




Public
Assistance

Debris
Operations
Job Aid



Federal Emergency
Management Agency
FEMA 9580.1
August 2000



Federal Emergency Management Agency

**PUBLIC ASSISTANCE
DEBRIS OPERATIONS
JOB AID
FEMA 9580.1**

For more information related to Debris Management and Operations, please refer to the Debris Management Guide, FEMA 325.

Report fraud, waste, and abuse to FEMA's Office of the Inspector General on the Hotline at 1-800-323-8603

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Foreword

This job aid provides guidance on the pick-up, removal, and disposal of eligible debris generated by hurricanes, tornadoes, floods, earthquakes, wildfires, and other events that are Presidentially declared disasters or emergencies. Public Assistance Program staff may find this job aid useful when working with applicants to manage debris removal and disposal operations.

Questions regarding this job aid, or debris removal operations in general, should be directed to:

Chief, Engineering Branch
Infrastructure Division
Response & Recovery Directorate
Federal Emergency Management Agency
500 C Street, SW
Washington, DC 20472
(202) 646-3684

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Debris Management Terms

Burning – Reduction of woody debris by controlled burning. Woody debris can be reduced in volume by approximately 95% through burning. Air curtain burners are recommended because they can be operated in a manner to comply with clean-air standards.

Chipping or Mulching - Reducing wood related material by mechanical means into small pieces to be used as mulch or fuel. Woody debris can be reduced in volume by approximately 75%, based on data obtained during reduction operations. The terms “chipping” and “mulching” are often used interchangeably.

Debris - Scattered items and materials either broken, destroyed, or displaced by a natural disaster. Example: trees, construction and demolition material, personal property.

Debris Clearance - Clearing the major road arteries by pushing debris to the roadside to accommodate emergency traffic.

Debris Removal - Picking up debris and taking it to a temporary storage site or permanent landfill.

Department of Public Works (DPW) - Department typically responsible for clearing debris from the roads and rights-of-way.

Department of Solid Waste Management (SWM) - Department typically responsible for managing and overseeing the collection and disposal of garbage, trash, construction debris, and disaster related debris.

Federal Response Plan – A plan that describes the mechanism and structure by which the Federal government mobilizes resources and conducts activities to address the consequences of any major disaster or emergency that overwhelms the capabilities of State and local governments.

Final Debris Disposal - Placing mixed debris and/or residue from volume reduction operations into an approved landfill.

Force Account Labor - In this context, State, tribal or local government employees engaged in debris removal activities within their own jurisdiction.

Garbage - Waste that is regularly picked up by the Department of Solid Waste Management. Examples: food, plastics, wrapping, papers.

Hazardous Waste - Material and products from institutional, commercial, recreational, industrial and agricultural sources that contain certain chemicals with one or more of the following characteristics, as defined by the Environmental Protection Agency: 1) Toxic, 2) Flammable, 3) Corrosive; and/or 4) Reactive.

Household Hazardous Waste (HHW) - Used or leftover contents of consumer products that contain chemicals with one or more of the following characteristics, as defined by the Environmental Protection Agency: 1) Toxic, 2) Flammable, 3) Corrosive and/or 4) Reactive. Examples of household hazardous waste include small quantities of normal household cleaning and maintenance products, latex and oil based paint, cleaning solvents, gasoline, oils, swimming pool chemicals, pesticides, and propane gas cylinders.

Hot Spots - Illegal dumpsites that may pose health and safety threats.

Monitoring - Actions taken to ensure that a contractor complies with the contract scope of work.

Mutual Aid Agreement – In this context, a written understanding between communities or between States obligating assistance during a disaster or emergency. (See Response and Recovery Directorate Policy Number 9523.6, “Mutual Aid Agreements for Public Assistance”, dated August 17, 1999.

Recycling - The recovery and reuse of metals, soils, and construction materials that may have a residual monetary value.

Rights-of-Way - The portions of land over which facilities, such as highways, railroads, or power lines are built. Includes

land on both sides of the highway up to the private property line.

Scale/Weigh Station - A scale used to weigh trucks as they enter and leave a landfill. The difference in weight determines the tonnage dumped and a tipping fee is charged accordingly. Also may be used to determine the quantity of debris picked-up and hauled.

Sweeps - The number of times a contractor passes through a community to collect all disaster-related debris from the rights-of-way. Usually limited to three passes through the community.

Temporary Debris Storage and Reduction (TDSR) Site - A location where debris is temporarily stored until it is sorted, processed, and reduced in volume and/or taken to a permanent landfill.

Tipping Fee - A fee based on weight or volume of debris dumped that is charged by landfills or other waste management facilities to cover their operating and maintenance costs. The fee also may include amounts to cover the cost of closing the current facility and/or opening a new facility.

Trash - Non-disaster related yard waste, white metals, or household furnishings placed on the curbside for pickup by local solid waste management personnel. Not synonymous with garbage.

United States Army Corps of Engineers (USACE) - The USACE designs and manages construction projects and buys, manages, and disposes of land for the Army and Air Force. The USACE may be used by FEMA when direct Federal assistance, issued through a mission assignment, is needed.

Volume Reduction Operations - Any of several processes used to reduce the volume of debris brought to a temporary debris storage and reduction site. It includes chipping and mulching of woody debris, shredding and baling of metals, air curtain burning, etc.

White Metals - Household appliances, such as refrigerators, freezers, stoves, washers, and dryers.

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Acronyms

C&D	Construction and Demolition
DFO	Disaster Field Office
DPAO	Deputy Public Assistance Officer
DPW	Department of Public Works
ERT	Emergency Response Team
ESF#3	Emergency Support Function - Public Works and Engineering
ESF#12	Emergency Support Function – Energy EST Emergency Support Team
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
OFA	Other Federal Agencies
OIG	Office of Inspector General
MA	Mission Assignment
PA	Public Assistance
PAC	Public Assistance Coordinator
PAO	Public Assistance Officer
PDA	Preliminary Damage Assessment
PIO	Public Information Officer
PW	Project Worksheet
ROC	Regional Operation Center
SBA	Small Business Administration
SWM	Solid Waste Management
TAC	Technical Assistance Contractor
TDSR	Temporary Debris Storage and Reduction
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency

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Section A

PUBLIC ASSISTANCE DEBRIS MANAGEMENT RESPONSIBILITIES

Authority

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended) provides the authority for the Federal government to respond to disasters and emergencies in order to provide assistance to save lives and protect public health, safety, and property.

Federal Response Plan

The Federal Response Plan is designed to address the consequences of any disaster or emergency situation in which there is a need for Federal response assistance under the authority of the Stafford Act. The plan identifies actions that participating Federal departments and agencies will take in the overall Federal response, in coordination with the affected State. It is applicable to natural disasters such as earthquakes, hurricanes, typhoons, tornadoes, wildfires, and volcanic eruptions. These events can heavily damage buildings, structures, and other components of the basic infrastructure. Combined with downed or damaged trees and shrubs, the resulting debris may overwhelm State and local resources.

When a full Emergency Response Team (ERT) is activated under the Federal Response Plan, it consists of the following organizational elements:

- Federal Coordinating Officer (FCO) Support Staff
- Operations Section
- Information and Planning Section
- Logistics Section
- Administration Section

Operations Section

In a full ERT, the Operations Section will have an Infrastructure Support Branch with the following groups:

- **ESF#3 Public Works & Engineering Group:** Responsible for supporting the restoration of essential public services and facilities.
- **ESF#12 Energy Group:** Responsible for providing assistance in restoring power systems and fuel supplies.
- **Public Assistance Group:** Responsible for administering grant assistance to State and local governments and certain private nonprofit organizations for debris removal, emergency protective measures, and repair, restoration, and replacement of damaged facilities.

Public Assistance Group

The Infrastructure Branch Chief normally directs the Public Assistance Group. In some cases, this person may also be assigned as the Public Assistance Officer (PAO). If debris is a significant component of the disaster, then a Deputy PAO for Debris will be assigned and assume many of the following debris related responsibilities:

- Advising the Operations Section Chief and FCO on potential debris issues.
- Coordinating the efforts of restoring essential public services with the State PAO.
- Coordinating requests for Debris Mission Assignments that may be issued to
 - ESF#3 Public Works & Engineering
 - ESF#12 Energy
 - ESF#10 Hazardous Materials
- Coordinating Preliminary Damage Assessment (PDA) operations.

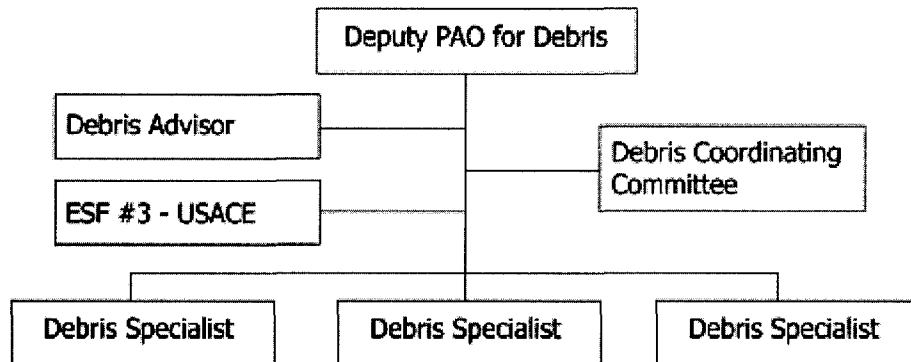
- Identifying major debris issues and applicants with potential debris problems based on the PDA.
- Administering applicable portions of the Public Assistance Grant Program.
- Identifying and obtaining resources for managing debris operations. Such resources may include a Debris Advisor and an appropriate number of Debris Specialists.
- Providing Public Assistance Coordinators (PACs) with guidance and direction on problems, procedures, and policies pertaining to debris operations.

