

**Oregon Office of Emergency
Management Region 1**

Regional Debris Management Plan



December 2008

**Prepared for:
Benton, Lincoln, Linn, Marion, Polk, and Yamhill Counties**

**Prepared by:
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List of Abbreviations and Acronyms


ACI	Advanced Contracting Initiative
ARC	American Red Cross
BCC	Benton County Code
BOC	Board of Commissioners
C&D	Construction and Demolition
CDMP	County Debris Management Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DDA	Detailed Damage Assessment
DET	Debris Estimating Teams
DHS	Department of Homeland Security
DM	Debris Manager
DMP	Debris Management Plan
DMTF	Debris Management Task Force
DOGAMI	Department of Geology and Mineral Industries
ECC	Emergency Coordination Center
ECP	Emergency Conservation Program
EM	Emergency Management
EMBD	Emergency Management Board Designee
EMD	Emergency Management Director
EMP	Emergency Management Plans
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ESF	Emergency Support Function
EWP	Emergency Watershed Protection Program
FEMA	Federal Emergency Management Agency
FIT	Field Inspection/Monitoring Team
FSA	Farm Service Agency
HAZUS-HM	Hazards United States Multi-hazard
HHW	Household Hazardous Waste
IDA	Initial Damage Assessment
JIC	Joint Information Center
JIS	Joint Information System
LCRD	Linn County Road Department
LDMD	Lead Debris Management Department

List of Abbreviations and Acronyms (Cont.)

M	Magnitude
NCP	National Contingency Plan
NRC	National Response Center
NRCS	Natural Resources Conservation Service
NRF	National Response Framework
ODA-NRD	Oregon Department of Agriculture – Natural Resources Division
ODEQ	Oregon Department of Environmental Quality
ODOT	Oregon Department of Transportation
OEM	Oregon Emergency Management
ORS	Oregon Revised Statutes
PA	Public Assistance
PDA	Preliminary Damage Assessment
PPE	Personal Protective Equipment
PIO	Public Information Officer
PRT	Planning Response Team
RCRA	Resource Conservation and Recovery Act
RDMP	Regional Debris Management Plan
READ	Recycling Electronics and Asset Disposition
SOW	Scope of Work
T&M	Time and Material Contracts
TDSR	Temporary Debris Storage and Reduction
the Region	Oregon Emergency Management Region 1
the Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act
U.S.	United States
U.S. DOT FHWA	United States Department of Transportation Federal Highway Administration
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
WBUG	Woody Biomass Utilization Group



Glossary of Terms



Advanced Contracting Initiative (ACI)

A program developed by the Army Corps of Engineers to competitively award contracts for the future use in the areas of water, ice, power, temporary roofing, and debris removal. Having these contracts in place allows the Corps to rapidly respond to emergency situations

Area Method

Describes a lump sum contract when the scope of work is based on a one-time clearance of a specified area.

Baseline Checklist

A tool used by Field Inspection Teams to ensure that TDSR operations are compliant with the contract as well as with local, State, and Federal regulations. This checklist includes site data prior to activity, during use, and progressive updates.

Cascadia Subduction Zone

The Cascadia Subduction Zone is the site where an oceanic tectonic plate (the Juan de Fuca plate) is being pulled and driven (i.e. subducted) beneath a continental plate (the North American plate). Earthquakes along the fault that is the contact between the two plates may generate significant amounts of damage both through seismic activity and tsunamis in the Pacific Northwest.

Collection centers

Center where citizens can drop-off eligible debris from an debris generating event, if curb side collection is not available

Construction and demolition (C & D) debris

Waste generated by construction and demolition of buildings, such as bricks, concrete, drywall, lumber, miscellaneous metal parts and sheets, packaging materials, etc.

Contamination Reduction Zone

The area where personnel and equipment exiting the Exclusion Zone are decontaminated. This is also a buffer area between the Exclusion Area and the Support Zone.

Glossary of Terms (Cont.)

Critical Facilities

Critical Facilities include facilities such as fire stations, police stations, hospitals, and other critical infrastructure as identified by the counties in their respective Emergency Operations Plans.

Damage Assessment

Process used to determine what happened, what the effects are, which areas were hardest hit, what situations must be given priority and what types of assistance are needed.

Debris

Items and materials broken, destroyed, or displaced by a natural or man-made federally declared disaster. Examples of debris include, but are not limited to, trees, construction and demolition material, and personal property.

Debris Management Cycle

Phased approach to debris management that includes normal operations, increased readiness, response, and recovery

Debris Management Task Force (DMTF)

Temporary unit formed for each county and staffed by county personnel to respond to issues regarding debris management.

Debris Manager (DM)

The debris manager has overall responsibility for the operations, planning, logistics, and finance of the debris management activities.

Debris Planning and Response Team (PRT)

Teams maintained by the Army Corps of Engineers which are pre-rostered, fully trained, and ready to deploy within 6 hours to begin operationally planning a Direct Federal Assistance mission.

Debris-generating Event

Any man made or natural disaster that results in debris that requires removal from the public right-of-way.

Detailed Damage Assessment (DDA)

The DDA is the second damage assessment conducted by the American Red Cross and should occur in the first seventy-two hours after a disaster occurs. This more detailed than the Preliminary Damage Assessment.

Disposal Site Monitor

Disposal Site Monitor(s) are assigned by the DMTF and are responsible for monitoring contractor activities at debris collection points and the processing/storage sites.

Glossary of Terms (Cont.)

Electronic Waste (E-waste)

Electronic Waste includes televisions, desktop and laptop computers, stereo equipment, cell phones and other similar waste.

Environmental Baseline Study

An environmental baseline study is performed on any TDSR site prior to its use. Baseline data are essential to document the condition of the land before it is used and in returning it to that condition following site closeout.

Essential Facilities

Essential facilities include schools, municipal buildings, water treatment plants, wastewater treatment plants, power generation units, airports, temporary shelters for disaster victims, etc.

Exclusion Zone

The area where contamination is known to occur or will likely occur. All persons in this area should be wearing the proper PPE. Access is limited to only those who have a need to be in this zone.

Field Inspection/Monitoring Teams (FIT)

FITs periodically monitor each TDSR site to ensure that operations are being followed as specified in the contractor scope of work and contract with respect to local and Federal regulations and the Baseline Checklist. FITs will also periodically monitor loading sites and canvass the city to report on any illegal dumping sites.

Hardfill

Hardfill (also known as natural cleanfill) is uncontaminated gravels, clay, rock, silt, rubble, concrete, soil, bricks, stones, asphalt, pavers, sand, etc.

Hold harmless agreement

The assumption of liability through contractual agreement by one party, thereby eliminating liability on the part of the other.

Household Hazardous Waste (HHW)

Products used in residences, such as paints and some cleaning compounds, that are toxic to living organisms and/or the environment.

Inert environmental debris

This debris category includes dirt, rocks, mud and sand and most likely will be generated during flooding and earthquakes which cause landslides.

Initial Damage Assessment

Generally the IDA is performed first and examines the damages and costs related to a disaster, the impact of the disaster on the community, and which State or Federal programs are the most appropriate possibilities for providing needed assistance.

Glossary of Terms (Cont.)

Joint Preliminary Damage Assessment

The Joint PDA provides the Governor with the information necessary to determine whether to request a presidential major disaster declaration.

Lahars

A mixture of water and rock fragments that flow down the slope of a volcano, usual along a stream channel.

Lead Debris Management Department (LDMD)

Title given to each county department in charge of debris removal operations.

Load Site Monitor

A Load Site Monitor is assigned to each contractor loading site within the designated debris area and initiates load tickets that verify the debris being picked up is eligible under the terms of the contract.

Load ticket

Load tickets are generally used for unit price contracts and are a focal point for quantity verification for payment.

Lump Sum Contract

Written agreement under which a principal agrees to pay a contractor a specified amount for completing a scope of work without requiring a cost breakdown.

Magnitude

Magnitude is a number that characterizes the relative size of an earthquake. It is based on measurement of the maximum motion recorded by a seismograph.

Pass Method

Describes a lump sum contract 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.

Personal Protective Equipment (PPE)

Specialized clothing or equipment worn by response workers for protection against health and safety hazards. PPE may include clothing, helmets, goggles, or other garment designed to protect the wearer's body.

Preliminary Damage Assessment

The PDA or "windshield survey" is conducted by the American Red Cross and often occurs prior to or simultaneous with the local IDA. It is a quick look determining the boundaries of areas affected by the disaster, the general needs and characteristics of the disaster areas, the condition of roads, transportation systems, and utilities, the approximate number dwelling units affected, and whether disaster conditions are improving or worsening.

Productive Equipment Hours Report

Completed by the Load Site Monitor.

Glossary of Terms (Cont.)

Public Assistance Grant Program

Program operated by FEMA to provide assistance to State, Tribal and local governments, and certain types of Private Nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President.

Public Assistance Pilot Program

A FEMA program that provides an additional five percent Federal cost share, to applicants that have a FEMA-approved debris management plan and at least two pre-qualified debris and wreckage removal contractors identified prior to a disaster. Note that currently in order to qualify for funds under this program the disaster must have occurred prior to December 31, 2008; unless the Federal government decides to reappropriate funds.

Public Transfer Facilities

Facilities where the public can bring their waste. The waste is consolidated at the transfer facility and then transported to its final disposal location.

Putrescible waste

Waste that is subject to decomposition or decay. Usually used in reference to food wastes and other organic wastes that decay quickly.

Quality Assurance Report

Completed by the Lead Site Monitor.

Rapid Needs Assessment

These assessments are conducted by teams of two or more registered building inspectors to quickly inspect and evaluate the safety of each applicable structure within affected areas.

Reasonable Cost

A price that is consistent with what a reasonable person would incur in the conduct of the same business in the same or similar circumstances.

Reportable quantity

Quantity of a hazardous substance that triggers reports under CERCLA.

Right of entry agreement

An agreement that would give the jurisdiction the right to enter private property for debris clearance purposes.

Site Monitors

Monitor contractor activities at two locations; the collection point and the processing/storage site, to ensure satisfactory performance. Site monitors will ensure that contractors comply with the contract through training, enforcement of separation at the site, and monitoring of trucks at the facility.

Glossary of Terms (Cont.)

Source segregated debris collection

Residents are directed to sort the debris by material type and place it at the curb in separate piles. Trucks designated for a particular debris type collect the assigned debris and deliver it to a temporary staging area, or debris management site, reduction, recycling, or disposal facility.

Support Zone

An area beyond the Warm Zone where there should be no contamination and it is safe for persons without PPE.

Temporary Debris Storage and Reduction Site (TDSR)

A location where debris is sorted, processed, reduced in volume, and/or disposed of (if debris management activities take place at a permanent disposal site).

Time and Material (T & M) contract

A contract providing for the procurement of supplies or services on the basis of direct labor hours at specified fixed hourly rates, and material at cost.

Tonnage

Weight measured in tons.

Transfer Station

A major facility at which debris from collection vehicles is consolidated into loads that are transported by larger trucks or other means to more distant final disposal facilities, typically landfills.

Transformation Facility

A transformation facility burns waste, solid waste or biomass, to produce heat or electricity.

Unit price Contract

The unit price contract uses construction units and prices for these units to develop line item costs and total contract cost. It is used when the scope of work is difficult to define and is based on estimated quantities.

White goods

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

Public Assistance Pilot Program Increased Federal Share Incentive Checklist

Requirement	Location of Information
Does the plan outline the roles and responsibilities of the various functions identified (Public Works, Finance, and Solid Waste Departments, etc.)?	Section 4 of the RDMP, Section 2 of each CSA
Does the plan address health and safety procedures in accordance with State/Local health and safety standards/requirements?	Section 8 of the RDMP
Does the plan identify procedures for acquiring required regulatory permits?	Section 8 of the RDMP
Does the plan address the basis for planning which include assumptions for various events and forecasting/modeling for debris volumes?	Section 3 of the RDMP, Section 1 of each CSA
Does the plan include priorities for the clearance, collection, and disposal of debris?	Section 5 of the RDMP
Does the plan address recycling?	Section 5 and 9 of the RDMP
Is there a process for the collection and disposal of hazardous waste and/or white goods?	Section 6 and 9 of the RDMP
Does the plan address debris monitoring of the pickup sites, Debris Management Sites (DMS) or Temporary Debris Storage and Reduction Sites (TDSR) and final disposal?	Section 7, ,8, and 9 of the RDMP
Does the plan identify TDSR and potential landfills for final disposal to include operation and site management procedures and staffing?	Section 8 and 9 of the RDMP, Section 5 of each CSA
Does the plan address the environmental requirements?	Section 8 of the RDMP
Does the plan address contracting/procurement procedures?	Section 7 of the RDMP
Does the plan address the authority and processes for private property debris removal?	Section 6 of the RDMP
Does the plan address the dissemination of information to the general public and media?	Section 4 of the RDMP
Does the applicant have a list of pre-qualified contractors?	Section 7 of the RDMP
Does the applicant have documentation demonstrating how the list was obtained?	Section 7 of the RDMP

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1

Introduction

1.1 Authority

Benton, Lincoln, Linn, Marion, Polk, and Yamhill Counties constitute Oregon Emergency Management (OEM) Region 1, hereafter referred to as the Region. A range of statutes, regulations, executive orders, plans, and policies govern the Region's emergency management programs. At the Federal level, the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974 (the Stafford Act), the Homeland Security Act of 2002, and the Post-Katrina Emergency Management Reform Act of 2006 establish assistance and guidance to State and local governments for disaster preparedness, response, recovery, and mitigation.

The Oregon Revised Statutes (ORS) and associated Administrative Rules add State direction and guidance to local emergency management programs. The National Response Framework (NRF), the National Contingency Plan (NCP), and the State of Oregon Emergency Operations Plan (EOP) provide planning and policy guidance to counties and local entities. Collectively, these documents support the foundation for the County and City EOPs.

On October 4, 2006, President Bush signed the Department of Homeland Security (DHS) Appropriations Act directing the Federal Emergency Management Agency (FEMA) to conduct a Public Assistance (PA) Pilot Program to provide an additional five percent Federal cost share, not to exceed 100 percent, to applicants that have a FEMA-approved debris management plan and at least two pre-qualified debris and wreckage removal contractors identified prior to a disaster. The plan does not need to have approval prior to the declared event. According to the *Public Assistance Pilot Program Field Guide Supplement to FEMA 598, Program Guidance, August 2007*, a community may satisfy the plan requirements by participating in debris management planning with surrounding jurisdictions. Additional criteria to qualify for the additional five percent cost share can be found in the Program Guidance, FEMA 598. The Region's Emergency Managers have agreed to participate in the preparation of this Regional Debris Management Plan (RDMP) to be used during a disaster that requires management and processing of disaster-related debris, such as a winter storm or earthquake.

1.2 General

The Region is susceptible to many natural and human-made hazards which can potentially generate large amounts of debris. The debris poses immediate public health and safety threats from disease, fire, and obstructions to emergency response activities, in addition to the long-term environmental threats from debris storage and disposal operations. This RDMP identifies the actions required to plan for, and respond to, a natural or human-made debris-generating event. When properly implemented, the result will be a coordinated and comprehensive effort to reduce the debris-related impacts and costs of a disaster within the Region. In addition to expediting the Region's recovery from a debris-generating event, the RDMP maximizes the amount of Federal reimbursement received from FEMA for debris management activities.

Following this RDMP are Annexes for each county within the Region that contain county-specific details. The RDMP, coupled with a County-Specific Annex, constitutes a County Debris Management Plan (CDMP) for each county within the Region. Throughout the RDMP, information found in the County-Specific Annexes is referenced. A table summarizing information found in a County-Specific Annex is provided at the beginning of any RDMP section for which additional information can be found in a County-Specific Annex. Each County-Specific Annex contains appendices for specific documents.

Each county has prepared an EOP that has been formatted to follow the structure used in the NRF, including the Emergency Support Function (ESF) Annexes identified in the NRF. Debris clearance and removal is an aspect of ESF #3 – Public Works and Engineering and, if appropriate, ESF #10 – Oil and Hazardous Materials Response. This RDMP is a supporting plan to ESF #3 and ESF #14 - Recovery.

1.3 Purpose

The Purpose of this RDMP and the corresponding County-Specific Annexes is:

- To provide organizational structure, guidance, and standardized procedures for the clearance, removal, reuse, recycling, and disposal of debris caused by a major debris-generating event that affects the Region;
- To establish the most efficient and cost effective methods to resolve disaster debris removal, reuse, recycling, and disposal issues;
- To expedite debris removal, reuse, recycling, and disposal efforts that (1) provide visible signs of recovery and (2) mitigate the threat to the health, safety, and welfare of the Region's residents. Visible signs of

recovery offer encouragement and obvious healing of the community to the Region's residents.

- To coordinate relationships, interoperable communications and pre-planning with local, State, and Federal agencies involved with debris management responsibilities; and
- To qualify the counties within the Region to benefit from the economic and program incentives offered under the voluntary FEMA PA Pilot Program.

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2

Situation and Assumptions

This section outlines the current environment within which this RDMP is being prepared and the assumptions that were made during its preparation. If any of the situations or assumptions change, and that change affects the accuracy of this RDMP, the Region's Emergency Managers will update the RDMP. Plan maintenance is discussed in Section 11.

2.1 Situation

- The Region is subject to a number of disaster circumstances that could create a need for debris management services. These circumstances include earthquakes, severe weather/wind storms, floods, volcanic activity, and other natural or terrorist/technologic events that could produce large amounts of debris. Each county maintains and regularly updates a specific Hazard Analysis, which prioritizes the most likely events for each community.
- Benton, Lincoln, Linn, Marion, Polk, and Yamhill counties constitute OEM Region 1; Figure 2-1 shows the location of these counties in relationship to each other and the remainder of the State.
- Each county within the Region has an EOP that covers additional aspects related to emergency response and recovery.
- Natural and manmade disasters precipitate a variety of debris that could include, but is not limited to, trees, sand, gravel, building construction material, vehicles, personal property, and hazardous materials.
- The quantity and type of debris generated from any particular disaster will be specific to the location and type of event experienced, as well as its magnitude, duration, and intensity. This RDMP and the coordinating County-Specific Annexes are intended to be used for managing disaster debris, and are not intended for typical, day-to-day debris pick-up and disposal.
- The quantity and type of debris generated, its location, and the size of the area over which it is dispersed will determine the type of collection and disposal methods utilized to address managing the debris.

- In a major or catastrophic disaster, the Region and its associated counties may have difficulty in locating staff, equipment, and funds to devote to debris management, in the short-term as well as long-term.
- The waste management hierarchy—reuse, recycling, and disposal—will be considered in all debris management activities. Every effort will be made during response and recovery operations to separate waste streams to maximize reuse and recycling before considering disposal options.
- Within the Oregon Revised Statutes (ORS) there are several chapters that could pertain to certain types of debris and situations. These include:
 - Chapter 98 – Lost, Unordered and Unclaimed Property, Unlawfully Parked Vehicles.
 - Chapter 99 – Property Removed by High Water
 - Chapter 271 – Use and Disposition of Public Lands Generally, Easements
 - Chapter 273 – State Lands Generally
 - Chapter 272 – County Lands
 - Chapter 276 – Public Facilities
 - Chapters 279 through 280 – Pertaining to Public Contracting and Financing of Local Public Projects and Improvements
 - Chapter 292 – Administration of Public Funds
 - Chapter 294 – County and Municipal Financial Administration
 - Chapter 459 and 459a – Solid Waste Management and Reuse/Recycling
 - Multiple chapters in Volume 10 Section 31 – Highways, Roads, Bridges and Ferries and Volume and Section 32 – Military Affairs and Emergency Services.
- Within the Region there are nine active private and public landfills, 10 private and public transfer facilities, one energy recovery facility, and seven composting facilities. Municipalities also have contracts with franchise waste haulers, and there are numerous building recycling centers in the State. A list of these resources is provided in Appendix A – Solid Waste Handling/Processing Facilities.

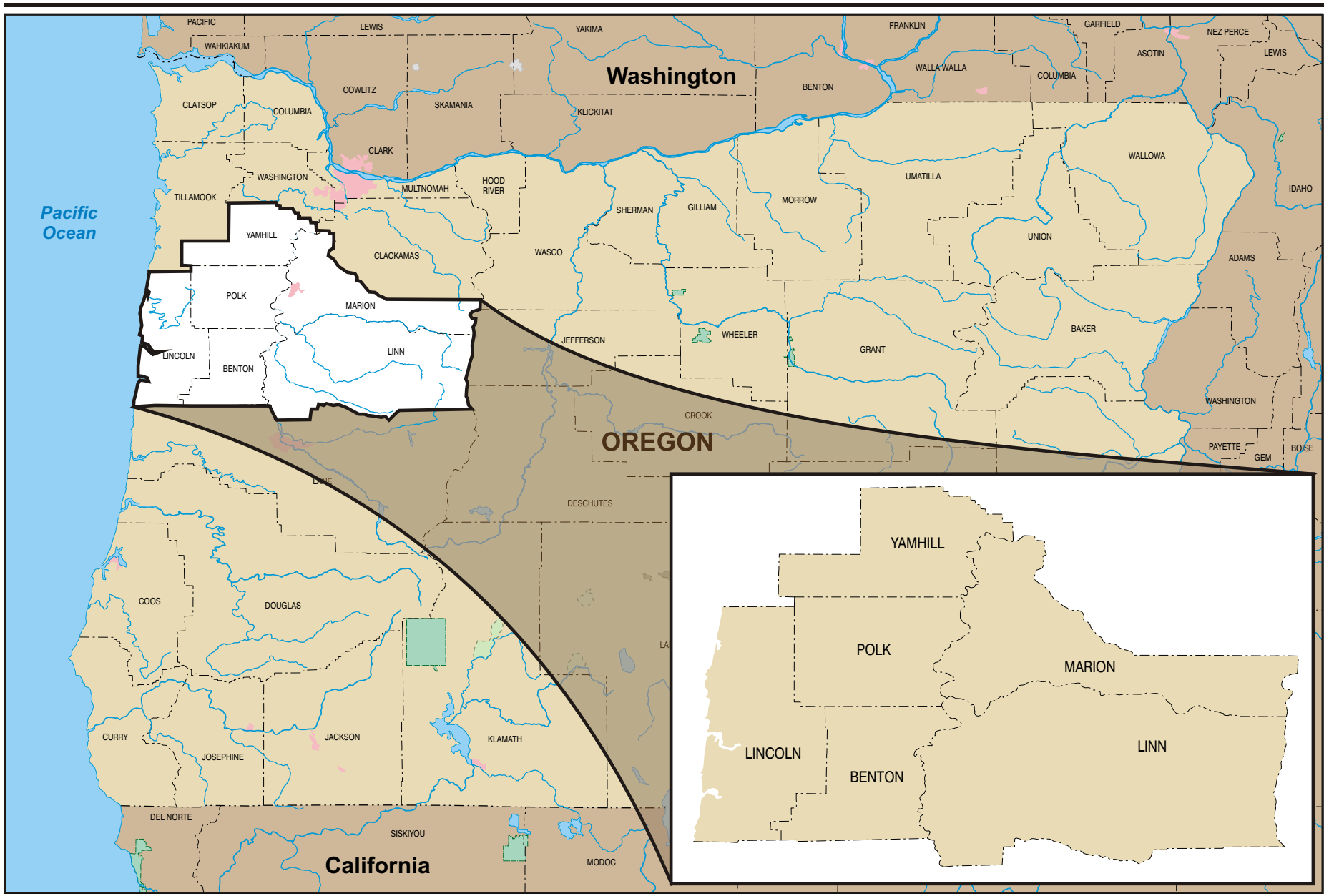


Figure 2-1

OREGON OFFICE OF EMERGENCY MANAGEMENT
REGION 1

2.2 Assumptions

- A natural disaster that requires the removal of debris from public or private lands and waters could occur at any time. A major earthquake likely presents the worst-case scenario for a disaster in the Region. The probability of a major earthquake occurring and causing damage (resulting in large amounts of debris needing disposal) is high.
- No Debris Management Plans (DMP) are currently found in the regional cities.
- The amount of debris resulting from an event or disaster would exceed a city's capabilities and the respective county would be called upon to provide debris clearance and removal with assistance from the city; the county and city Emergency Operations Center (EOC)/Emergency Coordination Center (ECC) would thus be activated.
- The amount of debris resulting from an event or disaster could exceed an individual county's and the Region's removal, processing, recycling, and disposal capabilities.
- If the natural disaster requires, the Governor may declare a State of Emergency that authorizes the use of State resources to assist in the removal and disposal of debris. In the event that Federal resources are required, the Governor may request, through FEMA, a Presidential Disaster Declaration.
- The Region may contract with private contractors to play a significant role in the debris clearance, removal, recycling, and disposal process.
- Existing franchise hauler contracts with the counties and municipalities should have an emergency services provision that contains the following language, or similar, and does not need to be modified before the franchise haulers can perform debris clearance or removal:
 - **Emergency Services.** Within 24 hours of city (or county) notice, Contractor will provide, or begin providing, emergency services beyond the standard Scope of Services at the times and to the extent directed by the city (or county), including unscheduled cleanup of solid waste and other debris consequent upon natural disasters such as earthquakes and floods. City (or county) will compensate Contractor per agreed Contractor's Reimbursement Costs for those services.
- The Region and individual county's debris management programs will be based on the waste management approach of reduce, reuse, and recycle. Debris placement in a landfill or incineration will always be the last option.

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3

Potential Disaster Scenarios

Table 3-1 Section 3 Information Found in County-Specific Annexes

▪ Debris Volume Estimations
▪ Potential Volcanic Debris Locations (Marion and Linn counties only)

The following is a brief discussion of the types of scenarios that could affect the Region and the type of debris associated with each scenario. Each County-Specific Annex contains debris volume estimations for the worst case scenario earthquake; volume estimations for other scenarios have not been calculated but may be added by individual counties as the information becomes available. In addition, the Marion and Linn County-Specific Annexes contain information to illustrate where potential volcanic debris could occur within those counties. Each county within the Region has previously prepared a Natural Hazard Mitigation Plan; refer to these plans for more detailed information on the County Hazard Analyses for various disaster scenarios.

3.1 Earthquake

3.1.1 Disaster Potential

There are three types of earthquakes that could impact the region: subduction zone earthquakes, intraplate earthquakes, and crustal earthquakes. Subduction zone earthquakes occur when two tectonic plates meet and move toward each other, with one plate sliding beneath the other. The faults that separate the plates often produce earthquakes with magnitude (M) 8.0 to 9.0+ and have the potential to produce tsunamis. The Cascadia Subduction Zone off the coast of Oregon and Washington is estimated to have a recurrence interval of 200 to 1,000 years, with the last large earthquake estimated to have occurred 300 years ago. Intraplate earthquakes occur in the Pacific Northwest within the Juan de Fuca plate as it subducts beneath the North American Plate. The 2001 M 6.8 Nisqually earthquake was a result of an intraplate earthquake. Crustal earthquakes occur in the North American plate at relatively shallow depths. The 1993 Klamath Falls, Oregon earthquake was the result of a crustal earthquake ¹.

¹ Information in this paragraph was obtained from *Geologic Hazards, Earthquake and Landslide Hazards Maps, and Future Earthquake Damage Estimates* (Burns et al. 2008).

In 1999 DOGAMI published a report that analyzed all counties in the State for earthquake losses related to an M 8.5 Cascadia Subduction Zone earthquake and Statewide earthquakes within a 500-year return interval². In addition to other earthquake effects the report provides debris volume estimates for each county in the State. The debris volume for each county in the 1999 DOGAMI report was multiplied to the percentage population increase within the county from 2000 to 2006 to estimate debris in 2008. Refer to the County-Specific Annexes for specific volumes.

3.1.2 Types of Debris Generated

Earthquake debris primarily includes building materials, personal property, and sediment from mudslides. Post-earthquake debris composition evolves with time. If the material is from damaged structures, it is likely to contain personal belongings, valuables, and mementos. For damaged structures that are still habitable, residents and businesses will usually begin soon after the main shock to clean up broken glass and ceramics, spilled foods and liquids, as well as broken furniture and appliances. Later, demolition material (including concrete, asphalt, bricks, gypsum wallboard, woody construction materials, metal, and soil) comprises the majority of the disaster-related waste stream. Putrescible household goods and other hazardous wastes may be mixed with any earthquake-related debris.

3.2 Winter Storms

3.2.1 Disaster Potential

Types of winter storms that generally produce debris include wind storms, heavy rain, and ice/snow storms. Debris generated as a result of flooding is discussed in section 5.3. Winter storms are typically large cyclonic low-pressure systems moving from the Pacific Ocean and thus usually affect large areas of Oregon and/or the whole Pacific Northwest.

High winds are common throughout the Region. Destructive wind storms are most commonly from the southwest, associated with storms moving onto the coast from the Pacific Ocean. These storms are most common October through March. Wind speeds vary with the storms but generally lessen as the storm moves inland because of the north-south orientation of the Coast and Cascade Ranges. East winds, often called Chinook winds, can also be very strong; these winds are usually limited to the vicinity of the Columbia River Gorge. The most destructive winds are those that blow from the south, parallel to the Coastal and Cascade Ranges (NOAA 2008) (State of Oregon 2006). Wind storms can be very destructive, as illustrated by the Columbus Day Storm of October 1962 and the winter storms of December 2007.

² The earthquake scenarios are presented in *Earthquake Damage in Oregon: Preliminary Estimates of Future Earthquake Losses* (Wang et al 1999)

The potential impact of heavy rainfall depends on both the total inches of rain and the intensity of rainfall (inches per hour or inches per day). Debris generation could result from debris flows or landslides. Heavy rain is also often associated with wind storms, multiplying the event's effect (State of Oregon 2006).

Ice storms are generally associated with the Columbia Gorge, as cold air from the interior commonly flows westward through the Gorge, bringing very cold air to the Portland area (State of Oregon 2006). However, ice storms occasionally occur within the Region, most commonly at higher elevations but occasionally on the floor of the Willamette Valley as well. The most likely impact of snow and ice events on the Region are road closures that limit passage to and from some areas, especially roads to higher elevations; but such events may also bring down vegetation and damage roofs and structures.

3.2.2 Types of Debris Generated

Winter storms can generate significant amounts of woody debris such as broken tree limbs and branches, but also includes utility lines, wires, poles/towers, and building debris from damaged roofs and structures.

3.3 Flooding

3.3.1 Disaster Potential

The damage resulting from flood events can be caused by structural and infrastructural inundation of flood waters and high velocity waters. Structural and infrastructural damage is usually limited to the floodway and the floodplain area immediately adjacent to a river; damage could also result from urban flooding caused by clogged or overwhelmed storm drainage systems. Heavy damage may result from high-velocity waters in areas of steep slopes or failure of a flood control project such as a dam or levee. Flooding on streams and rivers within Region generally results from large winter or late spring storms from the Pacific, which often result in simultaneous flooding on many rivers and streams in an affected area. In general, four types of flooding occur in the Region: (1) riverine and (2) urban flooding, both of which could affect all counties in the Region, (3) ocean flooding from high tides and wind-driven waves, and (4) flooding associated with a tsunami event, both of which would affect only Lincoln County. Flooding often coincides with wind storms because a large percentage of Oregon's annual precipitation occurs with wind storm events (State of Oregon 2006).

3.3.2 Types of Debris Generated

Flooding causes damage to structures and personal belongings and can generate large volumes of downed vegetation, mud and soil, household debris (e.g. appliances; furniture; rugs, carpet, and padding; and Household Hazardous Waste

(HHW)), sandbags, plastic sheeting, vehicles and demolition debris. Ocean and tsunami flooding will result in boats being deposited on land. Landslides are often associated with flooding and result in debris consisting of soil, gravel, rock, and some construction material.

3.4 Volcanic Activity

3.4.1 Disaster Potential

The Cascades, which run from British Columbia through Washington and Oregon into northern California, contain more than a dozen major volcanoes and hundreds of smaller volcanic features. In the past 200 years, seven of the Cascade volcanoes in the United States have erupted, including: Mt. Baker, Glacier Peak, Mt. Rainier, Mount St. Helens, Mt. Hood, Mt. Shasta, and Mt. Lassen (Goettel 2006). Throughout the Region, ash accumulation could result from a volcanic eruption and require removal and disposal. Half inch of ash can impede the movement of vehicles and disrupt transportation, communication, and utility systems. Ash could also damage roads (resulting in demolition debris) and wet ash creates very slippery and hazardous road conditions (State of Oregon 2006). In Marion and Linn Counties, additional debris could result from lahars caused by an eruption of Mount Jefferson. Lahars are a mixture of water and rock fragments that flow down the slope of a volcano, usually along a stream channel. Lahars can be generated by volcanic activity, prolonged rain, or any other weather conditions that result in rapid snow melt (Goettel 2006). Refer to the County-Specific Annexes for Marion and Linn Counties for potential volcanic debris issues.

3.4.2 Types of Debris Generated

Debris resulting from a volcanic event will include ash, burned structures, mud, and vegetation. Household debris (e.g. appliances; furniture; rugs, carpet, and padding; and Household Hazardous Waste (HHW)). Flooding could occur if there is significant snowmelt during an eruption.

3.5 Summary of Types of Debris

The table below illustrates the types of debris by category. Options for removal are discussed in Section 6. Options for disposal are discussed in Section 9.

Table 3-2 Types of Debris

Putrescible Debris	
▪ Animal corpses: domestic and wild animals	▪ Food remnants: meal leftovers or food spoiled as a result of power failure
Vegetation	
▪ Leaves and branches	▪ Uprooted shrubs and trees

3. Potential Disaster Scenarios

Inert Environmental Debris	
<ul style="list-style-type: none"> ▪ Soil ▪ Rock 	<ul style="list-style-type: none"> ▪ Mud ▪ Sand
Construction Debris	
<ul style="list-style-type: none"> ▪ Acrylic ▪ Insulation materials (fiberglass, Styrofoam, etc.) ▪ Asphalt ▪ Masonry ▪ Blinds ▪ Metal (steel, iron, aluminum, copper, etc.) ▪ Brick ▪ Tile ▪ Pipe 	<ul style="list-style-type: none"> ▪ Concrete ▪ Plastic ▪ Drywall ▪ Rubble ▪ Electrical wire, lamps, bulbs ▪ Vinyl products ▪ Glass and mirror fragments ▪ Wood ▪ Carpet
Appliances, Household Equipment and Furniture	
<ul style="list-style-type: none"> ▪ Beds and mattresses ▪ Desks, chairs, chests ▪ Upholstered furniture 	<ul style="list-style-type: none"> ▪ Sofas ▪ Washing and drying machines, refrigerators, dishwashers, stoves, hot water tanks, furnaces ▪ Electronics
Personal Items and Objects	
<ul style="list-style-type: none"> ▪ Art work ▪ Clothing ▪ Vehicles, boats 	<ul style="list-style-type: none"> ▪ Books and papers ▪ Cooking utensils, china, glassware
Hazardous Wastes	
<ul style="list-style-type: none"> ▪ Asbestos ▪ Oil ▪ Biomedical waste ▪ Paint ▪ Cleaning agents ▪ Pesticides ▪ Combustibles 	<ul style="list-style-type: none"> ▪ Radioactive substances ▪ Explosives ▪ Solvents ▪ Fertilizers ▪ Lead ▪ Computer equipment, telephones ▪ Other toxic substances or materials

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4

Concept of Operations

Table 4-1 Section 4 Information Found in County-Specific Annexes

▪ Emergency Operations Center activation procedures
▪ Organization and assignment of responsibilities to county departments
▪ Lead Debris Management Department
▪ Debris Manager responsibilities

This section provides an overview of the debris management cycle, including normal operations, increased readiness, response, and recovery. A brief discussion of the roles and responsibilities of the various levels of government in debris management is also provided. The County-Specific Annexes provide information regarding EOC activation and organization and assignment of responsibilities for debris management within the respective county.

4.1 Debris Management Cycle

Normal Operations and Increased Readiness tasks are, in part, addressed by this RDMP and the corresponding County-Specific Annexes. These tasks can be performed before a debris-generating event occurs. The Response part of the Debris Management Cycle is also known as Phase I; the primary focus of this phase is on clearing debris from the roadway for emergency resources. The Recovery part of the Debris Management Cycle is also known as Phase II; this phase includes debris removal, reuse, recycling, and disposal.

1. Normal Operations
 - a. Develop local and regional resource list of contractors who can assist local governments in all phases of debris management.
 - b. Develop comprehensive DMP, including but not limited to: mutual aid agreements, sample contracts, pre-identified debris storage sites, lifeline and critical routes for priority clearing, Public Information Officer (PIO) planning and public education.
2. Increased Readiness
 - a. Designate a Debris Manager (DM) to manage disaster-related debris and to coordinate debris management activities with local, regional, State, and Federal government representatives, waste haulers, and solid waste processing facilities.

