI Regional Disaster Debris Management Plan

following a debris-causing incident?				
Does the plan include a list of pre-qualified contractors that provide disaster debris services and can be called after an incident has occurred including an explanation of how the list was developed	Yes No	Appendix A Debris Resources		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan address emergency contracting/procurement procedures?	Yes No	7.3 Existing Debris Management and Solid Waste Contracts		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan stipulate that a debris removal contract should only be signed AFTER it has been reviewed by the jurisdictions legal representative?	Yes No	Section 7		FEMA 325, FEMA suggests that this language be included in your plan.
Does the plan stipulate that FEMA DOES NOT certify, credential, or recommend debris contractors?	Yes No	7.3 Existing Debris Management and Solid Waste Contracts		FEMA 325
Does the plan explain, if applicable, the limitations that WUTC regulations have on contracting for additional debris hauling resources?	Yes No	7.1 Existing Debris Management and Solid Waste Contracts		

8 Private Property Demolition and Debris Removal	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
Does the plan identify regulations and procedures that apply to demolition and debris removal involving privately owned property?	Yes No	8.1 Debris Removal and Demolition Permitting and Procedures: Demolition Documentation		UASI Regional Disaster Debris Management Plan
Does the plan outline several planning considerations that should be reviewed during disaster debris management planning?	Yes No	8.2 Special Considerations		FEMA 325, UASI Regional Disaster Debris Management Plan

Does the plan have a section that provides information on private property demolition and debris removal costs FEMA has paid during past events?	Yes No	8.3 Eligibility of Private Property Demolition and Debris Removal Costs		FEMA 325, UASI Regional Disaster Debris Management Plan
--	-------------------	---	--	---

9 Public Information Strategy	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
Does the plan provide a brief description of the roles and responsibilities of the Public Information Officer (PIO)?	Yes No	9.1 Public Information Officer 5.1 Staff		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan describe actions the jurisdiction can take prior to an incident to inform the public about debris management?	Yes No	9.2 Communication and Public Information Strategy Prior to an Incident		UASI Regional Disaster Debris Management Plan
Does the plan describe how public information and messaging will be delivered during a debris incident?	Yes No	9.3 Public Information Strategy during an Incident		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan identify and outline alternative outreach channels that can be used in an emergency?	Yes No	9.3 Public Information Strategy during an Incident: Developing Messages in Alternative Languages and Formats		UASI Regional Disaster Debris Management Plan
Does the plan coordinate with city/county public information stakeholders to develop awareness campaign material such as door-hangers, or print, radio, or TV ads	Yes No	9.3 Public Information Strategy during an Incident: Distribution Strategy		FEMA 325, UASI Regional Disaster Debris Management Plan

Does the plan include a description of establishing a Joint Information Center or media center to handle debris questions from the public?	Yes No	9.3 Public Information Strategy during an Incident: Coordination with Joint Information Center		UASI Regional Disaster Debris Management Plan
Does the plan include a contact list for the media?	Yes No	9.3 Public Information Strategy during an Incident: Distribution Strategy		UASI Regional Disaster Debris Management Plan
Does the plan set up hotline for debris pickup and to answer questions about diversion programs when activated?	Yes No	9.3 Public Information Strategy during an Incident: Distribution Strategy		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan determine need for interpreters and translators?	Yes No	9.3 Public Information Strategy during an Incident: Distribution Strategy		UASI Regional Disaster Debris Management Plan

I. 10 Training and Exercises	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
J. Does the plan include a section that provides general information on basic training relating to Emergency Management Operations?	Yes No	10.1 General Emergency Management Training		UASI Regional Disaster Debris Management Plan
Does the plan include a section that contains information on specific training courses suggested for the staff who will assume roles in disaster debris management operations?	Yes No	10.2 Position-Specific Training		FEMA 325, UASI Regional Disaster Debris Management Plan
Does the plan include a section that provides information on conducting debris management exercises?	Yes No	10.3 Exercises		UASI Regional Disaster Debris Management Plan

K. Appendices	Review Status	Location within template (section/subsection)	Reviewer Comments	Information Sources/Guidance
Does the plan include priorities for the clearance of debris and outline a response operation, including mapping critical facilities and anticipated concentrations of debris?	Yes No	Appendix X: Lifelines, Critical Infrastructure, and other Debris Clearance Priorities		County/Local GIS Division
Does the plan contain a sample Intergovernmental Emergency Mutual Aid Agreement form?	Yes No	Appendix X: Mutual Aid Agreement Sample Template		UASI Regional Disaster Debris Management Plan
Does the plan contain a sample Time and Material Contract?	Yes No	Appendix X: Example of Time and Materials Contract for Debris Removal		UASI Regional Disaster Debris Management Plan
Does the plan contain a sample Lump Sum Contract?	Yes No	Appendix X: Example of a Lump Sum Contract		UASI Regional Disaster Debris Management Plan
Does the plan contain a sample Unit Price Contract?	Yes No	Appendix X: Example of a Unit Price Contract		UASI Regional Disaster Debris Management Plan
Does the plan contain a sample Right of Entry Agreement and Hold Harmless Form?	Yes No	Appendix X: Example of Right of Entry for Debris Removal		UASI Regional Disaster Debris Management Plan
Does the plan contain sample Debris Load Slips?	Yes No	Appendix X: Sample Forms for Debris Tracking		UASI Regional Disaster Debris Management Plan
Does the plan contain a sample Load checking form?	Yes No	Appendix X: Sample Forms for Debris Tracking		UASI Regional Disaster Debris Management Plan
Does the plan contain a map of Lifeline Routes?	Yes No	Appendix X: Map of Lifeline Routes		County/Local transportation department, County/Local GIS Division
Does the plan contain a map of DMSs?	Yes No	Appendix X: Map of DMSs		County/local GIS Division