Debris Management Organization and Responsibilities

Many of the debris issues identified in the Debris Removal and Disposal Operations Plan (See Appendix A) developed during the Response Phase may not be resolved until the Recovery Phase has begun. Consequently, the Public Assistance staff that is assigned to execute the Public Assistance Program must be knowledgeable of the debris issues defined in the Debris Removal and Disposal Plan, and their current status as defined by the Debris Removal and Disposal Status Report (See Appendix B). A recommended organization for managing and coordinating debris operations is shown in the organization chart on the following page. A brief discussion of the roles and responsibilities of each position shown, as well as those of some of the supporting staff follow the chart. A more detailed overview of the Debris Coordinating Committee is shown in Appendix C.

Emergency Response Team (ERT) Infrastructure Branch Chief

- Coordinates the efforts of restoring essential public services.
- Administers Public Assistance Programs.



Typical DFO Debris Management Organization

- Reviews Debris Mission Assignments issued by the EST to the Public Works and Engineering Group and coordinates with the Public Assistance Group.
- Requests that Debris Specialists be assigned to assist in PDA operations as necessary.

Public Assistance Officer (PAO)

- Identifies major debris issues and applicants with potential debris problems based on the PDA.
- Identifies and, as required, obtains resources for managing debris operations (Deputy PAO for Debris, Debris Advisor and an appropriate number of Debris Specialists).
- Provides the Deputy PAO for Debris with guidance and direction on problems, procedures, and policies pertaining to debris operations.
- Advises the Infrastructure Branch Chief and FCO on potential debris issues.

Deputy PAO for Debris

- Coordinates all debris-related activities and operations.
- Organizes and chairs the Debris Coordinating Committee.
- Identifies major debris issues and applicants with potential debris problems based on coordination with the State PAO.

- Coordinates all debris mission assignments with ESF#3.
- Supervises the Debris Advisor and Debris Specialists.
- Provides PACs with guidance and direction on problems, procedures, and policies pertaining to debris operations.
- Advises the PAO on potential debris issues.
- Coordinates with DFO Attorney to review proposed debris related contracts provided by local applicants.
- Arranges for technical assistance in contract preparation or contract monitoring if requested.

Public Assistance Coordinator (PAC)

- Identifies debris issues during the kickoff meeting with the applicant.
- Educates applicants on the availability of PA funding for debris operations.
- Works with the Debris Advisor and Specialists to resolve potential program issues with respect to debris.
- Assesses the need for obtaining resources to monitor debris contractor's activities with the Debris Advisor.
- Works with applicants early in the process to encourage a smooth transition for debris operations from Federal Direct Mission Assignments to local responsibility.
- Utilizes the Debris Advisor to conduct technical reviews of Category A-Project Worksheets as needed, especially those that are large or complex.
- Informs the DPAO for Debris of potential debris issues.

Debris Advisor

- Serves as the DPAO's debris expert and advisor.
- Attends ESF#3 and USACE debris coordination meetings as the DPAO's representative.

- Works closely with ESF#3 and the USACE on all Debris Mission Assignments. Ensures that copies of USACE debris situation reports and copies of all debris contracts are obtained for the files.
- Attends Kickoff Meetings with applicants who have significant debris problems.
- Continues to meet with applicants to address debris removal issues as operations progress.
- Coordinates requirements for Contract Monitors with the PACs.
- Conducts periodic visits to all temporary debris storage and reduction sites and landfills.
- Conducts technical reviews of large or complex Category A-Project Worksheets.

Debris Specialist

- Participates in PDA operations.
- Works with applicants to resolve debris operations issues.
- Performs debris contract monitoring functions.
- Assists applicants and FEMA Project Officers with the development of Category A-Project Worksheets.

Disaster Field Office (DFO) Attorney

- Reviews proposed and active debris contracts.
- Reviews right-of-entry permits and hold harmless agreements.
- Advises the PA staff on such issues as land acquisition, condemnations, insurance requirements, potential liability, duplication of benefits, environmental and historic preservation.

Public Information Officer

- Provides timely news releases regarding debris removal.

- Coordinates with the PAO to address debris related concerns of local news media.
- Ensures correct information is provided to the media during press conferences.

Regional Environmental Officer

- Provides guidance on environmental considerations for debris operations.
- Assists in determining environmental considerations for opening and closing temporary debris storage and reduction sites.

FEMA Technical Assistance Contractors

The FEMA Technical Assistance Contractors (TAC) can provide trained Debris Advisors and Debris Specialists as requested.

The PAO or Resource Coordinator should specifically define the technical specialty, scope of work, and period of performance required of the TAC. Requests should be forwarded to the Infrastructure Division Project Office at FEMA Headquarters.

Debris Removal and Disposal Operations Plan

If debris is a significant component of a disaster, it usually will be necessary to provide continuing and timely information on debris operations to the Public Assistance Officer. This process can be more easily managed if, under the direction of the DPAO for Debris, development of a Debris Removal and Disposal Operations Plan begins immediately after an event. This document will provide a framework for coordinating all debris removal and disposal issues. In several recent disasters, such a plan was found to be extremely useful. An outline is shown in Appendix A. Basic information required for this plan includes:

1. The quantity, type and location of debris.
2. Management responsibility (local governments, state

agencies, US Army Corps of Engineers, other Federal agencies.

A debris-coordinating group (normally the Debris Coordinating Committee) that includes local, State and Federal personnel is assembled to identify possible disaster related debris removal and disposal issues. The issues identified provide the framework for the plan. Key personnel are then assigned the responsibility of reviewing specific issues and providing recommendations or solutions. These are then discussed at the subsequent coordination meeting, and resulting actions recorded in the Daily Debris Removal and Disposal Operation Status Report (See Appendix B).

Section B

MISSION ASSIGNMENTS

General

When an impacted State and local governments do not have the capability to perform or contract for debris removal and disposal, Direct Federal Assistance may be requested from FEMA. If this request is approved, FEMA may issue a Mission Assignment.

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.

Debris removal and disposal Mission Assignments are generally assigned to the USACE through ESF#3. They may also be issued to provide Technical Assistance when a State or local jurisdiction lacks the knowledge and expertise to accomplish an identified task.

Direct Federal Assistance work is limited to Category A: Debris Removal and Category B: Emergency Protective Measures, under Sections 402, 403 and 407 of the Stafford Act.

Direct Federal Assistance is subject to the cost sharing provisions applicable to the disaster, as specified in the FEMA/ State Agreement.

Use of Mission Assignments

Debris related Mission Assignments (MAs) could be issued to:

- Remove debris from critical roadways and facilities.
- Remove debris from curbsides and haul it to either temporary or permanent disposal sites.
- Remove debris from eligible facilities and haul it to either temporary or permanent disposal sites.
- Operate temporary debris storage and reduction sites.

- Monitor debris contractor's activities.
- Demolish and/or remove disaster-damaged structures and facilities in accordance with FEMA regulations and policies.
- Provide technical assistance to FEMA, the State or applicants.

Development of Debris Mission Assignments

Mission Assignments for Direct Federal Assistance are issued when the required disaster-related efforts exceed State and local resources, and are requested by the State.

Initial Debris MAs of limited scope may be issued by the Emergency Support Team (EST) or Regional Operations Center early in a disaster using pre-scripted scopes of work.

Pre-scripted MAs may be issued to initiate debris related operations; however, the scope should be reviewed by the DPAO for Debris before final approval. Task orders will be issued against the pre-scripted MA after it is approved. Each task order should be carefully reviewed to ensure it is clear, concise and accurate.

The Infrastructure Branch Chief, along with the PAO, should coordinate with the USACE to further define the Debris MA scope of work based on information received from the PDA and the State. The DPAO for Debris should assess immediate needs, but plan for 30-, 60-, and 90-day requirements.

Scope of Work

When developing a Debris MA, or a Task Order under a pre-scripted MA:

- The scope of work should define the work to be done, but not the means.
- The scope of work should identify specific geographic locations or easily definable areas, as well as estimated types and volumes of debris.
- The scopes of work should be modified or new ones developed if the situation changes.

- Be sure to have a good understanding of the specific debris operations required for a particular disaster. Not all disposal operations require a TDSR, and not all debris should go to a TDSR; some can go directly to a disposal site.

Monitoring Mission Assignments

Contract monitoring is the key to successful debris operations. In a Debris MA, the USACE achieves this by:

- Assigning personnel to work sites to monitor contractor's performance.
- Insuring that contract monitoring personnel are trained and carefully briefed.
- Sending progress reports through the ESF#3 to the DPAO for Debris on a periodic basis. The frequency of the reports will be established by the DPAO for Debris.

The FEMA Project Monitor (normally the DPAO for Debris) is assigned when the MA is implemented. This individual should make periodic visits to all job sites to monitor overall performance.

Advanced Contract Initiative

Under an Advanced Contract Initiative (ACI), the USACE has developed contracts for immediate implementation. These contracts are with pre-selected contractors, and each covers potential operations in several states. The operations that can be conducted under this concept are extremely flexible.

There are certain aspects of the ACI with which FEMA personnel should be familiar:

1. The intent to award these contracts was announced on a nation-wide basis, and all interested qualified firms had an opportunity to respond to the announcement.
2. If the USACE is given a debris mission assignment, the pre-selected contractor **must** be used for a minimum of \$100,000 of work.

3. The USACE may award contracts to local contractors for debris operations; however, there still is a requirement for the ACI contractor to be involved in a minimum of \$100,000 of work (or receive payment for that amount).
4. The USACE may use the ACI contractor to pick-up, haul, and dump debris; to manage a Temporary Debris Storage and Reduction (TDSR) site; to haul from the TDSR site to final disposal; or to be involved in any combination of these operations.
5. The USACE can divide a disaster area into sectors or sub-areas in which the ACI contractor will work. The sectors may be counties, cities, towns or other political subdivisions. This means that the ACI contractor can be working for one applicant, while one adjoining applicant may be using force account labor and equipment, and another adjoining applicant may be using a local contractor.