- b. Establish procedures and sites for temporary storage and processing of disaster debris.
 - c. Evaluate the DMP on an established schedule, or as appropriate.
3. Response (Phase I)
- a. Identify and prioritize debris removal sites considering critical facilities and roadways.
 - b. Begin public removal and/or contract privately for removal of debris.
 - c. Identify and eliminate debris-related threats to public health and safety.
 - d. Restore delivery of garbage and recycling collection services.
 - e. Provide information to the public regarding debris-related health issues.
 - f. Track debris management costs and debris tonnage processed.
4. Recovery (Phase II)
- a. Identify and prioritize remaining debris removal sites. Emphasize recovery operations that provide reuse and recycling options for debris.
 - b. Remove or contract for removal of debris from sites not cleared during response operations.
 - c. Establish controls to prevent or minimize illegal dumping and theft of services.
 - d. Provide information and direction to the public regarding the handling of all categories of disaster-related debris.
 - e. Track debris management costs and debris tonnage processed. Submit claim for Federal assistance if applicable.

Specific actions and activities related to Phase I and Phase II are described in more detail in Sections 5.0 and 6.0.

4.2 Roles of Government

In most cases, debris clearance, removal, and disposal actions can be accomplished quickly, using municipal and, potentially, State resources. In other cases, however, the damage and resulting debris in a region is so extensive that it can only be successfully managed through adequate pre-planning and the coordinated efforts of Federal, State, and local governments. Leveraging contracts with private resources may also be necessary. Disaster debris on State property will be the cleanup responsibility of the State. The roles of government and the private sector in managing disaster debris are discussed below.

4.2.1 Cities

Cities have debris management responsibilities within their own boundaries. These responsibilities include administration of franchise-hauling activities, management of public information programs, emergency contracting, and designation of emergency drop-off points and Temporary Debris Storage and Reduction (TDSR) sites. Cities are responsible for performing damage assessments to identify necessary lifesaving actions, assess the magnitude of damage and determine whether additional resources are needed from other local governments or the State; this damage assessment report will be completed in accordance with the local EOPs. Response efforts may be accomplished with local force account labor and equipment, contractors, volunteers and assistance from adjacent communities. At the time of this writing no cities within the Region have prepared their own DMPs. However, the City of Salem is working in a parallel path to coordinate their plan with that of Marion and Polk counties (the two counties which Salem is located). Cities without a DMP will rely heavily on their respective counties for debris management support. Cities requesting assistance will channel requests through their county EOC/ECC.

Most cities maintain equipment such as trucks, rubber tire loaders, graders, chippers, chain saws, small cranes, dozers, and backhoes with experienced operators who can be used to open roads and remove debris. Temporary hires may be added by a city to provide additional labor and equipment. Cities may have entered into mutual aid agreements with other cities or their respective counties; mutual aid agreements are discussed in Section 7.9.

4.2.2 Counties

Counties have debris management responsibilities, such as solid waste collection services, for unincorporated areas within their borders; they are also responsible for solid waste disposal at transfer stations and landfills. The responsibilities are similar to those outlined for the cities. When a city's capacity is exceeded, the Counties provide the next level of assistance. Counties within the Region will activate mutual aid agreements and contact each other for assistance with debris management before requesting assistance from the State. Counties within the Region maintain equipment and operators that can be used to open roads and remove debris from across the Region.

The County-Specific Annexes contain information detailing the breakdown of responsibilities of departments within a county.

Each county has designated a department that has lead debris management responsibilities. Because there is variation in the titles of the designated departments there is the need to develop consistent titles for use in this RDMP that can apply uniformly to each county. For example, Benton County has designated the County Health Department – Environmental Health Services and

Marion County has designated the County Department of Public Works; within this RDMP both departments will be referred to as a Lead Debris Management Department (LDMD). Table 4-2 provides each county’s corresponding LDMD.

Table 4-2 Lead Debris Management Departments for Each County within the Region

County	Department
Benton	County Health Department - Environmental Health Division
Lincoln	Public Works
Linn	Linn County Road Department
Marion	County Department of Public Works
Polk	Polk County Public Works with assistance from County Environmental Health Services
Yamhill	County Public Works

Each county LDMD will designate a DM who will have overall responsibility for the operations, planning, logistics, and finance of the debris management activities. The DM will lead the Debris Management Task Force (DMTF), which will consist of one representative from each departments the DM identifies as having debris management responsibilities, a PIO, and any other representative the DM deems appropriate (i.e. emergency managers and franchise hauler representatives). The PIO may be identical with the county PIO, rather than assigning a debris specific PIO; in this case the county PIO would disseminate debris information to the public. The exact number of DMTF members will depend on the severity of the situation and availability of personnel for each county. DMTF members may be staffed with personnel already assigned to other EOC positions. The DMTF will establish Debris Estimating Teams (DET) and Field Inspection/Monitoring Teams (FIT) and will assign Site Monitors based on availability of personnel following an event.

4.2.3 State

A number of State agencies have a stake in (and oversight of) many disaster-related debris management activities, including the Oregon Department of Environmental Quality (ODEQ), the Oregon Department of Transportation (ODOT), the Oregon National Guard, and the Oregon Department of Agriculture – Natural Resources Division (ODA-NRD). Each is described briefly below. In addition, Oregon Emergency Management (OEM) serves as the counties’ liaison to FEMA during a disaster and cleanup. Government response should be coordinated through appropriate local and/or State EOC/ECCs that have been

activated for the disaster so that effective mutual aid may occur; on the county level this would be done through the County's EOC.

4.2.3.1 Oregon Department of Environmental Quality

The DEQ plays a central role in the disposal of disaster debris. Reimbursement by the Federal government for costs incurred by the counties in response to an emergency may be hampered if State and local agencies have not coordinated and communicated with the DEQ regarding the location and handling of disaster debris.

The DEQ has prepared a fact sheet for local governments called *Disaster Debris Management from Winter Storm Emergencies*, which can be found in Appendix F; although the fact sheet was prepared for winter storm emergencies, the information provided can apply to all debris generating events. The purpose of the fact sheet is to advise county solid waste programs; solid waste facility operators; local emergency management agencies; local government public works, road, and fire departments; and the ODOT about the following debris management information:

- DEQ's role in coordinating information and assisting local communities;
- Advice on disaster debris best management practices;
- DEQ approval for changes at permitted solid waste sites; and
- Procedures for obtaining approval for TDSR sites.

Some key information from the fact sheet includes:

- If existing permitted solid waste facilities, transfer stations, landfills, material recovery facilities and compost facilities need to modify their operations in response to a disaster, DEQ must be contacted within 48 hours of the change.
- DEQ can also issue temporary Solid Waste Letters of Authorization for temporary facilities quickly. Having the Letter of Authorization will help the facility comply with State law, which can impact the ability to get FEMA reimbursements.
- DEQ must be contacted before burning to obtain proper burn permits. If DEQ determines that the site, the wastes, and/or the need to burn are not warranted, it will work with the counties to find alternatives to burning.
- DEQ will provide assistance to find locations to use or store chipped wood waste and yard debris and with hazardous waste collection at disaster debris sites.

- DEQ will help counties let residents know where to take their wastes by issuing news releases to local media and putting information on their web site.

In the case of a large volume of animal mortality, DEQ may be able to grant an exception for landfills that do not normally accept animal carcasses.

4.2.3.2 Oregon Department of Transportation

As one of Oregon's designated emergency response agencies, ODOT plays an important supporting role in emergency response and disaster recovery. A functional transportation system is crucial for getting emergency responders and life saving supplies where they need to go and in helping promote economic recovery after a disaster. ODOT is responsible for clearing and removing debris from State highways and may be able to provide personnel and equipment to the counties. It maintains the Oregon Public Works Emergency Response Cooperative Assistance Agreement and has prepared *Guidelines for Using the Public Works Emergency Response Cooperative Assistance Agreement*, which can be found in Appendix B – Forms. In addition, ODOT also maintains a registry of businesses interested in assisting ODOT during an emergency, which may be used by the counties.

4.2.3.3 Oregon National Guard

The Oregon National Guard mission statement states that the Oregon National Guard will provide the citizens of the State of Oregon and the United States with a ready force of citizen soldiers and airmen, equipped and trained to respond to any contingency, natural or man-made. If counties request assistance from the State, the State may choose to deploy the Oregon National Guard in response. The Oregon National Guard and Oregon Emergency Management are both housed under the Oregon Military Department.

4.2.3.4 Oregon Department of Agriculture – Natural Resource Division

Farm Service Agency (FSA) programs, discussed under the subsequent Federal portion of this RDMP, are administered through the ODA. The FSA has local offices throughout the State that are often co-located with the Oregon State University Extension Service, Natural Resources Conservation Service, and/or the local soil and water conservation district office. The ODA-NRD can provide guidance on disposing of dead animals. Generally, animal carcasses cannot be burned in the open; however, the open burning of carcasses of animals that have died or been destroyed because of an animal disease emergency is allowed when authorized by ODA.

4.2.4 Federal

The legal authority for Federal assistance in natural disasters comes from the Stafford Act, which sets forth Federal disaster relief responsibilities, procedures, and conditions for Federal assistance. Among many other activities, the Stafford

Act authorizes debris removal in “the public interest...from publicly and privately owned lands and water.” The President makes the final decision to declare an area a major disaster and therefore eligible for Federal assistance. For the worst case scenario of an M 9.0+ Cascadia Subduction Zone earthquake it is assumed that counties within the Region would qualify, and in the past winter storms have also qualified. In such instances, FEMA will give to the United States Army Corps of Engineers (USACE) a mission assignment to prepare, execute, and monitor contracts for debris operations. Typically, when a mission is assigned by FEMA, the USACE will provide a liaison to the EOC/ECC when activated. This liaison will serve as an advisor to EOC/ECC staff, providing advice as needed and ensuring that USACE is prepared to respond when tasked. USACE will alert a Debris Planning and Response Team (PRT) and the Advance Contracting Initiative (ACI) Contractor under contract for that area and have those resources ready to respond when a mission assignment is authorized. Once USACE receives a mission assignment from FEMA, the management groups for both the PRT and ACI contractor will be available to meet with the DMTF and other representatives to conduct contingency planning as required.

In addition to FEMA and USACE, Federal agencies that may be available to provide assistance are the United States (U.S.) Environmental Protection Agency (EPA), the United States Coast Guard (USCG), the United States Department of Agriculture (USDA), and the U.S. Department of Transportation (DOT) Federal Highway Administration (U.S. DOT FHWA). Each is briefly described below.

4.2.4.1 Federal Emergency Management Agency

FEMA is the lead Federal agency that responds to disasters and emergencies to help save lives and protect public health, safety, and property. Its most visible role in disaster recovery and debris management consists of administering the PA Grant Program, which provides supplemental Federal disaster grant assistance to states and local governments (in this case, the counties). FEMA’s PA staff will assemble a debris management team for the size and scope of the disaster. This team is responsible for providing debris-related technical assistance to applicants and managing the PA grant process. The PA Grant Program is administered through a coordinated effort among FEMA, the affected state, and the applicants (counties). Communication and coordination among all of these agencies is important. Understanding FEMA requirements prior to an emergency enables a community to recover the maximum allowable for cleanup costs. For this reason, this RDMP is based on FEMA guidance and discusses FEMA requirements, even though a disaster may not qualify for reimbursement.

In 2007, FEMA began a PA Pilot Program designed to reduce the Federal costs of administering the PA Grant Program, increase flexibility in administering the PA Grant Program, and expedite the much-needed recovery dollars to the program’s applicants (the counties) following disasters. FEMA developed the PA Pilot Program in response to the 2007 DHS Appropriations Act. The pilot procedures

are applicable to debris removal and the repair, restoration, and replacement of damaged facilities. Participation in the PA Pilot Program is open to State and local governments on a voluntary basis. The Program addresses the following items:

- Increased Federal cost share incentive: FEMA will provide an additional five percent Federal cost share, not to exceed 100 percent, to applicants that have a FEMA approved debris management plan and at least two pre-qualified debris and wreckage removal contractors identified prior to a disaster.
- Debris recycling: FEMA will allow an applicant to retain any revenue from the salvage value of recyclable disaster debris as an incentive to recycle debris.
- Category A (Debris Removal), Force Account labor: FEMA will reimburse the straight or regular time salaries and benefits of an applicant's permanently employed staff that performs debris-related activities.
- Grants for certain large projects based on estimates: FEMA will provide grants on the basis of estimates for large projects up to \$500,000. Applicants cannot appeal projects funded through this method.

4.2.4.2 Army Corps of Engineers

USACE plays a key role in support of FEMA and other Federal agencies. Typical USACE activities and mission assignments regarding debris management include assessing building structural safety, conducting emergency repair of public infrastructure, and performing debris removal and disposal operations. This agency can provide support by either a Technical Assistance mission or a Direct Federal Assistance mission assignment. The USACE may be able to respond for up to 10 days without a Presidential Declaration.

4.2.4.3 Environmental Protection Agency

EPA is the primary Federal agency responsible for administering the Resource Conservation and Recovery Act (RCRA). Under RCRA, EPA issues regulations and guidelines to properly manage solid and hazardous waste and provides technical assistance to states and local governments. EPA also provides support and technical assistance on appropriate solid waste management practices, although the final decision on the management of these materials lies with State and local officials. EPA implements the Recycling Electronics and Asset Disposition (READ) services contract. It provides recycling and asset disposition services on a government-wide basis for the recycling of electronic equipment and the disposal of excess or obsolete electronic equipment in an environmentally responsible manner. Counties may be able to utilize this vehicle through FEMA. EPA is also the primary Federal agency responsible for providing emergency

support related to the release of hazardous materials and providing support under the NRF. EPA also provides support to local and State agencies in properly managing debris deemed hazardous, including household hazardous waste (HHW). Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the National Contingency Plan (NCP), and the National Response Center (NRC), EPA may be able to provide support even when disasters are not federally declared.

4.2.4.4 Coast Guard

The USCG supports USACE in responding to marine debris contaminated with oil or hazardous substances; assistance includes marking and coordinating with USACE for the removal of obstructions declared to be hazards to navigation and aiding in vessel salvage and removal of vessel debris.

4.2.4.5 Department of Agriculture – Natural Resources Conservation Service and Farm Service Agency

The Natural Resources Conservation Service (NRCS) is limited in its authority in that debris-related activities are limited to either runoff retardation or soil erosion prevention in response to a sudden impairment in the watershed which creates an imminent threat to life or property. Typically, this includes debris within, or close proximity to, a channel. The program is called the Emergency Watershed Protection Program (EWP). The EWP's purpose is to undertake emergency measures for runoff retardation and soil erosion prevention on any watershed impaired by fire, flood, or any other natural occurrence. The FSA Emergency Conservation Program (ECP) provides emergency funding and technical assistance for farmers and ranchers to rehabilitate farmland damaged by natural disasters, including removal of debris and restoration of fences and conservation structures. Since these programs address private property the public will be made aware of this potential assistance through the PIO.

The USDA also provides leadership, technical expertise, and assistance for the management of animal carcasses. They may also provide engineering and contracting/procurement personnel and equipment to assist in emergency removal of debris. The USDA is part of the Woody Biomass Utilization Group (WBUG), which seeks to utilize biomass produced from disasters.

4.2.4.6 Federal Highway Administration

The U.S. DOT FHWA assists in the emergency repair of Federal roads. State and local transportation agencies are empowered to begin emergency repairs immediately. Properly documented costs will be reimbursed once the FHWA division administrator determines that the disaster is eligible for funding; the types of activities that are eligible for Federal funding include those related to road surfaces, debris removal, and demolition and reconstruction of damaged bridges.

4.3 Public Information

Informing the public about debris management before an event strikes will make dealing with the aftermath easier. The PIO will coordinate with other public information agencies, through a Joint Information System (JIS) or Joint Information Center (JIC) to keep the public informed of all debris removal activities and schedules. Public notifications will be arranged immediately after a disaster and continually throughout the removal and disposal operation. Notification could include:

- Information bulletins,
- Hotline responses,
- Public service announcements for radio and television,
- Handbills (a loose printed sheet to be distributed by hand),
- Door hangers, and
- Newspaper notices.

Notices will emphasize the actions the public can perform to expedite the clean-up process, including separating flammable and nonflammable debris, segregating household hazardous waste, placing debris at the curbside, keeping debris piles away from fire hydrants and valves, reporting locations of illegal dump sites or incidents of illegal dumping, and segregating recyclable materials. The public will also be kept informed of important debris removal activities such as debris pick-up schedules, disposal methods, and ongoing actions to comply with State and EPA regulations, disposal procedures for self-help and independent contractors, and restrictions and penalties for creating illegal dumps.

The PIO will be equipped to answer questions from the press and residents. In past disasters problems arose when people did not understand the clean-up process and therefore became impatient with the process and resorted to illegal burning, dumping, and other improper management methods. Public information will be disseminated following the guidance and procedures outline in ESF #15 in each county's EOP.

Counties may also consider advertising to encourage private citizens to submit their name and contact information if they are interest in using an by-products of debris removal, recycling, and reductions. The advertising would include the types of products that may be available and who to contact for more information regarding the program.

5

Phase I – Response Operations

Table 5-1 Section 5 Information Found in County-Specific Annexes

▪ Critical Route Maps
▪ List of Critical Facilities
▪ List of county, State, and Federal roads within the County

Previous sections of this RDMP have provided an overview of the types of debris-generating events and corresponding debris that could be expected in the Region; defined the planning environment surrounding the RDMP; and outlined the process of debris management and the roles of various local, State, and Federal agencies. Subsequent sections provide additional detail regarding Phase I and Phase II activities.

As outlined in Section 4, debris management operations are divided into two phases. Phase I operations typically occur during the first 24 to 72 hours following an event. During this phase the major emphasis of the counties is to push debris from the traveled way to the right-of-way or curb to open emergency evacuation routes and roadways to critical facilities and affected areas. Little or no effort is made to remove debris from the right-of-way, only to provide debris clearance to key access routes to expedite the following tasks:

- Movement of emergency vehicles and life-saving resources into impacted areas;
- Law enforcement;
- Resumption of critical services; and
- Assessment of damage to key public facilities and utilities such as schools, hospitals, government buildings, and municipal owned utilities.

Debris clearance priorities are as follows:

- The first priority for debris clearance includes roadways that allow ingress and egress to critical public facilities such as fire stations, police stations, hospitals, and other critical facilities as identified by the counties in their respective EOPs.
- Second priority will be given to essential facilities, including schools, municipal buildings, water treatment plants, wastewater treatment

plants, power generation units, airports, temporary shelters for disaster victims, etc.

- Third priority for debris removal teams to address will be the elimination of debris related threats to public health and safety. This will include such things as the repair, demolition, or barricading of heavily damaged and structurally unstable buildings and systems.

The County-Specific-Annexes contain critical route maps, lists of critical facilities, and listings of county, State, and Federal roads within each county.

Phase I includes several possible damage assessments. The assessments are not debris-specific and, at the county level, are coordinated by the county department and/or personnel designated in the respective county EOP. However, the process is outlined here to help provide insight into how debris estimation can be incorporated into the assessments. The DMTF will ensure that a debris estimating team (DET) is part of the assessments to collect data specific to debris management needs.

Generally the initial damage assessment (IDA) is performed first, this assessment examines the damages and costs related to a disaster, the impact of the disaster on the community, and which State or Federal programs are most appropriate possibilities for providing needed assistance. While the IDA is being conducted, the American Red Cross (ARC) will be performing a preliminary damage assessment (PDA) or windshield survey; the PDA should occur within the first 24 hours. It may be possible to coordinate the IDA with the ARC rather than duplicate the work. If efforts are coordinated with the ARC, the DMTF will ensure that a DET is present. Following the PDA the ARC will perform an on-site detailed damage assessment (DDA) within the first 72 hours. Although other emergency responders may not participate in the DDA, it may be useful to continue collecting debris information; the DM will determine if a DET should continue collecting debris estimations.

Post-disaster safety inspections of buildings may also provide debris-estimating data. The inspections are performed by local building inspectors and qualified specialty inspectors. Once safety inspections of critical facilities within the affected area are complete the DM will coordinate with the inspectors to obtain pertinent debris data for assessment of the full scope of the debris clearance, removal, and disposal effort (i.e. number of public facilities tagged with a red “Unsafe Use” placard may result in demolition debris requiring disposal). Assessments are discussed in the OEM *Disaster Recovery Assistance Guidebook*.

Clearance activities will be performed by force account employees and private contractors. At the discretion of the DMTF, each force account employee and contractor will be given an initial route for clearing and will be directed to respond with all due haste, personnel, and equipment. In accordance with FEMA

5. Phase I and Phase II Operations

guidance, Time and Material contracts will only be used for emergency debris removal during the first 70 hours following a disaster. Time and Material contracts are discussed in Section 7.

If the situation requires time and material contracts for periods longer than 70 hours, FEMA must review these situations on a case-by-case basis to determine if it is reasonable to extend reimbursement beyond 70 hours. During Phase I, counties will work with utility providers to ensure that power lines do not pose a hazard to emergency work crews and to determine the damage done to utility systems. Restoration of damaged energy utility infrastructure and accompanying systems is coordinated through ESF #12 of the county EOPs.

Also during Phase I, the county DMTFs will review their respective lists of TDSR sites and identify which sites should be opened based on initial observations of the location and volume of debris. Remaining legal, environmental, and health issues related to TDSR sites will also be addressed and resolved prior to activation of the TDSR site, which occurs in Phase II operations.

The DMTF will coordinate the restoration of garbage and recycling collection services during Phase I, if they were disturbed by the event and if appropriate (i.e., if there are residents still living in the area to participate in garbage and recycling services). Residents will be informed of when debris operations will take place in their neighborhoods and of any debris-related health issues, either through a DMTF PIO or the County PIO.

Documentation of debris management costs and decisions is important to ensure that resources are being used efficiently and the maximum Federal reimbursement is received. The DMTF will facilitate the documentation of costs through the close coordination and tracking of personnel, equipment, and debris tonnage processed.

Once all debris clearance priorities have been addressed force account workers and contractors will be directed by the DMTF to begin Phase II operations.

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6

Phase II – Removal Operations

Phase II operations usually begin after the emergency access routes are cleared and the residents return to their homes and begin to bring debris to the public rights-of-way. Phase II consists of removing, segregating, and disposing of the debris that hinders the orderly recovery of the community and poses a less immediate threat to health and safety. Operations usually begin within 72 hours of an event and can last for months, or even years. During this phase debris is moved either to TDSR sites for volume reduction and separation then disposal, or to landfills for permanent disposal. Under most circumstances, the counties will terminate their Time and Materials contracts and move into unit price contracts during Phase II.

Damage assessments performed, generally, during the transition from response to recovery include the Joint PDA and possible a Rapid Needs Assessment. The Joint PDA provides the Governor with the information necessary to determine whether to request a presidential major disaster declaration. The Rapid Needs Assessment typically occurs immediately following a presidentially declared major disaster or emergency. As with the IDA, the DM will ensure that a DET is part of the Joint PDA if deemed necessary.

Once the appropriate assessments have occurred, the DMTF will identify and prioritize debris removal sites and make the final determination regarding which TDSR sites should be opened and whether additional sites need to be identified. If not already completed, the environmental baseline studies of TDSR sites will be completed before the TDSR sites are activated; TDSR site are discussed in more detail in Section 8. Early in Phase II operations it will be important for the DMTF PIO or County PIO to notify citizens of debris procedures through public information campaigns.

The Region will use a combination of source segregated debris collected and collection centers. Source segregated collection means residents are directed to sort the debris by material type and place it at the curb in separate piles. Trucks designated for a particular debris type collect the assigned debris and deliver it to TDSR or disposal facility. This is the best method to use to meet the Regions goal of maximizing recycling and reduction of debris over land fill disposal. Source-segregated debris collection offers the potential of high salvage value and efficient recycling/reduction processing. This method is important when

collecting hazardous and environmentally sensitive debris, such as household hazardous waste and white goods. Both types of debris are discussed at the end of this section. Collection centers will be facilitated by making certain TDSR sites open to the public where they can transport their debris to a common location. This will be important to service residents who live in rural areas where it might not be possible to move the debris to the curb.

Once citizens have started to segregate debris at the curb side the DMTF will use force account personnel and/or contractors to move debris from public property to the TDSR sites or landfill sites as appropriate. The affected areas will be divided into definable sectors for control purposes, and bids will be solicited based on the sectors and the estimated cubic yards or tonnage of debris in each. Each county's DMTF will monitor the debris disposal contracts to ensure that public funds are properly accounted for and that contractors perform according to contract requirements. Throughout Phase II operations the DMTF will track debris management costs and debris tonnage processed and will submit a claim for Federal assistance if applicable.

Debris removal will generally be limited to debris in, upon, or brought to public streets and roads, right-of-ways, city and county properties and facilities, specifically designated critical private facilities (such as hospitals) and other public facility sites. In some cases, debris will be removed from private property as well. Subsequent sections discuss the removal of debris from public and private property, and special consideration for HHW and white goods.

6.1 Public Property/Right-of-way Debris Removal

Initial debris that is moved from the roadway is deposited at the curb or right-of-way during Phase I. There is little time or concern for sorting debris at this time. The objective is to provide for the safe movement of emergency and support vehicles into and out of the disaster area. As removal operations progress, the initial roadside piles of debris become the dumping location for additional yard waste and other storm-generated debris such as construction material, personal property, and trash; white metals such as refrigerators, washers, dryers and hot water heaters, and roofing; and even household, commercial, and agricultural chemicals. FEMA assistance is not available to reimburse private property owners for the cost of removing debris from their property; however, if property owners move the disaster-related debris to a public right-of-way, a county can qualify to be reimbursed for the pickup and disposal of the debris. The extent and duration of this type of work is carefully controlled; FEMA and county officials will agree on a time frame during which pick-up from the curb will be eligible for PA funding.

During debris removal from public property/right-of-way the respective county DMTF will determine whether local contractors will be needed to assist in Phase II operations and whether additional State and/or Federal assistance will be required. They will also develop independent teams using the local and county personnel to monitor the removal activities, and the monitors will be the eyes and ears for the DMTF in the field.

Daily update briefings with key debris managers will be conducted and all major debris removal and disposal actions will be reviewed and approved by the DMTFs or their designated local representatives. A representative of the corresponding DMTF will attend all briefings to resolve any coordination problems between State and Federal debris removal efforts and local debris removal and disposal efforts. The DMTF will also coordinate with local, tribal, and State DOT and law enforcement authorities to ensure that traffic control measures expedite debris removal activities.

Not all debris removed from public property is eligible for FEMA PA funds. The DMTF will ensure that the requested reimbursement is only for debris management that eliminates immediate threats to lives, public health and safety; eliminates immediate threats of significant damage to improved public or private property; and/or ensures economic recovery of the affected area to the benefit of the community-at-large.

6.2 Private Property Debris Removal

Debris removal from private property is the responsibility of the individual property owner, aided by insurance settlements and assistance from volunteer agencies. FEMA assistance is not available to reimburse private property owners for the cost of removing debris from their property; however, if property owners move the disaster-related debris to a public right-of-way, a county can qualify to be reimbursed for the pickup and disposal of the debris. The extent and duration of this type of work is carefully controlled; FEMA and county officials will agree on a time frame during which pick-up from the curb will be eligible for PA funding.

If the debris on private business and residential property is so widespread that public health, safety, and/or the economic recovery of the community is threatened, FEMA may fund debris removal from private property, but it must be approved in advance by FEMA. The counties should also execute hold harmless and right of entry agreements prior to entering the property. Additionally, the counties should obtain agreements from the private property owners to transfer any proceeds from debris removal covered by their insurance policy.

6.3 Household Hazardous Waste

Pickup and disposal of household hazardous waste is another component of Phase II operations. Typical HHW includes paints, thinners, used oil, batteries, cleaning products, solvents, fluorescent light bulbs, and pesticides. Many household items are also considered electronic wastes (e-wastes). Examples of e-waste are computer CRT monitors, CRT televisions, VHS cassette players, and other electronic appliances and are also considered “universal wastes” (hazardous wastes). These HHWs should not be disposed of with normal solid waste.

FEMA recommends that HHW is picked up in at least three passes through a community, with about two weeks between each pass; this allows enough time for citizens to return home and move debris to the curbside. Following an event, the respective DMTF will determine the number and frequency of collections, based on actual conditions following the event. Sufficient public notification and assessment and monitoring of the recovery efforts will also affect the scheduling of pickups. Just as with normal debris removal operations the Region will collect HHW at curbside and specific disposal sites.

This public information program for HHW should include disseminating the following information to residents:

1. A description of the drop-off point collection program being implemented;
2. The responsible agency for the program with contact person and telephone numbers;
3. The locations of the drop-off points;
4. The hours of operation;
5. A description of the types of HHW being collected at each location; and
6. Any other relevant information

6.4 White Goods

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

Residents will be instructed to separate their white goods at the curbside. They will be collected and taken to a TDSR site for processing. Disposal options and procedures for white goods are included in Section 9.

7

Contracts and Agreements

Table 7-1 Section 7 Information Found in County-Specific Annexes

▪ List of existing mutual aid agreements
▪ Sample Contracts and Generic Scopes of Work
▪ Legal Agreements to Indemnify and Limit Liability

This section discusses types of contracts; FEMA-related contracting issues such as reasonable cost and ineligible contracts; important things to consider when monitoring contractors; and the type of site monitors required during debris removal. This section also includes a discussion of legal agreements to indemnify and limit liability, sample forms, and regional contractors.

The DMTF will identify the department responsible for managing debris contracts from project inception to completion. Managing debris contracts includes monitoring performance, contract modifications, inspections, acceptance, payment, and closing out of activities. The counties are encouraged to enter into cooperative agreements with other State agencies and local governments to maximize public assets. Section 9.8 discusses such agreements.

7.1 Reasonable Cost

FEMA will only reimburse reasonable cost for disaster debris removal. FEMA defines “reasonable” as a cost that is both fair and equitable for the type of work being performed. The reasonable cost requirement applies to all labor, materials, equipment, and contract costs awarded for the performance of eligible work.

7.2 Types of Contracts

There are three types of contracts that local governments can enter into for reimbursement. These contracts described below, include Time and Materials, Unit Price and Lump Sum.

7.2.1 Time and Materials (T&M) Contracts are based on the price of labor and equipment when it is operating and are extremely flexible. T&M contracts may be used for short periods of time immediately after a disaster to mobilize contractors for emergency clearance efforts. They

will have a dollar ceiling or a not-to-exceed limit for hours (or both) and will be terminated immediately when this limit is reached. This contract qualifies for reimbursement for the first 70 hours of debris clearance and only when all city and State equipment has been committed elsewhere.

The contract will 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 county reserves the right to terminate the contract at its convenience; and
- d. The county does not guarantee a minimum number of hours.

7.2.2 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 and based on estimated quantities. A Unit Price Contract:

- a. Ensures a wide range of competition because of the simplicity of the contract;
- b. Allows the scope of work to be easily increased or decreased because unit pricing for the work accomplished is established at the time of the bidding process;
- c. Provides an accurate account of actual quantities transported in either cubic yards or tons;
- d. Requires contract monitoring at both loading sites and at the disposal sites;
- e. Has a relatively low risk to the contractor;
- f. Carries some risk of contract fraud if loading and disposal operations are not closely monitored;
- g. Is complicated if additional segregation for recycling and disposal is required at the staging sites;
- h. Requires all trucks to be accurately measured and numbered; and
- i. Requires a significant amount of documentation and accurate accounting.

7.2.3 Lump Sum Contracts establish the total contract price using a one-item bid from the contractor. Lump sum contracts can be defined in one of two ways:

- a. Area Method. Where the scope of work is based on a one-time clearance of a specified area. The Area Method:
 - i. Requires minimum labor for monitoring,
 - ii. Requires that contractors shoulder most of the risk,
 - iii. Does not require quantities to be documented,
 - iv. Must have a clear, definable scope of work that can be quantitatively measured by the contractor
 - v. Often makes it difficult to quantify what debris will be brought to the right-of-way for removal, and

- vi. Results in a high probability of claims if debris estimates are difficult to estimate and require speculation
- b. 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. The Pass Method:
 - i. Requires minimum labor for monitoring,
 - ii. Defines scope better than the Area method and decreases the risk of claims caused by quantity speculation,
 - iii. Does not require quantities to be documented,
 - iv. Must have accurate, up-to-date plans and information on all roads that will be included in the “pass” scope of work,
 - v. Requires the public to cooperate in the removal process,
 - vi. Requires that the contracting agency must be successful in communicating with the public in the removal area,
 - vii. Provides three to four passes, depending on the magnitude of the disaster,
 - viii. Solicits a price for each pass and a total job price, and
 - ix. Clearly defines any debris segregation requirements, road locations, time intervals between passes and required time frame to complete each pass.

7.3 Ineligible Contracts

FEMA will not provide funding for the following types of contracts:

- a. Cost-plus-percentage of cost contracts,
- b. Contracts contingent upon receipt of local Government or Federal disaster assistance funding, and
- c. Contracts awarded to debarred contractors.

7.4 Site Monitors

Site monitors assigned by the DMTF will monitor contractor activities at two locations; the collection point and the processing/storage site, to ensure satisfactory performance. Monitors will be trained and have a good understanding of eligible and ineligible debris to ensure that ineligible debris is not picked up. The DMTF will provide site monitors from their own staff. Monitoring will include control of load tickets, verification that all debris picked up is a eligible under the terms of the contract; measurement and inspection of 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. Site monitors will

ensure that contractors comply with the contract through training, enforcement of separation at the site, and monitoring of trucks at the facility. The monitors will periodically visit facilities to enforce contract requirements.

The DMTF will provide the following three types of monitors:

1. Field Inspection Teams (FIT)
 - a. FIT will periodically monitor each TDSR site to ensure that operations are being followed as specified in the contractor scope of work and contract with respect to local and Federal regulations and the Baseline Checklist.
 - b. Each Field Inspector will submit a daily report, such as the USACE Inspector's Quality Assurance Report describing their observations.
 - c. FIT will periodically monitor loading sites and prepare daily reports describing their observations.
 - d. FIT will also periodically canvass the city and report on the location of any illegal dumping sites.
2. Load Site Monitors
 - a. The Load Site Monitors will be assigned to each contractor-loading site within the designated debris areas.
 - b. The Load Site Monitor will initiate the load tickets that verify the debris being picked up is eligible under the terms of the contract. They will be responsible for ensuring that the information outlined in Section 9.6 is on the load ticket. The Load Site Monitors will also:
 - vii. Complete a Record of Loads; and
 - viii. Daily Quality Assurance Report and a Productive Equipment Hours Report.
3. Disposal Site Monitors
 - a. The Disposal Site Monitors will be stationed at all TDSR sites, hardfill sites, recycling facilities, and landfill sites for the purpose of verifying the quantity of material being hauled by the contractor through the use of load tickets.
 - b. TDSR site monitors will use the inspection stations at each TDSR site, which allows for a clear view of the load bed of each piece of equipment used to haul debris. The TDSR site contractor is responsible for constructing and maintaining the monitoring stations. TDSR Site monitors will also complete a monitoring report.
 - c. Disposal Site Monitors will verify the load and estimate the volume of debris in cubic yards and record the estimated quantity on the preprinted load tickets. The Disposal Site Monitor will also

ensure any remaining items on the load ticket are completed. The following sections on the bottom portion of the load ticket needs to be completed by the Disposal Site Monitor.

In addition to the specific site monitor tasks, each site monitor will also be trained and knowledgeable of the following contract monitoring issues:

- Even when homeowners take time to separate flammable, nonflammable, and other hazardous debris, contractors may place everything into the truck or push the curbside debris to a cul-de-sac or intersection and load it there.
- Site delays may be caused by the need to establish initial tare weights for each truck going across the landfill site's scale. Tare weights will be established using other scales, if available, before debris hauling begins.
- Overweight or unsafe trucks may result in State ODO enforcement officers issuing fines to the contractors.
- Commercialized containerized haulers will not be allowed to dump for free because they normally include the tipping fee as part of the overall costs.
- Ensure that contractors do not add excessive amounts of water to debris prior to loading; however, minimal amounts of water may be necessary to keep down dust.
- Ensure that contractors do not add excessive amounts of non-debris-related dirt and sand; however, some minimal dirt pickup is unavoidable.
- Inaccurate truck capacities, either from improperly measured trucks or modified truck beds; trucks not fully loaded; or trucks lightly loaded (i.e. only tree tops).
- Loads exceeding capacities; for example, if a truck has a capacity of 80 cubic yards, then that is the maximum that should be allowed.
- Changing truck numbers because trucks are measured and volumes calculated then listed by truck number.
- Reduced truck capacity; for example, steel mesh welded above the normal truck bed.
- Pick-up of ineligible debris.
- Multiple counting of the same load; for example, trucks of debris come into the disposal site, are counted, drive out of the site— still fully loaded—and return with the same load.

- Metal plates in the truck bed placed after the truck was initially weighed.

Example monitoring forms such as a Tower Monitoring Form, Roving Monitoring Form, Daily Issue Log, and Productive Equipment Hours Report are included in Appendix B – Forms.

7.5 Load Tickets

The contractor will only be paid based on the number of cubic yards or tonnage of material deposited at the disposal site as recorded on the debris load tickets. One part of the load ticket will be given to the truck driver, one part retained by the site monitor, and the third part returned to the site inspector through the contractor's authorized superintendent or foreman. The truck driver's portion of the load ticket will be turned in daily to his or her supervisor. The site monitor's copy will be turned in daily to the coordinator for the DMTF. Payment for hauling debris will only be approved upon presentation of the duplicate debris load ticket with the contractor's invoice to the DMTF. Load tickets will include the following:

- Preprinted ticket number;
- Contract number;
- Prime Contractor's name, Sub Contractor's name if applicable;
- Date of the work;
- Truck number;
- Truck capacity in cubic yards;
- Load size, either in cubic yards or tons;
- Truck drivers name;
- Type of debris such as woody, construction and demolition (C&D), metals, white goods, mixed, household hazardous waste, etc.
- Zone/Sector;
- Dumpsite location;
- Loading time (from work site) and odometer reading;
- Dumping time (at disposal site);
- Loading site monitor; and
- Dumping site monitor.

An example Load Ticket can be found in Appendix B – Forms.

7.6 Sample Truck Certification Form

A sample truck certification form can be found in Appendix B – Forms. Utilizing truck certification forms will assist Site Monitors in detecting issues outline in Section 9.4, which result either from an oversight by the contractor or from deliberate intention to inflate the volume or tonnage of debris.

7.7 Regional Contractors

During an emergency, local contractors will play an important role in debris management. If an emergency is widespread enough to affect more than one county in the Region there may be a strain on resources. The table provided in Appendix D – Regional Contractors presents a list of pre-qualified contractors that could be contracted during an emergency; the list includes general personnel crews, heavy equipment resources, and chainsaw operators that have been identified in the Region. Each county will be responsible for making sure the contractors listed in its county are correct and will share that information with the other counties.

In the case of widespread damage resource may be needed from contractors outside the Region. The counties will contact other county Emergency Managers for assistance if the need arises. Counties may also hire from the State approved contractor list from ODOT, Oregon Parks and OEM to expedite the process. The two pre-qualified contractors for each county and documentation demonstrating how the list was obtained can be found in the County-Specific Annexes.

7.8 Sample Contracts and Generic Scope of Work

Sample contracts and generic scopes of work (SOW) are found in Appendix E – Sample Contracts and Scopes of Work. They include a sample SOW for an Equipment Leasing Contract, Unit Price Contracts, Time and Material Contracts, and Lump Sum contracts. Individual counties may choose to develop their own sample contracts and generic SOWs; if so, those documents can be found in the County-Specific Annexes.

7.9 Mutual Aid Agreements

Counties within the Region have existing mutual aid agreements, Appendix C - Agreements includes an example mutual aid agreement that could be used if new partnerships are identified that would benefit the debris removal process. The counties have an existing Inter-county Omnibus Mutual Aid Agreement, which enables them to provide emergency assistance to each other during times of emergency in the form of supplemental personnel, equipment, materials or other

support. The counties are also part of the Oregon Public Works Emergency Response Cooperative Assistance Agreement with ODOT. *Guidelines for Using Public Works Emergency Response Cooperative Assistance Agreement* can be found in Appendix B – Forms. Copies of these agreements are maintained by the counties, see the County-Specific Annexes for information regarding which departments maintain the agreements.

7.10 Legal Agreements to Indemnify and Limit Liability

Legal agreements to indemnify and limit liability may be needed for several instances; TDSR sites, accessing private property to remove eligible debris. Existing agreements for each county can be found in the county-specific annex. Also, TDSR sites that have been identified that require agreements but have not yet been obtained are identified in the counties' TDSR site table. An example Right-of-Entry Agreement can be found in Appendix C – Agreements.

8

Temporary Debris Storage and Reduction Sites

Table 8-1 Section 8 Information Found in County-Specific Annexes

- List of potential TDSR Sites within each County

Temporary debris storage and reduction (TDSR) sites are located and designed to temporarily store, segregate, transfer, and reduce debris for reuse, recycling, and final disposal. Potential staging sites to be considered during an emergency are landfills, large paved or unpaved lots, industrial properties, sites near rail access, and expansion of existing sites. TDSR sites are expensive and may not always be necessary. The DMTF will ensure that a TDSR site is necessary and cost-effective before it is opened. In small disasters, entities with available landfills or debris not easily reduced or recycled might not need such a facility. The DM and DMTF will provide listings of potential TDSR sites as part of plan maintenance.

Based on a maximum debris pile stack height of 10 feet (3.33 yards), one acre of land could hold 16,133 cubic yards of debris per acre. However, since FEMA estimates that 60 percent of the land area will be devoted to roads, safety buffers, burn pits, HHW, etc., one acre could actually hold 6,453 cubic yards of debris per acre.

8.1 Procedures for Evaluating Potential Sites

1. Debris storage and reduction sites will be evaluated by the DM and DMTF, at a minimum. Additional multi-disciplinary staff familiar with the area may also take part in the evaluation. Detailed information, including exact location, size, and available ingress and egress routes will be maintained for any site identified.
2. Sites used in the past will be revisited to observe whether site conditions have changed or the surrounding areas have changed significantly enough to alter the use of the site.
3. Site selection criteria for pre-determined and additional TDSR sites will be as follows:

8. Temporary Debris Storage and Reduction Sites

- a. Site ownership
 - i. Public lands are preferred and less costly to lease
 - ii. Private lands should be used only if public sites are unavailable
 - iii. Attorney will review leases to avoid closeout claims
- b. Site size - Size depends on volume of debris to be collected and planned volume reduction method.
- c. Site location - The use of TDSR sites can substantially increase the overall debris clearance costs, since debris is essentially managed twice, i.e., from the generation point to the temporary accumulation site, and from there to final disposal. Strategies to reduce these costs might involve the location of the sites.
 - i. Evaluate the impacts of noise, traffic, and environment
 - ii. Look for ingress/egress at sites to maximize efficiency of traffic flow
 - iii. Locate sites outside of identifiable or known floodplain and flood prone areas
 - iv. Consider impacts of trucks hauling to site on neighboring communities
 - v. Consider geological site conditions (topography, stable ground, groundwater levels, pervious vs. impervious soils, fractured rock). When planning site preparation, the counties will consider ways to make site closure and restoration easier.
 - vi. Consider prevailing winds, which can carry particulates and noise
 - vii. Consider visibility from the surrounding area
 - viii. Avoid environmentally sensitive areas (wetlands, threatened animal and plant species, public water supplies, critical habitats, historical and archaeological sites, sensitive land uses, etc.)
- d. Neighborhood concerns
 - i. 24-hour light and noise

8. Temporary Debris Storage and Reduction Sites

- ii. Dust and traffic
 - iii. Smoke from burning activities
 - iv. Runoff from hazardous waste (consider berms and holding ponds)
4. Conduct Environmental Baseline Studies for selected sites; prior to being used for TDSR sites.
- a. Document existing conditions
 - i. Take photographs and video of the site
 - ii. Take random soil samples
 - iii. Take random water samples
 - iv. Check soil for Volatile Organic Carbons (VOCs)
 - v. Check drainage
 - vi. Obtain ambient air quality data
 - vii. Note important features such as landscaping, structures, fencing, etc.
 - b. Develop mitigation measures to minimize or eliminate impacts
 - c. Establish a monitoring program for:
 - x. Air quality, relative to dust, and particularly if burning will be conducted
 - xi. Water, both surface and ground
 - xii. Fuel spills

8.2 Environmental Permits Required

Environmental permits that may be required include waste processing and recycling operations permits, temporary land use permits, land use variances, traffic circulation plans, air quality permits, water quality permits, HHW permits, and fire department permits. DEQ requires proper burn permits be obtained before burning can take place; DEQ must also issue temporary Solid Waste Letters of Authorization for temporary facilities. Before use of a site DEQ requires the following information to be provided:

8. Temporary Debris Storage and Reduction Sites

- Written statement of permission from the landowner;
- Location and size of the site provided on a map;
- Roads and road conditions leading to and from the site;
- Distance to surface water, including wetlands;
- Actions taken to prevent release of contaminants to surface and ground water; and
- Information regarding how the site will be operated: who is operating it, hours of operation, fees, security, and emergency/spill response

DEQ must also be notified within 48 hours of changing operations at an existing permitted solid waste facility. If animal carcasses require disposal at a facility not permitted to accept animal carcasses DEQ may grant an exception to the facility. ODA may authorize the open burning of animal carcasses if deemed necessary.

8.3 Site Operations and Closeout Procedures

Environmental assessments of the TDSR should be conducted prior to beginning and after completing the waste staging and processing operations. The contractor will be responsible for preparing and closing out TDSR sites according to specification in the debris removal and disposal contract. Each TDSR site will eventually be emptied of all material and restored to its previous condition and use. DMTF inspectors will monitor all closeout activities to ensure that the contractor complies with the debris removal, processing, recycling, and disposal contracts. Figure 8-1 shows an example TDSR site layout for a 100 acres site. This would be the ideal layout; actual conditions, availability of personnel and equipment, size of the site, and other factors will affect actual TDSR site layouts.

8. Temporary Debris Storage and Reduction Sites

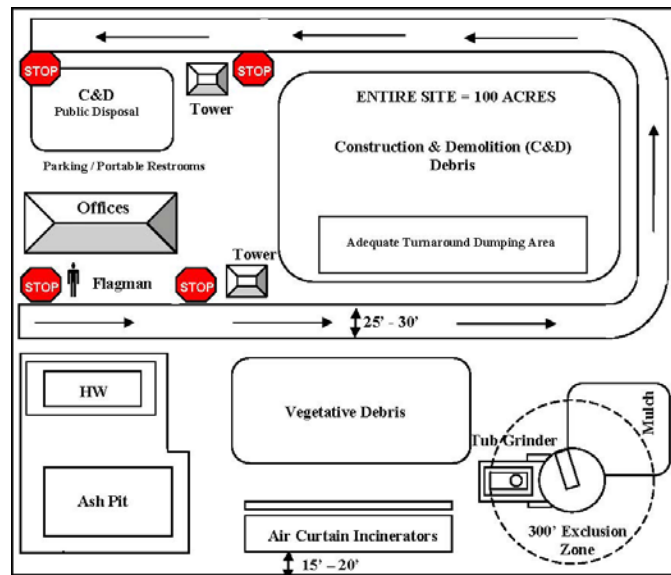


Figure 8-1 Example TDSR Site Layout

8.3.1 Site Operations

The following procedures should be initiated once TDSR sites have been activated.

1. Establish proper buffer zones around the perimeter of the site and inside the site boundaries.
2. Construct containment berms as necessary and document photographically.
3. Ensure that incoming debris is segregated based on the volume reduction methods at the site:
 - a. Recycling
 - b. Grinding/Composting
 - c. Separation
4. Develop holding areas for HHW and fuels, line these areas with plastic or other approved liners, and fence them.
5. Immediately clean up fuel and hydraulic spills. Document the incident with the following information:
 - a. When it occurred
 - b. When the material was cleaned up
 - c. When and where the material was disposed

8. Temporary Debris Storage and Reduction Sites

- d. Contact the Oregon Emergency Response System (OERS) at 1-800-452-0311 if a reportable quantity is spilled.
6. Photograph operations and monitoring activities weekly so that areas of concern can be pinpointed later for additional sampling.
7. Maintain up-to-date maps and sketches of the site and operations.
8. Implement efficient procedures to keep debris moving into the site, properly separated and reduced, and moved out of the site.
9. Document any changes, tests, problems, actions taken, and monitoring visits conducted.
10. Perform ongoing volume reduction (on site or removal for disposal/reduction).
11. Provide nuisance management (dust, noise, smoke, traffic, etc.).
12. Provide vector controls (rats, insects, etc).
13. Provide security (limit access).
14. Ensure that appropriate equipment is available for site operations.

Figure 10-1 is an example TDSR site layout from FEMA.

8.3.2 Site Closeout Procedures

Once a site is no longer needed, it should be closed and restored to its previous condition and use. All mixed debris, construction and demolition (C&D) debris, and debris residue must be removed to approved landfills or recycling sites. If a contractor has this responsibility, field inspectors will monitor all closeout activities to ensure that the contractor complies with the contract. Site remediation will go smoothly if baseline data collection and site operation procedures are followed.

The contractor will be responsible for site closeout, but the following procedures should be in place for proper monitoring of the closeout:

1. Ensure that all operations have stopped and the site has been cleared and cleaned of all debris.
2. Ensure that current environmental data on soil and water have been compared to baseline data taken before the site was activated.
3. If private property, conduct environmental assessment with landowner.

8. Temporary Debris Storage and Reduction Sites

4. Reference appropriate and applicable environmental regulations.
5. Coordinate with local and officials on requirements and support for implementation of a site remediation plan.
6. Develop a remediation plan.
7. Remediation plan reviewed by landowner and DMTF.
8. Execute plan.

8.4 Health and Safety Hazards at Debris Sites

This section emphasizes the need to maintain personal safety if an incident is encountered, ensure the safety of the public, provide public education, accurately characterize the material and associated risk, and contact the appropriate emergency response agency to ensure the protection of public health and the environment.

Response to hazardous material debris sites should only be carried out by individuals who have received appropriate specialized training, are equipped with the necessary personal protective equipment (PPE), and are acting in accordance with the agency's procedures. Those who have not received the First Responder Health and Safety Training mandated by 29 Code of Federal Regulations (CFR) 1910.120 should not enter any area where a hazardous materials release or suspected hazardous materials release has occurred. Specialized hazardous materials emergency response training is also very highly recommended before responding to a hazardous materials incident debris site.

Responders should use this information to take appropriate precautions to reduce the risk of exposure and injury to themselves and the public and protect the environment. This information is not provided for use in controlling, containing, or otherwise responding to a hazardous materials spill. The LDMD will act as an information and educational resource for the public to answer questions regarding proper disposal methods for household hazardous materials and other debris. The LDMD will also help assess hazardous material debris and refer those materials to the appropriate response and disposal agency.

Some common definitions when responding to hazardous debris sites are:

Hazardous Material: A substance that can threaten or harm people, the environment, or property. Included in this definition are specific regulatory terms such as hazardous wastes, hazardous substances, toxic substances, and hazardous chemicals.

8. Temporary Debris Storage and Reduction Sites

Evacuation: Removal of persons from an area of potential hazardous material/chemical contamination. Normally no PPE is required. Removal of people from a contaminated area is referred to as “Rescue” and should be done by trained personnel wearing PPE.

Exclusion Zone: (Also known as the Hot Zone or Contaminated Area) The area where contamination is known to occur or will likely occur. All persons in this area should be wearing the proper PPE. Access is limited to only those who have a need to be in this zone.

Contamination Reduction Zone: (Also known as the Warm Zone) The area where personnel and equipment exiting the Exclusion Zone are decontaminated. This is also a buffer area between the Exclusion Area and the Support Zone.

Support Zone: (Also known as the Cold Zone.) An area beyond the Warm Zone where there should be no contamination and it is safe for persons without PPE.

9

Debris Disposal and Reduction Methods

Once debris has been collected and brought to TDSR sites the material can will be processed for recycling, reuse, or reduction before land fill disposal. In this section the term recycling applies to any material that will undergo processing before being used in an end product. For example, concrete will be crushed before being turned into aggregate. The term reuse applies to any material that will be reused in its current form; no processing is required to make it useful in an end market. For example, wooden beams from a building would be used by rebuilding centers, rather than the wood being chipped into smaller pieces to be used as mulch. In many cases reduction is used in combination with either recycling or land fill disposal. The table below illustrates what options are available for each category of debris.

Table 9-1 Disposal Options for Categories of Debris

Category	Recycling	Reuse	Reduction	Landfill
Putrescible Wastes			X	X
Vegetation	X		X	X
Treated Wood			X	X
Inert Environmental Debris	X			X
C&D	X	X	X	X
Metals and White Goods	X		X	X
Automobiles and Boats	X		X	X
Electronic Waste	X			X
Hazardous Waste				X
Personal Property			X	X

9.1 Recycling

Types of debris that are generally recyclable include inert environmental debris, C&D debris, vegetation, metals and white goods (which would include automobiles and boats), and electronics. Recycling will be given consideration early in a disaster because it may reduce the cost of debris removal and disposal. To begin the recycling program, the DMTF should:

1. Locate markets and users.
2. Determine the segregation and preparation requirements.
3. Determine the tests that are required.
4. Determine the process for reducing and hauling.
5. Determine mitigation requirements to minimize environmental and public health impacts from the processing and disposal of disaster debris.

Appendix G contains waste equipment and processing requirements.

9.1.1 Inert Environmental Debris

This debris category includes dirt, rocks, mud and sand. Inert environmental debris will most likely be generated during flooding and earthquakes which cause landslides. Large amounts of soil can be recovered if the material is put through a screen system, the resulting soil can be given back to the agricultural community, returned to their original location, used as fill in reconstruction projects, or used as cover material in landfills. The soil could also be transported to a staging area and reduction site where it could be combined with organic material that will decompose.

Soil recycling would require large earthmoving equipment, potentially dump trucks, conveying equipment, and screening equipment.

In agricultural areas where chemical fertilizers are used heavily, recovered soil may be too contaminated for use on residential or existing agricultural land. Monitoring and testing of the soil would be necessary depending on where the debris originated and may result in the soil being disposed of in a landfill.

9.1.2 C&D Debris

C&D debris is generated by the total or partial destruction of structures during disasters and could represent a large portion of disaster debris but provide an excellent opportunity for recycling. After the Northridge earthquake approximately 80 percent of mixed debris was able to be recycled by separating

C&D debris from the waste stream. Table 3-2 lists the types of debris that may be found in this category.

Masonry materials, such as brick and blocks, and concrete could be crushed into aggregate and reused in road reconstruction or as fill. Lumber and other wood products could be ground and used for boiler fuel, mulch, and engineered lumber. Asphalt shingles could be recycled into new asphalt pavement mixes or used at a cement kiln. Drywall can be recycled into new dry wall, cement and agricultural uses. Metal construction materials are discussed under section 9.1.4.

The DMTF will be careful to ensure that lead-based paint coated wood and chemically treated lumber are separated from recyclable wood. Pest may also restrict the shipment of wood materials. The DMTF will consult with the State Department of Agriculture for guidance.

Equipment used for recycling C&D material could include conveying, crushing/reducing, screening/separating, and magnetic equipment; and a manual picking station.

9.1.3 Vegetation

This debris could be ground and used as mulch for residential, commercial, or agricultural areas, for producing compost, as landfill cover, and for boiler fuel. Whole trees could also be used as a timber resource. Pest may restrict the shipment of wood materials. The DMTF will consult with the State Department of Agriculture for guidance. The USDA is part of the WBUG, which seeks to utilize biomass produced from disasters, and may be able to assist in identifying end market users. In addition, several counties already maintain a list of property owners interested in obtaining mulch from debris clearing operations. Care will be taken to separate treated wood from vegetative debris.

Equipment requirements could include crushing/reducing, and screening/separating equipment.

9.1.4 Metals and White Goods

This debris category includes white goods; such as stoves, refrigerators, washers, and dryers; cars, boats, construction material, road and bridge debris. Metal is already typically recycled, therefore options for metal recycling after a disaster may be promising. Metal is almost always recycled back into other metal products.

Vehicles and boats may have title and ownership issues before they can be scrapped. All fluids would be drained and managed appropriately. In addition, batteries, tires, gas tanks, airbags, and mercury switches would be removed and managed appropriately.

Refrigerators and freezers will require special attention because they may contain putrescible wastes, refrigerants, and capacitors containing PCB's. Refrigerant-containing appliances will be handled by EPA-certified refrigeration technicians or recycling centers (EPA maintains a list of approved recyclers).

Ferrous materials could be separated from other waste using magnetic separation. Metal maulers and shredders could be used to shred trailer frames, trailer parts, appliances, and other metal items.

9.1.5 Electronics

This debris category could contain televisions, computers, stereo equipment, and cell phones. As discussed in Section 4, EPA implements the READ services contract. It provides recycling and asset disposition services on a government-wide basis for the recycling of electronic equipment and the disposal of excess or obsolete electronic equipment in an environmentally responsible manner. Counties may be able to utilize this vehicle through FEMA.

9.2 Reuse

Building material reuse centers may be able to provide deconstruction services, at a cost, for individual homes and/or county property that is damaged. In some cases, use of deconstruction methods rather than demolition can salvage 85 percent of a building for reuse. In order for material to be viable for reuse, the end use must be considered from the start. Rather than demolishing a building with heavy equipment, the building would be deconstructed with the idea of reuse in mind. Doors, flooring, wood beams, fixtures, tiles, molding are just some of the materials that could be reused without needing any physical processing.

9.3 Reduction

Reduction will generally be used prior to recycling to break down material to a size that can be incorporated into new materials or prior to land fill disposal to reduce the amount of space required both in the truck for transportation and in the landfill for disposal. There are several reduction methods including; grinding, chipping, and incineration. Recycling was discussed in its own Section 9.1.

9.3.1 Volume Reduction by Grinding, Chipping, and Shredding

Chippers can be used on vegetative debris, grinders can be used on vegetative or metal debris, and shredding is typically used for metal reduction or on personal property prior to placement in a landfill. Chipping operations are suitable in urban areas where streets are narrow or in groves of trees where it is cheaper to reduce the woody vegetation to mulch than to move it to a central grinding site

9. Debris Disposal and Reduction Methods

and then returning it to the affected area. The DMTF will consider debris location when deciding how to equip the TDSR sites.

1. The resulting product of the chipping and grinding operation may be used as a landfill product, used as topsoil, or used for residential applications.
2. This method generally reduces volume of debris by 75 percent (4 to 1).
3. The mulch also must remain free of paper and plastic if used for agricultural purposes.
4. The following information is for the use of mulch as an agricultural product:
 - a. Size: The average size of wood chips is not to exceed four inches in length and one half inch in diameter.
 - b. The debris reduction rate for moderately contaminated debris is 100 to 150 cubic yards per hour, and when the debris is relatively clean it is 200 to 250 cubic yards per hour.
 - c. Contaminants: The contamination rate for material other than wood products should be less than 10 percent of the mulch. Eliminate plastics completely. Use rake loaders to pick up debris because normal loaders pick up earth, which is part of the contaminant list and harms the chipper.
5. Tub grinders are ideal for use at TDSR sites due to high-volume capacity.
6. Mulch piles should be no higher than 15 feet

9.3.2 Incineration

Incineration has up to a 95 percent reduction rate. Local agricultural extension personnel would be consulted to determine if the resulting ash can be recycled as a soil additive. This option would be terminated if mixed debris enters the waste stream.

The incineration process requires a minimum of three steps, to include:

1. Unloading the debris.
2. Moving the debris into an incinerator.
3. Removing the ash from the incinerator to final disposition. Final disposition may be an appropriately constructed area at the TDSR site or a landfill.

There are several incineration methods available for volume reduction including; uncontrolled open-air incinerations, controlled open-air incineration, air curtain pit incineration, and portable air curtain incineration.

Uncontrolled open-air incineration is the least desirable method of volume reduction because it lacks any type of environmental control. It would be used as a last resort and coordinated through DEQ.

Controlled open-air incineration carefully reduces vegetative debris by burning debris within a contained fixed area. The reduction of clean woody debris presents little environmental damage and is cost-effective.

Air curtain pit incineration offers an effective means to expedite the volume reduction process while substantially reducing the environmental concerns caused by open-air incineration. The air curtain incineration method uses a pit constructed by digging below grade or building above grade (if a high water table exists) and using a blower unit. The blower unit and pit comprise an engineered system that must be precisely configured to function properly. The burning chamber is usually no more than 8 feet wide and 9 to 14 feet deep. The length of the pit varies depending on site size, environmental permitting, and labor/equipment limitations. It is important to note that there are no industry standards for air curtain pit design. The County would seek knowledgeable personnel who are experienced with air curtain pit incinerator design and operating procedures when soliciting expertise to perform incineration services.

Portable air curtain incinerators use the same methods as air curtain pit incinerator systems, except that the portable incinerators use a pre-manufactured pit rather than an onsite constructed earth/limestone pit. Portable air curtain incinerators are the most efficient incineration 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. Portable air curtain units are ideal for areas with high water tables and sandy soils as well as areas where smoke capacity must be kept to a minimum.

9.4 Regional Landfill and Treatment Facility Capacity Estimates

All categories of debris could be disposed of in a landfill if necessary or more appropriate than recycling or reuse. Appendix A contains a listing of regional landfills and treatment facilities.

10

Documentation

The DMTF is responsible for proper documentation of debris removal, recycling, processing, recycling, and disposal procedures to ensure FEMA reimbursement. The DMTF will provide training to appropriate personnel working on reimbursement and will coordinate with FEMA on all documentation. Documentation is a critical component in support of contractor invoices and in justifying FEMA's reimbursement policy. Load ticket disposition and debris monitoring activities are the major tools that the counties must employ in order to adequately document debris management activities for FEMA reimbursement. Required documentation includes the source of the material, the weight or volume of the material, the disposal cost, and salvage value remitted to the local government.

- Ensure that records are auditable. Lack of proper documentation can jeopardize or delay FEMA funding.
- Include a clause for termination for convenience - this will provide the city with the option to cancel the contract for any reason.
- Define a reasonable period of performance.
- Base the contract on an estimate of debris removal services prepared by the local planning staff; do not rely on contractor estimates.

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11

Plan Maintenance

County Emergency Managers are responsible for updating County-Specific Annex information with assistance from county staff they deem appropriate. Once a county has finalized changes to its Annex the Emergency Manager shall provide the necessary hard copies or electronic copies for other county Emergency Managers to make changes to their copies of the RDMP. In most cases changes to a County-Specific Annex will not require discussion among other counties.

Changes to the RDMP will be implemented after County Emergency Managers, or their designated representatives for the issue, have reached an agreement regarding the proposed change and designated someone to implement the change and disseminating the information.

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A

**Solid Waste Handling/Processing
Facilities**

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This will be completed and inserted at a later date.

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B

Forms

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ODOT Emergency Preparedness Committee

**Guidelines for Using the
Public Works Emergency Response Cooperative Assistance Agreement**

Here are suggested steps for your agency to follow when using the Oregon Public Works Emergency Response Cooperative Assistance Agreement. The participants to the agreement are listed by agency, with a contact person, their phone number and an emergency 24-hour phone number. Simply make the contact and obtain the assistance.

The Oregon Department of Transportation (ODOT) Office of Maintenance will keep an updated list of participants and will provide a copy of the list to everyone on the list.

Requesting Agency Steps to Follow

When your agency is requesting assistance:

1. Assess the situation and determine the resources needed.
2. Fill out the REQUESTING AGENCY CHECKLIST (Attachment 1).
3. Locate agencies included in the agreement.
4. Call one or more agencies that may have the resources you need.
5. Fill out a Requesting Agency's MUTUAL AID INFORMATION form (Attachment 2).
6. Send copy of form to the Responding Agency as soon as possible.

Responding Agency Steps to Follow

When your agency is responding to a request for assistance:

1. Make sure you can fulfill the request before giving an answer. Remember, you are not required to supply aid if you determine you cannot spare resources or if you do not have qualified personnel, appropriate equipment and necessary materials for what is requested.
2. Analyze the risk level of the request.
3. Complete the RESPONDING AGENCY CHECKLIST (Attachment 3) with the information given by the Requesting Agency.
4. Brief your employees and prepare the equipment.
5. Complete the EMPLOYEE & EQUIPMENT INFORMATION form (Attachment 4). Provide copies to your responding staff and to the Requesting Agency.
6. Dispatch staff to the Requesting Agency for assistance.

Supervisor of Responding Agency Steps to Follow

1. Complete the INCIDENT COMMANDER CHECKLIST (Attachment 5).
2. Carry a copy of the Requesting Agency's MUTUAL AID INFORMATION (Attachment 2) and your EMPLOYEE & EQUIPMENT INFORMATION form (Attachment 4). Provide a copy of each to the Requesting Agency.
3. Remember you are responsible for your crew working in a safe and professional manner.
4. Track your equipment and materials inventory.

Attachment 1

REQUESTING AGENCY CHECKLIST

What is the Need?

- _____ Be sure a real need exists. The Oregon Public Works Emergency Response Agreement is only to be used to support resources already reasonably committed.
- _____ What is the nature of the emergency? What can the Responding Agency help you repair or service?
- _____ Identify what type of equipment, material, and skilled employees are needed.
- _____ How long may they be needed? Will Responding Agency employees work independently or with one of your supervisors?
- _____ Where will Responding Agency employees eat, sleep, and shower? Do you need to make contact with the Red Cross for meals? What facilities/motels are available for Responding Agency employees?
- _____ Has an arrangement for refueling and repair of equipment been made?
- _____ Identify a staging area. Where will Responding Agency employees meet your Agency supervisor(s) to be briefed and assigned work? Responding Agency employees will need names of your supervisor(s), phone numbers and locations and times to meet and report.

Who Can Help?

- _____ Review list of Public Works Emergency Response Mutual Aid agencies and find an agency not affected by the emergency.
- _____ Contact your local Office of Emergency Management, if needed.
- _____ Call the agency directly. Send written request as soon as possible.
 - ___ Identify yourself and your agency.
 - ___ Fill out a MUTUAL AID INFORMATION form (Attachment 2).
 - ___ State the nature of the problem.
 - ___ State your needs such as personnel, equipment, and resources. How long will you need them?
 - ___ Advise the Responding Agency on weather and road conditions.
 - ___ How soon is aid needed? Is the work time sensitive?
 - ___ Advise the Responding Agency where, when and to whom they are to report.
 - ___ Identify facilities that are available to Responding Agency (shelter, food, etc.).

Briefing

- _____ Meet with your agency's union reps or supervisors to discuss how staff will be used.
- _____ Identify a staff person to work directly with your employees to handle and address questions. Provide local maps of the area with information such as eating and sleeping sites.
- _____ Provide system maps and discuss how to use them.
- _____ Review standards for the type of work being requested.
- _____ Establish a communications plan.

**Attachment 2
MUTUAL AID INFORMATION FORM
Requesting Agency**

DATE: _____ TIME: _____

REQUESTING AGENCY: _____

NAME/TITLE CONTACT: _____

PHONE NUMBER: _____ FAX NUMBER: _____

EMERGENCY PHONE NUMBER: _____

TYPE OF EMERGENCY: _____

ESTIMATED DURATION ASSISTANCE WILL BE REQUIRED: _____

ASSISTANCE BEING REQUESTED (be as specific as possible)

Technical Assistance *

Personnel

Area of Expertise

Equipment *

Communication Equipment: _____

Materials *

* Items to consider in your request:

Inspectors	Engineers	Surveyors	Technicians	Truck Drivers
Mechanics	Operators	Flaggers	Welders	Utility Person
Bridge Repair	Carpenters	Electricians	Dump Trucks	Back Hoe
Gravel	Pipe	Oiler	Grader	Power Supply
Compactor	Traffic Control Equipment		Paving Equipment	
Communication Equipment			Lighting	

Attachment 3
RESPONDING AGENCY CHECKLIST

DATE: _____ TIME: _____

REQUESTING AGENCY: _____

NAME/TITLE CONTACT: _____

PHONE NUMBER: _____ FAX NUMBER: _____

EMERGENCY PHONE NUMBER: _____

TYPE OF EMERGENCY: _____

ESTIMATED DURATION ASSISTANCE WILL BE REQUIRED: _____

Fill out Mutual Aid Information Form (Attachment 2).

Clarify Need

- _____ Review types of damage and what Responding Agency employees may be expected to deal with (volcanic ash, earthquake, flooding, etc.)
- _____ Review types of equipment, materials and number of employees needed and skills required.
- _____ How long will your employees be needed? Should a relief crew be prepared?
- _____ Where will your employees stay and eat?
- _____ Identify a communications plan for crews.
- _____ How will responding affect your agency's current operations?
- _____ Immediately notify Supervisor, elected officials and ODOT Office of Maintenance of request for Emergency Response Mutual Aid.
- _____ Will there be night work?

Preparations

- _____ Identify your responding employees. Ask employees to bring necessary personal items.
- _____ Identify Incident Commander for your employees and appoint staff for operations, planning, logistics and finance.
- _____ Review ER/FEMA documentation procedures with supervisors and initiate record-keeping requirements.
- _____ Inventory and standardize tools and materials on vehicles. Inspect vehicles for travel.
- _____ Set up daily check in time between Responding and Requesting agency.
- _____ Review progress, identify hours worked, working conditions and status of crew.
- _____ Send cash (not check) or credit cards with Supervisor for emergency expenses.
- _____ Send mobile phone and/or radio equipment for backup communications.
- _____ Be sure emergency food and water are on each vehicle.

Attachment 4
EMPLOYEE AND EQUIPMENT INFORMATION
Responding Agency

Agency: _____ Date: _____

Supervisor of Crew: _____

Communication Equipment/Phone Numbers: _____

Report Time: _____ Report Date: _____

Report To: _____ Area Assigned: _____

ASSISTANCE BEING PROVIDED (be as specific as possible)

Supervisor & Crew Employees

Name	Emergency Contact & Phone Numbers	Qualifications			
		Flagger	CPR	ODL	Operator First Aid
_____	_____				
_____	_____				
_____	_____				
_____	_____				
_____	_____				

Technical Assistance*

Personnel	Area of Expertise
_____	_____
_____	_____
_____	_____

Is it a permit-required confined space? Explain: _____

Equipment *

Truck Type & Size: _____

Truck Materials Inventory: _____

Truck Tools & Equipment Inventory: _____

Communication Equipment: _____

Equipment for Night Work (explain): _____

ATTACHMENT 4, Page 2

Materials*

Excavation work: Do you need shoring? Explain (be specific): _____

* Items to consider in your request:

Inspectors	Engineers	Surveyors	Technicians	Truck Drivers
Mechanics	Operators	Flaggers	Welders	Utility Person
Bridge Repair	Carpenters	Electricians	Dump Trucks	Back Hoe
Gravel	Pipe	Oiler	Grader	Power Supply
Compactor	Traffic Control Equipment		Paving Equipment	
Communication Equipment			Lighting	

1 copy to Requesting Agency
1 copy to Responding Agency
1 copy to Crew Supervisor

Attachment 5
INCIDENT COMMANDER CHECKLIST
Responding Agency

Upon Arrival

- _____ Check in with supervisor on site.
- _____ Review shift assignments.
- _____ Review maps, damage information, repair needs and potential crew assignments.
Request information on repair standards.
- _____ Make sure that lodging, meals, and refueling capabilities exist. If not, identify crew member to work on problem and ask Requesting Agency for assistance.
- _____ Review documentation procedures with Requesting Agency's supervisor and obtain supplies to track repairs and costs associated with the job.
- _____ Establish daily briefing time with Requesting Agency's supervisor.
- _____ Establish daily documentation briefing with Requesting Agency's supervisor to ensure that tasks are completed.
- _____ Establish working shifts.
- _____ Review Communication Plan, as developed between Requesting Agency and Responding Agency.

Daily Process

- _____ Briefing with supervisor and crew on work assignments and progress.
- _____ Review safety procedures with crew.
- _____ Review events and any problems or positive interaction with Requesting Agency's employees or customers.
- _____ Ensure lunch and evening food breaks are provided and that a system for meals, refueling, and restocking is maintained.
- _____ Contact Responding Agency for briefing.
- _____ Review documentation at end of each day for accuracy and completion.

Work Termination

- _____ Meet with crews to review successes and problems.
- _____ Identify total hours worked and number of repairs.
- _____ Total up costs associated with work.
- _____ Allow rest and recovery time before leaving for home.