If there are any questions or concerns regarding the ACI, the PAO or DPAO for Debris should discuss them with an ESF #3 staff member, a USACE representative, or FEMA Headquarters.

Section C

WORKING WITH APPLICANTS

Timing

To minimize potential problems with debris operations, there are two elements that must be addressed in a timely manner. The first is providing potential applicants (including the State) information on possible debris issues in a timely manner. The second is timely deployment of trained debris staff. In the first element, both summary and detailed information should be provided to the applicants:

- Before the disaster
- During the PDA
- At the Applicant's Briefing
- At the Kickoff Meeting
- During coordination meetings with the PAC, the Debris Advisor, and the Debris Specialist

It is important that as much information as possible be provided before a disaster occurs. At every opportunity, FEMA staff should present information on debris operations so those applicants will be better informed when a disaster occurs. Waiting until Applicants' Briefings or Kickoff Meetings to initially discuss eligibility and contracts is too late.

The need for timely deployment of trained debris staff cannot be overemphasized. A rapid assessment of the general magnitude of debris should be based on the nature and extent of the disaster. If debris is, or may be, a significant component of the disaster, key debris staff should be alerted and deployed as early as possible.

- If the Regional Operations Center (ROC) is activated, a staff member familiar with debris-related activities should work through the ROC, with the affected State, to begin providing information to potential applicants. **This should be a very high priority.** Ideally, the Region and the State

would have a plan in effect to provide such information or reinforce information already provided.

- A Debris Specialist should be assigned as part of any PDA team. Potential applicants should be provided a copy of the Public Assistance Program ***Debris Removal Fact Sheet for Local Governments*** (See Appendix D).
- The DPAO for Debris should be part of the initially deployed unit, and should deploy sufficient staff to immediately begin meeting with applicants and monitoring debris operations.
- Correct and timely information, along with timely deployment of trained debris specialists, will minimize problems in debris operations.

Applicant Information Needs

Although the applicant already should have been provided information on debris operations, the Kickoff meeting is an excellent opportunity to reinforce that information. If the applicant has not been provided debris-related information, the PAC should make sure there is a good understanding of the subject. The PAC can discuss:

- PA Program eligibility criteria. In particular, debris removal from private property should be thoroughly covered.
- The need for, and an explanation of, acceptable documentation.
- Types of acceptable debris contracts. The applicant should not “automatically” accept contractor provided contracts. (See Appendix F Debris Contract Information)
- Reasonable costs.
- Alternatives for debris reduction and disposal.
- Process for reimbursement.
- Existing or anticipated Mission Assignments for debris removal and disposal.

- Interaction with USACE (if applicable).
- Procedures to request technical assistance from FEMA.
- Procedures to monitor applicant's contractors.

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Section D

DEBRIS CLEARANCE, REMOVAL AND DISPOSAL STRATEGY

Phase I: Emergency Debris Clearance Operations

The local Department of Public Works (DPW) is usually (but not always) responsible for Phase I debris clearance activities because it has the necessary personnel, equipment and contracting experience suitable for rapid clearing of debris from critical roadways and facilities.

The DPW, or other responsible entity, should be staffed to identify and control the movement of debris from all designated emergency roads and facilities using all available resources. This may include force account labor and equipment, military personnel, mutual aid providers and local contractors. Roadway debris should be quickly moved to the side of the road to provide access into devastated areas to allow for:

- Movement of emergency vehicles.
- Law enforcement.
- Resumption of critical services.
- Damage assessment of critical public facilities and utilities.

Requirements for government services increase dramatically following a major natural disaster. After emergency access has been provided to hospitals, police and fire stations, the next priority normally is to open access to other critical community facilities, such as schools, municipal buildings, water treatment plants, wastewater treatment plants, power generation units, airports and seaports.

Phase II: Debris Removal and Disposal Operations

The local Department of Solid Waste Management (SWM) is usually (but not always) responsible for coordinating all debris removal and disposal activities to include normal garbage

pickup. Debris removal and disposal operations should be closely coordinated between the DPW and SWM to ensure a smooth transition.

The Department of SWM (or responsible entity) should be prepared to remove and dispose of the following types of debris:

- Tree blow-down and broken limbs.
- Yard trash such as outdoor furniture and trashcans.
- Building debris, such as roofs, sheds, block walls and chimneys.
- Personal property, such as clothing, appliances, and furniture. (Removal of boats, cars, trucks, and trailers are the responsibility of the owner and are not normally considered as debris.)
- Silt from flooding and earth and rocks from landslides.

Removal of utility poles, power, telephone and cable television lines, transformers and other electrical devices is the responsibility of the private/public owner/operator.

The following are critical steps necessary to clear, remove and dispose of debris following a natural disaster.

Step 1. Preliminary Damage Assessment

Conduct a joint PDA to:

- Develop initial debris estimates
- Identify critical facilities
- Prioritize key routes

Step 2. Phase I - Debris Clearance Operations

Initiate debris clearing operations using:

- Force account personnel and equipment
- Mutual aid providers

- National Guard
- Volunteers

Supplement debris clearing operations using:

- Rental equipment
- Local contractors

Determine Type of Contracts to Use:

- Time and Material Contracts can be used during this period of time, **but FEMA policy limits reimbursement to work done during the first 70 hours of actual work.** Lump Sum contracts should not be used during Phase I.

Step 3. Phase II -Debris Removal and Disposal Operations

Decide where to dispose of the debris.

- Should Temporary Debris Storage and Reduction (TDSR) sites be used?
- Should privately owned or publicly owned local landfills be used?

Decide if volume reduction or other processing is required.

- Should debris be burned, and how?
- Should debris be ground into mulch?
- Should debris be recycled?

Determine Type of Contracts to Use:

- Unit Price. Use when quantities cannot be accurately quantified.
- Lump Sum. Use only when quantities can be accurately quantified.
- Contractor's debris estimates should not be used without independent verification of estimated quantities.

Initiate Debris Removal and Disposal Operations Using:

- Force Account Personnel and Equipment
- Local Contractors
- Regional Contractors

Contractors' debris estimates should not be used without independent verification of estimated quantities.

Temporary Debris Storage and Reduction (TDSR) Sites

The following questions will help to identify and prioritize appropriate TDSR sites based on local requirements and conditions.

Site Ownership

- Are public lands available?
- Will public lands be provided at no cost?
- Are private land lease terms long enough?
- Are private land lease terms automatically renewable?
- What are the specific restoration requirements of the private land lease or usage arrangement? Improvements to the pre-disaster conditions are not eligible.

Site Size

- Is the site large enough to accommodate the planned debris storage and/or reduction methods? For estimating purposes, use 100 acres per one million cubic yards of debris.
- Will the site configuration allow for an efficient layout?

Site Location

- Does the site have good ingress/egress?
- Does the site have good transportation arteries?

- Does the site have open, flat topography?
- Does the site have wetlands? Coordinate with the Region Environmental Officer.
- Does the site have or will it affect public water supplies, including well fields and surface waters?
- Does the site have threatened and endangered animal and plant species?
- Does the site have threatened and endangered species' critical habitats?
- Does the site have rare ecosystems?
- Does the site have historic sites or archaeological sites?
- Does the site have sensitive surrounding land use, such as residential, school and church?
- Has there been coordination between FEMA, the State, and EPA?

Volume Reduction Methods

Depending upon the type of debris generated by the disaster, the original volume may be significantly reduced by using one, or a combination of, several methods. Each method should be considered in developing a volume reduction strategy.

Volume Reduction by Burning

Burning woody debris reduces the volume by approximately 95%, leaving only an ash residue for disposal; however, be sure to check all applicable State and local regulations. The following are recommended methods to reduce clean woody debris by burning:

Controlled Open Air Burning - Controlled open-air burning is a cost-effective method for reducing clean, woody debris in rural areas. Controlled open-air burning should be terminated if mixed debris enters the waste stream.

Air Curtain Pit Burning - The air curtain burning method uses a pit constructed by either digging below grade or building above grade (if a high water table exists) and a blower unit. The blower unit and pit comprise an engineered system that must be precisely configured to function properly.

Portable Air Curtain Burner - Portable air curtain burners are the most efficient systems available because the pre-manufactured pit is engineered to precise dimensions to complement the blower system. The pre-manufactured pit requires little or no maintenance as compared to earth or limestone constructed pits, which are susceptible to erosion.

Volume Reduction by Grinding and Chipping

Hurricanes and ice storms produce large quantities of clean woody debris. Large-scale grinding and chipping operations should be considered if burning is banned. Chipping and grinding generally reduces the volume on a 4-to-1 ratio (4 cubic yards of woody debris is reduced to 1 cubic yard of mulch) or by 75%. Because the type and mix of woody debris may cause this ration to vary, it may be appropriate to make test runs early in the process. Make sure all appropriate parties are involved in the test, trucks are accurately measured and properly loaded, and both the pre-reduction and post-reduction volumes are carefully measured. For chipping and grinding to be most effective, the volume remaining should have some benefit, such as mulch for agricultural purposes, use as daily cover in a land-fill, or as fuel for use in industrial heating or in a cogeneration plant.

Volume Reduction by Recycling

After many disasters, especially hurricanes and earthquakes, volume reduction may be accomplished by large-scale recycling operations. Recycling should be considered early in the debris operation, because it may provide an opportunity to reduce the overall cost of the operation. There should be coordination between FEMA, the State and EPA when recycling is being considered.

The following materials are candidates for recycling:

Metals - Hurricanes and tornadoes can cause extensive damage to mobile homes, sun-porches, metal roofing material, and green houses. Both non-ferrous and ferrous metals are suitable for recycling. Metal maulers and shredders can be used to shred trailer frames, trailer parts, appliances and other metal items. Ferrous and non-ferrous metals are separated using an electromagnet, and then sold to metal recycling firms.

Soil - The equipment used in cleanup operations may pick up large amounts of soil. Most of the soil can be recovered if the material is put through a screen or shaker system. The dirt can be stored on-site, used as landfill cover material or sold to the agricultural community. Care must be exercised to ensure the soil is tested before use.

Construction and Demolition Materials - Construction and demolition waste material may be generated directly by the disaster or in the demolition of disaster-damaged structures and facilities. This waste stream includes concrete, asphalt, gypsum, wood waste, glass, bricks, and roofing tile. Much of this material can be reused or recycled.

Wood - Clean, woody debris can be ground, chipped, shredded, or removed by timber operators or pulpwood cutters.

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Section E

PUBLIC ASSISTANCE PROGRAM DEBRIS ISSUES

Estimating Debris Quantities

General: Initial quantity estimates are difficult to make, due to a number of factors: the type, magnitude, and geographical location of the disaster; geographical extent of the debris; the types and mix of debris, and the sometimes difficulties in gaining access to the affected areas. It is important, however, to make as accurate an estimate as possible, and refine that estimate as work continues.

Become familiar with the general results of various types of disasters. Hurricanes and tornadoes can produce large quantities of yard waste and construction materials scattered over a large area. Floods create large amounts of debris that may be buried in silt. Ice storms and snowstorms create large amounts of woody debris from broken limbs and branches. Many of the large broken limbs remain attached to the tree trunk and must be removed by professional tree trimmers.

Ensure that necessary equipment is available, including:

- Digital (preferred) or Polaroid camera
- 100 foot tape or roll-off wheel
- Calculator, notepad, sketchpad
- Maps of area
- Aerial photographs (preferably before and after the disaster)
- Dedicated vehicle and mobile communications

Debris estimating can be expedited by dividing the community into sectors based on any of the following.

- Type of debris: woody, mixed or construction material
- Location of debris: residential, commercial or industrial
- Land use: rural or urban

Reminders: The following reminders may be of assistance when performing debris estimates:

- Look beyond the curb into side and backyards and at the condition of the homes. Most of the debris in these areas will eventually move to the curb.
- Wet storms will produce more personal property (household furnishings, clothing, rugs, etc.) debris if roofs are blown away.
- Look for hanging debris such as broken limbs after an ice storm.
- Flood-deposited sediment may be compacted in place. Volume may increase as debris is picked up and moved.
- Using aerial photographs in combination with ground measurements will help determine if there are any voids in the middle of large debris piles.
- Treat debris piles as a cube, not a cone, when performing estimates.

Estimating Aids – Buildings: The following information will assist you in determining the amount of debris from destroyed buildings and mobile homes:

- One Story House Formula:

$$\frac{L' \times W' \times 8'}{27} = \text{___ cubic yards} \times 0.33 = \text{___ cubic yards of debris}$$

(The 0.33 factor accounts for the “air space” in the house)

- The table at the top of the next page can be used to estimate debris quantities for a totally destroyed typical home. A vegetative debris multiplier is also included.
- Amount of personal property (as debris) from average flooded residence without a basement: 25-30 cy.
- Amount of personal property (as debris) from average flooded residence with a basement: 45-50 cy

Typical House (square feet)	Vegetative Cover Multiplier (Yard Waste)			
	None	Light (1.1)	Medium (1.3)	Heavy (1.5)
1000 SF.	98 cy	107 cy	127 cy	147 cy
1200 SF.	118 cy	129 cy	153 cy	177 cy
1400 SF.	137 cy	150 cy	178 cy	205 cy
1600 SF.	155 cy	170 cy	201 cy	232 cy
1800 SF.	175 cy	192 cy	228 cy	263 cy
2000 SF.	195 cy	215 cy	254 cy	293 cy
2200 SF.	215 cy	237 cy	280 cy	323 cy
2400 SF.	235 cy	259 cy	306 cy	353 cy
2600 SF.	255 cy	280 cy	332 cy	383 cy

- Single wide mobile home = 290 cy of debris
- Double wide mobile home = 415 cy of debris

Rules of Thumb:

- 15 trees 8 inches in diameter = 40 cy (average)
- Root system (8'-10' diameter) = Requires one flat bed trailer to move.
- To convert cubic yards of Construction & Demolition (C&D) debris to tons, divide by 2.
- To convert tons of C&D debris to cubic yards, multiply by 2.
- To convert cubic yards of woody debris to tons, divide by 4*.
- To convert tons of woody debris to cubic yards, multiply by 4*.

*These factors to convert woody debris from cubic yards to tons, and vice versa, is considered a good average for mixed

debris, developed by the US Army Corps of Engineers. If there is any issue with these conversion factors, it is best to test several truckloads. The testing should be done with all affected parties present. Make sure the trucks are measured, well loaded, and contain woody debris typical of that being removed.

Debris Composition for Hurricanes: As a general statement, hurricanes are the biggest debris generators of all disasters. For planning purposes, it is sometimes useful to have an estimate of the composition of the debris expected from a hurricane. There is no exact composition data; the mix from Hurricane Andrew in Florida was generally 30% clean, woody debris and 70% construction and demolition debris. After Hurricane Fran in North Carolina, the mix was reversed – clean woody debris was 70%. Look closely at the areas impacted by the hurricane before projecting the mix. One type of debris that has a fairly consistent composition is mixed construction and demolition debris. A good average for that mix is:

- 42% burnable, but requires sorting (Check before burning, there may be prohibitions against burning construction debris).
- 5% soil.
- 15% metals.
- 38% landfilled.

Reduction Rates:

- Burning: 95% reduction.
- Chipping and grinding: 75% reduction (average). This percentage may vary with the types of wood being chipped. It is best to carefully measure several piles of typical woody debris before they are chipped, then immediately thereafter, measure the amount of mulch generated. Palm trees normally are not chipped because of their fibrous trunks and the high content of silicates that are carried up the truck during intake of moisture.

- Tub-grinders have production rates ranging from 160 to 340 cubic yards per hour for brush and yard waste. Check production rates for specific equipment being used. Do not use Grinder Production Logs; they tend to over quantify production because they may apply engine hours, use an “ideal” rate of production; lack personnel to monitor equipment usage, have changes in conditions of debris, etc. Verify by monitoring operations.

Remote Sensing: The use of remote sensing information (aerial photographs, satellite data, etc.), either alone or in combination with field surveys, may be of significant use in estimating the amount, mix, and extent of debris.

Geographical Information Systems (GIS) maps should be considered early. Depending upon the area, it is usually possible to quickly obtain GIS maps of landfills, Superfund sites, transportation routes, etc. As data on debris is obtained, considered plotting data on GIS maps. Coordinate early with ESF #5, Information and Planning.

Debris Estimating Models: U.S. Army Corps of Engineers (USACE): The U.S. Army Corps of Engineers Emergency Management staff developed a modeling methodology designed to forecast potential amounts of hurricane-generated debris. This model was initially based on actual data from Hurricanes Frederic, Hugo and Andrew, has a predicted accuracy of plus/minus 30 percent. The USACE has a continuing on- going effort to improve this model, and information may be available through ESF #3. More information on this model can be found in *Debris Management Guide, FEMA Publication 325*.

Other Estimating Models: Consultants, state, and local governmental entities currently are working on developing or implementing debris estimating models. Before using the output of such models, review the procedure being used, the amount and accuracy of the input data, and the expected accuracy of the output. Assess the advantages and limitations of the model, and do not use any estimating model as a basis for payment, but rather as a basis for planning.

Eligibility of Curbside Pick-up

Debris may continue to accumulate as residents bring debris from their properties to public rights-of-way. Typically, this occurs in three stages:

- Stage 1: Woody debris and yard waste moved to right-of-way.
- Stage 2: Household waste, such as damaged personal goods, moved to right-of-way.
- Stage 3: Construction and demolition materials removed by the homeowner prior to the receipt of insurance and individual assistance payments.

Residents should not mix garbage with debris. Debris deposited at the curbside must be disaster-related to be eligible for pickup and disposal by the applicant. Applicants should resume normal garbage pick-up schedules as soon as possible.

Construction and demolition materials from minor or major repairs or reconstruction by contractors should not be deposited at the curbside. Contractors should remove and deposit the debris at approved landfills.

Insurance proceeds usually cover the cost for demolition debris removal from private property. Remember, only disaster-related debris removal costs not covered by insurance are eligible for reimbursement. Watch for non-disaster related materials (bagged grass clippings, household garbage, automobile parts).

When it becomes apparent that the debris being brought to the curb is not disaster-related, or is reconstruction debris, the PAO should negotiate with State counterpart to set a realistic deadline and make sure the applicants have advance notice. For example, it is unrealistic to impose a deadline that takes effect 48 hours later. For large events, it is unrealistic to set deadlines immediately following the disaster. However, discussions with the State on the need to establish deadlines should begin early.

Remember, the time extension authority given to the State applies only to disaster-related debris. That authority does not apply to curbside pick-up of non-disaster debris, or to reconstruction debris.

Removal of Eligible Debris from Private Property

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

- Ensure that the term “economic recovery of the affected areas” is not being misapplied. Use of this criterion is normally restricted to the removal of disaster-related debris from large commercial areas to expedite restoration of the economic viability of the affected community.
- Ensure that all applicants are aware that **only FEMA makes eligibility determinations regarding removal of debris from private property.**
- Ensure that all applicants are aware of the limitations of debris removal from private property early in the disaster.
- If FEMA determines that debris is so widespread that removal from private property is appropriate, ensure that the eligible applicant is aware of the requirement to comply with specific requirements before removal (right-of-entry, release from liability, insurance, etc.).
- Before paying for removing the debris from private property, ensure that the eligible applicant understands the requirement to collect any insurance proceeds that covers the debris removal. These proceeds must be reported to FEMA, and that amount deobligated from the appropriate PW. (See Appendix E for a sample document that is a

combination Right-of-Entry Permit, Hold Harmless Release, and Insurance Reimbursement Agreement.)