TRUCK CERTIFICATION FORM

General Information

Applicant: _____ Monitor: _____
Contractor: _____ Date: _____
Measurement Location: _____ County: _____
Declaration Number: _____

Truck Information

Make	Year	Color	License

Truck Measurements

Performed By: _____ Date: _____
Volume Calculated By: _____ Date: _____
Both Checked by: _____ Date: _____

Driver Information

Name: _____
Address: _____
Phone Number: _____

Owner Information

Name: _____
Address: _____
Phone Number: _____



Truck Identification



Truck Capacity



Photo

(See reverse for calculation worksheet)

TRUCK CERTIFICATION FORM

DUMP TRUCK

Measurements

Truck Measurements Length (L) = Width (W) ft = Height (H) ft =

Hoist Measurement Length₁ (L₁) ft = Width_H (W_H) ft = Height_H (H_H) ft =

 Length₂ (L₂) ft =

Radius Radius ft = Height (H) =

Calculations

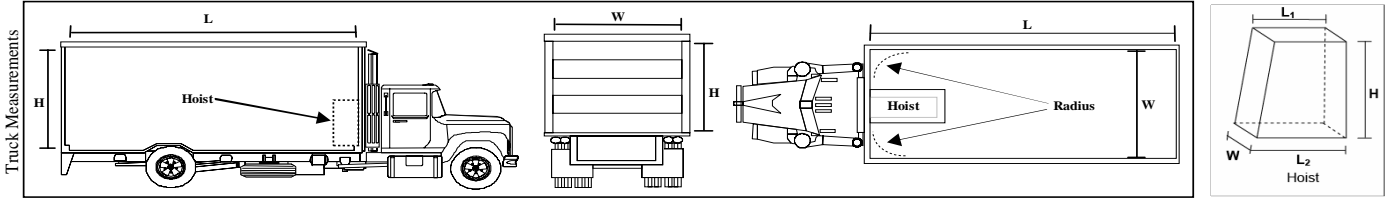
Bed Volume (Basic) $(L \times W \times H) / 27 =$ cyd

Hoist Volume $((L_1 + L_2 / 2) \times W_H \times H_H) / 27 =$ cyd

Radius Volume $(3.14 \times R^2 \times H) / 27 =$ cyd

Total = cyd

Cubic Yards



EXTRA TRAILER

Measurements

Truck Measurements (Basic) Length (L) = Width (W) ft = Height (H) ft =

Hoist Measurement Length₁ (L₁) ft = Width_H (W_H) ft = Height_H (H_H) ft =

 Length₂ (L₂) ft =

Radius Radius ft = Height (H) =

Calculations

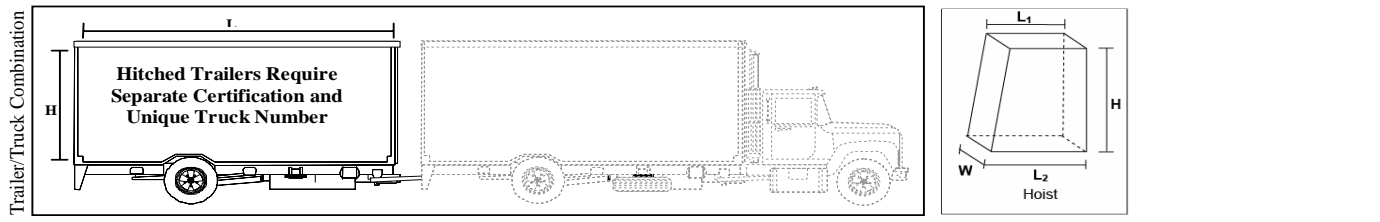
Bed Volume (Basic) $(L \times W \times H) / 27 =$ cyd

Hoist Volume $((L_1 + L_2 / 2) \times W_H \times H_H) =$ cyd

Radius Volume $(3.14 \times R^2 \times H) / 27 =$ cyd

Total = cyd

Cubic Yards



ROUND BOTTOM TRUCK

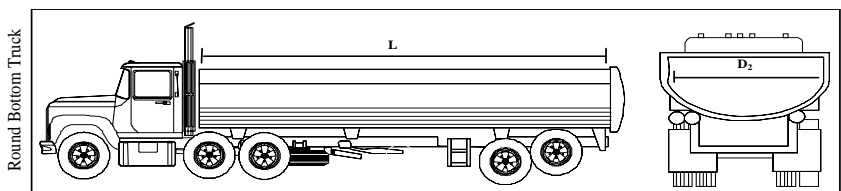
Measurements

Truck Measurements Length (L) ft = Diameter (D) ft =

Calculations

Approx. Volume $(3.14 \times (D/2)^2 \times L) / 27 =$ cyd (round bottom portion only)

Cubic Yards



Load Ticket		Ticket No. 0012345	
Municipality (Applicant)		Prime Contractor	
		Sub-Contractor	
Truck Information			
Truck No		Capacity	
Truck Driver (print legibly)			
Loading Information			
Loading	Time	Date	Inspector/Monitor
Location (Address or Cross Streets)			
When Using GPS Coordinates use Decimal Degrees (N xx.xxxxx)			
N		W	
Unloading Information			
Debris Classification		Estimated %, CYs, or Actual Weight	
<input type="checkbox"/> Vegetation <input type="checkbox"/> C&D <input type="checkbox"/> White Goods <input type="checkbox"/> HHW <input type="checkbox"/> Other* See Below			
Unloading	Time	Date	Inspector/Monitor
DMS Name and Location			
*Other Debris Explanation		Original: Applicant Copy 1: _____ Copy 2: _____ Copy 3: _____	

TOWER MONITOR LOG

Date: _____

Monitor: _____

Applicant Monitor: _____

Time	Truck No.	Load Ticket	Capacity	Vol. or Weight	Pick-Up Location	Photo/ Disc	Comments

Applicant: _____

Page _____

Tower Site: _____

Monitor: _____

ROVING MONITOR REPORT

Date: _____

Time	Truck No.	Load Ticket	Capacity	Vol. or Weight	Pick-Up Location	Photo/Disc	Comments

Applicant: _____

Page _____

Monitor: _____

DAILY ISSUE LOG

Date: _____

Issue No.	Truck No.	Load Ticket	Pick-Up Location	Contractor/ Sub-Contractor	Applicant Monitor	Photo/ Disc	Issue/Resolution

Applicant: _____

Page _____

C

Agreements

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MUTUAL AID AGREEMENT EXAMPLE
INTERGOVERNMENTAL EMERGENCY MUTUAL AID AGREEMENT

STATE OF _____
CITY / COUNTY _____

WHEREAS, (State Name) law authorizes local governments to contract with each other to provide services, and

WHEREAS, (State Name) law and state policy also provides for certain reimbursements or financial aid to local government for certain natural disasters or emergency conditions declared by the Governor, and

WHEREAS, the (City or County Name) finds it to be in its best interest to have such mutual aid agreements with other local governmental bodies in the state and region,

NOW, THEREFORE, in consideration of the above recitals and the covenants contained herein, the parties hereto agree as follows:

1. The (City or County Name) hereby agrees to provide through its Director of Public Works such mutual aid as may be requested by a governmental unit, which has emergency conditions of a natural disaster as defined by (State Name) law. The aid rendered shall be to the extent of available personnel and equipment not required for minimum needs of the (City or County Name). The judgment of the Director of Public Works or his designee shall be final as to the personnel and equipment so available.
2. Personnel dispatched to aid another jurisdiction shall remain employees of the (City or County Name), but shall work under the supervision of the Director of Public Works of the requesting jurisdiction. The (City or County Name) retains the right to withdraw any and all aid rendered upon direction of the Director of Public Works.
3. The Director of Public Works will provide a list of hourly rates and equipment costs, and hours worked for all such aid rendered to the requesting jurisdiction for all actual costs, and the requesting jurisdiction agrees to compensate such claim for costs incurred as expeditiously as possible.
4. The (City or County Name) will maintain workers compensation coverage for its employees and liability coverage for its vehicles and equipment. Any uninsured or extraordinary expenses may be a part of claimed costs for reimbursement. The requesting jurisdiction agrees to maintain adequate liability insurance under state law and to hold harmless and indemnify the (City or County Name) for any and all claims occurring while its personnel and equipment are working under the direction of the Director of Public Works of the requesting jurisdiction. These indemnities shall include attorney's fees and costs that may arise from providing aid pursuant to this agreement.
5. The purpose of these recitals is to insure that the (City or County Name) is reimbursed all costs and assumes no additional liabilities as a result of this agreement. Neither party to this agreement shall be liable, for its failure to refusal to render aid pursuant to this agreement. The Director of Public Works shall in his sole discretion determine the manner which such emergency aid may be used. (or his/her designee in charge of operations)

IN WITNESS WHEREOF, this Agreement has been duly executed by the parties subscribed below and is binding upon the _____ and the requesting jurisdiction.

Date signed _____ CITY / COUNTY OF _____ by: _____

Date signed _____ REQUESTING JURISDICTION _____ by: _____

RIGHT OF ENTRY AGREEMENT EXAMPLE

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

_____, State of _____ (city/town) (county)

do hereby grant and give freely and without coercion, the right of access and entry to said property in the County/City of _____, its agencies, contractors, and subcontractors thereof, for the purpose of removing and clearing any or all storm-generated debris of whatever nature from the above described property.

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

I/We (have _____, have not _____) (will _____, will not _____) received any compensation for debris removal from any other source including Small Business Administration (SBA), National Resource Conservation Service (NRCS), private insurance, individual and family grant program or any other public assistance program. I will report for this property any insurance settlements to me or my family for debris removal that has been performed at government expense. For the considerations and purposes set forth herein, I set my hand this _____ day of _____, 20__.

Witness

Owner

Owner

Telephone No. and Address

D

Regional Contractors

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Debris Removers/Contractors

General Personnel Crews

Company	Contact	Phone	Location
America Services, Inc. 1160 Duffield Heights Avenue SE Salem, OR 97302	Serafin Garcia, Owner Jose Cortez	503-566-3610 503-931-8995 Cell 503-580-6178 Cell	Salem
Coria Contracting 8182 Liberty Rd. S. Salem, OR 97306	Luis Coria	503-399-1044 503-871-9348 Cell 503-399-7685 After hrs.	Salem
Ferguson Management Co. PO Box 768 Albany, OR 97321	Tina Ferguson	541-967-8425	Albany
First Choice Contracting, Inc 234 21 st Street NE Salem, OR 97301	Leo Vera Louie Vera	503-588-7294 503-949-4482 Cell 503-510-8551 Cell	Salem
Grand Ronde Tribe P O Box 10 Grand Ronde, OR 97347	Jeff Nepstad	503-879-5522 503-879-2377 971-241-2949 Cell	Grand Ronde
Miller Timber Services PO Box 12599 Philomath, OR 97370	Lee Miller	541-929-2840 541-740-9393 Cell	Philomath
South Fork (ODF) 48300 Wilson River Hwy. Tillamook, OR 97141	Gordon Dana	503-842-7213 x 309, 310	South Fork

Heavy Equipment Resources

A. Company	Contact	Phone	Operators
Breon Logging 3915 Logsden Road Siletz, OR 97380	Dave Breon	541-444-1306 Home 541-270-2874 Cell	Dave Breon
Bruer's Contract Cutting 5280 Kings Valley Hwy. Dallas, OR 97338	Mike Bruer	503-623-2025 Home 503-931-9491 Cell	
DTL Logging PO Box 849 Philomath, OR 97370	Larry Cook	541-456-4824 Home 541-740-4310 Cell	Larry Cook Dale Cook
Fall Creek Logging PO Box 277 Grand Ronde, OR 97347	John Hofenbredl Sr. John Hofenbredl Jr.	503-879-3787 Hm/Wk 503-551-4968 Cell 503-623-4629 Home 503-510-3050 Cell	Keith Bagby
J.R. Hendrix, Inc.			

PO Box 23 Alsea, OR 97324	Roger Hendrix	541-487-4098 Home 541-740-2862 Cell	Roger Hendrix
Leeway Logging 525 NW Bay Blvd. Toledo, OR 97391	Dewey Goodell	541-336-3652 541-270-1253 Cell	Dewey Goodell Joe Dodson
Minahan Cutting, Inc. PO Box 999 Dallas, OR 97338	Nick Minahan	503-623-5994 HWF 503-871-7080 Cell	
Oleman, Kurt PO Box 868 Philomath, OR 97370	Kurt Oleman Kevin Oleman	541-929-3398 541-740-3399 Cell 541-456-2218 541-740-9866 Cell	
Ramco Logging PO Box 1377 Philomath, OR 97370	Roy Parks	541-453-5931 Home 541-740-8290 Cell	Roy Parks Mike Conner
Rick Franklin Corporation	Rick Franklin	541-451-1275	
Strom Contract Cutters 17895 Alsea Highway Alsea, OR 97324	Gary Strom	541-487-7399	
TRTL Enterprises PO Box 53 Monmouth, OR 97361	Tom Wright Luann Wright	503-838-0744 503-576-0086 Cell 503-559-0277 Cell	Tom Wright
Todco Inc. 11575 Orrs Corner Road Dallas, OR 97338	Tod Brostrom	503-623-4542 503-931-4778 Cell	Tod Brostrom
Warfield Ltd. PO Box 59 Toledo, OR 97391	Scott Warfield	541-875-4945(W) 541-270-2111 Cell	Scott Warfield Rob Warfield Danny Warfield

Sawyers/Swampers (Chainsaw operators)

B. Company	Contact	Phone	Fallers
Bruer's Contract Cutting 5280 Kings Valley Hwy. Dallas, OR 97338	Mike Bruer	503-623-2025 Home 503-931-9491 Cell	
Cantrell, Steve Alsea	Steve Cantrell	541-487-4891 Home	
DTL Logging PO Box 849 Philomath, OR 97370	Larry Cook	541-456-4824 Home 541-740-4310 Cell	Larry Cook
Fall Creek Logging PO Box 227 Grand Ronde, OR 97347	John Hofenbredl	503-879-3787 503-623-4629 503-551-4968 Cell 503-510-3050 Cell	Kevin Zook Rod Cornwall

Gassner Logging 37236 Mary's River Rd. Blodgett, OR 97326	Ron Gassner	541-740-1253 Cell	Ron Gassner
Holt, Jim 376 N. Beaver Valley Dr. Seal Rock, OR 97376	Jim Holt	541-563-4213 Home	Jim Holt
Leeway Logging 525 NW Bay Blvd. Toledo, OR 97391	Dewey Goodell	541-336-3652	
Ramco Logging PO Box 1377 Philomath, OR 97370	Roy Parks	541-453-5931 Home 541-740-8290 Cell	Roy Parks
Ronald Oleman Contract Cutting, Inc.	Ron Oleman	541-444-1137	
Strom Contract Cutting Alsea	Gary Strom	541-487-7399 Home	
Young, Bob PO Box 127 Falls City, OR 97344	Bob Young	503-787-3767 503-871-0933 Cell	Bob Young

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E

Sample Contracts and Scopes of Work

Example contracts and scopes of work presented in the appendix are from the FEMA Debris Management Guide and the Sample Debris Management Plan developed by the Ohio Emergency Management Agency and the Ohio Environmental Protection Agency.

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**APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS**

Note: This scope of work example may be downloaded from the U.S. Army Corps of Engineer's Internet site at: <ftp://ftp.sam.usace.army.mil/pub/op/opr/scopes>

**SCOPE OF WORK
FOR
EQUIPMENT LEASING FOR CLEARING OF DEBRIS
RELATED TO
[NAME/NATURE OF DISASTER]
AT, IN, OR NEAR
[LOCATION OF RECOVERY EFFORTS]**

1. GENERAL.

1.1 The purpose of this contract is to provide debris clearing and removal response assistance to [LOCATION; I.E. "North Carolina counties" or "Mobile and Baldwin Counties in Alabama"] which have been declared disaster areas by the President because of the effects of [NAME OF DISASTER].

2. SERVICES.

2.1. The Contractor shall provide specified equipment, with operators and laborers, for debris removal. The contractor shall provide all labor and materials necessary to fully operate and maintain (including fuel, oil, grease and repairs) the following:

[INSERT QUANTITY AND DESCRIPTION FROM EQUIPMENT PICK LIST]

2.2. The Contractor shall provide the crews for [INITIAL TIME; I.E. "two weeks" or "not to exceed either time or dollar amount"] with a Government option to extend for up to an additional [EXTENSION TIME; I.E. "one week"].

2.3. All hourly equipment rates include the cost of the operator, supervision, maintenance, fuel, repairs, overhead, profit, insurance, and any other costs associated with the equipment and personnel.

2.4. All hourly manpower rates include the cost of protective clothing (to include hard-hats and steel-toed boots), fringe benefits, hand tools, supervision, transportation and any other costs.

2.5. The work shall consist of clearing and removing any and all "eligible" debris (see section 3.0 for a definition of eligible debris) as directed by the Contracting Officer's Representative (COR). Work will include: 1) loading the debris, 2) hauling the debris to an approved dumpsite, and 3) dumping the debris at the dumpsite. Ineligible debris will not be loaded, hauled, or dumped under this contract. This work will involve primarily clearing the right-of-way (ROW) of streets and roads.

2.6. The Contractor shall not move from one designated work area to another designated work area without prior approval from the COR.

APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS

2.7. The Contractor shall conduct the work so as not to interfere with the disaster response and recovery activities of Federal, State, tribal and local governments or agencies, or of any public utilities.

2.8. The Contractor shall comply with local, tribal, State and Federal Safety and Health Requirements.

3. DEBRIS CLASSIFICATION

3.1. **Eligible Debris.** Debris that is within the scope of this contract falls under three possible classifications: Burnable, Non-Burnable, and Recyclable. Debris that is classified as Household Hazardous Waste (HHW) is not to be transported by this contract.

3.2. **Burnable Debris.** Burnable debris includes all biodegradable matter except that included in the following definitions of other categories of debris. It includes, but is not limited to, damaged and disturbed trees; bushes and shrubs; broken, partially broken and severed tree limbs; tree stumps with base cut measurements less than 2 feet; untreated structural timber; untreated wood products; and brush.

3.3. **Non-Burnable Debris.** Non-burnable debris includes, but is not limited to, treated timber; plastic; glass; rubber products; metal products; sheet rock; cloth items; non-wood building materials; carpeting; recyclable debris including metal products (i.e. mobile trailer parts, household appliances (white metal), and similar items), or uncontaminated soil.

3.4. **Household Hazardous Waste (HHW).** Household hazardous wastes, such as petroleum products, paint products, etc., and known or suspected hazardous materials, such as asbestos, lead-based paint, or electrical transformers shall be removed by others. Coordination for hazardous debris removal is the responsibility of the Government.

4. DUMPSITES

4.1. The Contractor shall use only debris dumpsites designated and approved by the COR.

4.2. The dumpsite operator shall direct all dumping operations. The Contractor shall cooperate with the dumpsite operator to facilitate effective dumping operations.

5. PERFORMANCE SCHEDULE

5.1. The Contractor shall commence mobilization immediately upon award of the contract and designation of work areas by the COR and will commence debris removal operations within 24 hours of Notice to Proceed.

5.2. The Contractor shall work during daylight hours for [INSERT] hours per day, [INSERT] days per week.

APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS

6. EQUIPMENT

- 6.1. All trucks and other equipment must be in compliance with all applicable Federal, State, tribal and local rules and regulations. Any truck used to haul debris must be capable of rapidly dumping its load without the assistance of other equipment; be equipped with a tailgate that will effectively contain the debris during transport and permit the truck to be filled to capacity; and measured and marked for its load capacity. Sideboards or other extensions to the bed are allowable, provided they meet all applicable rules and regulations, cover the front and both sides, and are constructed in a manner to withstand severe operating conditions. The sideboards are to be constructed of 2" by 6" boards or greater and not to extend more than 2 feet above the metal bedsides. The Contracting Officer's representative must approve all requests for extensions. Equipment will be inspected prior to its use by the Contractor using applicable U.S. Army Corps of Engineers forms. The forms will be provided to the Government after completion.
- 6.2. Trucks and other heavy equipment designated for use under this contract shall be equipped with two signs, one attached to each side. A total of [QUANTITY] signs will be provided by the Government and are to be returned to the Government prior to issuance of final payment. A fee of \$[AMOUNT] will be accessed against the final payment for each lost sign.
- 6.3. Prior to commencing debris removal operations, the Contractor shall present to the Government's representative all trucks or trailers that will be used for hauling debris for the purpose of determining hauling capacity. Hauling capacity, in cubic yards, will be recorded and marked on each truck or trailer. Each truck or trailer will also be numbered for identification. The government reserves the right to re-measure trucks and trailers at any time during the contract and to use re-measurements as the basis for calculating loads for payment purposes.
- 6.4. Trucks or equipment that are designated for use under this contract shall not be used for any other work during the working hours of this contract. The Contractor shall not solicit work from private citizens or others to be performed in the designated work area during the period of this contract. Under no circumstances will the Contractor mix debris hauled for others with debris hauled under this contract.

7. REPORTING

- 7.1. The Contractor shall submit a report to the COR by close of business each day of the term of the contract. Each report shall contain, at a minimum, the following information:

Contractor's Name.

Contract Number.

Daily and cumulative hours for each piece of equipment.

Daily and cumulative hours for personnel, by position.

8. OTHER CONSIDERATIONS

- 8.1. The Contractor shall supervise and direct the work, using qualified labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, personnel, taxes and fees necessary to perform under the terms of this contract.

APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS

- 8.2. The Contractor must be duly licensed in accordance with the state's statutory requirements to perform the work. The Contractor shall obtain all permits necessary to complete the work. The Contractor shall be responsible for determining what permits are necessary to perform under the contract. Copies of all permits shall be submitted to the COR prior to issuance of a notice to proceed.
- 8.3. The Contractor shall be responsible for taking corrective action for any notices of violations issued as a result of the Contractors or any subcontractors actions or operations during the performance of this contract. Corrections for any such violations shall be at no additional cost to the Government.
- 8.4. The Contractor shall be responsible for control of pedestrian and vehicular traffic in the work area. The Contractor shall provide all flag persons, signs, equipment and other devices necessary to meet Federal, State, tribal and local requirements. The traffic control personnel and equipment shall be in addition to the personnel and equipment required in other parts of this contract. At a minimum, one flag person should be posted at each approach to the work area.

9. PAYMENT.

- 9.1. The Contractor will be entitled to invoice for 60% of the mobilization and demobilization line item after all equipment is delivered to the designated work site. The remaining 40% will be due after all equipment is removed from the work site, all vehicle signs have been returned to the government, and the contractor has submitted a proper invoice.
- 9.2. Payment for work completed will be based on verified hours worked from the daily operational report. Equipment down time resulting from equipment failure, routine maintenance and fueling that exceeds fifteen (15) minutes of a work hour will be considered unacceptable work and non-payment for one half of that hour and the number of work hours will be reduced to exclude the down time (the minimum reduction shall be one-half hour).
- 9.3. All payments made under this contract will be in accordance with PAYMENTS clauses located in other sections of this contract.

10. OPTIONS

- 10.1 The option items listed in Schedule B (the bid Schedule) are for the purpose of extending this contract for 7 days at a time. These options will be exercised at the discretion of the Government in accordance with the OPTION TO EXTEND SERVICES clause located elsewhere in this contract.

11. ATTACHMENTS.

- 11.1 Daily Report Format
- 11.2 Sample Bidding Schedule
- 11.3 Operations Report
- 11.4 Equipment Pick List

**APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS**

DAILY REPORT						
CONTRACTOR:					DATE OF REPORT:	
CONTRACT NO. :						
Truck No.	Capacity	Burn site trips	C.Y. Totals	Landfill trips	C.Y. Totals	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
DAILY GRAND TOTALS			C.Y.		C.Y.	

**APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS**

BIDDING SCHEDULE					
ITEM	DESCRIPTION	HOURS	U/I	U/P	AMOUNT
001	Mobilize Equipment/Demobilize Equipment	JOB			
002	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
003	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
004	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
005	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
006	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
007	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
008	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
009	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
010	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
011	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
012	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
013	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
014	One (1) Loader, Front-end, 3-5 cy capacity, with Operator	140.00			
015	One (1) Loader, Front-end, 3-5 cy capacity, with Operator	140.00			
016	One (1) Knuckleboom, 10 ton lifting capacity, with Operator	140.00			
017	Four (4) Laborers with Chainsaws, 16" min bar, traffic flags, and misc. small tools (axes, shovels, safety equip.)	140.00			
018	One (1) Truck, Pickup, ½-1 Ton, with crew foreman, and cellular phone.	140.00			
019	One (1) Track Hoe, 2-3 yd ³ bucket with operator	100.00			
020	One (1) Low Bed Equipment Trailer , 20 Ton capacity, and Tractor Truck with operator	70.00			
		TOTAL			

**APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS**

BIDDING SCHEDULE					
ITEM	DESCRIPTION	HOURS	U/I	U/P	AMOUNT
FIRST OPTION PERIOD					
021	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
022	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
023	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
024	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
025	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
026	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
027	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
028	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
029	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
030	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
031	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
032	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
033	One (1) Loader, Front-end, 3-5 cy capacity, with Operator	70.00			
034	One (1) Loader, Front-end, 3-5 cy capacity, with Operator	70.00			
035	One (1) Knuckleboom, 10 ton lifting capacity, with Operator	70.00			
036	Four (4) Laborers with Chainsaws, 16" min bar, traffic flags, and misc. small tools (axes, shovels, safety equip.)	70.00			
037	One (1) Truck, Pickup, 1/2 -1 Ton, with crew foreman, and cellular phone.	70.00			
038	One (1) Track Hoe, 2-3 yd ³ bucket, with operator	50.00			
039	One (1) Low Bed Equipment Trailer, 20 Ton capacity, and Tractor Truck, with operator	35.00			
		TOTAL			

**APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS**

OPERATIONAL REPORT








CONTRACT NO. _____

EQUIPMENT	TOTAL HOURS WORKED THIS DAY	TOTAL HOURS IDLE THIS DAY
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
F.E. LOADER#		
F.E. LOADER#		
DOZER #		
TRACK HOE #		
KNUCKLEBOOM #		
KNUCKLEBOOM #		
KNUCKLEBOOM #		
PICKUP TRUCK #		
LABOR CREW #		



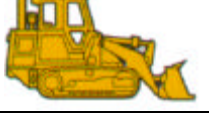


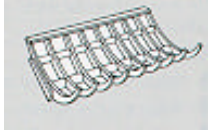


**APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS**

EQUIPMENT PICK LIST


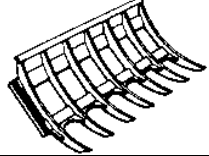









ITEM	PICTURE	DESCRIPTION	LIKE
1.		Truck, Pickup, .5/.75 Ton, with Operator	Ford F-150
2.		Truck, Dump, 6-8 cy capacity, with Operator	
3.		Truck, Dump, 16-20 cy capacity, with Operator	GMC C-Series Trucks
4.		Truck, Dump, 25-30 cy capacity, with Operator	
5.		Excavator, Hydraulic, 1-2 cy bucket, 128 Net Hp, with Operator	CAT 320 CASE 9030B
6.		Excavator, Hydraulic, 2-3 cy bucket, 168 Net Hp, with Operator	CAT 325
7.		Excavator, Hydraulic, 3-5 cy bucket, 286 Net Hp, with Operator	CAT 350
8.		Knuckleboom, 10 ton lifting capacity, with Operator	Barko 160A
9.		Attachment, Grapple, hydraulically operated clam-type bucket with 360-degree rotation, for use in demolition, and clearing	



APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS

10.		Attachment, Grapple, thumb, a demolition or trash grapple. Can be used with the standard excavator bucket. Thumb section can be stiff arm mounted or controlled with a hydraulic cylinder.	
11.		Attachment, Clamp, Bucket	
12.		Loader, tracked, 1-2 cy blade capacity, with Operator	CAT 933
13.		Loader, tracked, 2-3 cy blade capacity, with Operator	CAT 953
14.		Loader, tracked, 3-5 cy blade capacity, with Operator	CAT 973
15.		Loader, Front-end, wheeled, 3-5 cy capacity, with Operator	CASE 821B CAT 938F
16.		Loader, Front-end, 3-5 cy capacity, with Operator	CAT 960F
17.		Loader, Front-end, 3-5 cy capacity, with Operator	CAT 970F CASE 921B
18.		Rake, Loader with top clamp	
19.		Attachment, Loader Rake, mounts in place of the bucket on 4-wheel drive or crawler loaders. Loads debris at truck height. Long curved teeth for maximum load capacity. Bucket cylinder controls positions for digging depth or transporting.	
20.		Grader, Motor, 12-foot blade, 130-140 net Hp	CAT 12H Champion 710 Series IV
21.		Dozer, tracked, 1-2 cy Blade Capacity, with Operator	CAT D5
22.		Dozer, tracked, 2-3 cy Blade Capacity, with Operator	CAT D7G

**APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS**

23.		Dozer, tracked, 22'6" Blade length, 405 Net Hp, with Operator	Caterpillar D9R
24.		Rake, Clearing and Stacking, Dozer mounted; lighter-weight construction. Curved teeth lift and stack trees and debris while sifting out dirt.	
25.		Chainsaw, not less than 20" bar, with Operator	
26.		Chainsaw, Gas engine, not less than 14" bar, with Operator	
27.		Backhoe, with loader, 1 cy bucket, with Operator	CASE 4-390
28.		Backhoe, with loader, 1.5 cy bucket, with Operator.	JCB 217 4WD
29.		Attachment, Thumb	
30.		Attachment, Clamshell bucket	
31.		Skidder,	
32.		Loader, Mini, Width of vehicle not to exceed 6 feet, for use in restricted maneuver area.	Bobcat 553 JCB 165
33.		Burner, Air Curtain, fully self-contained system that includes a power plant, hydraulic drive system blower fan and fuel tank. A diesel injection system and/or a propane ignition system are offered as light-up options.	Air Burners, Inc. Model "S"

APPENDIX E
SCOPE OF WORK EXAMPLE
EQUIPMENT LEASING FOR CLEARING OF DEBRIS

34.		<p>Burner, Air Curtain, mobile unit, 6 cylinder diesel engine, minimum 89 HP (66 kW), full enclosure; burn container 4" (102 mm) thick walls; refractory panels filled with thermal ceramic material.</p> <p>Instrument panel, tachometer, hour meter, ampere meter, key switch, oil pressure and water temperature gauges, with safety shutdown feature and adjustable locking throttle, minimum 15,500 cfm (439 m³/min).</p> <p>Centrifugal fan, air output approx. 165 MPH (266 km/h) at fan, 110 MPH (177 km/h) at air spouts.</p> <p>Manifold minimum 1/8" (3.2 mm) steel, solid-weld assembly; air vents inject air at 20-degree angle to maintain proper air curtain. Length: 35' (10.70 m); 2 sections: 15' (4.60 m) each; T-section at 5' (1.50 m).</p> <p>Weight approx. 7,200 lbs. (3,266 kg). 50 gallons (189 liter) minimum fuel tank capacity. Air quality meets or exceeds applicable US-EPA regulations.</p>	Air Burners, Inc. Mobile System Model "T- 359"
35.		Grinder, Tub, with 300-400 Hp engine, 8 ft diameter tub	Portec Model 20900
36.		Laborer, with hand tools (i.e. shovels, axes, rakes, traffic-control flags, etc)	

**APPENDIX F
SCOPE OF WORK EXAMPLE
UNIT PRICE CONTRACT FOR DEBRIS REMOVAL**

Note: This scope of work example may be downloaded from the U.S. Army Corps of Engineer's Internet site at: <ftp://ftp.sam.usace.army.mil/pub/op/opr/scopes>

**SCOPE OF WORK
FOR
UNIT PRICE CONTRACT FOR DEBRIS REMOVAL
RELATED TO
[NAME/NATURE OF DISASTER]
AT, IN, OR NEAR
[LOCATION OF RECOVERY EFFORTS]**

1.0 GENERAL

1.1 The purpose of this contract is to provide debris clearing and removal response assistance to [LOCATION; i.e. "North Carolina counties" or "Mobile and Baldwin Counties in Alabama"] which have been declared disaster areas by the President because of the effects of [NAME OF DISASTER].

2.0 SERVICES

2.1 The Contractor shall provide for debris removal from the area(s) outlined on the attached maps, and described as: [DESCRIPTION OF WORK AREA].

2.2 The debris shall be taken to the dumpsite(s) indicated on the attached maps, located at [LOCATION (S) OF DUMPSITE(S)].

2.3 The total amount of debris to be removed under this contract is estimated to be [QUANTITY].

2.4 The work shall consist of clearing and removing any and all "eligible" debris (see section 4.0 for a definition of eligible debris) primarily from the public right-of-way (ROW) of streets and roads, as directed by the Contracting Officer's Representative (COR). Work will include 1) examining debris to determine whether or not debris is eligible, burnable or non burnable, 2) loading the debris, 3) hauling the debris to an approved dumpsite or landfill, and 4) dumping the debris at the dumpsite or landfill. Ineligible debris will not be loaded, hauled, or dumped under this contract. Burnable debris will be loaded separately from non-burnable debris. Mixed loading of burnable and non-burnable will be kept to a minimum. The COR will determine the appropriate dumpsite for mixed loads.

2.5 Debris removal shall include all eligible debris found on the ROW within the area designated by the COR. The COR may specify any eligible debris within the ROW which should not be removed, or which should be removed at a later time. The Contractor shall make as many passes through the designated area as required by the COR. The Contractor shall not move from one designated work area to another designated work area without prior approval from the COR. Any eligible debris, such as fallen trees, which extends onto the ROW from private property shall be cut at the point where it enters the ROW, and that part of the debris which lies within the ROW shall be removed. The Contractor shall not enter onto private property during the performance of this contract.

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2.6 The Contractor shall conduct the work so as not to interfere with the disaster response and recovery activities of Federal, State, tribal and local governments or agencies, or of any public utilities.

2.7 The government reserves the right to inspect the site, verify quantities, and review operations at any time.

2.8 All work shall be accomplished in a safe manner in accordance with EM 385-1-1.

3.0 LOAD TICKETS

3.1 "Load tickets" will be used for recording volumes of debris removal. (See Enclosure)

3.2 Each ticket will contain the following information:

Ticket Number
Contract Number
Date
Contractor Name
Site Departure Time
Dump Arrival Time
Debris Classification
Debris Quantity

3.3 [SELECT ONLY ONE OF THE FOLLOWING PARAGRAPHS, AND DELETE THE OTHERS]

Load tickets will be issued by a COR prior to departure from the loading site. The COR will keep one copy of the ticket, and give three copies to the vehicle operator. Upon arrival at the dumpsite, the vehicle operator will give the three copies to the COR at the dumpsite, the COR will validate, retain one copy and give two copies to driver for the Contractor's records, (one copy for the sub-contractor and one copy for the prime contractor).

Load tickets will be issued by a COR prior to departure from the loading site. The COR will keep one copy of the ticket, and give two copies to the vehicle operator for the Contractor's records.

Load tickets will be issued by a COR to a vehicle operator upon arrival at the dumpsite. The COR will keep one copy of the ticket, and give two copies to the vehicle operator for the Contractor's records.

4.0 DEBRIS CLASSIFICATION

4.1 **Eligible Debris.** Debris that is within the scope of this contract falls under three possible classifications: Burnable, Non-Burnable, and Recyclable. Debris that is classified as Household Hazardous Waste (HHW) is not to be transported by this contract.

4.2 **Burnable Debris.** Burnable debris includes all biodegradable matter except that included in the following definitions of other categories of debris. It includes, but is not limited to, damaged and disturbed trees; bushes and shrubs; broken, partially broken and severed tree limbs; untreated structural timber; untreated wood products; and brush.

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- 4.3 **Non-Burnable Debris.** Non-burnable debris includes, but is not limited to, treated timber; plastic; glass; rubber products; metal products; sheet rock; cloth items; non-wood building materials; metal products (i.e. Mobile Trailer parts, Household appliances (White Metal), and similar items), or uncontaminated soil; roofing materials; and carpeting.
- 4.4 **Household Hazardous Waste (HHW).** Household hazardous wastes, such as petroleum products, paint products, etc., and known or suspected hazardous materials, such as asbestos, lead-based paint, or electrical transformers shall be removed by others. Coordination for hazardous debris removal is the responsibility of the Government.
- 4.5 **Stumps.** Tree stumps located within the ROW with are one-half or more of the root ball exposed will be removed. Tree stumps with base cut diameter measurements less than or equal to 24 inches (measured 24 inches up from where the tree originally exited the ground) will be considered to be burnable debris and removed of with the same methods used for other burnable debris. Tree stumps larger than 24 inches in diameter will be removed of as burnable and paid for in accordance to the MEASUREMENT and PAYMENT paragraphs in this contract.

5.0 DUMPSITES

5.1 The Contractor shall use only debris dumpsites designated in Section 2.2, unless otherwise approved by the COR. The Contractor shall haul non-burnable debris to the site designated for non-burnable debris and burnable debris to the burn sire designated.

5.2 The dumpsite operator shall direct all dumping operations. The Contractor shall cooperate with the dumpsite operator to facilitate effective dumping operations.

5.3 The Government makes no representations regarding the turn-around time at the dumpsites.

6.0 PERFORMANCE SCHEDULE

6.1 The Contractor shall commence performance on [DATE].

6.2 The Contractor shall, with the CORs direction, provide a work with plan showing where operations will begin and which streets/roads will be cleared on a 2, 7, 14 day projection. The plan will be updated every 2 days.

6.3 Maximum allowable time for completion will be [ENTER] calendar days, unless the Government initiates additions or deletions to the contract by written change orders. Subsequent changes in completion time will be equitably negotiated by both parties pursuant to applicable State and Federal law. Liquidated damages shall be assessed at \$[AMOUNT] per calendar day for any time over the maximum allowable time established by the contract.

7.0 EQUIPMENT

7.1 All trucks and other equipment must be in compliance with all applicable Federal, State, tribal and local rules and regulations. Any truck used to haul debris must be capable of rapidly dumping its load without the assistance of other equipment; be equipped with a tailgate that will effectively contain the debris during transport and permit the truck to be filled to capacity; and measured and marked for its load capacity.

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Sideboards or other extensions to the bed are allowable provided they meet all applicable rules and regulations, cover the front and both sides, and are constructed in a manner to withstand severe operating conditions. The sideboards are to be constructed of 2" by 6" boards or greater and not to extend more than two feet above the metal bedsides. The Contracting Officer's representative must approve all requests for extensions. Equipment will be inspected prior to its use by the Contractor using applicable U.S. Army Corps of Engineers forms. The forms will be provided to the Government after completion.

7.2 Trucks and other heavy equipment designated for use under this contract shall be equipped with two signs; one attached to each side. The U.S. Army Corps of Engineers will furnish these signs to the Contractor. The signs remain the property of the United States Government, and will be returned to the U.S. Corps of Engineers at the conclusion of the contract.

7.3 Prior to commencing debris removal operations, the Contractor shall present to the Government's representative all trucks or trailers that will be used for hauling debris, for the purpose of determining hauling capacity. The hauling capacity will be based on the interior dimensions of the truck's metal dump bed. Hauling capacity, in cubic yards, will be recorded and marked on each truck or trailer with permanent markings. Each truck or trailer will also be numbered for identification with a permanent marking.