- Ensure that the determination that “a public health and safety issue exists” is **not** based on building codes. Generally, the determination would be based on ordinances related to condemnation. Additionally, most such ordinances require that the applicant place a lien on the property for recoupment of demolition and debris removal costs. If so, that amount should be treated similar to insurance proceeds, and deobligated.
- Ensure that there is a clear understanding that a public health and safety hazard must exist for the removal of the debris to be eligible. Again, the final determination for the eligibility of debris removal from private property is a FEMA responsibility.
- Demolition of a structure is not always the most cost-effective health and safety alternative. For “attractive nuisances,” where structural integrity has not been compromised, cleaning and securing the facility may be the best alternative.
- Concrete slabs or foundations-on-grade do not present a health or safety hazard to the general public except in very unusual circumstances, such as erosion under a concrete slab on a hillside.
- Broken slabs, or slabs incapable of supporting a new structure, do not constitute a public health or safety hazard. They are more appropriately part of the reconstruction of the facility, and concrete slabs that are removed for reconstruction purposes are not eligible for removal as disaster-related debris, even when brought to the curbside
- The cost of removing substantially damaged structures, as well as associated slabs, driveways, fencing, garages, sheds, and similar appurtenances, are eligible when the property is part of a Section 404 Hazard Mitigation buyout and relocation project. Review the *Policy on Demolition of Private and Public Facilities*, November 9, 1999.

Homeowner's Insurance Coverage for Debris Removal

Essentially all general homeowner's insurance policies contain a provision for the pick-up of debris resulting from damages to a facility (and any required demolition) covered by that policy. That usually includes structures, fences, playground equipment, etc., but removal of vegetative debris. Check the insurance policy to determine whether or not it covers vegetative debris. If not covered by insurance, that does not mean removal of vegetative debris is eligible for Federal funding. As previously stated, it is primarily the responsibility of the property owner. The amount of coverage usually is a percentage of the damages, commonly 10%-15%, but reports indicate it can be as high as 25%. That means that if a \$100,000 residence is completely destroyed, or is destroyed to the point that demolition is required, the homeowner may receive \$10,000 to \$15,000 for debris removal. It should be made clear to an applicant that if there is a request for FEMA to remove the debris from private property, the responsibility for collecting the insurance rests with that applicant. The collection of insurance proceeds is in accordance with Federal law prohibiting Duplication of Benefits (Section 312 of the Stafford Act). Remember, insurance is a State-regulated industry and policy terms and requirements may be governed by State-law.

If there are questions regarding individual homeowner's insurance, check with FEMA Human Services. If a homeowner has applied for individual assistance, and indicated insurance coverage on the application, there is a potential for duplication of benefits.

Verify that the right-of-entry and release from liability document also requires the homeowner to agree to forward insurance proceeds for debris removal to the applicant (see Appendix E for recommended wording).

If SBA is involved, check to determine whether or not its loan includes a provision for demolition and debris removal.

Debris Removal from Federal-Aid Roads, Streets, and Highways

The Federal Highway Administration (FHWA) can initiate its Emergency Relief Program after a disaster that covers the following:

- When damages to Federal Aid systems exceed \$500,000, FHWA can provide up to \$100 million per State, per event.
- Funding also can be provided to roads on Federal facilities.
- Emergency work (including debris removal) can begin immediately after the event and does not require pre-approval of FHWA.
- Funding goes to State DOT, not to local governments, so check with the State DOT to determine if funding has been provided.
- FHWA may provide funding for damage to Federal Aid roads done as a result of emergency operations, which includes debris hauling.

For further information, look at the Emergency Relief Manual for Federal-Aid Roads, which can be downloaded from: www.fhwa.dot.gov/reports/erm/index.htm

Emergency Response Activities Related to Hazardous Materials

In the response phase of a disaster, there may be a number of requirements related to contamination by hazardous and toxic wastes, retrieving and disposing of orphan drums and barrels, etc. There are specific activities that FEMA will fund, while others are the responsibility of the United States Environmental Protection Agency (USEPA). Please check with FEMA Headquarters if hazardous and toxic waste other than household hazardous waste (HHW) become an issue.

Types of Debris Removal and Disposal Contracts

Many local jurisdictions do not have the experience or expertise required to define specific debris removal tasks, or to

recommend specific contract types based on the magnitude of the debris clearance, removal, and disposal operation.

Contracting for labor and equipment may be necessary if the magnitude of the emergency debris operation is beyond the capabilities of local force account resources, State resources, mutual aid agreements, and volunteer labor and equipment. If the Governor waives contracting procedures because of the emergency, that does not necessarily mean competition is suspended; it means time can be compressed. Emergency contracting may still require (or can use) competitive bidding.

Local communities should not enter into contracts that are developed by the contractor without having those contracts carefully reviewed by their legal staff. While most contractors are very reputable, experience has shown there is a small number that will attempt to take advantage of the confusion surrounding a disaster.

While applicants may enter into any contracts they wish, and FEMA is not a party to those contracts, they should be strongly encouraged to work with FEMA to ensure that the costs set forth in the contracts they are considering are eligible for reimbursement. To facilitate assistance to applicants in this matter, FEMA staff will be available to provide technical assistance before contract execution to help ensure compliance with the provisions of the Public Assistance Program, as well as other applicable statutes and regulations. This information can assist the applicant in the selection of proper contract forms and the development of acceptable scopes of work. Appendix F, Debris Contract Information for Applicants, is a handout that can be provided to the States and local applicants to assist in contracting.

Time and Material Contracts: To be eligible for FEMA reimbursement, Time-and-Material contracts should be limited to a maximum of 70 hours of actual emergency debris clearance work and should be used only after all available local, tribal and State government equipment has been committed.

The 70 hours provides time for (1) moving the debris from the roadway to the curbsides or rights-of-way to allow passage of

emergency vehicles, and (2) negotiating unit price and/or lump sum contracts. If an applicant awards multiple time and material contracts, those contracts should run concurrently, not consecutively.

Time-and-Material contracts should clearly state that:

- The price for the equipment applies only when the equipment is operating.
- The hourly rate includes the operator, fuel, maintenance and repair.
- The community reserves the right to terminate the contract at its convenience.
- The community does not guarantee a minimum number of hours.
- The contract has either a dollar ceiling or a not-to-exceed-number-of-hours clause.

Time-and-Material contracts for debris clearing, hauling and/or disposal should be terminated once the designated not-to-exceed number of hours is reached. On occasion, Time-and-Material contracts may be extended by FEMA for a short period when absolutely necessary; for example, if there is a short unavoidable delay in executing Unit Price contracts. Such an extension should be in writing with a copy placed in the Case Management File.

A Time and Material Contract:

- Is extremely flexible, not scope-dependent.
- Has a wide range of uses.
- Is suitable for emergency “hot spots” and early debris rights-of-way clearance.
- Requires contractor oversight and direction as to what work to perform.
- Requires documentation of actual hours worked by equipment and operators.

- Requires competitive bids or negotiated reasonable hourly rates for equipment and operators.
- Specifies equipment as generically as possible to encourage competition.
- Requires full-time and trained contract monitors to document actual equipment usage.

Unit Price Contract: The unit price contract uses construction units (Cubic Yards, Tons, Each) and prices for these units to develop line item costs and total contract cost. The unit price contract should be used when the scope of work is difficult to define and is based on estimated quantities.

A Unit Price Contract:

- Is flexible.
- Requires accurate account of actual quantities removed in either cubic yards or tons.
- Ensures a wide range of competition because of simplicity of contract.
- Has a low risk for the contractor.
- Requires dedicated contract monitors at the pickup site and at the disposal site.
- Has possibility of contractor fraud if loading and dumping operations are not closely monitored.
- Is complicated if segregation of debris is required.
- Requires all trucks to be accurately measured and numbered.
- Requires all truckloads to be documented. For most accurate accounting a pre-numbered load ticket should be used. Load tickets are the verification of the estimated quantity of debris in cubic yards or tons deposited at the dumping site.

Lump Sum Contract: The lump sum contract should be used only when the scope of work is clearly defined by the applicant

(not the contractor), and the areas of work can be specifically quantified. This type of contract establishes a total contract price by a one-item bid from the contractor. It is understood in a lump sum contract that the price for the work is fixed unless the scope of work changes; therefore, the bottom line of the contract is not in question, as it is with the unit price contract.

The main disadvantage of the lump sum contract occurs if the scope of work is not well defined. In that case, the quantity estimate and the definition of the scope of work become the responsibility of the contractor bidding the project. Experience has shown that the contractor passes this burden back to the government in the form of contingencies, which are incorporated into the bid price.

The Lump Sum Contract:

- Should be used only when there is a clear, definable scope of work that can be quantitatively measured by the contractor and the applicant. (Be sure the contract includes the quantity of debris that is being moved.)
- Provides an easy means of establishing the cost of the work at the time of bid opening.
- Requires minimum labor for monitoring.
- Is easy to monitor, as the scope of work is well defined.
- May result in difficulty to quantify the amount of debris that will be brought to the right-of-way for removal.
- Has a high probability of claims if debris estimates are difficult to estimate and require speculation.
- Makes it easy to determine when a contractor has completed all work.
- Shifts most of the risk to the contractor.
- Does not require quantities to be documented (as they are in a unit price contract).

Debris Removal and Disposal Contract Monitoring

Debris removal and disposal operations require dedicated applicant and FEMA personnel to monitor the activities of the contractor.

Applicant Monitoring Responsibilities: The applicant should employ full time, trained debris monitors to account for the actual quantity of debris being hauled and disposed of under a unit price contract. The applicant should ensure that there is adequate supervision by qualified local monitors at all temporary storage and reduction sites or landfill disposal sites. These sites become the focal point for quantity verification for payment under unit price contracts.

The applicant should establish inspection stations near the entrance of the site if the contract unit of measurement is cubic yards. Inspection stands should be built for the inspection of loaded trucks. When the contract unit of measurement is based on weight, provisions should be made for weighing trucks as they enter the site.

Payment under a unit price contract is normally made on the basis of load tickets. The recommended procedure for using load tickets is as follows:

- Load tickets should be treated as accounting forms.
- A work site debris monitor should initiate a load ticket for all contract trucks leaving a designated contract area.
- The work site debris monitors should retain one copy of the form, which is returned to the operations office, and two copies should be given to the truck driver after completing the initial information.
- All contract trucks should have the contractor's name or initials, the truck number and the measured capacity of the truck, as determined by a government representative, clearly visible on both sides of the vehicle. Truck measurements should be periodically verified.
- The disposal site debris monitor should estimate the volume of debris and note arrival time and volume in cubic

yards on the load ticket. The truck driver should keep one copy and the site monitor should keep the other. The disposal site debris monitor's copy should be returned to the operations office to be matched against the work site inspector's copy for pay verification. The truck driver's copy is the basis of contract billings.

- All debris monitors should read and become familiar with the technical provisions of the contract and should conscientiously estimate each load hauled by the contractor. Improper estimates can lead to large and unnecessary government expenditures.
- If loads are not properly loaded or compacted, debris monitors should reduce the rated volume of the truck accordingly. Debris monitors should always be fair and consistent in dealing with contractor personnel.
- A local government staff member should be designated as the temporary storage and reduction site and/or disposal site manager.

Applicant debris monitors should take the following actions to ensure that all contractor operations comply with the contract:

- Monitor all contractor operations to include pick-up areas, disposal areas and temporary and permanent disposal sites.
- Measure debris piles to verify quantities at temporary sites.
- Report any illegal dumping.
- Meet with the contractor to reach an agreement as to when temporary sites will be closed.
- Take aerial and/or ground photographs of temporary sites after they have been cleaned.

If communities are unable to provide their own debris monitors they may:

- Hire local engineering firms. (Registered professional engineers are not required for monitoring activities.)

- Request FEMA /State staff assistance.
- Request assistance from Technical Assistance Contractors.
- Request Mission Assignments to USACE for assistance.

FEMA Monitoring Responsibilities: FEMA has the authority to monitor applicant's contractor operations and may select specific contractors for monitoring. The following are actions that should be initiated by the PAO or Debris Advisor immediately after a disaster:

- Two person monitoring teams are recommended with one member being either a FEMA or TAC Debris Specialist and the other a State employee.
- Debris monitoring should be done on a full-time basis if possible. If not, then use a random monitoring process.
- Debris monitors should obtain and review copies of proposed contracts – before final execution if possible.
- Debris monitors should observe all phases of the operation to include loading sites, TDSR sites and final landfill sites.

Monitoring Tips: There are a number of techniques used by debris contractors to inflate actual quantities of debris removed and processed. Be on the lookout for:

- **Inaccurate Truck Capacities.** Trucks should be measured before operations and load capacities documented by truck number. Periodically, trucks should be pulled out of operation and re-measured by the applicant.
- **Trucks Not Fully Loaded.** Do not accept the contention that loads are higher in the middle and if leveled would fill the truck. Check to see if that statement is valid.
- **Trucks Lightly Loaded.** Trucks arrive loaded with treetops (or a treetop) with extensive voids in the load.
- **Trucks Overloaded.** Trucks cannot receive credit for more than the measured capacity of the truck or trailer bed even

if material is above the sideboards. If a truck is measured to carry 18 cubic yards it cannot receive credit for more than 18 cubic yards. However, it can receive credit for less if not fully loaded or lightly loaded as described above.

- **Changing Truck Numbers.** Normally, trucks are listed by an assigned vehicle number and capacity. There have been occasions where truck or trailer numbers have been changed that have a smaller carrying capacity. This can be detected by having the applicant periodically re-measure the trucks or record actual State license numbers in addition to having a description of the truck.
- **Reduced Truck Capacity.** There have been occasions where trucks have had a heavy steel grating welded 2 to 3 feet above the bed after being measured, reducing the capacity. This can be detected by periodically having the applicant re-measure the truck bed.
- **Wet Debris when Paid by Weight.** There have been occasions when contractors have added excessive water to debris loads to increase the weight when being paid by the ton. This can be detected during monitoring before the load reaches the disposal site by excessive water dripping from the truck bed, or by inspecting the truck bed immediately after unloading.
- **Multiple Counting of the Same Load.** Trucks have been reported driving through the disposal site without unloading, then re-enter with the same load. This can be detected by observing the time of departure and time of arrival recorded on the driver's load ticket. This may also indicate problems with the applicant's debris monitors at the loading or unloading site.
- **Picking-up Ineligible Debris.** This is difficult to detect unless debris monitors are watching the pick-up process. Monitors should have a good understanding of eligible debris (especially from private property) and any time limits imposed on pick-up of specific types of debris. Examples (from actual occurrences) include sweeping areas for abandoned cars and white goods, cleaning up illegal dump

sites, removing cut trees from sub-divisions under development, and removing/cutting trees from off the right-of-way in rural areas.

Reasonable Costs

The definition of “cost eligibility” states that a cost must be reasonable and necessary. Additionally, the Office of Management and Budget Circular A-87 requires Federal agencies to pay only reasonable costs.

A reasonable cost is a cost that is both fair and equitable for the type of work being performed. Many communities enter into contracts that may not meet the definition of reasonable cost. For example: charging \$75/CY for hauling debris is unreasonable when the going rate for similar work in adjacent locations is \$25/CY.

The reasonable cost requirement applies to all labor, materials, equipment, and contract costs awarded for the performance of eligible work.

The Debris Specialist should monitor debris removal and disposal operations and take note of the following actions that may have an effect on determining reasonable costs:

- Is debris being picked-up and hauled to a temporary staging site?
- Is debris being segregated at the curb or at the temporary site?
- Is debris being screened at the temporary sites to remove dirt?
- What types of volume reduction are being used?
- What is the cost to haul to final disposal site(s)?
- How much are the disposal costs?
- Who is responsible for paying the tipping fees?
- Is there a temporary site restoration plan?

- Has a baseline investigation been conducted at the temporary site?
- What is the current landfill capacity?
- What is the process for handling and disposing of household hazardous wastes?

When determining reasonable costs, check for the following:

- Historical data (area and region) for similar work.
- Applicant data for previous similar work.
- Contract costs for similar work being done in the area.
- USACE costs in the area.
- State Office of Emergency Services data.
- FEMA cost codes for force account work.
- Consider the time frame of the operation (Costs may be higher for clearing roads immediately after disaster; but implementation of a bidding process for pickup and disposal should reduce costs).

Do not arbitrarily establish “reasonable rates”. There must be some basis for the reasonableness – records, rates being paid by other nearby local entities, historical data, State rates for **similar** work, examination of work being done, etc.

Determine the reasons for any cost variations on Project Worksheets (PW). Be careful of writing PWs using the amount stated in the contract. Check the contract and debris amounts and work actually accomplished. Verify through monitoring or withhold some funds until applicant can provide sufficient documentation.

Tipping Fees: The Debris Specialist should always get a breakdown of the landfill-tipping fee to determine the components of that fee. It may include:

- Bond payoff for construction (Payoff of bonds for other facilities is not eligible).

- Operation.
- Cover materials.
- Expansion.
- Monitoring.

Check with the State PAO to determine whether or not there is a regulatory office that approves landfill-tipping fees. Make sure that debris disposal costs do not include a duplication of landfill capacity reduction costs or tipping fees. The charging of tipping fees should be consistent, and not waived for some and charged to others. Waived tipping fees are not reimbursable.

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Section F

References

For additional information, the user should refer to the following documents:

- *The Federal Response Plan*, 9230.1-PL, April 1999
- *Emergency Response Team (ERT) Operations Manual*, 9354.1-PR, June 1998
- *Mission Assignments, Overview*, 9344.1-VW, November 1998
- *Debris Management Guide*, FEMA 325, April 1999
- *Public Assistance Policy Digest*, FEMA 321, October 1998
- *Demolition of Private and Public Facilities*, Response and Recovery Directorate Policy Number: 9523.4, November 9, 1999
- *Public Assistance Guide*, FEMA 322, October 1999
This document includes the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, as amended; and 44 CFR Part 206, Disaster Assistance (subparts G-L pertaining to the PA Program).
- 44 CFR Part 13, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

These documents are available in Regional Offices, and generally in Disaster Field Offices. At DFOs, check with the Public Assistance Officer.

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APPENDIX A

The following is an example of the type of plan that should be prepared in the Public Assistance Section to coordinate, track, and document all debris-related activities (Sections should be added or deleted as necessary)

Public Assistance Debris Removal and Disposal Operations Plan

FEMA-XXXX-DR-XX

Date

- 1. Preliminary Damage Assessment (Note: This section may be used to summarize a plan for PDA debris activities or summarize debris information from the PDA.)**
 - a. Identify Counties and Communities Affected.
 - b. Identify Location of Debris.
 - c. Estimate Quantity of Debris.
 - d. Determine Types (Mix) of Debris.
 - e. Estimate Amounts of Debris on Private Property, Public Property and Rights-of-Way.
- 2. Public Information Strategy - General Public (Development of process to keep public timely informed of debris-related activities including the following):**
 - a. Collection Schedule.
 - b. Separation Requirements (Household Hazardous Waste, Woody Debris, C&D, Metals, Appliances, etc.).
 - c. Extent of public property cleanup (Remove all eligible debris up to property line).

- d. Differentiate between eligible debris and normal garbage pickup.
- e. Location of local drop-off locations for debris by self-help and independent contractor.
- f. Volunteer organizations offering to assist homeowners with private property cleanup.
- g. Normal garbage pickup schedules.
- h. Illegal Dumping Penalties.
- i. Procedures for Removal of Abandoned Vehicles.