7.4 Trucks or equipment which are designated for use under this contract shall not be used for any other work during the working hours of this contract. The Contractor shall not solicit work from private citizens or others to be performed in the designated work area during the period of this contract. Under no circumstances will the Contractor mix debris hauled for others with debris hauled under this contract.

7.5 Equipment used under this contract shall be rubber tired and sized properly to fit loading conditions. Excessive size equipment (6 CY and up) and non-rubber tired equipment must be approved by the COR.

8.0 REPORTING

8.1 The Contractor shall submit a report to the COR during each day of the term of the contract. Each report shall contain, at a minimum, the following information:

- Contractor's Name
- Contract Number
- Crew
- Location of work
- Day of Report
- Daily and cumulative totals of debris removed, by category

8.2 Discrepancies between the daily report and the corresponding load tickets will be reconciled no later than the following day.

9.0 OTHER CONSIDERATIONS

9.1 The Contractor shall supervise and direct the work, using skillful labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, personnel, taxes, and fees necessary to perform under the terms of this contract.

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9.2 The Contractor must be duly licensed in accordance with the state's statutory requirements to perform the work. The Contractor shall obtain all permits necessary to complete the work. The Contractor shall be responsible for determining what permits are necessary to perform under the contract. Copies of all permits shall be submitted to the COR.

9.3 The Contractor shall be responsible for taking corrective action in response to any notices of violations issued as a result of the Contractors or any subcontractors actions or operations during the performance of this contract. Corrections for any such violations shall be at no additional cost to the Government.

9.4 The Contractor shall be responsible for control of pedestrian and vehicular traffic in the work area. The Contractor shall provide all flag persons, signs, equipment, and other devices necessary to meet Federal, State, tribal and local requirements. The traffic control personnel and equipment shall be in addition to the personnel and equipment required in other parts of this contract. At a minimum, one flag person should be posted at each approach to the work area. Work shall be accomplished in a safe manner in accordance with EM 385-1-1.

10.0 MEASUREMENT

10.1 Measurement for burnable debris removed will be by the cubic yard as predetermined through truck bed measurement. Trucks with less than full capacities will be adjusted down by visual inspection by the COR. Measurement will be documented by load tickets.

10.2 Measurement for non-burnable debris removed will be by the cubic yard as predetermined through truck bed measurement. Trucks with less than full capacities will be adjusted down by visual inspection by the COR. Load tickets will document measurement

10.3 Measurement for payment of stumps removed with 25 to 36 inch diameters base cuts (measured 24 inches up from where the tree originally exited the ground) shall be per stump.

10.4 Measurement for payment of stumps removed with 37 to 48 inch diameter basecuts (measured 24 inches up from where the tree originally exited the ground) shall be per stump.

10.5 Measurement for payment of stumps removed with 49 inch and larger diameter basecuts (measured 24 inches up from where the tree originally exited the ground) shall be per stump.

10.6 Measurement for mobilization and demobilization will be by the job.

11.0 PAYMENT

11.1 Payment for the removal of burnable debris (including stumps 24 inches and smaller) to include all cost associated with loading, hauling and dumping will be paid for under the contract bid item for **Burnable Debris**.

11.2 Payment for the removal of non-burnable debris to include all cost associated with loading, hauling and dumping will be paid for under the contract bid item for **Non-burnable Debris**.

11.3 Payment for the removal of stumps, 25 inches and larger, to include all cost associated with loading, hauling and dumping will be paid for under the contract bid item for the appropriate size category for **Stumps**.

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11.4 Payment for mobilization and demobilization will be paid for under the contract bid item for Mobilization and Demobilization.

11.5 Payment for work completed may be invoiced on a bi-weekly basis. Invoices will be based on verified quantities from the daily operational reports and valid load tickets.

11.6 The Contractor will be entitled to invoice for 60% of the mobilization and demobilization line item after all equipment is delivered to the designated work site. The remaining 40% will be due after all equipment is removed from the work site, all vehicle signs have been returned to the government, and receipt of a proper invoice.

11.7 All payments made under this contract will be in accordance with PAYMENTS clauses located in other sections of this contract

12.0 OTHER CONTRACTS

12.1 Other contracts may have been issued.

12.2 The Government reserves right to issue other contracts or direct other contractors to work within the area included in this contract.

13.0 ENCLOSURES/ATTACHMENTS

13.1 Bidding Schedule

13.2 Daily Report

13.3 Load Ticket

**APPENDIX F
SCOPE OF WORK EXAMPLE
UNIT PRICE CONTRACT FOR DEBRIS REMOVAL**

BIDDING SCHEDULE

ITEM	QTY	DESCRIPTION	UNITS	UNIT PRICE	AMOUNT
001.	1	Mobilization and Demobilization	Lump Sum		
002.	xxx	Removal of Burnable Debris	Cubic Yard		
003.	xxx	Removal of Non-Burnable Debris	Cubic Yard		
004.	xxx	Removal of Stumps - 26 to 36 inch	Each		
005.	xxx	Removal of Stumps - 37 to 48 inch	Each		
006.	xxx	Removal of Stumps - 49 inch and larger	Each		

**APPENDIX F
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DAILY REPORT						
CONTRACTOR: CONTRACT NO. :					DATE OF REPORT:	
Truck No.	Capacity	Burn site trips	C.Y. Totals	Landfill trips	C.Y. Totals	
1						
2						
3						
4						
5						
6						
7						
8						
	Daily Totals					

DAILY REPORT				
CONTRACTOR:				DATE OF REPORT:
Processing Site	Stumps 26-36 in.	Stumps 36-48 in.	Stumps > 49"	
1				
2				
3				
4				
5				
6				
7				
8				
9				
	DAILY TOTALS			

**APPENDIX F
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UNIT PRICE CONTRACT FOR DEBRIS REMOVAL**

Sample Debris Load Ticket

LOAD TICKET		
TICKET NUMBER:		00001
CONTRACT NUMBER:		
PRIME CONTRACTOR'S NAME:		
DATE:		
DEBRIS QUANTITY		
Truck No:	Capacity (CY):	
Load Size : Cubic Yards _____		
or Tons _____		
Truck Driver:		
DEBRIS CLASSIFICATION		
	Burnable	
	Non-Burnable	
	Mixed	
	Other	
LOCATION		
Zone/Section	Dumpsite	
	Time	Contract Monitor
Loading		
Dumping		

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Attachment 5.3

Example Time and Materials Contract

ARTICLE 1: Agreement Between Parties

This contract is entered into on this _____ day of _____, 20____, by and between the city/county of _____, hereinafter called the ENTITY and _____, hereinafter called the CONTRACTOR.

ARTICLE 2: Scope of Work

This contract is issued pursuant to the Solicitation and Procurement on _____, 20____, for the removal of debris caused by the sudden natural or man-made disaster of _____ to _____, 20____. It is the intent of this contract to provide equipment and manpower to remove all hazards to life and property in the affected communities. Clean up, demolition, and removal will be limited to 1) that which is determined to be in the interest of public safety and 2) that which is considered essential to the economic recovery of the affected area.

ARTICLE 3: Schedule of Work

Time is of the essence for this debris removal contract.

Notice to proceed with Work: The work under this contract will commence on _____, 20____. The equipment shall be used for (recommended not to exceed 70) hours, unless the ENTITY initiates additions or deletions by written change order. Based upon unit prices of equipment and labor, no minimum or maximum number of hours is guaranteed.

ARTICLE 4: Contract Price

The hourly rates for performing the work stipulated in the contract, documents, which have been transposed from the low bidder's bid schedule, are as follows:

Equipment/Machine/Operator	Mobilization/ Demobilization Cost	Hourly Rate
-----------------------------------	--	--------------------

Manufacturer, Model

Total unit rate shall be given which includes maintenance, fuel, overhead, profit, and other associated cost with the equipment.

Estimated Cost per unit of material. Only actual invoice amounts will be paid.

Labor man-hours

Protective clothing, fringe benefits, hand tools, supervision, transportation, and any other costs.

ARTICLE 5:
Payment

The ENTITY shall pay the Contractor for mobilization and demobilization if the Notice to Proceed is issued and will pay for only the Time that the equipment and manpower is actually being used in accomplishing the work. The Contractor shall be paid within _____ days of the receipt of a pay estimate and verification of work by the inspector.

ARTICLE 6:
Claims

Not Applicable

ARTICLE 7:
Contractor's Obligations

The Contractor shall supervise accomplishment of the work effort directed by labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, personnel, liability insurance, taxes, and fees necessary to perform under the terms of the contract.

Caution and care must be exercised by the Contractor not to cause any additional damage to sidewalks, roads, buildings, and other permanent fixtures.

ARTICLE 8:
Insurance and Bonds

The Entity's representative(s) shall furnish all information necessary for commencement of the Work and direct the Work effort. Costs of construction permits, disposal sites and authority approvals will be home borne by the Entity. A representative will be designated by the Entity for inspection the work and answering any on-site questions. This representative shall furnish the Contract daily inspection reports including work accomplished and certification of hours worked.

The Entity shall designate the public and private property areas where the work is to be performed. Copies of complete "Right of Entry" forms, where they are required by State or local

law for private property shall be furnished to the contractor by the Entity. The Entity shall hold-harmless and indemnify the Contractor and his employees against any liability for any and all claims, suits, judgements, and awards alleged to have been caused by services rendered under this contract for disaster relief work unless such claims are the result of negligence on the part of the Contractor.

The Entity will terminate the contract for failure to perform or default by the Contractor.

ARTICLE 9:
Insurance and Bonds

The Contractor shall furnish proof of Worker's Compensation Coverage, Automobile Liability Coverage, and Comprehensive General Liability Insurance (Premises-Operations, Personnel Injury, etc, as deemed necessary by the Entity).

Surety: The Contractor shall deliver so the Entity fully executed Performance and Payment Bonds in the amount of 100% of the contract amount, if required by the specifications, general or special conditions of the contract. The Entity will reimburse the Contractor for the costs of the bonds, the costs of which will be included in the base bid.

ARTICLE 10:
Contractor Qualifications

The Contractor must be duly licensed in the State per statutory requirements.

THIS CONTRACT IS DULY SIGNED BY ALL PARTIES HERETO:

Entity (City, County, Town, Etc)

By _____ Seal

by _____ Seal
Principal of the firm

Contractor (Include address, City, State)

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Attachment 5.4

Example Lump Sum Contract for Debris Removal

ARTICLE 1: Agreement Between Parties

This contract is made and entered into on this ____ day of _____, 20____, by and between the city/county of _____, hereinafter called the ENTITY and _____, hereinafter called the CONTRACTOR.

ARTICLE 2: Scope of Work

This contract is issued pursuant to the Solicitation and Procurement on _____, 20____, for the removal of debris caused by the sudden natural or manmade disaster of _____ to _____, 20____. It is the intent of this contract to provide equipment and manpower to remove all hazards to life and property in the affected communities. Clean up, demolition, and removal will be limited to 1) that which is determined to be in the interest of public safety and 2) that which is considered essential to the economic recovery of the affected area.

ARTICLE 3: Schedule of Work

Time is of the essence for this debris removal contract.

Notice to proceed with the Work: The Work under this contract will commence on _____, 20____. Maximum allowable time for completion will be _____ Calendar days, unless the Entity initiates additions or deletions by written change order. If the Contractor does not complete Work within the allotted time, liquidated damages will be assessed in the amount of _____ per day.

ARTICLE 4: Contract Price

The lump sum price for performing the work stipulated in the contract document is.
\$ _____.

ARTICLE 5:
Payment

The Contractor shall submit certified pay requests for completed work. The Entity shall have 10 calendar days to approve or disapprove the pay request. The Entity shall pay the Contractor for his/her performance under the contract within _____ days of approval of the pay estimate. On contracts over 30 days in duration, the Entity shall pay the Contractor a pro-rata percentage of the contract amount on a monthly basis, based on the amount of work completed and approved in that month. The Entity will remunerate the Contractor within 30 days of the approved application for payment, after which interest will be added at a rate of _____ on each payment. Retainer shall be released upon substantial completion of the work.

Funding for this contract is authorized pursuant to Public Law of the State of Ohio _____, And _____.
Local Statute or ordinance

ARTICLE 6:
Change Orders

If the scope of work is changed by the Entity, the change in price and contract time will be promptly negotiated by the parties, prior to commencement of work.

ARTICLE 7:
Contractor's Obligations

The Contractor shall supervise and direct the Work, using skillful labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, equipment, personnel, taxes, and fees necessary to perform under the terms of the contract.

Any unusual, concealed, or changed conditions are to be immediately reported to the Entity. The Contractor shall be responsible for the protection of existing utilities, sidewalks, roads, building, and other permanent fixtures. Any unnecessary damage will be repaired at the Contractor's expense.

ARTICLE 8:
Entity's Obligations

The Entity's representative(s) shall furnish all information, documents, and utility locations, necessary for commencement of Work. Costs of construction permits and authority approvals will be borne by the Entity. A representative will be designated by the Entity for inspecting the work and answering on-site questions.

The Entity shall designate the public and private property areas where the disaster mitigation work is to be performed. Copies of complete "Right of Entry" forms, where they are required by the State and local law for private property, shall be furnished to the Contractor by the Entity. The Entity shall hold harmless and indemnify the Contractor judgements and awards alleged to

have been caused by services rendered under this contract for disaster relief work unless such claims are caused by the gross negligence of the Contractor, his subcontractors or his employees.

ARTICLE 9:
Claims

If the Contractor wishes to make a claim for additional compensation, for work or materials is not clearly covered in the contract, or nor ordered by the Entity as a modification to the contract, he/she shall notify the Entity in writing. The Contractor and the Entity will negotiate the amount of adjustment promptly; however, if no agreement is reached, a binding settlement will be determined by a third party acceptable to both Entity and Contractor under the sections of applicable State law.

ARTICLE 10:
Insurance and Bonds

The contractor shall furnish proof of Worker's Compensation Coverage, Automobile Liability Coverage, and Comprehensive General Liability Insurance (Premises-Operations, Personal injury, etc. as deemed necessary by the Entity).

Surety: The Contractor shall deliver to the Entity fully executed Performance and Payment Bonds in the amount 100% of the contract amount, if required by the specifications, or general or special conditions of the contract. The Entity will reimburse the Contractor for the costs of the bonds, the cost of which will be included in the base bid.

ARTICLE 11:
Contractor Qualifications

The Contractor must be duly licensed in the State per statutory requirements.

THIS CONTRACT IS DULY SIGNED BY ALL PARTIES HERETO:

Entity (City, County, Town, Etc.)

By _____ Seal

Contractor (Include Address, City, State

By _____ Seal
Principal of the Firm

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**DEQ Disaster Debris Management
from Winter Storm Emergencies
Fact Sheet**

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Disaster Debris Management from Winter Storm Emergencies



State of Oregon
Department of
Environmental
Quality

**Regional
Environmental
Solutions
Northwest Region**
2020 SW 4th Avenue
Suite 400
Portland, OR 97201
Phone: (503) 229-5263
(800) 452-4011
Fax: (503) 229-6945
Contact: Tiffany Yelton
(503) 229-229-5049
www.deq.state.or.us

The purpose of this Department of Environmental Quality (DEQ) fact sheet is to advise County solid waste programs; solid waste facility operators; local emergency management agencies; local government public works, road and fire departments; and the Oregon Department of Transportation about the following storm debris management information:

- 1) DEQ's role in coordinating information and assisting local communities
- 2) Advice on disaster debris best management practices
- 3) DEQ approval for changes at permitted solid waste sites
- 4) How to obtain approval for temporary disaster debris sites

It is important for local disaster debris management to be done in a way that protects human health and the environment.

Reimbursement by the federal government for costs incurred by public agencies in response to an emergency may be hampered if state and local agencies have not coordinated and communicated with DEQ on the location and handling of disaster debris. Letting DEQ know where disaster debris can go in your area will help us let residents know where to take their wastes. DEQ will issue news releases to local media and put information on our Web site at www.deq.state.or.us

Best management practices

Where disaster debris is found:

- First priority is human health and safety. Only approach buildings and other debris areas if safe to do so.
- Sort as much debris on site as possible. Make removal of waste that will rot highest priority.
- Secure any containers of liquids, if safe to do so, to prevent further release. Contact Oregon Emergency Response System (OERS) if containers are discovered that may have breached and contents are unknown and secure area.
- The property owner may be able to provide information on the presence of asbestos containing material. **Take caution in disturbing asbestos containing material.** Keep this material damp, covered and isolated to prevent release of fibers.

- Use respiratory protection if handling suspected asbestos containing material.

At debris collection sites

- Follow any applicable Emergency Operations Plan that addresses disaster debris management.
- Set up the site to provide surfaces where spills and releases can be contained. This can be done by providing berms around paved areas and closing off the storm drains and/or the use of liner. Mark areas for different types of debris. Cordon the site off with caution tape to control access, as appropriate.
- Waste that can decompose should be highest priority for removal to final disposal. This includes all food wastes, dead animals, and household garbage.
- Sort debris for better recovery and disposal. Keep clean wood (not treated or painted) and yard debris and fallen trees separate to facilitate grinding/chipping. The ground and chipped wood waste and yard/tree waste can be used on site for berms or ground cover, can go offsite for composting, or be burned in hog fuel boilers.
- Final disposal of residential and commercial demolition debris should go to approved landfills. It is best to sort the demolition debris at the site where it occurred if possible. The waste can be sorted into wood, metal, glass and other piles wastes. Some of the materials may be recyclable.
- Provide safe entrance and exiting from the disaster debris collection site for commercial haulers and private individuals. Having separate routes for commercial hauler's trucks and private individuals is best to prevent vehicle accidents and to provide safe areas for individuals to unload their waste.
- **Containers of hazardous materials, including household materials such as cleaners, paints and oils should be isolated and placed on spill containment if safe to do so.** See contact numbers below.

Since hazardous materials require special handling, call Dave Kunz at 503-229-5336 for technical assistance or Oregon Emergency Response System (OERS) at 1-800-452-0311 for spill response, or contact local collection depots if one is available.

Get DEQ approval for disaster debris sites

For Existing Permitted Solid Waste Facilities Transfer Stations, Landfills, Material Recovery Facilities, Compost Facilities)

Existing sites may need to make changes to their operations in response to a disaster. For sites in the Northwest Region (Multnomah, Clackamas, Washington, Columbia, Clatsop and Tillamook Counties), **contact Tiffany Yelton 503-229-5049 within 48 hours** of the following:

- Increasing the volume of acceptable wastes beyond any permit limits.
- Setting up areas for collection of wastes not allowed under the permit. This should only apply to those wastes that staff or contractors at the site can safely handle.
- Opening to the public or to haulers who do not usually use the site. Assure that the public has safe access to the site.
- Processing waste on site that that is not part of normal operations.

Use alternatives to burning

Burning certain waste including rubber and plastics is prohibited. **DEQ strongly recommends using alternatives to burning to protect human health from harmful fine particles and toxic air pollutants in smoke.** Give priority to chipping or grinding wood waste and yard debris for reuse. DEQ will provide assistance to find locations to use or store this chipped wood waste and yard debris.

If burning of any waste is determined to be necessary to protect human health, you must contact DEQ **before** burning to obtain proper burn permits. DEQ may determine that the site, the wastes and the need to burn are not warranted and will work with you to find alternatives to burning. For DEQ emergency burn permits Robert Vance at 503-229-5600 or 503-229-5393. You also must contact local fire departments prior to burning.

For temporary facilities

- First priority should be given to large, flat, paved publicly owned sites for the temporary storage and sorting of disaster debris.

- Protect surface and ground water by providing a surface for working on, closing off access to stormwater drains and using physical barriers to prevent spills and releases from going off site.
- **DEQ can issue temporary Solid Waste Letters of Authorization for temporary facilities with a very short turn around time.** Having the letter of authorization helps the facility comply with state law which can impact the ability to get FEMA reimbursements. DEQ would need the following as soon as possible before the use of the site:
 - Written statement of permission from the land owner
 - If using a site for temporary storage that was used in previous emergencies or is identified in your emergency response plan, please note.
 - Location and size of the site on a map
 - Roads and road condition leading to and from the site
 - Distance to surface water including wetlands
 - Actions taken to prevent release of contaminants to surface and ground water.
 - Information on how the site will be operated: who is operating it, hours of operation, fees, security, emergency/spill response
 - Further information may be needed
 - If the site location is sensitive and the site can not be operated in a way that protects the environment, it will not be permitted
 - Fax to 503-229-6945, Attention Tiffany Yelton or e-mail to yelton.tiffany@deq.state.or.us

Sewage treatment spills

In the event of a spill from sewage treatment plants, contact the facility's permit manager.

DEQ Contacts for storm debris disposal

Call the DEQ toll free at **800-452-4011** and ask for the DEQ contact or call the direct lines listed below.

Debris management, including setting up temporary handling sites and hazardous waste collection at those sites, contact Tiffany Yelton 503-229-5049 or via cell at 503-720-7472. Maggie Conley is also available for assistance with hazardous waste collection at disaster debris sites by calling 503-780-2962.

Hazardous materials management, contact Dave Kunz at 503-229-5336. To report a hazardous spill, contact Oregon Emergency Management (OERS) at 1-800-452-0311 for spill response.

Water quality issues, including treatment facilities, contact the facility's permit manager, or the DEQ Water Quality Duty Officer, at 503-229-5263.

Emergency burn permits, general questions or complaints, contact Robert Vance, DEQ complaint officer, at 503-229-5600 or 503-229-5393.

Alternative formats

Alternative formats (Braille, large type) of this document can be made available. Contact the DEQ Office of Communications & Outreach, Portland, at (503) 229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696.



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Waste Equipment and Processing Requirements

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Waste Equipment and Processing Requirements

Waste Handling Equipment Types: Equipment selections are based upon the type of activity to be carried out and the materials involved. The table below groups construction and demolition (C&D) processing equipment into five main types:

1. Conveying;
2. Crushing / Reducing;
3. Screening / Separating;
4. Magnetic & Electric Field Separation; and
5. Manual Picking Station

	Equipment	Materials Handled
1. Conveying Equipment	Conveyors transfer materials from one location to another. The most common type of conveying equipment used to process C&D is a belt conveyor which consists of a strip of belting material that is looped around a shaft on each end.	All types of C&D and other waste streams sized and weighted properly to fit on the conveyor belt
2. Crushing/Reducing Equipment	Size reduction is the unit operation in which waste materials are mechanically reduced in size. The objective is to obtain a product that is reasonably uniform and considerably reduced in size in comparison with its original form.	
1. Hydraulic breaker or jackhammer	A pneumatic impact tool is used for breaking oversized material into pieces small enough to be processed by the next crusher/reduction unit in the process.	Concrete pavement, foundations.
2. Jaw Crusher	Designed to crush large chunks of concrete, asphalt, etc.	Concrete, asphalt, pipes, steel, rebar, manhole lids, etc. Compressible materials such as wood and plastics tend to jam up the jaws and severely reduce throughput.
3. Hopper	Receives the chunks and feeds them to the cone, or impactor.	Can choose either cone or impactor, or both.
4. Cone	Crushes concrete and asphalt to aggregate size	Can choose either cone or impactor, or both.
5. Impactor	Crushes concrete and asphalt to aggregate size	Concrete & Asphalt
Hammermill	Also known as wood hogs, can	Wood

	process a variety of wood materials. Reduction occurs as the heavy hammers, attached to a rotating element, impact the material as it enters and eventually force the shredded material through the discharge of the unit.	
Stump Grinder	Large machines, often trailer-mounted and top-loaded by on-board knuckleboom loaders. The machine is more expensive than a wood hog but can handle large bulky materials.	Wood, stumps
Rotary Shear Shredders	Low-speed, high-torque machines that rip and tear material apart.	Ideal for primary reduction of bulky wood material, such as pallets, crates and stumps, up to 3" to 4" in diameter. Large units can also reduce concrete, steel drums, white goods and furniture.
Screw Shredders	Shredding is done by two parallel screws with opposing threads.	Bulky wood material, including tree stumps, brush, logs, scrap lumber, clean wood, pallets, trees, yard trimmings.
<hr/>		
3. Screening/Separating Equipment	Screening is a unit operation used to separate mixtures of materials of different sizes into two or more size fractions by means of one or more screening surfaces.	
Grizzly Screen	Vibrating grizzly feeders are ideal for feeding rubble and mixed C&D material to the primary crusher.	Rubble and mixed C&D material
Vibrating Screen	Vibrating screens can be designed to vibrate from side to side, vertically, or lengthwise.	Rubble and mixed C&D material
Trommel Screen	An inclined rotating cylindrical screen where material to be separated tumbles and contacts the screen several times as it travels down the length of the screen.	Rubble and mixed C&D material
Disc Screen	Disc screens consist of parallel horizontal shafts equipped with interlocking lobed (or star-shaped) discs that run perpendicular to the flow of infeed material.	Wood
Air Classifiers	A separator which uses an air stream to separate materials based on the weight difference of the material.	Commingled waste (plastic, glass, paper, metal)

Flotation	A unit operation which employs water to separate wood from rubble-based material.	Separates wood from rubble-based material
4. Magnetic & Electric Field Separation	Uses the electrical and magnetic properties of waste materials to separate them.	
Magnetic Separation	Designed to remove ferrous metals from a moving bed of material.	Ferrous materials
Electrostatic Separation	High-voltage electrostatic fields can be used to separate nonconductors of electricity, such as glass, plastic, and paper, from conductors such as metals.	Nonconductors such as glass, plastic, and paper
Eddy Current Separation	Separates non-ferrous metal (usually aluminum cans) from the waste stream by passing a current through the materials. These systems can be expensive.	Non-ferrous metal (usually aluminum cans)
5. Manual Picking Station	An elevated platform with a conveyor and a catwalk along both sides of the conveyor. Manual sorting is done by removing specified items from the conveyor and dumping` them in the appropriate chute provided.	Various Waste Types (waste items must be non hazardous and small enough to be "hand-picked" though)

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CSA 1

Benton County

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1.1 Potential Disaster Scenarios – Debris Volume Estimation

In 1999 DOGAMI published *Earthquake Damage in Oregon: Preliminary Estimates of Future Earthquake Losses* (Wang et al. 1999), which analyzes all counties in the State for earthquake losses related to an M 8.5 Cascadia Subduction Zone earthquake and Statewide earthquakes within a 500-year return interval.

According to the report a total of 544,000 tons of debris could be generated during an M 8.5 Cascadia Subduction Zone earthquake. Because the 500-year return interval earthquake includes several earthquakes, the amount of debris generated for this model is not considered for this plan.

To convert tons of debris to cubic yards of debris, FEMA suggests a multiplying factor of four. The resulting cubic yards of debris would be 2,176,000. To account for the population increase between 1999 and 2008 the 2,176,000 cubic yards of debris was increased by 1.2 percent, which is the percentage population increase for Benton County estimated by the U.S. Census Bureau. Therefore the estimated volume of debris for a Cascadia Subduction Zone earthquake is 2,202,000 cubic yards.

Based on one acre holding 6,453 cubic yards of debris and a TDSR being cycled at least once during the recovery period, a total of 170 acres of TDSR sites would be needed for a Cascadia Subduction Zone earthquake.

2.1 Concept of Operations – Emergency Operations Center Activation

The Chairperson, followed by Vice-chair, Commissioner, and Sheriff may declare a state of emergency, put the County EOP into effect, and activate and staff the County EOC on a full or partial basis. Activation of the EOC is outlined in Section 5 and ESF #5 of the Benton County EOP.

2.2 Concept of Operations – Organization and Assignment of Responsibilities

Debris Management is addressed in ESF #3 of the County EOP. ESF 3 provides and coordinates infrastructure and engineering services during all phases of emergency management. The lead agency for ESF #3 is the Benton County Public Works Department. ESF #3 activities and resources (personnel, equipment, facilities, materials, and supplies) are coordinated through a Department Operations Center or the County ECC and managed through the incident command structure established for the incident. Within Benton County, the Environmental Health Division of the Health Department is the LDMD for the RDMP. The DM will be from the Environmental Health Division and will coordinate with the Public Works Department. The remainder of this section discusses debris management–specific organization and responsibilities within Benton County not addressed in the County EOP. Appendix B of this Annex contains an organizational chart. In addition to the organization and assignment of responsibilities, Benton County has prepared a Government Agency Solid Waste Management Contact list for their use and information regarding area power companies. These lists can be found in Appendix A of this Annex; a figure showing power service coverage areas can be found in Appendix B.

Solid waste collection services are franchised in the Cities of Adair Village, Albany, Corvallis, Monroe, and Philomath. Solid waste collection services in the unincorporated area of the County are franchised by Benton County. Franchise agreements for solid waste disposal at the Monroe Transfer Station and the Coffin Butte Regional Sanitary Landfill are also the responsibility of Benton County government.

Benton County Code (BCC) Chapter 23.105, Solid Waste Management, states that *“No person shall solicit for service customers or provide service in Benton County without first acquiring a franchise or permit under BCC Chapter 23 unless specifically exempted pursuant to this section. BCC Chapter 23 shall not apply within the limits of an incorporated city except as may be provided through an agreement with the city.”*

During the response phase of the disaster, debris management strategies will be formulated by solid waste management professionals from the impacted area and

will be implemented through jurisdictional emergency centers. As incident operations transition into long-term recovery, specific debris management programs, processes, and projects will be developed and coordinated by solid waste program managers.

2.2.1 Benton County Health Department and its Environmental Health Division

The Benton County Health Department is responsible for assessing threats to public health posed by disaster-related debris.

Within Benton County, the Environmental Health Division of the Health Department will provide local leadership for development of debris management strategies. It will coordinate with Federal, State, and local agencies, solid waste facilities, and waste haulers to ensure that those strategies meet the needs of the incident while complying with statutes and regulations and addressing the waste management hierarchy. It will also serve as the point of origin for materials designed to instruct, inform, and educate the public concerning the handling of disaster-related solid wastes.

Task Assignments for Benton County Health Department, Environmental Health Division include:

1. Advise the ECC on the status, capacity, and operating hours of solid waste handling/processing facilities.
2. Adjust hours of operation of disposal sites as needed.
3. Adjust fees for public and private use of disposal sites as appropriate.
4. Track tonnage of debris processed.
5. Provide technical assistance to local governments.
6. Act as liaison between haulers, debris processing facilities, the public, cities within Benton County, and other public agencies (e.g., Oregon Department of Environmental Quality, Oregon Department of Human Services, and Oregon Department of Agriculture).
7. Determine status of local debris collection resources and recycling and disposal facilities, and advise the County ECC
8. Identify temporary storage sites for disaster-related debris, and advise the County ECC.
9. Arrange for the survey (i.e., soil and water samples, access routes, photos, etc.) of temporary storage sites prior to their use.
10. Develop and manage a debris estimation program.
11. Formulate the County's strategic debris management plan, including:
 - a. A summary of debris management services to be provided by the County government.
 - b. A list of disaster debris drop-off points and temporary storage locations.

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- c. Modifications in solid waste franchise operations such as amended hauler schedules, regulatory waivers, and adjusted disposal rates.
 - d. Procedures for putrescible surge abatement and processing of medical and contaminated wastes.
 - e. Controls to prevent or minimize illegal dumping and theft of services.
12. Work with local jurisdictions and waste haulers and facilities to develop educational materials relating to disaster debris for distribution to the public.
 13. Coordinate the distribution of public education materials through the Joint Information Center (JIC) in the County ECC, through local jurisdictions and through waste haulers and disposal facilities.
 14. Execute necessary franchise and other agreements with haulers, contractors, and facilities for collection, processing, and disposal operations.
 15. Contract for services necessary to train site monitors and debris estimators.
 16. Coordinate specific regulatory issues directly with the State (e.g., burning of wastes, storage/refrigeration of medical wastes, etc.).
 17. Track the tonnage/volume of debris processed within Benton County.
 18. Enforce proper removal and disposal of debris by entities contracted to provide service.

2.2.2 Benton County Public Works Department

The Benton County Public Works Department will have responsibility for tactical debris management activities. Public Works must be able to quickly remove and process debris from County rights-of-way and may be a generator of significant debris from damaged County roadways and bridges. Public Works can also remove debris from creeks and streams on an emergency basis. Benton County Public Works Facilities Division operates and/or manages County buildings and can assist with management (e.g., emergency contracting) of debris generated at those sites. Public Works will develop and maintain a list of approved contractors who have the capability to provide debris management removal and disposal in a fiscally responsible and environmentally sound fashion.

Task Assignments for the Benton County Public Works Department, Operations Center include:

1. Gather and track information regarding debris locations/amounts involving areas of departmental responsibility (i.e., roads, bridges, drainage ditches/culverts, residential and commercial buildings, etc.) (Planning Section, Operations Section).
2. Report debris locations/amounts to the County ECC (Planning Section).
3. Recommend debris removal site priorities to the County ECC (Operations Section, Incident Commander).

County-Specific Annex 1. Benton County

4. Coordinate removal of debris from County rights-of-way, drainage ditches/culverts, etc. (Operations Section, Logistics Section).
5. Coordinate with the County ECC, Environmental Health Division/Health Department, and other County Departments and Divisions to identify temporary storage sites for disaster-related debris (Planning Section).
6. Track departmental debris removal costs and ensure that eligible costs are provided to the County ECC for inclusion in the Initial Damage Assessment (Finance Section, Planning Section).
7. Coordinate with the Environmental Health Division to identify temporary storage and landfill sites for debris removed during departmental operations (e.g., asphalt, concrete, woody debris, etc.).
8. Identify contract resources with input from the Environmental Health Division.

Task Assignments for the Benton County Public Works Department, Facilities Management Division include:

1. Gather and track information about debris locations/amounts involving areas of division responsibility (i.e., County buildings and parks).
2. Report debris locations/amounts to the County ECC.
3. Coordinate with the ECC and Environmental Health Division/Health Department to identify temporary storage and landfill sites for debris removed during departmental operations
4. Coordinate the removal of debris from County facilities and parks.
5. Identify contract resources with input from the Environmental Health Division.
6. Ensure compliance with regulations governing the management of hazardous wastes “generated” by the County as a consequence of debris removal activities.
7. Track departmental debris removal costs and ensure that eligible costs are provided to the County ECC for inclusion in the Initial Damage Assessment (e.g., contracted debris removal from County buildings and parks).

2.2.3 County Emergency Coordination Center

Task Assignments for the County Emergency Coordination Center (ECC) include:

1. Gather and track Countywide information on debris locations and amounts (Planning Section, Operations Section).
2. Notify other jurisdictions of debris sites in or affecting their jurisdictions. For example, notify ODOT of debris sites located on State rights-of-way (Planning Section, Operations Section).
3. Determine status of local debris collection resources (Planning Section).

4. Determine status of local debris recycling and disposal facilities (Planning Section).
5. Coordinate with Public Works, Environmental Health Division/Health Department, and other County departments and divisions to identify temporary storage sites for disaster-related debris (Planning Section).
6. Prioritize the County's debris removal sites (Operations Section, Incident Commander, Policy Group).
7. Coordinate the removal of debris from County buildings and parks in cooperation with the Facilities Management Division (Operations Section, Logistics Section).
8. Disseminate debris-related public education materials (JIC).
9. Coordinate debris removal support for local jurisdictions (Logistics Section, Planning Section, Operations Section).
10. Track County debris removal costs and ensure that eligible costs are included in the Initial Damage Assessment (Finance Section, Planning Section).

2.2.4 Private Citizens and Businesses

Private Citizens and businesses are responsible for the removal of disaster-related debris from their properties. Although some local governments are prohibited by law or policy from removing debris from private property, many other agencies (e.g., fire districts) will provide some assistance when the debris poses a risk to lives, public health, or property.

Private companies engage in franchise hauling activities; operate recovery and landfill sites; provide recycling and composting options for vegetative (i.e., woody) debris; and contract to pick up and transport medical and hazardous wastes.

Many nonprofit and volunteer organizations can assist with debris removal activities. Convergent volunteers (i.e., those who show up and offer assistance in time of emergency) can also help with debris removal. (See the Volunteer Management Annex of the County EOP for guidelines on processing, training, and equipping convergent volunteers.)

3.1 Response and Recovery Operations – Critical Route Maps and List of Critical Facilities

Critical route maps and lifeline overview maps are available in Appendix B of this Annex. The County maintains a separate list of Red Cross shelter locations and a list of critical facilities.

4.1 Contracts and Agreements

The Benton County Public Works Department has established the following service and equipment agreements with local, State, and regional entities. These agreements are on file with the Public Works Department and Emergency Management. They will be made available at the County EOC during an emergency incident.

- Oregon Public Works Emergency Response Cooperative Assistance Agreement. Oregon Department of Transportation, July 1998.

Appendices C and D of the RDMP contain Sample Mutual Aid Agreements, Contracts, and Scopes of Work. Appendix C of this Annex contains any sample Mutual Aid Agreements, Contracts, Scopes of Work, and legal agreements to limit liability that the County has prepared. Appendix C also contains a list of any pre-qualified contractors selected by the County and supplements Appendix D of the RDMP.

5.1 Temporary Debris Storage and Reduction Sites – List of Potential TDSR sites

Appendix A contains a list of potential TDSR sites that identifies their size, location, ownership, latitude and longitude (if available), and easting and northing (if available). Appendix B contains aerial photos of the potential TDSR sites.

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A

Benton CSA Tables

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GOVERNMENT AGENCY SOLID WASTE MANAGEMENT CONTACTS

Agency	Contact Persons/Title	Phone, Fax (F), Cell (C)
Benton County Emergency Services		541-766-6864 541-766-6052 (F)
553 NW Monroe Ave Corvallis, Oregon 97330	Diana Simpson, Sherriff Mary King, Emergency Services Manager Peggy Pierson, Emergency Services Coordinator	541-766-6054 541-766-6864 541-766-5569
Benton County Environmental Health Division		541-766-6841 541-766-6248 (F)
PO Box 579 530 NW 27 th St. Corvallis, Oregon 97339-0579	Bill Emminger, Environmental Health Director Gordon Brown, Sr. Environmental Health Specialist Rob Turkisher, Environmental Health Specialist	541-766-6842 541-740-7480 (C) 541-766-6170 541-207-6793 (C) 541-766-6169 541-602-0224 (C)
Benton County Public Works Department		541-766-6821 541-766-6891 (F)
360 SW Avery Avenue Corvallis, Oregon 97333	Roger Irvin, Public Works Director Laurie Starha, Road Maintenance Manager Kent Mahler, Road Maintenance Manager Jim Stouder, Road Maintenance Manager	541-766-6010 541-766-6002 541-766-6824 541-766-6017
City of Adair Village		541-745-5507 541-745-5530 (F)
6030 NE William R Carr St. Adair Village, Oregon 97330	Drew Foster, City Administrator Emergency Contacts Brian Helliwell Jeff Houchin	541-745-5507 541-409-3102 (C) 541-367-6938 541-409-3409 (C) 541-928-6599
City of Albany		541-917-7500
333 Broadalbin Street SW P.O. Box 490 Albany, OR 97321-0144	Wes Hare, City Manager	541-917-7501 541-917-7511 (F)
City of Albany Public Works	Diane Taniguchi-Dennis, Director Mike Wolski, Operations Manager	541-917-7665 541-917-7601
City of Corvallis		
PO Box 1083 501 SW Madison Avenue Corvallis, OR 97339-1083	Jon Nelson, City Manager	541-766-6901 541-766-6780 (F)
City of Corvallis Public Works	Steve Rogers, Director	541-766-6916 541-766-6920 (F)

PO Box 1083 1245 NE 3 rd Street Corvallis, OR 97339-1083	Adam Steele, Franchise Utility Specialist	541-766-1731
City of Monroe		
PO Box 486 664 Commercial Street Monroe OR 97456		541-847-5175 541-847-5177 (F)
City of Philomath		
PO Box 400 980 Applegate Street Philomath OR 97370	Randy Kugler, City Manager Ruth Post, City Recorder	541-929-6148 541-929-3044 (F)
City of Philomath Public Works PO Box 400 1515 Willow Lane Philomath OR 97370	Beau Vencill, Public Works Director	541-929-3579 541-929-3586 (F)
Linn County		
Linn County Environmental Health Division PO Box 100 300 SW 4 th Avenue, Rm 115 Albany OR 97321	Rick Partipilo, Environmental Health Director	541-967-3821 541-926-2060 (F)
Linn County Road Department 3010 Ferry Street SW Albany OR 97322	Darrin L. Lane, Roadmaster, Director Chuck Knoll, County Engineer Jim Ableman, Operations Manager	541-967-3919 541-924-0202 (F)
Lane County Public Works		
Waste Management Division 3100 E. 17th Ave. Eugene, OR 97403	Patti Hansen, Manager, Waste Management Division	541-682-3761 541-741-2842 (F)
Road Maintenance Section 3040 N Delta Hwy Eugene, OR 97408	Arno Nelson, Road Maintenance Manager	541-682 6901 541-682-8501 (F)
Polk County		
320 SW Ash Street Dallas OR 97338-2112		503-623-9287 503-623-0897 (F)
Environmental Health	Jim Solvedt, Environmental Health Supervisor	503-623-9237 503-623-6009 (F)
Public Works Department		503-623-9287 503-623-0897 (F)
Lincoln County		
880 NE 7th Street Newport, Oregon 97365		
Solid Waste District	Mark Saelens, District Manager Mary Cutting, Admin Assistant	541-574-1285 541-265-4171

		541-574-1295 (F)
Public Works Department	TO REPORT A ROAD EMERGENCY During Regular Business Hours 24 hr - LinCom	541-265-5747 541-574-1295 (F) 541-265-5747 541-265-4231 (F)
Other City Contacts:		
Other County Contacts:		
State Contacts:		
Western Region Department. of Environmental Quality		Phone:
1102 Lincoln St, Suite 210 Eugene OR 97401	Toll free in Oregon Brian Fuller Bob Barrows	800-844-8467 541-686-7838
750 Front St NE, Suite 120 Salem OR 97301-1039	Toll free in Oregon Cathie Davidson, Technical Assistant	800-349-7677 503-378-8240 503-378-5089 503-378-4196
Oregon State University	Brian Thorsness Brian.Thorsness@oregonstate.edu	541.737.7344

Power Company Information

A. Company	Phone Numbers	Service Areas
<p>Central Lincoln PUD 2129 North Coast Hwy Newport, OR 97365</p>	<p>541-265-3211</p> <p>1-866-484-3783 After hours or call 911</p>	<ul style="list-style-type: none"> - Lincoln County: Depoe Bay to Waldport, along coast. - Toledo & Siletz - South to Reedsport. <p>See map next page...</p>
<p>Consumer's Power Inc. PO Box 1180 6990 West Hills Rd. Philomath, OR 97370</p>	<p>1-800-872-9036 24-hour Customer Svc.</p> <p>541-929-3124 (press 1 for after hours emergencies)</p> <p>541-929-8673 Fax</p>	<ul style="list-style-type: none"> - Pedee - Kings Valley, - Monmouth Hwy. to Ohms Rd. - Portion of Bridgeport Rd. <p>See map next page....</p>
<p>Pacific Power 825 NE Multnomah Portland, OR 97232</p>	<p>1-888-221-7070 24-hour Customer Svc.</p> <p>1-877-548-3768</p> <p>Emergencies/Outage s</p>	<ul style="list-style-type: none"> - Monmouth - Falls City Kings Valley Hwy north of Airlie Rd. - Dallas - South Yamhill County. <p>See map next page...</p>

Regional Debris Management Plan

County-Specific Annex 1. Benton County

Benton County Potential TDSR Sites

Site	Size (acres)	Location	Ownership
Adair County Park and Aerodrome	26 and 16	Adair Village	Benton County
Corvallis Municipal Airport	236	South Corvallis	City of Corvallis
Corvallis Auction Yard	2	South Corvallis	McCoy Creek Properties LLC
Chapel Drive Mill Site	26	South Philomath	Andrew M. Martin/Martin Trust
Benton County Fairgrounds Parking Lot	5	West Corvallis	Benton County
99W	30	South Corvallis	Corvallis Industrial Park LLC
Kings Valley Mill Site	5	Kings Valley	EE Timber Company
Monroe Brick Factory	6	North Monroe	North Brick Estates LLC
Monroe Transfer Station	1	South Monroe	City of Monroe
Philomath Boulevard Mill Site	11	East Philomath	MHLIN LLC
Processing and Recovery Center	20	North of Adair Village near Coffin Butte Landfill	Valley Landfills, Inc.
Wren Mill Site	2	Wren	Hoskins Lumber Company

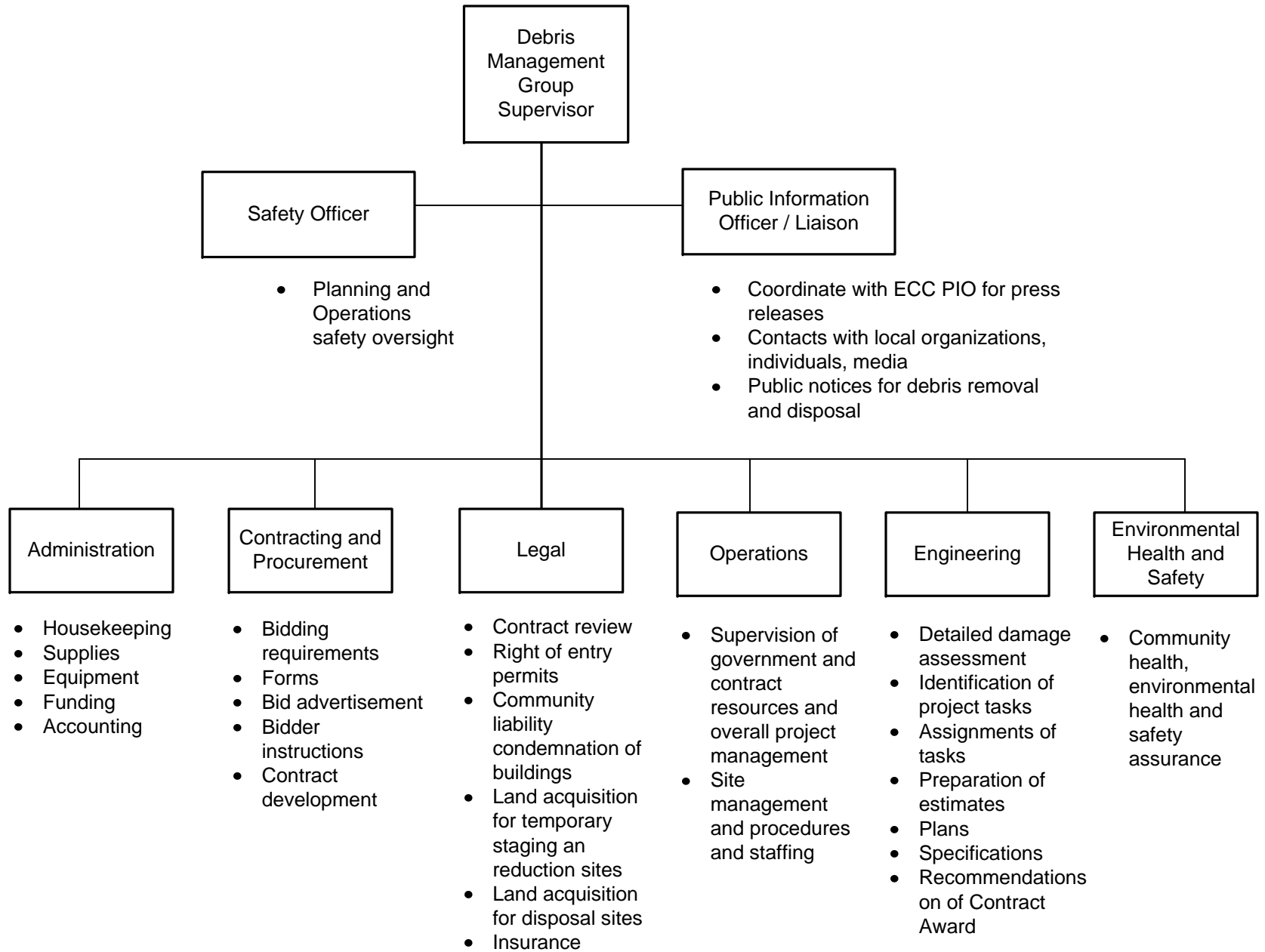
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Benton CSA Figures




















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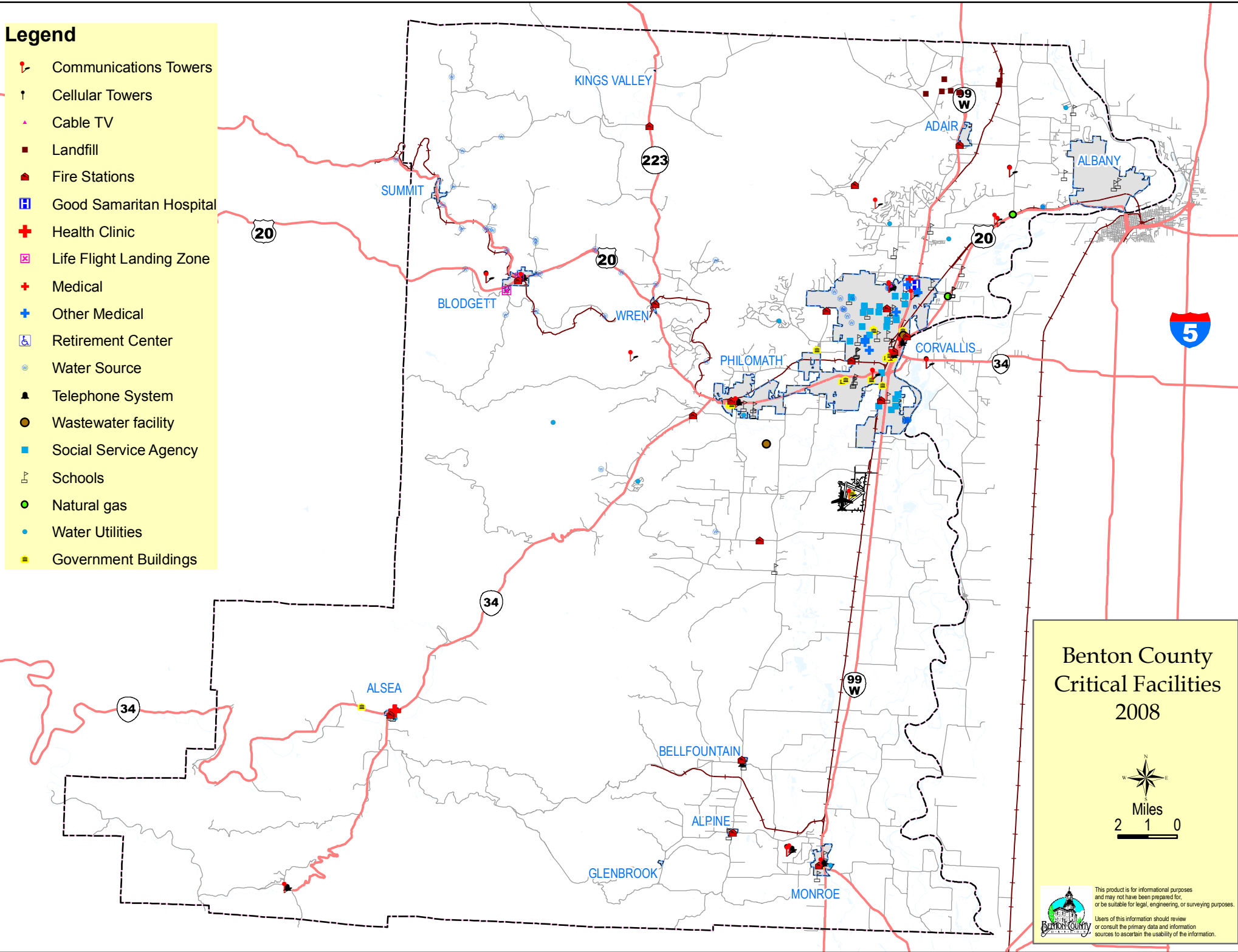
Benton County EOP Debris Management Annex



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Legend


-  Communications Towers
-  Cellular Towers
-  Cable TV
-  Landfill
-  Fire Stations
-  Good Samaritan Hospital
-  Health Clinic
-  Life Flight Landing Zone
-  Medical
-  Other Medical
-  Retirement Center
-  Water Source
-  Telephone System
-  Wastewater facility
-  Social Service Agency
-  Schools
-  Natural gas
-  Water Utilities
-  Government Buildings

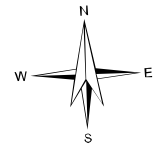
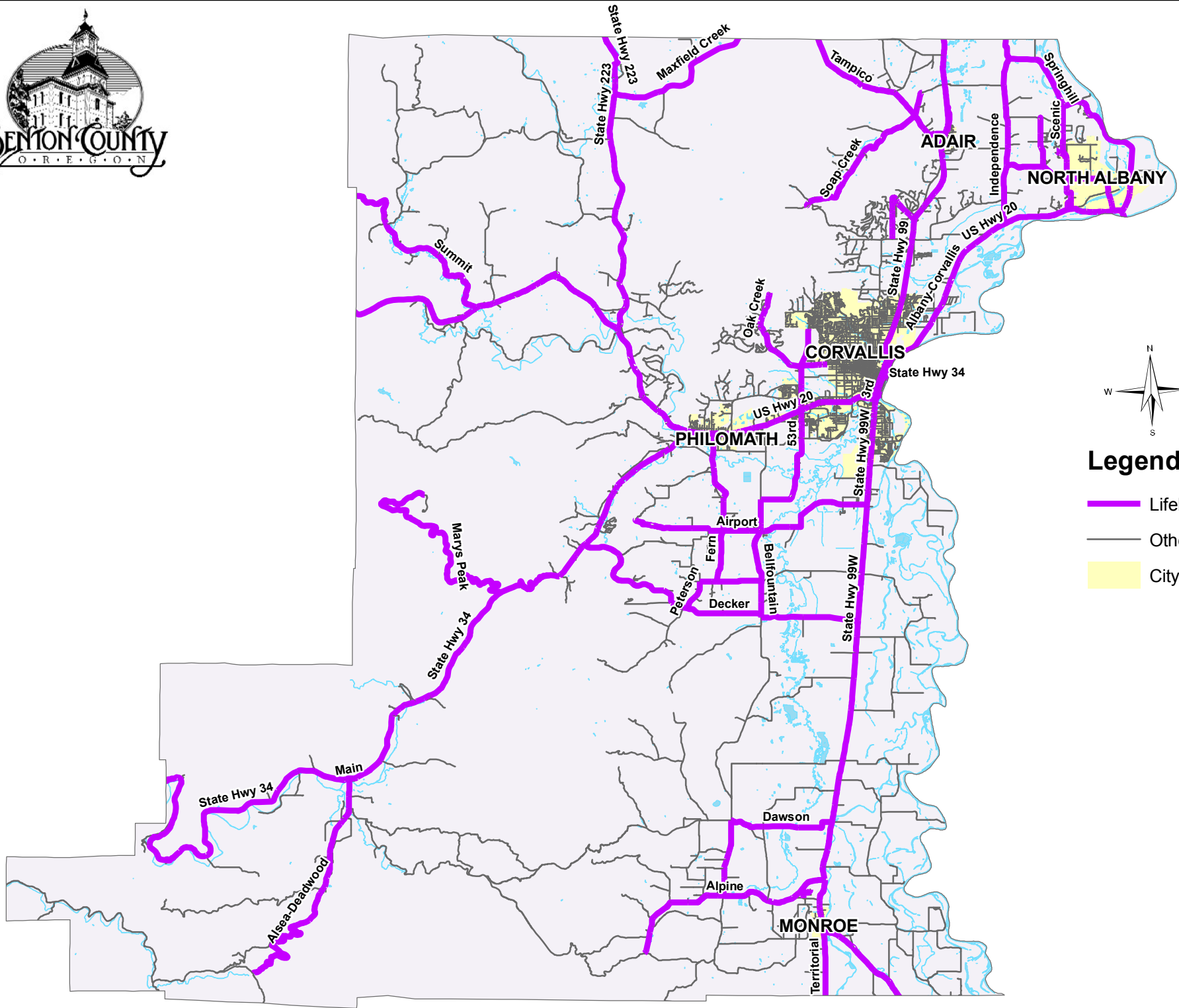


Benton County Critical Facilities 2008






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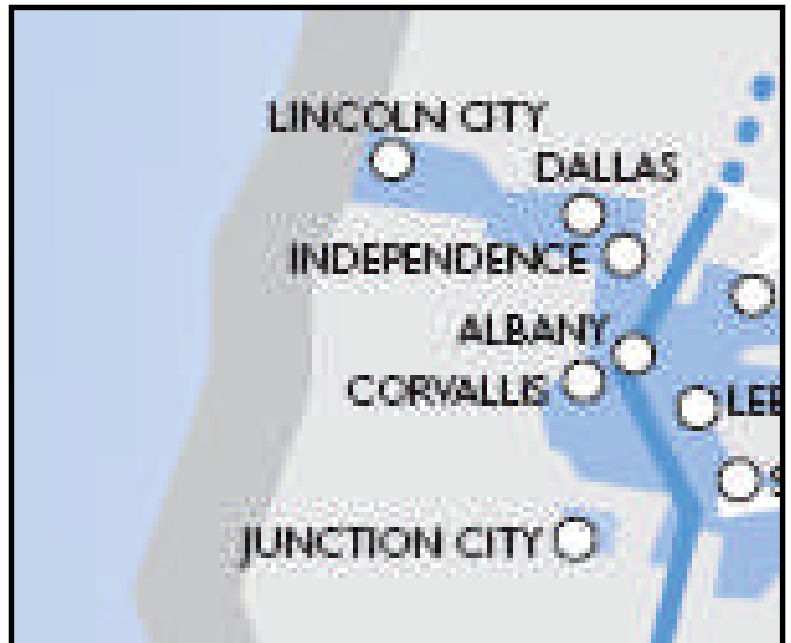
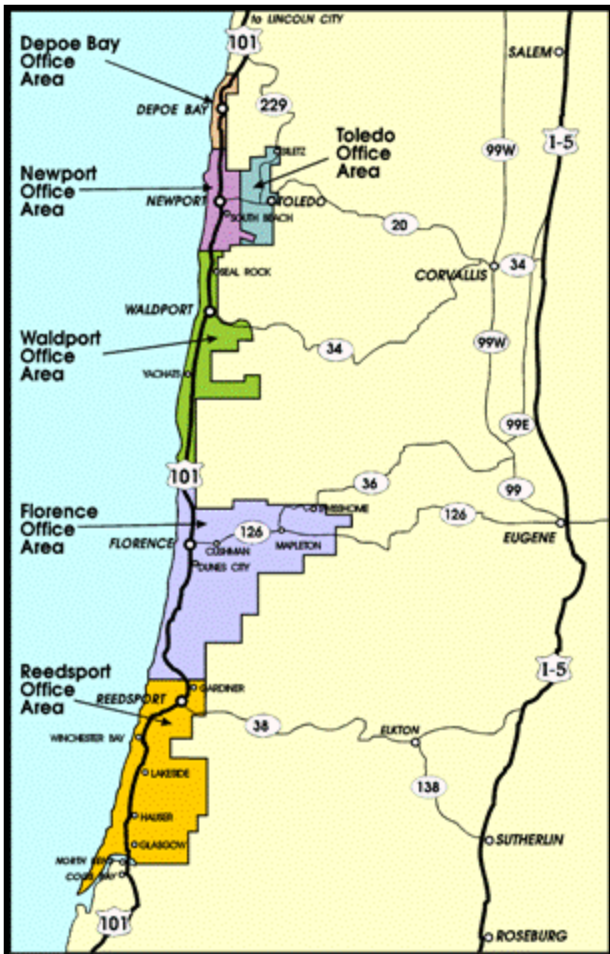
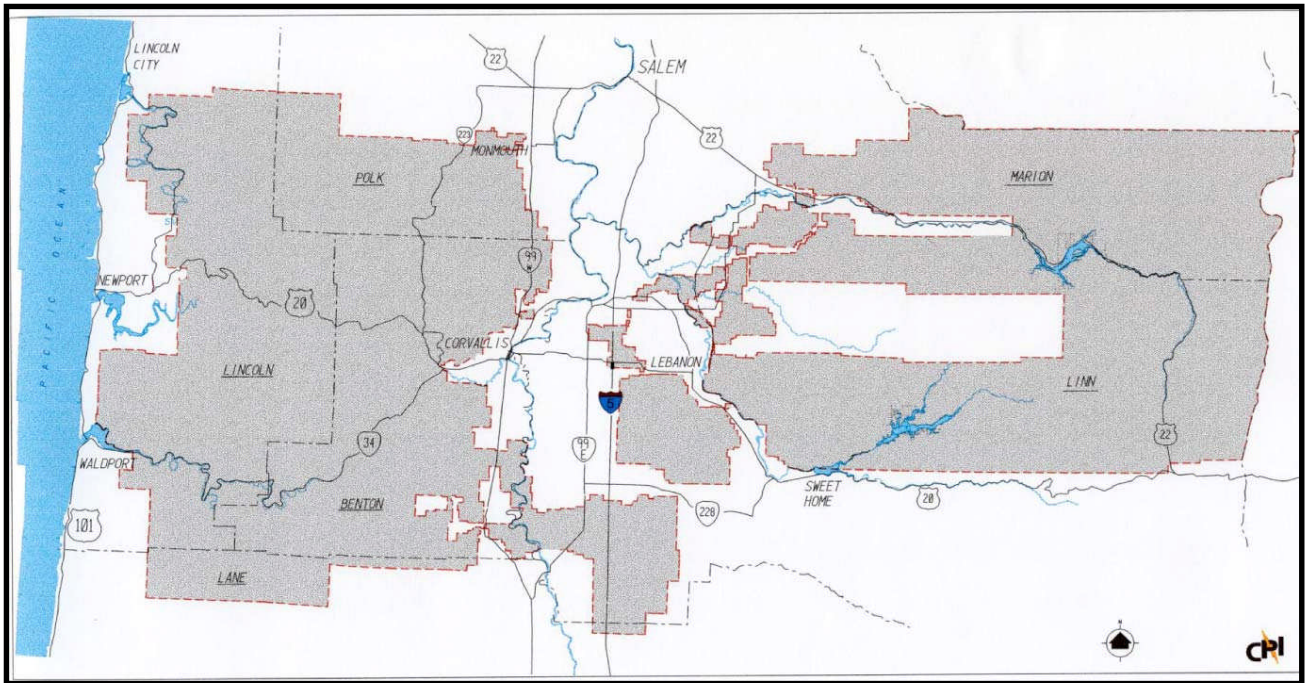




Legend

-  Lifeline
-  Other Streets
-  City Limits

Consumers Power Coverage Area



Central Lincoln PUD coverage area



Pacific Power Coverage Area ↑



Site: Adair County Park and Aerodrome
Ownership: Benton County
Approximate Size: 26 and 16 acres
Location: Adair Village



Site: Corvallis Municipal Airport
Ownership: City of Corvallis
Approximate Size: 236 acres
Location: South Corvallis



Site: Corvallis Auction Yard
Ownership: McCoy Creek Properties LLC
Approximate Size: 2 acres
Location: South Corvallis





Site: Benton County Fairgrounds
Parking Lot
Ownership: Benton County
Approximate Size: 5 acres
Location: West Corvallis



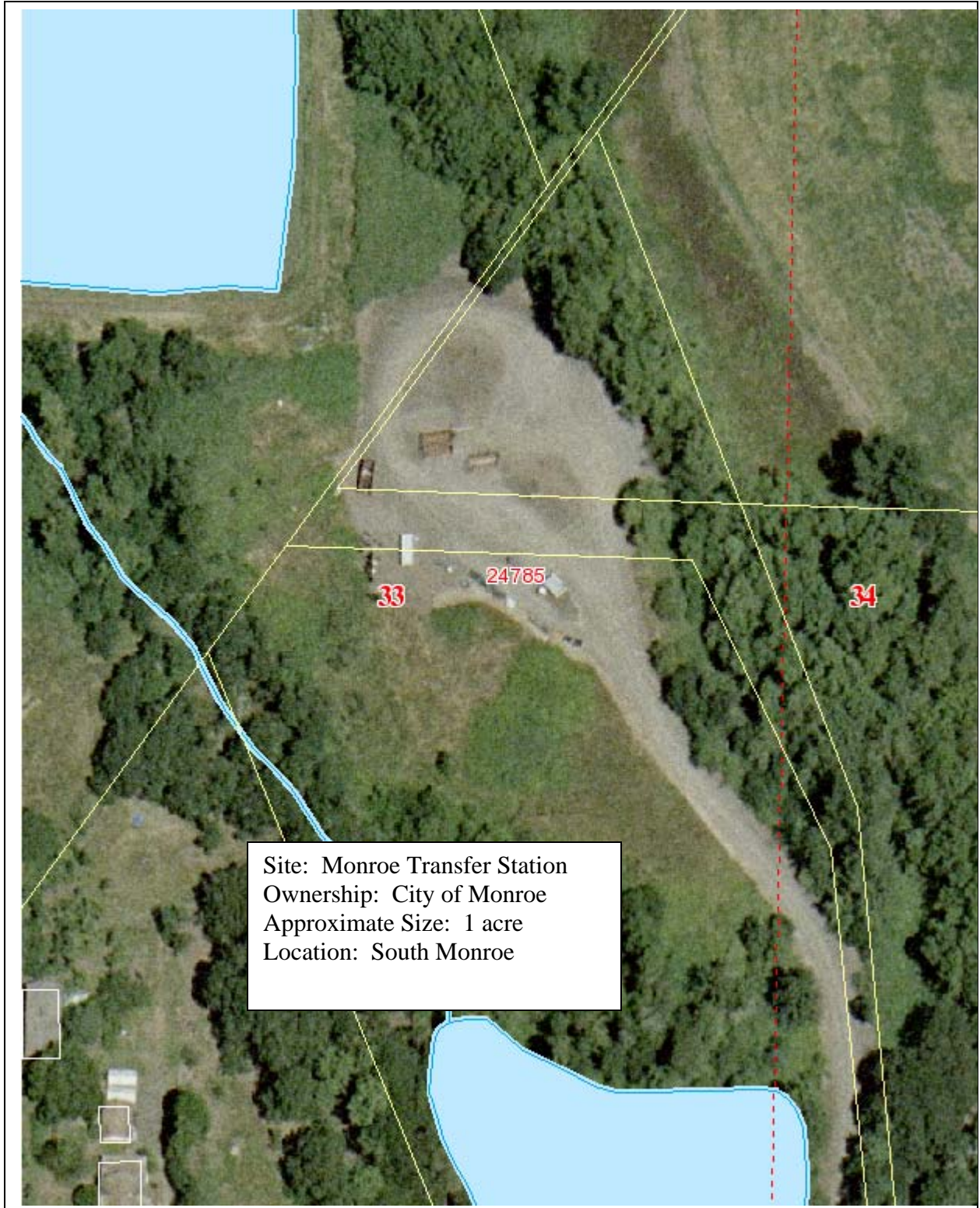
Site: 99W
Ownership: Corvallis Industrial Park LLC
Approximate Size: 30 acres
Location: South Corvallis



Site: Kings Valley Mill Site
Ownership: EE Timber Company
Approximate Size: 5 acres
Location: Kings Valley



Site: Monroe Brick Factory
Ownership: North Brick Estates LLC
Approximate Size: 6 acres
Location: North Monroe



Site: Monroe Transfer Station
Ownership: City of Monroe
Approximate Size: 1 acre
Location: South Monroe





Site: Processing and Recovery Center
Ownership: Valley Landfills, Inc.
Approximate Size: 20 acres
Location: North of Adair Village near Coffin Butte Landfill



Site: Wren Mill Site
Ownership: Hoskins Lumber Company
Approximate Size: 2 acres
Location: Wren



Benton CSA Contracts and Agreements

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License # _____

EMERGENCY APPLICATION FOR DEBRIS REMOVERS/CONSTRUCTION CONTRACTORS. FOR THOSE WITHOUT CURRENT CONTRACTS WITH BENTON COUNTY GOVERNMENT.

1. (a) Name and address of applicant (if a corporation or partnership, give home office address):

(b) If a partnership, list names and home addresses of all partners:

(c) If a corporation, list names and home addresses of all officers and directors:

2. Location (local address) of your business:

3. If you or any employee, partner, officer or director of your company has ever been convicted of any crime involving fraud, deceit, or dishonesty (whether in this State or in any other jurisdiction, list the crime and date of conviction):

4. List all licenses held by you or any employee, partner, officer, or director of your business which authorizes construction or repair work on buildings or structures, such as general contractors license, plumbing and heating contractors license, or electrical contractors license:

5. (a) Has any license of the type described in Question 4 ever been revoked, suspended, or refused to you, or any employee, partner, officer, or director of your business:

Yes No

(b) If yes, state the time, place, the State or local agency involved, and all other circumstances:

6. Any other information you wish to provide:

Are you bonded? _____

Workman's Comp? _____

Year business started? _____

I hereby certify the information on this application to be true and correct.

Signed _____ Date _____

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BENTON COUNTY

YEARLY MATERIALS/SERVICES CONTRACT

«Type_of_Contract»

This is an agreement by and between BENTON COUNTY, OREGON, a political subdivision of the State of Oregon, hereinafter called COUNTY, and, «Company», «Address1», «City», «St» «Zip», hereinafter called CONTRACTOR.

WHEREAS, COUNTY has need for the services of an individual with the particular training, ability, knowledge, and experience possessed by CONTRACTOR; and

WHEREAS, Benton County Code Chapter 2 excuses specified contracts from competitive bidding requirements provided specified findings are made and specified amounts are not exceeded; and

NOW, THEREFORE, in consideration of the mutual covenants contained herein the parties agree as follows:

1. TERM OF CONTRACT: This contract shall become effective upon signature and shall terminate on _____, 20____. No work shall be performed under this contract until it has been signed by all parties.

2. SERVICES TO BE PROVIDED: CONTRACTOR agrees and covenants with COUNTY that it will either furnish the materials as specified in Attachment A or perform and complete in a good and workmanlike manner the work specified in Attachment A, incorporated herein by this reference.

3. PAYMENT: COUNTY agrees to pay CONTRACTOR, in accordance with Attachment B, incorporated herein by this reference, up to a yearly limit of «Amt». Payment is to be made only upon acceptance of the work or materials by COUNTY. CONTRACTOR shall provide a copy of all invoices for materials and subcontractors, if any, for each project. COUNTY shall provide plans and/or specifications for each project where applicable.

4. ASSIGNMENT/DELEGATION: Neither party shall assign, sublet or transfer any interest in or duty under this agreement without the written consent of the other, and no assignment shall be of any force or effect whatsoever unless and until the other party has so consented.

5. STATUS OF CONTRACTOR: The parties intend that CONTRACTOR, in performing the services specified in this agreement, shall act as an independent contractor and shall have the control of the work and the manner in which it is performed. CONTRACTOR is not to be considered an agent or employee of the COUNTY and is not entitled to participate in any pension plan, insurance, bonus, or similar benefits COUNTY provides its employees.

CONTRACTOR will not be eligible for any federal social security, state worker's compensation, unemployment insurance, or Public Employees Retirement System benefits from this contract payment, except as a self-employed individual.

If this payment is to be charged against Federal funds, CONTRACTOR certifies that he is not currently employed by the Federal government and the amount charged does not exceed his normal charge for the type of service provided.

If this contract is subject to the prevailing wage rate law, CONTRACTOR shall file a \$30,000 Public Works Bond with the Construction Contractor's Board to be used exclusively for unpaid wages determined to be due by BOLI. CONTRACTOR shall verify Public Works Bond filing for any subcontractors prior to starting work on the project.

COUNTY will report the total amount of all payments to CONTRACTOR, including any expenses, in accordance with Federal Internal Revenue Service and State of Oregon Department of Revenue regulations. CONTRACTOR shall be responsible for any Federal or State taxes applicable to amounts paid under this contract.

6. INDEMNIFICATION: COUNTY has relied upon the professional ability and training of CONTRACTOR as a material inducement to enter into this agreement. CONTRACTOR warrants that all its work will be performed in accordance with generally accepted professional practices and standards as well as the requirements of applicable federal, state, and local laws, it being understood that acceptance of CONTRACTOR's work by COUNTY shall not operate as a waiver or release.

The CONTRACTOR shall hold harmless, indemnify, and defend Benton County, its officers, agents, and employees from any and all liability, actions, claims, losses, damages or other costs including attorney's fees and witness costs (at both trial and appeal level, whether or not a trial or appeal ever takes place) that may be asserted by any person or entity arising from, during or in connection with the performance of the work described in this contract, except liability arising out of the sole negligence of the County and its employees. Such indemnification shall also cover claims brought against Benton County under state or federal workers compensation laws. If any aspect of this indemnity shall be found to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity of the remainder of this indemnification.

7. INSURANCE: The CONTRACTOR and any subcontractors shall maintain insurance acceptable to the COUNTY (Attachment C) in full force and effect throughout the term of this contract.

If CONTRACTOR employs one or more workers as defined in ORS 656.027 and such workers are subject to the provisions of ORS Chapter 656, CONTRACTOR shall maintain currently valid worker's compensation insurance covering all such workers. CONTRACTOR shall maintain this insurance throughout the period of this contract.

8. METHOD AND PLACE OF GIVING NOTICE, SUBMITTING BILLS, AND MAKING PAYMENTS: All notices, bills and payments shall be made in writing and may be given by personal delivery or by mail. Notices, bills, and payments sent by mail should be addressed as follows:

THE COUNTY: Benton County Public Works
360 SW Avery Avenue
Corvallis OR 97333

CONTRACTOR: «Company»
 «Address 1»
 «City», «St» «Zip»

and when so addressed, shall be deemed given upon deposit in the United States Mail, postage prepaid. In all other instances, notices, bills, and payments shall be deemed given at the time of actual delivery. Changes may be made in the names and addresses of the person to whom notices, bills, and payments are to be given by giving notice pursuant to this paragraph.