3. Public Information Strategy – State and Local

- a. Procedures for providing information on contracting.
- b. Procedures for providing information on contract monitoring.
- c. Procedures for providing information on available technical assistance regarding contracting.
- d. Procedures for providing eligibility information.

4. Debris Removal Priorities

- a. Rights-of-Way
- b. Public Facilities

5. Roles and Responsibilities

- a. Local governments decide if they will remove and dispose of debris using either force account or contract.
- b. State government decides how it will support debris removal and disposal operations using either State assets, contracting out operations or requesting a FEMA Mission Assignment.

- c. FEMA prepares Mission Assignment to USACE based on request from State to conduct debris removal and disposal operations.
- d. FEMA coordinates with BIA for requests for debris removal from tribal lands, as necessary.

6. Final Debris Disposal Solution

- a. What are the requirements for final disposal of debris?
 - i. Metals
 - ii. Vegetative
 - iii. Construction and Demolition Debris
 - iv. Soil
 - v. Household and Hazardous Waste
 - vi. Hazardous Waste

7. Environmental Issues and Considerations

- a. Meet State and Local environmental Requirement for Minimization and Storage
- b. Hazardous Materials Disposal
- c. Household Hazardous Waste Disposal
- d. Air
- e. Surface and Subsurface Water
- f. Soil
- g. Erosion
- h. Noise
- i. Consult with State Historic Preservation Officer (SHPO) on Section 106 Historical Issues

8. Debris Operational Issues

- a. Determine when operations will start
- b. Determine where temporary storage and reduction sites will be located.
 - Public or Private Land
 - Size Requirements
 - Pre-existing Conditions
 - Public Acceptability
 - Site Ingress/Egress
 - Distance to Permanent Sites
- c. Determine which landfill sites, including ownership and operation, will be used for final disposal.
- d. Determine how separation will be handled.
- e. Determine if volume reduction will be used for debris going to privately owned landfills.
- f. Determine if volume reduction will be used for debris going to public owned landfills.
- g. Determine which methods of volume reduction will be used – burning, grinding, and recycling of metals.
- h. Establish Debris Coordinating Committee. Participants should include:
 - USACE/ESF#3
 - USEPA/ESF#10
 - State PAO
 - Appropriate State Agencies
 - Other FEMA Representatives (Legal/ Congressional Media Affairs/Community Relations, PIO, REO, etc.)

- i. Rights of Entry for Private Property
- j. Hold Harmless Agreements for Private Property
- l. Traffic Patterns, Traffic Flow, Routes and Restrictions
- m. Pickup Schedules
- n. Hours of Operation
- o. Condemnation and Demolition of Private Structures
(See Stafford Act Section 403)
- p. Disposal Location and Policy for Independent Contractors
- q. Public Information Dissemination
- r. Procedure for Recoupment of Insurance Proceeds
- s. Debris Removal from Tribal Lands

9. Applicant Contract Operations

- a. Review Contract Statements of Work (Copies attached, Annex B (Note: Use appropriate Annexes as necessary.)
- b. Monitoring Contractor Operations (See Monitoring Plan, Annex A)
- c. Legal Review of Local Contracts
- d. Environmental Review of Local Contracts
- e. Contract Closeouts

10. USACE Debris Removal Process (If applicable)

- a. Summary of Mission Assignment and Amendments
(See Annex C)
- b. Areas to be covered by USACE
- c. Location of TDSR sites
- d. Types of reduction being used

e. Schedule

f. Contacts

Debris Removal from Public Land - USACE	
Action	Responsible Participants
Identify Areas to be Cleared	Local and State Officials
Communicate Priorities to FEMA	State PAO
Mission Assignment to USACE	FEMA and ESF #3
Develop and Award Contract	USACE
Coordinate with Local Officials on Specific Contract Schedules of Execution	USACE, State and FEMA
Execute Contract and Monitor Operations	USACE and Contractor
Public Health and Safety Hazard must be in accordance with local ordinances and procedures determined by local government	Local and State Officials
Communicate Priorities to FEMA	Local Through State PAO
Mission Assignment to USACE	FEMA
Establish Process for Recoupment of Insurance Proceeds	FEMA, State, and Local Authorities
Obtain Rights of Entry and Hold Harmless Agreements	State and Local Government Forms provided by USACE or FEMA
Verify property Ownership	Local
Forward Executed ROE Forms to USACE	Local Through State PAO
Develop and Award Contract	USACE
Photograph Property, Develop Group Releases and prepare Contract Modification (if needed)	USACE
Coordinate with Local Officials on Specific Schedules of Execution	USACE, State and FEMA
Execute Contract and Monitor Cleanup Operations	USACE and Contractor
Report Completion to FEMA	USACE

11. Coordination Process

- a. Establish Debris Coordination Committee
 - i. Members
 - ii. Meeting Schedule
- b. Coordination between meetings
- c. Documentation of coordination

12. Category A – Project Worksheet Process

ANNEXES:

- A. Applicant Debris Contracts
- B. FEMA Contract Monitoring Plan
- C. USACE Debris Mission Assignments and Amendments
- D. Other (As Required)

APPENDIX B

The following is an example Status Report that should be prepared in the Public Assistance Section to coordinate, track, and document all debris-related activities (Sections should be added or deleted as necessary)

PUBLIC ASSISTANCE DEBRIS REMOVAL AND DISPOSAL OPERATIONS FEMA-XXXX-DR-XX STATUS REPORT

CURRENT SITUATION

The debris removal and disposal effort for disaster FEMA-XXXX-DR-XX involves a major debris-laden area approximately ___ miles wide by approximately ___ miles in length, bounded by ___ on the North, ___ on the South, ___ on the East and ___ on the West. Additional concentrated pockets of debris are located in isolated rural areas and county roads.

Initial debris estimates indicate that there are approximately ___ cubic yards of debris in the affected area.

PRIORITIES

- Identify and secure Temporary Debris Storage and Reduction Sites.
- Dissemination of debris information and schedules to the public and local governments.
- Develop a Contingency Plan for dealing with debris removal from private property.

ACTION ITEMS

1. State has requested Public Assistance (PA) to conduct Preliminary Damage Assessments (PDA) for five additional counties.

2. Some rural communities have started their own debris removal and disposal operations without coordinating with either State or FEMA. There is concern as to whether they are meeting Federal environmental requirements. DEQ is reviewing this situation.
3. Right of Entry and Hold Harmless forms being reviewed by the FEMA.
4. The initial environmental and archaeological site survey for the temporary debris-processing site will be conducted on Thursday.
5. Public Information Officer from the USACE will attend all Debris Coordinating meetings.
6. DEQ/EPA will develop a strategy for disseminating information to local communities for the special handling of Freon. The USACE may have to institute a modification to the current contract to address disposal of Freon from all refrigeration units.

ACCOMPLISHMENTS

1. State requested USACE assistance in removing and disposing debris on public property and public rights-of-way in all declared counties. Eleven counties declared to date.
2. FEMA has tasked the USACE using a Mission Assignment to institute contracting procedures to obtain a Prime Contractor to manage the debris removal and disposal mission.
3. ESF#3 will be the single point for coordination of all debris removal and disposal issues between FEMA and USACE.

APPENDIX C

DEBRIS COORDINATING COMMITTEE

In disaster operations, there are many entities that can become involved in debris operations. In a disaster where debris is a significant component, a Debris Coordinating Committee (DCC) is an excellent means of ensuring that all such entities are acting in a coordinated manner. Additionally, it can act as a clearinghouse for information, assist in establishing priorities, minimize duplication of effort, and provide a forum for resolving issues.

The Deputy PAO for Debris should organize and chair this committee. Depending upon the type and size of the disaster, the DCC should include representatives of any or all of the following:

- US Army Corps of Engineers (and/or ESF #3)
- Environmental Protection Agency (and/or ESF #10)
- DFO Environmental Officer
- DFO Attorney's Office
- DFO Media Affairs
- DFO Office of Inspector General
- DFO Congressional Liaison Office
- State PA Officer
- State Department of Solid Waste, Hazardous Waste, or similar agency
- State Department of Natural Resources
- Debris Advisor

Additional entities may be appropriate. It will be the responsibility of the DPAO for Debris to determine those that are necessary to ensure a coordinated approach to debris operations.

APPENDIX D

PUBLIC ASSISTANCE PROGRAM DEBRIS REMOVAL FACT SHEET FOR LOCAL GOVERNMENTS

Under the Presidential disaster declaration for [STATE], the Federal Emergency Management Agency (FEMA) may provide assistance to State and local governments for costs associated with debris removal operations. (Debris removal operations include collection, pick-up, hauling, and disposal at a temporary site, segregation, reduction, and final disposal). This document provides information on the eligibility of debris removal operations for Public Assistance funding.

Questions: Questions regarding debris operations or the Public Assistance Program in general should be referred to [State Public Assistance Officer], at [telephone number].

General Work Eligibility: Determination of eligibility is a FEMA responsibility. Removal and disposal of debris that is a result of the disaster, and is on public property, is eligible for Federal assistance. Public property includes roads, streets, and publicly-owned facilities. Removal of debris from parks and recreation areas is eligible when it affects public health and safety, or limits the use of those facilities.

Debris Removal from Private Property: Disaster-related debris may be removed from private property if it is pre-approved by the Federal Disaster Recovery Manager, is a public health and safety hazard, and if the work is performed by an eligible applicant, such as a municipal or county government. The cost of debris removal by private individuals is not eligible under the Public Assistance Program; however, within a specific time period, a private property owner may move disaster-related debris to the curbside for pick-up by an eligible applicant. That time period will be established by FEMA in coordination with the State. (The cost of picking up reconstruction debris is not eligible for FEMA reimbursement).