9. MERGER: This writing is intended both as the final expression of the agreement between the parties with respect to the included terms and as a complete and exclusive statement of the terms of the agreement. No modification of this agreement shall be effective unless and until it is made in writing and signed by both parties.

10. TERMINATION WITHOUT CAUSE: At any time and without cause, the COUNTY shall have the right in its sole discretion, to terminate this agreement by giving written notice to CONTRACTOR. If the COUNTY terminates the contract pursuant to this paragraph, it shall pay CONTRACTOR for services rendered to the date of termination.

11. TERMINATION WITH CAUSE: If CONTRACTOR fails to perform any of its obligations under this contract, within the time and in the manner provided, or otherwise violates any of the terms of this agreement, COUNTY may terminate the agreement by giving CONTRACTOR written notice stating the reason for the termination. If COUNTY terminates pursuant to this paragraph, CONTRACTOR shall be entitled to receive as full payment for all services satisfactorily rendered and expenses incurred, an amount which bears the same ratio to the total fees specified in the agreement as the services satisfactorily rendered by CONTRACTOR bear to the total services otherwise required to be performed for such total fee; provided, that there shall be deducted from such amount the amount of damage, if any, sustained by COUNTY due to the breach of the agreement by CONTRACTOR.

12. OWNERSHIP OF WORK PRODUCT: COUNTY shall be the owner of and shall be entitled to possession of any computations, plans, correspondence, or other pertinent data and information gathered by or computed by CONTRACTOR prior to termination of this agreement by CONTRACTOR or upon completion of the work pursuant to this agreement.

13. NONDISCRIMINATION: CONTRACTOR shall comply with all applicable federal, state and local laws, rules, and regulations on nondiscrimination in employment because of race, color, ancestry, national origin, religion, sex, marital status, age, medical condition, disability, sexual orientation, gender identity or source of income.

CONTRACTOR shall comply with the Americans with Disabilities Act of 1990 (Pub. Law No. 101-336), ORS 30.670 to ORS 30.685, ORS 659A.142, ORS 659A.145, and all regulations and administrative rules established pursuant to those laws, in the construction, remodeling, maintenance and operation of any structures and facilities, and in the conduct of all programs, services, training, educational or otherwise, conducted by CONTRACTOR.

14. EXTRA (CHANGED) WORK: Only the Board of Commissioners, or authorized Department Head may authorize extra (and/or changed) work. The parties expressly recognize that COUNTY personnel are not authorized to either order extra work (and/or changed) work or waive contract requirements. Failure of the CONTRACTOR to secure Board authorization for extra work shall constitute a waiver of any and all right to adjustment in the contract price or contract time due to such unauthorized extra work and the CONTRACTOR thereafter shall be entitled to no compensation whatsoever for the performance of such work.

CONTRACTOR further expressly waives any and all right or remedy by way of restitution and quantum meruit for any and all extra work performed by CONTRACTOR without the express and prior written authorization of the Board of Commissioners.

15. CONFLICT OF INTEREST: CONTRACTOR covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its services. The CONTRACTOR further covenants that in the performance of this contract no person having any such interest shall be employed.

16. AUDIT: CONTRACTOR shall maintain records to assure conformance with the terms and conditions of this agreement, and to assure adequate performance and accurate expenditures within the contract period. CONTRACTOR agrees to permit Benton County, the State of Oregon, the federal government, or their duly authorized representatives to audit all records pertaining to this agreement to assure the accurate expenditure of funds. Any independent audit report of CONTRACTOR's activities or finances prepared for CONTRACTOR shall be submitted to the Benton County Board of Commissioners.

17. CONTRACTOR shall abide by the provisions of ORS chapters 279A, B and C, incorporated by this reference. It is expressly understood that this contract in all things shall be governed by the laws of the State of Oregon.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed in two (2) duplicate originals, either as individuals, or by their officers, thereunto duly authorized.

CONTRACTOR

BENTON COUNTY

Signature

Roger Irvin, Public Works Director

Date: _____

Date: _____

Employer ID Number
or SS Number

Approved as to form:

County Counsel

AFFIDAVIT

CONTRACTOR declares that it does not currently employ, and will not employ any individuals for work under this contract during the term this contract is in force. (Sign if you are exempt from workers comp insurance.)

Principal

Date: _____

ATTACHMENT C
INSURANCE REQUIREMENTS

The CONTRACTOR and its subcontractors shall maintain insurance acceptable to the COUNTY in full force and effect throughout the term of this contract.

It is agreed that any insurance maintained by COUNTY shall apply in excess of, and not contribute with, insurance provided by CONTRACTOR. The policy or policies of insurance maintained by the CONTRACTOR and its subcontractors shall provide at least the following limits and coverages.

TYPE OF INSURANCE	LIMITS OF LIABILITY	
<u>X</u> <u>General Liability</u>	Each Occurrence	\$500,000
	General Aggregate	\$500,000
	Products/Comp Ops Aggregate	\$500,000
	Personal and Advert. Inj.	\$500,000
Please indicate if Claims Made or Occurrence		
<u>X</u> <u>Automobile Liability</u>	Combined Single covering any vehicle used on County business	\$500,000
	OR	
	Bodily Injury:	
	Per person	\$200,000
	Per occurrence	\$500,000
	Property Damage:	
	Per occurrence	\$ 50,000
<u>X</u> <u>Worker's Compensation</u>		Per Oregon State Statutes
<u> </u> <u>Professional Liability</u>	Per occurrence	\$500,000
	Annual aggregate	\$500,000
<u> </u> <u>Property of Others in Transit</u>	Per occurrence	\$250,000

CONTRACTOR'S general liability and automobile insurance must be evidenced by certificates from the insurers. The policies shall name Benton County, its officers, agents and employees as additional insureds and shall provide Benton County with a 30 day notice of cancellation.

Worker's compensation insurance must be evidenced by a certificate from the insurer. The certificate need not name Benton County as an additional insured, but must list Benton County as a certificate holder and provide a 30 day notice of cancellation to Benton County.

Certificates of Insurance shall be forwarded to:

Benton County Public Works
360 SW Avery Avenue
Corvallis OR 97333

CONTRACTOR agrees to deposit with the COUNTY, at the time s/he returns the executed contract, Certificates of Insurance or Binders of Insurance if the policy is new or has expired, sufficient to satisfy the COUNTY that the insurance provisions of this contract have been complied with and to keep such insurance in effect and the certificates and/or binders thereof on deposit with the COUNTY during the entire term of this contract. Such certificates and/or binders must be delivered prior to commencement of the work.

The procuring of such required insurance shall not be construed to limit CONTRACTOR'S liability hereunder. Notwithstanding said insurance, CONTRACTOR shall be obligated for the total amount of any damage, injury or loss caused by negligence or neglect connected with this contract.

YEARLY MATERIALS SERVICES CONTRACT DATA SOURCE

for Yearly Materials Services Contracts

No.	Company	Address1	City	St.	Zip	Type of Contract	Amt.
1.	A & G Washburn, Inc.	2376 Park View Drive	Eugene	OR	97408	Seed & Mulch	\$75,000
2.	Aggregate Conveyed Trucking, Inc.	PO Box 1191	Corvallis	OR	97339	Trucking	\$75,000
3.	Agricultural Drainage Corporation	PO Box 235	Tangent	OR	97389	Grading/Underground/Trucking	\$75,000
4.	Albany Road and Driveway Inc. Attn: Shorty Lindberg	4484 Pacific Blvd. SW	Albany	OR	97321	Trucking	\$75,000
5.	Albany/Lebanon Sanitation	1214 Montgomery SE	Albany	OR	97321	Sweeping	\$75,000
6.	Albin's Plumbing Inc.	942 NW 9th St.	Corvallis	OR	97330	Plumbing	\$75,000
7.	Torgerson Forest Products Inc.	16055 SW Walker Road PMB 448	Beaverton	OR	97006	Bridge Timbers	\$75,000
8.	Armadillo Underground Inc.	3840 Boone Rd. S.E.	Salem	OR	97301	Underground Utilities	\$75,000
9.	Auto Additions Attn: John Moore	4775 Portland Road NE	Salem	OR	97305	Emergency Vehicle Setup	\$75,000
10.	Axis Crane Attn: Tyler Mayfield	4616 25th Avenue NE #340	Seattle	WA	98105	Crane	\$75,000
11.	B & L Paving	22780 Alsea Highway	Philomath	OR	97340	Trucking	\$75,000
12.	B & R Body and Paint Shop	3065 SE 3rd Street	Corvallis	OR	97333	Auto Body Repair and Paint	\$75,000
14.	Beggs Tire and Wheel	PO Box 747	Corvallis	OR	97339	Tires	\$75,000
15.	Buena Vista Arbor Care Co.	6635 Prather Road	Buena Vista	OR	97351	Trees	\$75,000
16.	C-2 Utility Contractors	33005 Roberts CT	Coburg	OR	97408	Underground Utilities	\$75,000
18.	Chuck's Concrete Pumping Inc.	33245 Highway 99E	Tangent	OR	97389	Concrete Pumping	\$75,000
19.	Columbia Concrete Sawing Company	5462 SW Philomath Blvd.	Corvallis	OR	97333	Concrete	\$75,000
20.	Coral Sales	PO Box 22385	Portland	OR	97269	Guardrail/Bridge	\$75,000

YEARLY MATERIALS SERVICES CONTRACT DATA SOURCE

for Yearly Materials Services Contracts

						Timbers	
21.	Corvallis Disposal	110 NE Walnut Blvd.	Corvallis	OR	97330	Debris Removal	\$75,000
22.	Cutaway Inc. Attn: Larry LeBlanc	27407 Writsman Creek Road	Corvallis	OR	97330	Mowing	\$75,000
23.	David Evans & Associates, Inc.	1128 NE 2nd St.	Corvallis	OR	97330	Survey	\$75,000
24.	Devco Engineering, Inc.	PO Box 1211	Corvallis	OR	97339	Engineering and Survey	\$75,000
25.	Double Eagle Construction, Inc.	25492 SW Airport	Corvallis	OR	97333	Concrete	\$75,000
26.	E.D. Hughes Excavating, Inc.	PO Box 1258	Philomath	OR	97370	Underground	\$75,000
27.	EIS Inc.	8486 Amanda Way SE	Salem	OR	97301	Engineering	\$75,000
28.	FEI Testing and Inspection, Inc.	750 NW Cornell Avenue	Corvallis	OR	97330	Engineering	\$75,000
29.	Finstad Heating & Sheet Metal	2940 SW 3rd	Corvallis	OR	97333	Mechanical	\$75,000
30.	Forslund Crane Service, Inc.	3001 SW Ferry Street	Albany	OR	97322	Crane	\$75,000
31.	Forster and Co. Sweeping, LLC	PO Box 830	Lebanon	OR	97355	Sweeping	\$75,000
32.	Foundation Engineering	820 NW Cornell Avenue	Corvallis	OR	97330-4517	Engineering	\$75,000
33.	Freebird Body and Paint	29136 Highway 34	Corvallis	OR	97333	Auto Body Repair and Paint	\$75,000
34.	G-3 Construction Inc.	924 NE Thousand Oaks Drive	Corvallis	OR	97330-9413	Grading/Underground/Trucking	\$75,000
35.	Gelco Construction	1745 Salem Industrial Drive	Salem	OR	97303	Concrete	\$75,000
36.	GMT DBA Conser Quarry Company	27387 Ferguson Road	Junction City	OR	97448	Trucking	\$75,000
37.	Green & White Rock Products Inc.	PO Box 886	Corvallis	OR	97339	Concrete	\$75,000
38.	Gresham Transfer Inc.	PO Box 699	Fairview	OR	97024	Oversized Load Hauling	\$75,000
39.	Hanson Tire Inc.	906 Old Salem Road	Albany	OR	97321	Tires	\$75,000
40.	Holderman Paving LLC	30844 Ehlen Drive	Albany	OR	97321	Grading/Underground/Trucking	\$75,000
41.	J.H. Baxter	PO Box 10797	Eugene	OR	97440	Bridge Timbers	\$75,000
42.	J.R. Hendrix Inc.	PO Box 23	Alesea	OR	97324	Grading/Underground/Trucking	\$75,000

YEARLY MATERIALS SERVICES CONTRACT DATA SOURCE

for Yearly Materials Services Contracts

43.	Judsons Plumbing	939 NW Circle Blvd.	Corvallis	OR	97330	Plumbing	\$75,000
44.	L & M Welding	31975 Rolland Drive	Tangent	OR	97389	Fabrication	\$75,000
45.	Les Schwab Tires	2220 SW 3rd Street	Corvallis	OR	97333	Tires	\$75,000
46.	Limbwalker	PO Box 3004-268	Corvallis	OR	97339	Trees	\$75,000
47.	M & W Electric Inc.	29889 Hwy. 34 SW	Albany	OR	97321	Electrical	\$75,000
48.	Menasha Corporation	PO Box 588	North Bend	OR	97459	Survey	\$75,000
50.	Middleton Heating & Sheet Metal	610 SW Washington	Corvallis	OR	97333	Mechanical	\$75,000
51.	Mid-Pacific Enterprises Inc.	33965 Highway 99-E	Tangent	OR	97389	Trucking	\$75,000
52.	Mid-Valley Gravel Co.	PO Box 1089	Philomath	OR	97370	Trucking	\$75,000
53.	Midway Plumbing Inc.	2428 Three Lakes Road SE	Albany	OR	97321	Plumbing	\$75,000
54.	Mike Doolittle DBA Logs to Lumber	34473 Mountain View Place NE	Albany	OR	97321	Trees	\$75,000
55.	Miller Timber Services	PO Box 638	Philomath	OR	97370	Trees	\$75,000
56.	More Logs	39975 McDowell Creek	Lebanon	OR	97355	Trucking	\$75,000
57.	Knife River	32260 Old Hwy. 34	Tangent	OR	97389	Trucking	\$75,000
58.	Northstar Surveying Inc.	720 NW 4th St.	Corvallis	OR	97330	Survey	\$75,000
59.	Northwest Fire Fighters, Inc. (NWFF)	PO Box 188	Philomath	OR	97370	Hazard Waste	\$75,000
60.	Northwest Metal Fab & Pipe Inc.	6720 SW Frogpond Lane	Wilsonville	OR	97070	Equipment	\$75,000
61.	Oldham Crane Service Inc.	3330 Franklin Blvd.	Eugene	OR	97403	Crane	\$75,000
62.	Oregon Bridge Engineering Consultants	920 Country Club Road Suite 100B	Eugene	OR	97401	Bridge Engineering	\$75,000
63.	Penetrations, Inc.	PO Box 460	Turner	OR	97392	Concrete	\$75,000
64.	Portland General Electric	121 SW Salmon Street, 1 WTC0704	Portland	OR	97204	Electrical	\$75,000
65.	Professional Service Industries, Inc.	1040 A Shelley Street	Springfield	OR	97477	Testing	\$75,000

YEARLY MATERIALS SERVICES CONTRACT DATA SOURCE

for Yearly Materials Services Contracts

Attn: David							
66.	R.M. Sutherland	29595 Bellfountain Road	Corvallis	OR	97333	Concrete/Carpen try	\$75,000
67.	Rick Franklin Corp.	PO Box 365	Lebanon	OR	97355	Trucking	\$75,000
68.	Roger Langeliers Construction Company	32929 Roberts Court	Coburg	OR	97408	Concrete	\$75,000
69.	Solid Ground Electric	517 N. 19th Street	Philomath	OR	97370	Electrical	\$75,000
70.	Springer Surveying	37056 Moss Rock Drive	Corvallis	OR	97330	Survey	\$75,000
71.	Stephens Heating & Air Conditioning	1920 SW Third Street	Corvallis	OR	97333	Mechanical	\$75,000
72.	T. C. Lankford, Inc.	6560 NW Mt. View Drive	Corvallis	OR	97330	Underground Utilities	\$75,000
73.	The Bark Place	6725 Philomath Blvd.	Corvallis	OR	97333		\$75,000
74.	Thermo Fluids, Inc.	6400 SE 101st Avenue	Portland	OR	97266	Hazard Waste	\$75,000
75.	Tom Cat Construction	PO Box 1301	Albany	OR	97321	Trucking	\$75,000
76.	Trico Electric	857 SW Western Blvd.	Corvallis	OR	97333	Electrical	\$75,000
77.	URS Corporation Attention: Scott Craig	111 SW Columbia Street STE 900	Portland	OR	97201-5841	Engineering	\$75,000
78.	US Crane and Hoist Inc.	29375 SW Kingsman Rd.	Wilsonville	OR	97070	Crane and Hoist	\$75,000
79.	Voorhees Wood	PO Box 2184	Eugene	OR	97402	Bridge Timbers	\$75,000
80.	Wagener Inc. Attn: Loren Wagener	252 East Queen	Albany	OR	97322	Underground	\$75,000
81.	Western Farm Service	32092 Highway 34	Tangent	OR	97389	Road Stabilization	\$75,000
82.	Wet Inc. Attn: Scott Craig	PO Box 632	Corvallis	OR	97339-0632	Engineering	\$75,000
84.	Online Electric	PO Box 517	Monmouth	OR	97361	Electric	\$75,000
85.	Brattain International Trucks	PO Box 11287	Portland	OR	97211	Auto Body Repair and Paint	\$75,000
86.	Jim Schrock	PO Box 2096	Corvallis	OR	97339	Grading,	\$75,000

YEARLY MATERIALS SERVICES CONTRACT DATA SOURCE

for Yearly Materials Services Contracts

	Construction Company					Underground and Trucking	
87.	Patrick S. Thompson Consulting	PO Box 1240	Marcola	OR	97454	Environmental Services	\$75,000
88.	Applied Technology and Consultants dba The Acker Group LLC	38863 Scrael Hill Road	Albany	OR	97322	Environmental Services	\$75,000
89.	Pacific Wildlife Research	37112 Moss Rock Drive	Corvallis	OR	97330	Environmental Services	\$75,000
90.	Environmental Associates Inc.	460 SW Madison Avenue Suite 13	Corvallis	OR	97333	Environmental Services	\$75,000
91.	Cascade Earth Sciences	7150 Supra Drive SW	Albany	OR	97321	Environmental Services	\$75,000
92.	Complete Wireless Solutions	1245 Washington St. SW	Albany	OR	97321	Communication	\$75,000
93	Adolfson Associates, Inc.	5309 Shilshole Ave. NW Ste 200	Seattle	WA	98107	Engineering	\$75,000
94	Institute for Applied Ecology Attn: Tom Kaye	563 SW Jefferson Avenue	Corvallis	OR	97333	Environmental Services	\$75,000
95	R-J Consulting	2378 NW Holly Place	Albany	OR	97321	Vegetation Control	\$75,000
96	Edaphic Consulting	PO Box 50691	Eugene	OR	97405	Engineering	\$75,000
97	Precision Aggregate Products	95700 Territorial Road	Monroe	OR	97456-9504	Trucking	\$75,000
98	Otto Pipe	PO Box 589	Scio	OR	97374	Underground	\$75,000
99	Professional Flagging Company	PO Box 2738«Address1»	Albany	OR	97321	Flagging	\$75,000
100.	Excel Painting and Pressure Washing	PO Box 1014	Philomath	OR	97370	Painting and Pressure Spray Washing	\$75,000
101.	Ross Crane Rental	PO Box 9021	Brooks	OR	97305	Crane	\$75,000
102.	Pavement Services Inc.	541 NE 20th Avenue, Suite 107	Portland	OR	97071	Pavement Design	\$75,000
103.	Capitol Asset & Pavement Services Inc.	PO Box 7840	Salem	OR	97303	Engineering	\$75,000
104.	Pacific Autobody & Paint	357 11th Avenue SE	Albany	OR	97321	Auto Body Repair and Paint	\$75,000
105.	On Track Spray	1840 SW 53rd	Corvallis	OR	97333	Trees	\$75,000

YEARLY MATERIALS SERVICES CONTRACT DATA SOURCE

for Yearly Materials Services Contracts

	Service	Street					
106.	Strata Forestry, Inc.	100 West Q Street	Springfield	OR	97477	Vegetation Control	\$75,000
107.	Tim Brewer Tree and Stump Service	4720 SW Nash Avenue	Corvallis	OR	97333	Trees	\$75,000
108.	Jackson Luck Enterprises	Jeff Jackson	Corvallis	OR	97330	Trucking	\$75,000
109.	Vyanet Security and Technology	6286 Fernhill Loop	Springfield	OR	97458	Electric	\$75,000

BENTON COUNTY

PERSONAL SERVICES CONTRACT

This is an agreement by and between BENTON COUNTY, OREGON, a political subdivision of the State of Oregon, hereinafter called COUNTY, and _____, hereinafter called CONTRACTOR.

WHEREAS, COUNTY has need for the services of an individual with the particular training, ability, knowledge, and experience possessed by CONTRACTOR,

NOW, THEREFORE, in consideration of the mutual covenants contained herein the parties agree as follows:

1. TERM OF CONTRACT: This contract shall become effective upon signature, and shall terminate on _____, 20__.
2. SERVICES TO BE PROVIDED: (description of services)
3. PAYMENT: (\$_____ per hour, not to exceed \$_____.) or (\$_____, to be paid upon completion of the services contemplated by this contract.)

4. ASSIGNMENT/DELEGATION: Neither party shall assign, subcontract or transfer any interest in or duty under this agreement without the prior written consent of the other, and no assignment shall be of any force or effect whatsoever unless and until the other party has so consented.

5. STATUS OF CONTRACTOR: The parties intend that CONTRACTOR, in performing the services specified in this agreement, shall act as an independent contractor. Although COUNTY reserves the right to (i) determine and modify the delivery schedule for work to be performed and (ii) evaluate the quality of the completed performance, only CONTRACTOR shall have the control of the work and the manner in which it is performed. CONTRACTOR is not to be considered an agent or employee of the COUNTY and is not entitled to participate in any pension plan, insurance, bonus, or similar benefits COUNTY provides its employees.

CONTRACTOR will not be eligible for any federal social security, state workers' compensation, unemployment insurance, or Public Employees Retirement System benefits from amounts paid under this contract, except as a self-employed individual.

If this payment is to be charged against Federal funds, CONTRACTOR certifies that it is not currently employed by the Federal government and the amount charged does not exceed its normal charge for the type of service provided.

COUNTY will report the total amount of all payments to CONTRACTOR, including any expenses, in accordance with Federal Internal Revenue Service and State of Oregon Department of Revenue regulations. CONTRACTOR shall be responsible for any Federal or State taxes applicable to amounts paid under this contract.

6. WARRANTY: COUNTY has relied upon representations by CONTRACTOR regarding its professional ability and training as a material inducement to enter into this contract. CONTRACTOR represents and warrants that all its work will be performed in accordance with generally accepted professional practices and standards as well as the requirements of applicable federal, state, and local laws, it being understood that acceptance of CONTRACTOR's work by COUNTY shall not operate as a waiver or release of such warranty.

7. INDEMNIFICATION. CONTRACTOR shall hold harmless, indemnify, and defend COUNTY, its officers, agents, and employees from any and all liability, actions, claims, losses, damages or other costs including attorney's fees and witness costs (at both trial and appeal level, whether or not a trial or appeal ever takes place) that may be asserted by any person or entity arising from, during or in connection with the performance of the work described in this contract, except liability arising out of the sole negligence of the COUNTY and its employees. Such indemnification shall also cover claims brought against COUNTY under state or federal workers' compensation laws. If any aspect of this indemnity or the above warranty shall be found to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity of the remainder of this indemnification or the above warranty.

8. INSURANCE: CONTRACTOR and any subcontractors shall maintain insurance acceptable to the COUNTY as provided in Attachment A. Such insurance shall remain in full force and effect throughout the term of this contract.

If CONTRACTOR employs one or more workers as defined in ORS 656.027 and such workers are subject to the provisions of ORS Chapter 656, CONTRACTOR shall maintain currently valid workers' compensation insurance covering all such workers during the entire period of this contract.

9. METHOD AND PLACE OF GIVING NOTICE, SUBMITTING BILLS, AND MAKING PAYMENTS: All notices, bills and payments shall be made in writing and may be given by personal delivery or by mail. Notices, bills, and payments sent by mail should be addressed as follows:

COUNTY:

CONTRACTOR:

and when so addressed, shall be deemed given upon deposit in the United States Mail, postage prepaid. In all other instances, notices, bills, and payments shall be deemed given at the time of actual delivery. Changes may be made in the names and addresses of the person to whom notices, bills, and payments are to be given by giving notice pursuant to this paragraph.

10. TERMINATION: At any time, with or without cause, COUNTY, in its sole discretion shall have the absolute right to terminate this agreement by giving

written notice to CONTRACTOR. If COUNTY terminates pursuant to this paragraph, CONTRACTOR shall be entitled to receive as full payment for all services satisfactorily rendered and expenses incurred, an amount which bears the same ratio to the total fees specified in the agreement as the services satisfactorily rendered by CONTRACTOR bear to the total services otherwise required to be performed for such total fee; provided, that there shall be deducted from such amount the amount of damage, if any, sustained by COUNTY due to any breach of the agreement by CONTRACTOR.

11. OWNERSHIP OF WORK PRODUCT: COUNTY shall be the owner of and shall be entitled to possession of all work products of CONTRACTOR that result from this contract ("the work products"). In addition, if any of the work products contain intellectual property of CONTRACTOR that is or could be protected by federal law, CONTRACTOR hereby grants COUNTY a perpetual, royalty-free, fully paid, nonexclusive and irrevocable license to copy, reproduce, deliver, publish, perform, dispose of, use and re-use all such work products, including but not limited to databases, templates, file formats, scripts, links, procedures, materials, training manuals and other information, designs, plans or works provided or delivered to COUNTY or produced by CONTRACTOR under this contract.

12. NONDISCRIMINATION: CONTRACTOR shall comply with all applicable federal, state and local laws, rules, and regulations on nondiscrimination in employment because of race, color, ancestry, national origin, religion, sex, marital status, age, medical condition, disability, sexual orientation, gender identity or source of income.

13. STATUTORY AND REGULATORY COMPLIANCE: CONTRACTOR shall comply with all federal, state and local laws, ordinances and regulations applicable to the work under this contract, including, without limitation, the applicable provisions of ORS chapters 279A, B and C, particularly 279C.500, 279C.510, 279C.515, 279C.520 and 279C.530, as amended. In addition, CONTRACTOR expressly agrees to comply with Title VI of the CIVIL RIGHTS ACT of 1964 and comparable state and local laws. CONTRACTOR shall also comply with Section V of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (Pub. Law No. 101-336), ORS 30.670 to ORS 30.685, ORS 659A.142, ORS 659A.145, and all regulations and administrative rules established pursuant to those laws.

14. EXTRA (CHANGED) WORK: Only the Public Works Director may authorize extra (and/or changed) work. Failure of the CONTRACTOR to secure Director authorization for extra work shall constitute a waiver of any and all right to adjustment in the contract price or contract time due to such unauthorized extra work and the CONTRACTOR thereafter shall be entitled to no compensation whatsoever for the performance of such work.

CONTRACTOR further expressly waives any and all right or remedy by way of restitution and quantum meruit for any and all extra work performed by CONTRACTOR without the express and prior written authorization of the Public Works Director.

15. CONFLICT OF INTEREST: CONTRACTOR covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its

services. The CONTRACTOR further covenants that in the performance of this contract it shall not employ any person having any such interest.

16. AUDIT: CONTRACTOR shall maintain records to assure conformance with the terms and conditions of this agreement, and to assure adequate performance and accurate expenditures within the contract period. CONTRACTOR agrees to permit Benton County, the State of Oregon, the federal government, or their duly authorized representatives to audit all records pertaining to this agreement to assure the accurate expenditure of funds. CONTRACTOR shall notify COUNTY of any independent audit report of CONTRACTOR'S activities or finances prepared for CONTRACTOR and agrees to submit such reports to the Health Administrator upon request.

17. GOVERNING LAW: This contract shall be governed and construed by the laws of the State of Oregon.

18. SEVERABILITY: If any term or provision of this contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected.

19. MERGER: This writing and the attached exhibits constitute the entire and final contract between the parties. No modification of this agreement shall be effective unless and until it is made in writing and signed by both parties.

DATED this _____ day of _____, 20 _____.

CONTRACTOR

BENTON COUNTY

Roger M. Irvin, P.E.
Public Works Director & Contracting
Officer

Date: _____

Date: _____

Approved as to form:

County Counsel

AFFIDAVIT

CONTRACTOR declares that it does not currently employ, and will not employ any individuals for work under this contract during the term this contract is in force.

Principal

Date

ATTACHMENT A

INSURANCE REQUIREMENTS

The CONTRACTOR and its subcontractors shall maintain insurance acceptable to the COUNTY in full force and effect throughout the term of this contract.

It is agreed that any insurance maintained by COUNTY shall apply in excess of, and not contribute with, insurance provided by CONTRACTOR. The policy or policies of insurance maintained by the CONTRACTOR and its subcontractors shall endeavor to provide at least the following limits and coverages.

TYPE OF INSURANCE	LIMITS OF LIABILITY
___ <u>General Liability</u>	Each Occurrence \$500,000
	General Aggregate \$500,000
	Products/Comp Ops Aggregate \$500,000
	Personal and Advert. Inj. \$500,000

Please indicate if Claims Made or Occurrence

___ <u>Automobile Liability</u>	Combined Single covering any vehicle used on County business \$500,000
	OR
	Bodily Injury:
	Per person \$200,000
	Per occurrence \$500,000
	Property Damage:
	Per occurrence \$ 50,000

___ Worker's Compensation Per Oregon State Statutes

___ Professional Liability Per occurrence \$500,000
Annual aggregate \$500,000

___ Property of Others in Transit \$250,000
(If Contractor to haul County Equipment)

CONTRACTOR'S general liability and automobile insurance must be evidenced by certificates from the insurers. The policies shall name Benton County, its officers, agents and employees as additional insureds and shall provide Benton County with a 30-day notice of cancellation.

Worker's compensation insurance must be evidenced by a certificate from the insurer. The certificate need not name Benton County as an additional insured, but must list Benton County as a certificate holder and provide a 30-day notice of cancellation to Benton County.

Certificates of Insurance shall be forwarded to:

Benton County Public Works
360 SW Avery Avenue
Corvallis, OR 97333

CONTRACTOR agrees to deposit with the COUNTY, at the time s/he returns the executed contract, Certificates of Insurance or Binders of Insurance if the policy is new or has expired, sufficient to satisfy the COUNTY that the insurance provisions of this contract have been complied with and to keep such insurance in effect and the certificates and/or binders thereof on deposit with the COUNTY during the entire term of this contract. Such certificates and/or binders must be delivered prior to commencement of the work.

The procuring of such required insurance shall not be construed to limit CONTRACTOR'S liability hereunder. Notwithstanding said insurance, CONTRACTOR shall be obligated for the total amount of any damage, injury or loss caused by negligence or neglect connected with this contract.

CSA 2 Lincoln County

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1.1 Potential Debris Scenarios – Debris Volume Estimation

In 1999 DOGAMI published *Earthquake Damage in Oregon: Preliminary Estimates of Future Earthquake Losses* (Wang et al. 1999), which analyzes all counties in the State for earthquake losses related to an M 8.5 Cascadia Subduction Zone earthquake and Statewide earthquakes within a 500-year return interval.

According to the report a total of 446,000 tons of debris could be generated during an M 8.5 Cascadia Subduction Zone earthquake. Because the 500-year return interval earthquake includes several earthquakes, the amount of debris generated for this model is not considered for this plan.

To convert tons of debris to cubic yards of debris, FEMA suggests a multiplying factor of four. The resulting cubic yards of debris would be 1,784,000. To account for the population increase between 1999 and 2008 the 1,784,000 cubic yards of debris was increased by 3.9 percent, which is the percentage population increase for Lincoln County estimated by the U.S. Census Bureau. Therefore the estimated volume of debris for a Cascadia Subduction Zone earthquake is 1,854,000 cubic yards.

Based on one acre holding 6,453 cubic yards of debris and a TDSR being cycled at least once during the recovery period, a total of 144 acres of TDSR sites would be needed for a Cascadia Subduction Zone earthquake.

This debris estimate does not take into account the likely tsunami that would affect the coast following an M 8.5 Cascadia Subduction Zone earthquake.

2.1 Concept of Operations – Emergency Operations Center Activation

When emergency situations arise and it is determined that the normal organization and functions of County government are not sufficient to meet the needs of response activities effectively, the Lincoln County Emergency Manager will activate and implement all or part of the County EOP. In addition, the Lincoln County Emergency Manager may partially or fully activate and staff the County EOC. Activation and operation of the EOC is outlined in Section 5.3 and ESF #5 of the County EOP.

2.2 Concept of Operations – Organization and Assignment of Responsibilities

Debris Management is addressed in ESF #3 of the County EOP. ESF 3 provides and coordinates infrastructure and engineering services during all phases of emergency management. The lead agency for ESF #3 is the Lincoln County Public Works Department. ESF #3 activities and resources (personnel, equipment, facilities, materials, and supplies) are coordinated through the County EOC and managed through the incident command structure established for the incident. Within Lincoln County, the Public Works Department is the LDMD for the RDMP. The DM will be from the Public Works Department. The remainder of this section discusses debris management–specific organization and responsibilities within Lincoln County not addressed in the County EOP.

During the response phase of the disaster, debris management strategies will be formulated by solid waste management professionals from the impacted area and will be implemented through jurisdictional emergency centers. As incident operations transition into long-term recovery, specific debris management programs, processes, and projects will be developed and coordinated by solid waste program managers.

Lincoln County has identified the Emergency Services Department, multiple Divisions of the Public Works Department, the Health and Human Services – Environmental Health, Sheriff’s Department, and the County Board of Commissioners (BOC) as having a role in debris management. Among the multiple Divisions of Public Works, the Solid Waste District will be the lead agency. All other divisions will coordinate with the Solid Waste District; the Solid Waste District will coordinate with the EOC.

2.2.1 Lincoln County Public Works Road Maintenance & Operations

1. Gather and track information regarding debris locations/amounts involving areas of departmental responsibility (i.e., roads, bridges,

- drainage ditches/culverts, residential and commercial buildings, etc.) (Planning Section, Operations Section).
2. Report debris locations/amounts to the Solid Waste District (Planning Section).
 3. Recommend debris removal site priorities to the Solid Waste District (Operations Section, Incident Commander).
 4. Coordinate removal of debris from County rights-of-way, drainage ditches/culverts, etc. (Operations Section, Logistics Section).
 5. Track departmental debris removal costs and ensure that eligible costs are provided to the County EOC, through the Solid Waste District, for inclusion in the Initial Damage Assessment (Finance Section, Planning Section).

2.2.2 Lincoln County Public Works Solid Waste District

1. Coordinate with other Public Works Divisions and advise the EOC.
2. Advise the EOC on the status, capacity, and operating hours of solid waste handling/processing facilities.
3. Track tonnage/volume of debris processed.
4. Provide technical assistance to local governments.
5. Act as liaison between haulers, debris processing facilities, the public, cities within Lincoln County, and other public agencies (e.g., Oregon Department of Environmental Quality, Oregon Department of Human Services, and Oregon Department of Agriculture).
6. Identify temporary storage sites for disaster-related debris and advise the County EOC.
7. Develop and manage a debris estimation program
8. Formulate the County's strategic debris management plan, including:
 - a. A summary of debris management services to be provided by County government.
 - b. A list of disaster debris drop-off points and temporary storage locations.
 - c. Modifications in solid waste franchise operations such as amended hauler schedules, regulatory waivers, and adjusted disposal rates.
 - d. Procedures for putrescible surge abatement and processing of medical and contaminated wastes.
 - e. Controls to prevent or minimize illegal dumping and theft of services.
9. Coordinate the distribution of public education materials through the County EOC, through local jurisdictions, and through waste haulers and disposal facilities.
10. Contract for services necessary to train site monitors and debris estimators.
11. Coordinate specific regulatory issues directly with the State (e.g., burning of wastes, storage/refrigeration of medical wastes, etc.).

12. Enforce proper removal and disposal of debris by entities contracted to provide service.
13. Coordinate with the County EOC, Environmental Health Division, and other County Departments and Divisions to identify temporary storage sites for disaster-related debris (Planning Section)
14. Identify contract resources with input from the Environmental Health Division

2.2.3 Lincoln County Public Works Vegetation Management

Assist the Public Works Solid Waste District in identifying and implementing vegetative debris management.

2.2.4 Lincoln County Public Works Facilities Maintenance

1. Gather and track information on debris locations/amounts involving areas of division responsibility (i.e., County buildings and parks).
2. Report debris locations/amounts to the Solid Waste District.
3. Coordinate with the Solid Waste District and Environmental Health Division/Health Department to identify temporary storage and landfill sites for debris removed during departmental operations.
4. Coordinate the removal of debris from County facilities and parks.
5. Identify contract resources with input from the Environmental Health Division.
6. Ensure compliance with regulations governing the management of hazardous wastes “generated” by the County as a consequence of debris removal activities.
7. Track departmental debris removal costs and ensure that eligible costs are provided to the County EOC for inclusion in the Initial Damage Assessment (e.g., contracted debris removal from County buildings and parks).