Eligible Costs: If an applicant uses force-account personnel and equipment, the cost of the equipment and overtime costs for personnel are eligible for Federal funding. If an applicant chooses to award a contract(s) for debris operations, the costs of the contracts also are eligible for Federal funding. **Applicants should exercise judicious care in contracting for debris operations, since by law, FEMA is authorized only to assist with reasonable costs.** Reasonable costs are those that are fair and equitable for the type of work performed. If desired, FEMA staff will provide technical assistance on this subject prior to contract award.

Direct Federal Assistance: If disaster-related debris removal and disposal operations are beyond the capability of State and local governments to perform or contract for the work, the State may request direct Federal assistance. In such instances, FEMA will give to the U.S. Army Corps of Engineers a mission assignment to prepare, execute, and monitor contracts for debris operations.

Use of Contractors: If an applicant decides to award contracts for debris removal, FEMA advises the following:

- Do not allow contractors to make eligibility determinations; they have no authority to do so.
- Utilize pre-negotiated contracts if available.
- Consider using qualified local contractors because of their familiarity with the area.
- Utilize formal competitive procedures when time permits. If time does not permit use of normal competitive procedures, competitive bids still may be obtained using a reduced time frame for submittal of bids.
- Request copies of references, licenses, and financial records from unknown contractors.
- Document procedures used to obtain contractors.
- Do not accept contractor-provided contracts without close review. FEMA can provide technical assistance on contracts and contract procedures.

FEMA does not recommend, pre-approve, or certify any debris contractor.

FEMA does not certify or credential personnel other than official employees and Technical Assistance Contract personnel assigned to the disaster by FEMA.

Only FEMA has the authority to make eligibility determinations. (See Appendix F: Debris Contract Information.)

Types of Debris Contracts: There are three general types of contracts that may be used for debris operations:

Time and Materials Contracts may be used for short periods of time immediately after the disaster to mobilize contractors for emergency removal efforts. They must have a dollar ceiling or a not-to-exceed limit for hours (or both), and should be terminated immediately when this limit is reached. **For FEMA reimbursement, such contracts should be limited to 70 hours of actual work.** The contract should state that (a) the price for equipment applies only when equipment is operating, (b) the hourly rate includes operator, fuel, maintenance, and repair, (c) the community reserves the right to terminate the contract at its convenience, and (d) the community does not guarantee a minimum number of hours.

Unit Price Contracts are based on weights (tons) or volume (cubic yards) of debris hauled, and should be used when the scope-of-work is not well defined. They require close monitoring of pick-up, hauling, and dumping to ensure that quantities are accurate. Unit price contracts may be complicated by the need to segregate debris for disposal.

Lump Sum Contracts establish the total contract price using a one-item bid from the contractor. They should be used only when the scope of work is clearly defined, with areas of work and quantities of material clearly identified. Lump-sum contracts can be defined in one of two ways: area method, where the scope of work is based on a one-time clearance of a specified area; and pass method, where the scope of work is based on a certain number of passes through a specified area, such as a given distance along a right-of-way.

Ineligible Contracts: FEMA will not provide funding for cost-plus-percentage of cost contracts, contracts contingent upon receipt of State or Federal disaster assistance funding, or contracts awarded to debarred contractors.

Contract Monitoring: The applicant should monitor the contractor's activities to ensure satisfactory performance. Monitoring includes: verification that all debris picked up is a direct result of the disaster; measuring and inspecting trucks to ensure they are fully loaded; on-site inspection of pick-up areas, debris traffic routes, temporary storage sites, and disposal areas; verification that the contractor is working in its assigned contract areas; verification that all debris reduction and disposal sites have access control and security. FEMA can provide assistance with monitoring if necessary. If an applicant has insufficient staff to properly monitor debris contract operations, the cost of hiring of additional staff for monitoring (or reasonable costs of contracting for monitoring) is eligible for Federal funding.

Documentation: To ensure that processing of Federal funding is done as quickly as possible, applicants should keep the following information: debris estimates, procurement information (bid requests, bid tabulations, etc.), contracts, invoices, and monitoring information (load tickets, scale records). If an applicant does debris removal, the payroll and equipment hours must be kept.

Technical Assistance FEMA and the State may provide technical assistance with planning, carrying out, and monitoring of debris removal operations. Applicants in need of technical assistance should contact the State Public Assistance Officer at the number given in the first paragraph.

APPENDIX E
SAMPLE RIGHT-OF-ENTRY PERMIT
(INCLUDES HOLD HARMLESS AND
INSURANCE CLAUSES)

Right of Entry Permit Permit No. _____

Property Address/Description

City

Name (Owner or Tenant)

County

Date

Right of Entry

I certify that I am the owner, or an owner's authorized agent, of the property described above. I grant, freely and without coercion, the right of access and entry to said property to the (eligible applicant), its agents, contractors, and subcontractors, for the purpose of demolishing, removing and/or clearing any or all storm-generated debris of whatever nature from the above-described property.

Hold Harmless

I understand that this permit is not an obligation upon the government to perform debris removal. I agree to hold harmless the United States Government, the Federal Emergency Management Agency (FEMA), the State of (_____), and any of their agencies, agents, contractors, and subcontractors, for damages of any type whatsoever, either to the above-described property or to persons situated thereon. I release, discharge, and waive any action, either legal or equitable, that might arise by reason of any action of the above entities, while removing storm-generated debris from the property. I will mark any sewer lines, septic tanks, water lines, and utilities located on the described property.

Duplication of Benefits

Most homeowner's insurance policies have coverage to pay for removal of storm-generated debris. I understand that Federal law (42 United States Code 5155 et seq.) requires me to reimburse (eligible applicant) the cost of removing the storm-generated debris to the extent covered in my insurance policy. I also understand that I must provide a copy of the proof/statement of loss from my insurance company to (eligible applicant). If I have received payment, or when I receive payment, for debris removal from my insurance company, or any other source, I agree to notify and send payment and proof/statement of loss to (eligible applicant). I understand that all disaster related funding, including that for debris removal from private property, is subject to audit.

Sworn and attested: **Witnessed:**

All owners must sign below.

Print Name _____ Print Name _____

Signature _____ Signature _____

Name of Insurance Company: _____

Policy Number: _____

Please do not remove the following items: _____

APPENDIX F

DEBRIS CONTRACT INFORMATION FOR APPLICANTS

Many of the problems that affect Federal reimbursement for debris removal, reduction and disposal occur as a result of improper contracting procedures, incomplete or inappropriate contracts, and/or inadequate monitoring of contract operations. FEMA and/or the State can provide technical assistance on the preparation and review of debris contracts and contracting. The following information is provided to assist you in developing and monitoring debris related contracts.

1. FEMA does not certify, credential, or recommend debris contractors.
2. No debris contractor has the authority to make eligibility determinations.
3. You need to make sure that you are familiar with FEMA eligibility, and not allow the contractor to make eligibility determinations. Eligibility information is available in numerous FEMA documents including the Public Assistance Guide (FEMA 322), Public Assistance Applicant Handbook (FEMA 323), and the Public Assistance Debris Management Guide (FEMA 325) It also is available on the FEMA Website, www.fema.gov. If you have eligibility questions, call the State or FEMA.
4. Make sure the debris contract is one that contains a clear and definitive scope of work, monitoring requirements, and specific language that is required for each debris related task.
5. Do not sign a contract provided by a contractor until it has been thoroughly reviewed by your legal representative.
6. Use competitive bidding unless impossible to do otherwise. Many applicants have received competitive bids in very short time frames.

7. You are responsible for payment of services contracted, regardless of whether or not such services are eligible for reimbursement by FEMA. Remember that FEMA is not a party to a debris-related contract entered into by you and a contractor.
8. Be aware of the limitations of time and material contracts. It is FEMA policy to reimburse for only the first 70 hours of a time and materials contract. Some contracts contain time and material clauses for certain types of work, and costs of such work may not be fully reimbursable.
9. All types of contracts must contain a requirement that records be kept that shows the amount of debris picked up, hauled, and/or reduced to determine reasonable costs.
10. Every contract should contain a "Termination for Convenience" clause. It is recommended that your attorney prepare this clause. An **example** of such a clause is as follows:

"This contract may be terminated at any time for the convenience of (the contracting entity). If this clause is executed, (the contracting entity) agrees to pay the contractor for all work completed through the termination date, as well as any demobilization costs that were a part of the original contract."
11. The contract should contain a cap on the cost. When that cap is reached, a review of work accomplished and work completed should be conducted to determine work remaining. If necessary, the contract can then be modified to reflect more accurate information.
12. Be sure the contract has a reasonable period of performance for the work to be done. Monitor the work effort to ensure compliance with the schedule for completion.
13. Many services offered for a fee by contractors (training in preparing Project Worksheets, documentation requirements, eligibility information, etc.) may be available free from FEMA or the State. Be sure you are aware of those services.

14. Make sure costs are reasonable. FEMA pays only reasonable costs.
15. In some instances, it may be necessary to use temporary debris storage and/or reduction sites. Such sites are expensive to develop, manage and restore. Don't sign a contract for the development and management of such sites unless you know it is necessary. Call the State for assistance.
16. You, not the contractor, are responsible for monitoring and certifying debris operations. Be sure you have sufficient staff deployed for that task. If you do not have enough staff, hiring additional staff is eligible for funding according to the disaster cost share (usually 75% Federal, 25% non-Federal); however, those costs must be reasonable. It is not necessary to use registered professional engineers for monitoring. Many applicants find that construction inspectors are very appropriate.

Disaster recovery assistance is available without regard to race, color, national origin, sex, age, religion, disability, or economic status. Anyone who believes he/she has been discriminated against should contact the FEMA Helpline at 1-800-525-0321.

Report fraud, waste and abuse to FEMA's Office of Inspector General on the Hotline at 1-800-323-8603.

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