2.2.5 Lincoln County Emergency Services and EOC

1. Gather and track Countywide information on debris locations and amounts (Planning Section, Operations Section).
2. Notify other jurisdictions of debris sites in or affecting their jurisdictions. For example, notify ODOT of debris sites located on State rights-of-way (Planning Section, Operations Section).
3. Determine status of local debris collection resources (Planning Section).
4. Determine status of local debris recycling and disposal facilities (Planning Section).
5. Coordinate with Public Works, Environmental Health Division, and other County departments and divisions to identify temporary storage sites for disaster-related debris (Planning Section).
6. Prioritize the County’s debris removal sites (Operations Section, Incident Commander, Policy Group).

7. Coordinate the removal of debris from County buildings and parks in cooperation with the Facilities Management Division (Operations Section, Logistics Section).
8. Disseminate debris-related public education materials (JIC)
9. Coordinate debris removal support for local jurisdictions (Logistics Section, Planning Section, Operations Section).
10. Track County debris removal costs and ensure that eligible costs are included in the Initial Damage Assessment (Finance Section, Planning Section).

2.2.6 Lincoln County Health and Human Services - Environmental Health (Solid Waste Administration)

1. Adjust hours of operation of disposal sites as needed.
2. Adjust fees for public and private use of disposal sites as appropriate.
3. Arrange for the survey (i.e., soil and water samples, access routes, photos, etc.) of temporary storage sites prior to their use.
4. Execute necessary franchise and other agreements with haulers, contractors, and facilities for collection, processing, and disposal operations.

2.2.7 Lincoln County Sheriff's Department

Provide law enforcement in the case of illegal dumping, unauthorized access to TDSR sites, or uncooperative landowners if accessing private property is necessary to eliminate an immediate threat to public health and/or safety.

2.2.8 Lincoln County Board of Commissioners

Work with local jurisdictions and waste haulers and facilities to develop educational materials relating to disaster debris for distribution to the public.

2.2.9 Private Citizens and Businesses

Private citizens and businesses are responsible for the removal of disaster-related debris from their properties. Although some local governments are prohibited by law or policy from removing debris from private property, many other agencies (e.g., fire districts) will provide some assistance when the debris poses a risk to lives, public health, or property.

Private companies engage in franchise hauling activities; operate recovery and landfill sites; provide recycling and composting options for vegetative (i.e., woody) debris; and contract to pick up and transport medical and hazardous wastes.

Many nonprofit and volunteer organizations can assist with debris removal activities. Convergent volunteers (i.e., those who show up and offer assistance in time of emergency) can also help with debris removal.

3.1 Response and Recovery Operations – Critical Route Maps and List of Critical Facilities

Critical route maps are available in Appendix B of this Annex. Appendix A of this Annex contains a list of critical facilities and a table showing major routes in Lincoln County separated by County, State, and Federal roads.

4.1 Contracts and Agreements

The Lincoln County Public Works Department has established the following service and equipment agreements with local, State, and regional entities. These agreements are on file with the Emergency Manager. They will be made available at the County EOC during an emergency incident.

- Oregon Public Works Emergency Response Cooperative Assistance Agreement. Oregon Department of Transportation, July 1998.

Appendices C and D of the RDMP contain Sample Mutual Aid Agreements, contracts, and Scopes of Work. Appendix C of this Annex contains any sample Mutual Aid Agreements, contracts, Scopes of Work, and legal agreements to limit liability that the County has prepared.

5.1 Temporary Debris Storage and Reduction Sites – List of Potential TDSR sites

Appendix A contains a list of potential TDSR sites that identifies their size, location, ownership, latitude and longitude (if available), and easting and northing (if available). Appendix B contains aerial photos of the potential TDSR sites. The Public Works Department utilizes a variety of locations as woody debris depositories. In most cases the woody debris is placed at these depositories after chipping or the wood debris is placed on private land at the owner's request. All transfer and recycling centers in the County accept woody debris and sanitary haulers are willing to use their facilities as part of the debris management process. Franchise hauler facilities are ideal for woody debris and hazardous waste materials. There are four closed landfills located in the County that may be used as TDSR sites following appropriate approvals.

There are no active landfills located in the County; solid waste is primarily transported to Coffin Butte landfill in Benton County.

A

Lincoln CSA Tables

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Regional Debris Management Plan

County-Specific Annex 2. Lincoln County

List of Critical Facilities to be developed and inserted here.

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List of County, State, and Federal Roads within the County to be developed and inserted here.

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Regional Debris Management Plan

County-Specific Annex 2. Lincoln County

Lincoln County Potential TDSR Sites

Site	Size (acres)	Location	Ownership
Schooner Creek Transfer Station		367 S. Anderson Creek Road, Lincoln City, Oregon	North Lincoln Sanitary Service
Thompson's Transfer and Disposal, Inc.		8096 NE Avery Street, Newport, Oregon	Thompson's Sanitary Service
GP Toledo Mill Landfill		1 Butler Bridge Road, near Sunnyridge Road	Georgia-Pacific Company
Toledo Transfer Station		Section 4, T11S, R10W	Dahl & Dahl, Inc
South Lincoln Recycle & Transfer Station		3300 Crestline Drive, Waldport, Oregon	Dahl & Dahl, Inc
Public Works Department Woody Debris Depositories		Multiple locations throughout the County	Lincoln County
County Parks		Multiple locations throughout the County	Lincoln County
Lincoln County Fairgrounds		Newport, Oregon at NE 7 th and Harney Street	Lincoln County
Franchise Hauler locations		Multiple locations throughout the County	Multiple Private Franchise Haulers
Agate Beach Closed Landfill		Near the Thompson's Transfer and Disposal, Inc	
Waldport Closed Landfill		Waldport, Oregon	
Moonshine/Logsden Closed Landfill		Near Siletz, Oregon	
Schooner Creek Closed Landfill		Lincoln City, Oregon	

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Lincoln CSA Figures

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Lincoln County Critical Route Map to be developed and inserted here.

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Aerial images of potential TDSR sites to be developed and inserted here.

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Lincoln CSA Contracts and Agreements

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Regional Debris Management Plan

County-Specific Annex 2. Lincoln County

Lincoln County Mutual Aid Agreements, Debris Removal Contracts, Debris Removal Scopes of Work, and legal agreements to be inserted here when developed.

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CSA 3 **Linn County**

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1.1 Potential Disaster Scenarios – Debris Volume Estimation

In 1999 DOGAMI published *Earthquake Damage in Oregon: Preliminary Estimates of Future Earthquake Losses* (Wang et al. 1999), which analyzes all counties in the State for earthquake losses related to an M 8.5 Cascadia Subduction Zone earthquake and Statewide earthquakes within a 500-year return interval.

According to the report a total of 400,000 tons of debris could be generated during an M 8.5 Cascadia Subduction Zone earthquake. Because the 500-year return interval earthquake includes several earthquakes, the amount of debris generated for this model is not considered for this plan.

To convert tons of debris to cubic yards of debris, FEMA suggests a multiplying factor of four. The resulting cubic yards of debris would be 1,600,000. To account for the population increase between 1999 and 2008 the 1,600,000 cubic yards of debris was increased by 8.2 percent, which is the percentage population increase for Linn County estimated by the U.S. Census Bureau. Therefore the estimated volume of debris for a Cascadia Subduction Zone earthquake is 1,731,000 cubic yards.

Based on one acre holding 6,453 cubic yards of debris and a TDSR being cycled at least once during the recovery period, a total of 134 acres of TDSR sites would be needed for a Cascadia Subduction Zone earthquake.

1.2 Potential Disaster Potential – Potential Volcanic Debris Locations

Linn County could experience debris-generating events from Mount Jefferson and the Three Sisters Region. Mount Jefferson is located at the northeastern corner of the County near the border with Marion and Jefferson Counties. This area of the County could experience pyroclastic flows and lava flows. The North Santiam River, which forms the County line between Marion and Linn Counties in this area, could experience lahar flows of various volumes that extend to Detroit Lake. Lahars entering the lake have the potential to generate waves that could damage shore property and, in the case of large lahars, waves could overtop the dam. If lahars overtop the dam the lahar inundation zone could extend to Stayton, which is located on the Marion County side of the North Santiam River. An eruption at Mount Jefferson has the potential to affect the communities of Idanha, Detroit Gates, Mill City, Lyons, and Stayton.

The Three Sisters Region is located just south of the south eastern corner of Linn County. Portions of southeastern Linn County could be affected by thick tephra fall, ballistics, and pyroclastic flows. This area is primarily uninhabited.

2.1 Concept of Operations – Emergency Coordination Center Activation

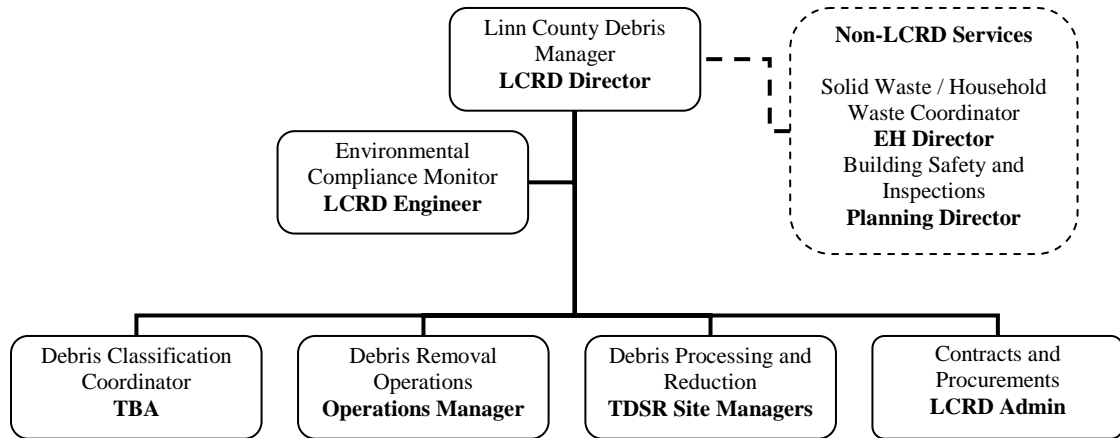
A mayor or County department head may request that the following officials activate the EOP and the EOC:

- Linn County Chairperson of the Board,
- Linn County Vice-Chair to the Board,
- Linn County Third Commissioner,
- Linn County Sheriff (Emergency Program Manager), and
- Linn County Administrative Officer

ESF #5 of the County EOP discusses EOP activation in further detail.

2.2 Concept of Operations – Organization and Assignment of Responsibilities

Debris Management is addressed in ESF #3 of the County EOP. ESF 3 provides and coordinates infrastructure and engineering services during all phases of emergency management. The lead agencies for ESF #3 are the Linn County Road Department (LCRD) and Linn County General Services. ESF #3 activities and resources (personnel, equipment, facilities, materials, and supplies) are coordinated through the County EOC and managed through the incident command structure established for the incident. Within Linn County, the Road Department is also the LDMD for the RDMP. The director of the Linn County Road Department will be designated as the DM. The remainder of this section discusses debris management-specific organization and responsibilities within Linn County not addressed in the County EOP. The organizational structure is designed to function on a stand-alone basis or as a component of a larger incident management organizational structure. All positions are subject to availability of personnel and may be substituted if necessary.



2.2.1 Linn County Debris Manager

Linn County DM responsibilities include overall coordination and execution of debris management response before, during, and after a major debris-generating event. Duties include briefing commissioners on the status of the debris clearing, removal, recycling, and disposal operations and ensuring that Linn County is represented at all meetings with other government and private agencies involved with debris cleanup operations.

2.2.2 Environmental Compliance Monitor

The LCRD Engineer shall provide environmental compliance monitoring and consultation for various components of debris removal operations, including TDSR site evaluation and restoration, right-of-way clean-up in sensitive areas, and assisting with mitigation of debris reduction environmental impacts.

2.2.3 Debris Classification Coordinator

The Debris Classification Coordinator shall be determined at the time of an event and shall be responsible for assisting debris removal operations and TDSR site managers with classification of debris. A debris classification guide will be prepared and provided to the coordinator so that incompatible debris types are segregated to allow for maximizing recycling and disposal efficiency; the guide will be available in Appendix C of this Annex.

2.2.4 Debris Removal Operations

The LCRD Operations Manager shall be responsible for Debris Removal Operations. Duties include coordinating the removal of debris and transportation of debris to an approved TDSR site. Additional duties include preparation and closure of TDSR sites. Operations manager shall utilize LCRD maintenance and Operations resources to perform clean-up operation on the Linn County right-of-way in accordance with the priority ranking system herein. Debris removal

operations shall not be conducted on private property or non-Linn County jurisdiction right-of-way unless approved by the DM.

2.2.5 Debris Processing and Reduction

TDSR Site Managers shall be responsible for operation and management of TDSR sites. Site Managers shall utilize the site layout examples and concepts included herein to assist with the safe and efficient preparation and operation of TDSR sites.

2.2.6 Contracts and Procurements

Contracts and procurements shall be the responsibility of the LCRD Admin staff, directed by the Administrative Assistant. The Administrative Assistant is responsible for preparation of contract documents and compliance with emergency contracting regulations. Routine procurements shall be accomplished through LCRD Purchasing.

2.2.7 Non LCRD Services

The Linn County Environmental Health Director shall be responsible for coordinating with private solid waste franchisees as needed to address private debris removal operations and provide consultation as needed to LCRD with respect to environmental health concerns associated with debris removal operations. The Linn County Planning Director shall be responsible for conducting or coordinating safety inspections on private and public structures outside incorporated areas. The planning director or designated representative shall coordinate building demolition activities with the LCRD or private contractors if needed.

3.1 Response and Recovery Operations – Critical Route Maps and List of Critical Facilities

Critical route maps are available in Appendix B of this Annex. Appendix A of this Annex contains a list of critical facilities and a table showing major routes in Linn County separated by County, State, and Federal roads.

4.1 Contracts and Agreements

The LCRD has established the following service and equipment agreements with local, State, and regional entities. These agreements are on file with the LCRD and Emergency Management. They will be made available at the County EOC during an emergency incident.

- Oregon Public Works Emergency Response Cooperative Assistance Agreement. Oregon Department of Transportation, July 1998.

Appendices C and D of the RDMP contain Sample Mutual Aid Agreements, Contracts, and Scopes of Work. Appendix C of this Annex contains any sample Mutual Aid Agreements, contracts, Scopes of Work, and any legal agreements to limit liability that the County has prepared.

5.1 Temporary Debris Storage and Reduction Sites – List of Potential TDSR sites

Appendix A contains a list of potential TDSR sites that identifies their size, location, ownership, latitude and longitude (if available), and easting and northing (if available). Appendix B contains aerial photos of the potential TDSR sites.

A simple and concise instruction sheet shall be developed and made available to all LCRD employees. This sheet will provide guidance for responding to debris removal operations and include such information as classifying debris, recognizing health hazards and safety risks, and determining the appropriate TDSR site for transportation and processing debris. The instruction sheet can be found in Appendix C of this Annex.

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Linn CSA Tables

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List of Critical Facilities to be developed and inserted here.

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List of County, State, and Federal Roads within the County to be developed and inserted here.

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Regional Debris Management Plan

County-Specific Annex 3. Linn County

Linn County Potential TDSR Sites

Site	Size (acres)	Location	Ownership
Cedar Mill Road Landfill		40580 Cedar Mill Road, Lyons, Oregon	Freres Lumber Co., Inc.
Albany Paper Mill		2800 Old Salem Road NE, Albany, Oregon	International Paper Company
Oremet Closed Landfill		530 34 th Ave SW, Albany, Oregon	Oregon Metallurgical Company
Lebanon Transfer Station		33370 Brewster Road, Lebanon, Oregon	Valley Landfills, Inc
Rick Franklin Corp Closed Landfill		101 Industrial Way, Albany, Oregon	Rick Franklin Corporation
Fred V Smith Closed Landfill		130 Washburn Street, Brownsville, Oregon	Oregon Metallurgical Company
Sweet Home Sanitation Transfer Facility		1325 18 th Ave, Sweet Home, Oregon	Waste Connections of Oregon, Inc. DBA Sw
Linn County Parks		Multiple Locations Throughout the County	Linn County
Linn County Road Department Facilities		Multiple Locations Throughout the County	Linn County

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Linn CSA Figures

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Linn County Critical Route Map to be developed and inserted here.

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Aerial images of potential TDSR sites to be developed and inserted here.

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Linn CSA Contracts and Agreements

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Linn County Mutual Aid Agreements, Debris Removal Contracts, Debris Removal Scopes of Work, and legal agreements to be inserted here when developed.

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Linn County Guidance for Responding to Debris Removal Operation to be developed and inserted here.

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Linn County Debris Classification Guide to be developed and inserted here.

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CSA 4 Marion County

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1.1 Potential Disaster Scenario – Debris Volume Estimation

In 1999 DOGAMI published *Earthquake Damage in Oregon: Preliminary Estimates of Future Earthquake Losses* (Wang et al. 1999), which analyzes all counties in the State for earthquake losses related to an M 8.5 Cascadia Subduction Zone earthquake and Statewide earthquakes within a 500-year return interval.

According to the report a total of 664,000 tons of debris could be generated during an M 8.5 Cascadia Subduction Zone earthquake. Because the 500-year return interval earthquake includes several earthquakes, the amount of debris generated for this model is not considered for this plan.

To convert tons of debris to cubic yards of debris, FEMA suggests a multiplying factor of four. The resulting cubic yards of debris would be 2,656,000. To account for the population increase between 1999 and 2008 the 2,656,000 cubic yards of debris was increased by 9.3 percent, which is the percentage population increase for Marion County estimated by the U.S. Census Bureau. Therefore the estimated volume of debris for a Cascadia Subduction Zone earthquake is 2,903,000 cubic yards.

Based on one acre holding 6,453 cubic yards of debris and a TDSR being cycled at least once during the recovery period, a total of 225 acres of TDSR sites would be needed for a Cascadia Subduction Zone earthquake.

1.2 Potential Disaster Scenario – Potential Volcanic Debris Locations

Marion County could experience-debris generating events from Mount Jefferson. Mount Jefferson is located at the southeastern corner of the County near the border with Linn and Jefferson Counties. This corner of the County could experience pyroclastic flows and lava flows. The North Santiam River, which forms the County line between Marion and Linn Counties in this area, and Breitenbush River could experience lahar flows of various volumes that extend to Detroit Lake. Lahars entering the lake have the potential to generate waves that could damage shore property and, in the case of large lahars, wave could overtop the dam. If lahars overtop the dam the lahar inundation zone could extend downstream to Stayton, Oregon. An eruption at Mount Jefferson has the potential to affect the communities of Idanha, Detroit Gates, Mill City, Lyons, and Stayton in Marion and Linn Counties.

2.1 Concept of Operations – Emergency Coordination Center Activation

The Emergency Management Director (EMD) or designee is responsible for providing a recommendation to the Emergency Management Board Designee (EMBD) or designee for the activation of the EOC. In the event of a catastrophic disaster, the EMD and/or EMBD have the authority to immediately activate the EOC. The level of activation may vary with the situation as determined by the EMD. EOC activation is outlined in ESF #5 of the County EOP.

2.2 Concept of Operations – Organization and Assignment of Responsibilities

Debris Management is addressed in ESF #3 of the County EOP. ESF 3 provides and coordinates infrastructure and engineering services during all phases of emergency management. The lead agency for ESF #3 is Marion County Department of Public Works, Division of Environmental Services. ESF #3 activities and resources (personnel, equipment, facilities, materials, and supplies) are coordinated through the County EOC and managed through the incident command structure established for the incident. Within Marion County, the Department of Public Works, Division of Environmental Services is also the LDMD for the RDMP. The DM will be from the Division of Environmental Services. Marion County has also identified the County Emergency Management as having debris-clearing responsibilities. The remainder of this section discusses debris management specific organization and responsibilities within Marion County not addressed in the County EOP. Marion County's Disaster Debris Management Team will consist of the following County positions: a Senior Environmental Engineer, Environmental Engineer Associate II, Site Operations Manager, and Waste Reduction Coordinator. Marion County has defined tasks by debris management phases: Normal Operations and Increased Readiness, Response, and Recovery.

2.2.1 Normal Operations and Increased Readiness

1. Public Works Environmental Services
 - a. Identify local haulers and recyclers that can handle disaster debris; develop memorandums of understanding defining how haulers and recyclers would assist in the disposal effort.
 - b. Establish pre-disaster agreements with local haulers and TDSR site owners (if applicable).
 - c. Identify locations for TDSR sites.
2. Emergency Management
 - a. Identify critical routes and bridges for priority debris removal.
 - b. Coordinate with Environmental Services in the development and maintenance of written procedures (such as this RDMP) for the disposal of debris in the event of a major disaster.

- c. Ensure that all levels of government are informed and aware of procedures.

2.2.2 Response

1. Public Works Environmental Services
 - a. Assume role as the County Department responsible for implementing this plan.
 - b. Provide personnel for the Debris Estimating Team.
 - c. Notify landfill operators.
 - d. Contact recyclers to confirm availability/capability to recycle concrete, metal, brick, wood, and mixed waste/garbage that is source-separated.
 - e. Mobilize haulers to identified locations as determined by County Emergency Management for debris removal (by type).
 - f. Work with the EOC PIO to notify the public and local government agencies of disposal sites, and that property owners will be responsible for hauling their debris.
 - g. Ensure that proper records are maintained, as well as necessary cost accounting.
2. Emergency Management
 - a. Identify debris from specific sites that have been designated as priority lifeline routes/bridges or buildings, hospitals, fire, police, etc.
 - b. Coordinate the clearing of lifeline routes and priority facilities.
 - c. Coordinate with local and State governments to ensure that critical routes, bridges, and facilities are cleared of debris as soon as possible.
3. Local and State Governments
 - a. Identify critical routes, bridges, and buildings that require immediate debris removal and disposal.
 - b. Arrange to have hauler remove debris, by type, to the appropriate disposal site.
 - c. If assistance is needed with debris removal from priority areas, contact the Public Works Coordinator at the County EOC.
4. Franchise/Private Haulers
 - a. Respond to Environmental Services' inquiry regarding current availability/capability to assist in removal of debris from critical locations.
 - b. Give priority to government requests for cleanup of roads, bridges, and buildings that have been designated as critical lifeline facilities.

2.2.3 Recovery

1. Emergency Management

- a. Monitor cleanup activities and coordinate them with involved agencies.
- b. Ensure that necessary cost accounting meets FEMA requirements for disaster aid.
- c. Prepare After Action Report, identifying areas needing improvement.

3.1 Response and Recovery Operations – Critical Route Maps and List of Critical Facilities

Critical route maps are available in Appendix B of this Annex. Appendix A of this Annex contains a list of critical facilities and a table showing major routes in Marion County separated by County, State, and Federal roads.

4.1 Contracts and Agreements

Marion County Emergency Management (EM) has established the following service and equipment agreements with local, State, and regional entities. These agreements are on file with the EM and will be made available at the County EOC during an emergency incident.

- Marion County, Polk County, and Yamhill County. August 14, 1996. This agreement provides aid when an emergency exceeds the capabilities of the affected county.
- Omnibus Agreement between Benton, Lincoln, Linn, Marion, Polk, and Yamhill counties. August 2005. The agreement provides emergency assistance.
- Marion County and the City of Keizer. August 5, 1996. The agreement provides aid when an emergency exceeds the capabilities of the affected jurisdiction.
- Marion County and the City of Salem. December 27, 1995. The agreement provides aid when an emergency exceeds the capabilities of the affected jurisdiction.
- Marion County and the City of Silverton. August 20, 1997. The agreement provides aid when an emergency exceeds the capabilities of the affected jurisdiction.
- Marion County and the City of Stayton. March 1996. The agreement provides aid when an emergency exceeds the capabilities of the affected jurisdiction.
- Marion County and the City of Woodburn. August 13, 1996. The agreement provides aid when an emergency exceeds the capabilities of the affected jurisdiction.
- Marion County and the Cities of Woodburn, Mt. Angel, Stayton, and Silverton. May 2005. The agreement provides SWAT capabilities.
- Oregon State Police Cooperative Policing Agreement with the Marion County.

County-Specific Annex 4. Marion County

- Marion County Fire Service Districts and Department. October 26, 2005. The parties agree to assist each other in response to a fire or public safety incident during emergencies.
- Marion County Department of Public Works and Oregon Department of Transportation. April 2004. The agreement expedites the response and ability to work with ODOT in the event of an emergency.
- Marion County and various government agencies in Oregon. April 2005. This agreement allows for the construction and maintenance of public facilities such as streets, roads, highways, sewers, water, and related systems during emergency conditions.

Appendices C and D of the RDMP contain Sample Mutual Aid Agreements, Contracts, and Scopes of Work. Appendix C of this Annex contains any sample Mutual Aid Agreements, contracts, Scopes of Work, and legal agreements to limit liability that the County has prepared.

5.1 Temporary Debris Storage and Reduction Sites – List of Potential TDSR sites

Appendix A contains a list of potential TDSR sites that identifies their size, location, ownership, latitude and longitude (if available), and easting and northing (if available). Appendix B contains aerial photos of the potential TDSR sites.

The City of Salem has a number of vacant properties in industrial parks such as Fairview Industrial Park and Mill Creek Industrial Park that could be considered as potential TDSR sites. The Brown's Island Demolition Landfill and Compost Facility and the North Marion Recycling and Transfer Station are also likely TDSR sites.

Other large acreage sites within the City are parks (Minto Park and Wallace Marine Park) however; there would be potential flood plain issues; Bush Park at Lower Lefelle St are also possibilities. Some undeveloped properties such as the old Battlecreek Golf Course and Fairview Training Center may also be possibilities.

Intermediate sized sites could include smaller parks and/or high school athletic fields throughout the community however; the type of material transported to athletic fields would have to be carefully considered.

The County would limit the use of the old Cannons Pond site at the airport in case their surface transportation infrastructure damaged to the point that the airport is the only immediate resource to import aid. Exclusive Farm Use lands may be used as TDSR sites, but will require pre-authorized conditional use permits obtained as part of baseline data collection and usage agreements.

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Marion CSA Tables

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Regional Debris Management Plan

County-Specific Annex 4. Marion County

List of Critical Facilities to be developed and inserted here.

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List of County, State, and Federal Roads within the County to be developed and inserted here.

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Regional Debris Management Plan

County-Specific Annex 4. Marion County

Marion County Potential TDSR Sites

Site	Size (acres)	Location	Ownership
Brown's Island Demolition Landfill and Compost Facility		2895 Faragate St. S, Salem, Oregon	Marion County Public Works Environmental Services
North Marion Recycling and Transfer Station		17827 Whitney Lane NE, Woodburn, Oregon	Marion County Public Works Environmental Services
McLeay Landfill Area		East of Salem	
State Lands South of Highway 22		Southeast Salem	State of Oregon
City/State Lands		Between Center Street / State Street and Hawthorn	City of Salem and State of Oregon
Norpac Land		Near Brooks, Oregon	
Land South of Salem Airport		Near Salem Airport	
Other State Lands		Multiple Locations within the County	
Old Mill Property		Near Idana	
Sand and Gravel Companies		Multiple Locations within the County	Walling, Wilsonvill, Knife River, etc.

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Marion CSA Figures

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Marion County Critical Route Map to be developed and inserted here.

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Aerial images of potential TDSR sites to be developed and inserted here.

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Marion CSA Contracts and Agreements

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Marion County Mutual Aid Agreements, Debris Removal Contracts, Debris Removal Scopes of Work, and legal agreements to be inserted here when developed.

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CSA 5 **Polk County**

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1.1 Potential Disaster Scenario – Debris Volume Estimation

In 1999 DOGAMI published *Earthquake Damage in Oregon: Preliminary Estimates of Future Earthquake Losses* (Wang et al. 1999), which analyzes all counties in the State for earthquake losses related to an M 8.5 Cascadia Subduction Zone earthquake and Statewide earthquakes within a 500-year return interval.

According to the report a total of 219,000 tons of debris could be generated during an M 8.5 Cascadia Subduction Zone earthquake. Because the 500-year return interval earthquake includes several earthquakes, the amount of debris generated for this model is not considered for this plan.

To convert tons of debris to cubic yards of debris, FEMA suggests a multiplying factor of four. The resulting cubic yards of debris would be 876,000. To account for the population increase between 1999 and 2008 the 876,000 cubic yards of debris was increased by 17.5 percent, which is the percentage population increase for Polk County estimated by the U.S. Census Bureau. Therefore the estimated volume of debris for a Cascadia Subduction Zone earthquake is 1,025,000 cubic yards.

Based on one acre holding 6,453 cubic yards of debris and a TDSR being cycled at least once during the recovery period, a total of 79 acres of TDSR sites would be needed for a Cascadia Subduction Zone earthquake.

2.1 Concept of Operations – Emergency Coordination Center Activation

The EMD or designee is responsible for providing a recommendation to the BOC Designee or designee for the activation of the EOC. In the event of a catastrophic disaster, the EMD has the authority to immediately activate the EOC. The level of activation may vary with the situation as determined by the EMD. EOC activation is outlined in ESF #5 of the County EOP.

2.2 Concept of Operations – Organization and Assignment of Responsibilities

Debris Management is addressed in ESF #3 of the County EOP. ESF 3 provides and coordinates infrastructure and engineering services during all phases of emergency management. The lead agency for ESF #3 is the Polk County Public Works Department, which receives assistance from the County Environmental Health Division. ESF #3 activities and resources (personnel, equipment, facilities, materials, and supplies) are coordinated through the County EOC and managed through the incident command structure established for the incident. The lead agencies for ESF #3 are also the LDMD for the RDMP. The DM will be from the Public Works Department and will coordinate with the Environmental Health Division. The remainder of this section discusses debris management-specific organization and responsibilities within Polk County not addressed in the County EOP. Polk County has defined tasks by debris management phases: Normal Operations and Increased Readiness, Response, and Recovery. Polk County has developed a Debris Management Emergency Response Contact List; the contact list is maintained by, and available from during an emergency, Polk County Environmental Health.

2.2.1 Normal Operations and Increased Readiness

1. Environmental Health
 - a. Identify local haulers and recyclers that can handle disaster debris and develop memorandums of understanding defining how haulers and recyclers would assist in the disposal effort.
 - b. Establish pre-disaster agreements with local haulers and TDSR site owners (if applicable).
 - c. Identify locations for TDSR sites.
2. County Emergency Management
 - a. Identify critical routes and bridges for priority debris removal.
 - b. Coordinate with Environmental Health Services in the development and maintenance of written procedures (such as this RDMP) for the disposal of debris in the event of a major disaster.
 - c. Ensure that all levels of government are informed and aware of procedures.
3. Local and State government

- a. Municipalities, fire districts, the County and the State should coordinate efforts to determine critical lifeline routes and bridges for their respective and overlapping jurisdictions.
- b. Establish pre-disaster agreements with local haulers, as appropriate.
4. Franchise/Private Haulers and Recyclers
 - a. Assess capability to assist in the removal of debris in response to a major disaster.
 - b. Work with Polk County Environmental Health and other units of local government in defining expectations/capabilities.

2.2.2 Response

1. Environmental Health/Public Works
 - a. Assume role as the County Department responsible for implementing this plan.
 - b. Notify landfill operators.
 - c. Contact recyclers to confirm availability/capability to recycle concrete, metal, brick, wood, and mixed waste/garbage that is source-separated.
 - d. Mobilize haulers to identified locations as determined by County Emergency Management for debris removal (by type).
 - e. Working with the EOC PIO, notify the public and local government agencies of disposal sites, and that property owners will be responsible for hauling their debris.
 - f. Ensure that proper records are maintained, as well as necessary cost accounting
2. County Emergency Management
 - a. Identify debris from specific sites that have been designated as priority lifeline routes/bridges or buildings, hospitals, fire, police, etc.
 - b. Coordinate the clearing of lifeline routes and priority facilities.
 - c. Coordinate with local and State government to ensure that critical routes, bridges, and facilities are cleared of debris as soon as possible.
3. Local and State Governments
 - a. Identify critical routes, bridges, and buildings that require immediate debris removal and disposal.
 - b. Arrange to have hauler remove debris, by type, to the appropriate disposal site.
 - c. If assistance is needed with debris removal from priority areas, contact the Public Works Coordinator at the County EOC.
4. Franchise/Private Haulers
 - a. Respond to Environmental Health Services' inquiry as to current availability/capability to assist in removal of debris from critical locations.

- b. Give priority to government requests for cleanup of roads, bridges, and buildings that have been designated as critical lifeline facilities.

2.2.3 Recovery

1. County Emergency Management
 - a. Monitor cleanup activities and coordinate with involved agencies.
 - b. Ensure that necessary cost accounting meets FEMA requirements for disaster aid.
 - c. Prepare After Action Report, identifying areas that need improvement.

3.1 Response and Recovery Operations – Critical Route Maps and List of Critical Facilities

Critical route maps are available in Appendix B of this Annex. Appendix A of this Annex contains a list of critical facilities and a table showing major routes in Polk County separated by County, State, and Federal roads.

4.1 Contracts and Agreements

The Polk County Public Works Department has established the following service and equipment agreements with local, State, and regional entities. These agreements are on file with the Public Works Department and Emergency Management. They will be made available at the County EOC during an emergency incident.

- Oregon Public Works Emergency Response Cooperative Assistance Agreement. Oregon Department of Transportation, July 1998.

Appendices C and D of the RDMP contain Sample Mutual Aid Agreements, contracts, and Scopes of Work. Appendix C of this Annex contains any sample Mutual Aid Agreements, contracts, Scopes of Work, and legal agreements to limit liability that the County has prepared.

5.1 Temporary Debris Storage and Reduction Sites – List of Potential TDSR sites

Appendix A contains a list of potential TDSR sites that identifies their size, location, ownership, latitude and longitude (if available), and easting and northing (if available). Once the County further evaluates a site the County may determine the site(s) are not feasible as TDSR sites. Based on conditions at the time of the event the County may also evaluate and activate sites that are not on the list. Appendix B contains aerial photos of the potential TDSR sites.

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Polk CSA Tables

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Polk County Critical Facilities

DALLAS

City of Dallas

City Hall and Police Department	187 SE Court
Fire Department	910 SE Shelton
Ambulance Facility	SE Washington
Water Reservoir	Reservoir Road
Mercier Dam	West Rickreall Road
City Sewer Lagoon	Bowersville Road

Polk County

Courthouse	850 Main Street
Jail	883 SE Jefferson
Human Services (Academy Building)	182 SW Academy
Extension Services (Academy Building)	182 SW Academy
Public Works	820 SW Ash
Fairgrounds	520 N Pacific Hwy, Rickreall

State

Adult and Family Services	770 SW Clay
National Guard	817 SW Church
Volunteer Services	177 SW Oak

Federal

Agricultural, Polk Soil, Farm Home Administration	289 E Ellendale
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Schools

Administrative Offices	111 SW Ash
High School	901 SE Ash
La Creole Middle School	701 SE La Creole
Lyle	185 SW Levens
Morrison Kindergarten	1251 Main Street
Oakdale Heights	1375 SW Maple
Whitworth	1151 SE Miller

Hospital

West Valley Hospital	550 SE Clay
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Utilities

Pacific Power and Light	583 SE Jefferson
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FALLS CITY

City of Falls City

City Hall	299 Mill Street
Fire and Police Departments	Main Street
High School	81 E North Main Street
Elementary School	177 Prospect

GRANDE RONDE

School

Grand Ronde Elementary School	Grand Ronde Road
Confederated Tribes of the Grand Ronde	
Governess Building	Grand Ronde Road
Medical Clinic	

INDEPENDENCE

City of Independence

City Hall, Police Department	100 Monmouth Street
Polk County Fire District #1/EMS	1800 Monmouth Street
Public Works	160 G Street
Water Tower	1180 Monmouth Street
Water Wells	Off Hannah Road
Sewer Lagoon and Pump Station	Riverside Park

Central School District

Administrative Offices	1610 Monmouth Street
Central High School	1530 Monmouth Street
Talmadge Middle School	510 S 16th
Henry Hill	750 S 5th
Independence	150 S 4th
Bus/Maintenance Building	520 N Polk County

Utilities

Pacific Power and Light Sub Station	1150 Monmouth St (/Hoffman)
Monmouth Power (Bonneville sub.)	Monmouth

MONMOUTH

City of Monmouth

City Hall	151 W Main
Police Department	W Jackson
Fire/Ambulance (See Independence)	
Public Works/Public Utilities	401 Hogan Rd. (Off "S" Curve)
Water Wells	Across Independence Br. (Marion Co.)
Water Tower	Cupids Knoll

Schools (Part of Central School System)

Monmouth Elementary	958 E Church
Western Oregon University	345 N. Monmouth

PERRYDALE

Schools

Perrydale School	7445 Perrydale Road
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WEST SALEM

City of Salem

Salem Fire Station 5	Glen Creek Rd NW
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Schools

Brush College Elementary	2623 Doaks Ferry Rd
Chapman Hill Elementary	1500 Doaks Ferry Rd
Myers Elementary	2160 Jewel St NW
Walker Middle School	1075 8th Street NW
Salem Academy	Stoneway Drive

List of County, State, and Federal Roads within the County to be developed and inserted here.

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Regional Debris Management Plan

County-Specific Annex 5. Polk County

Polk County Potential TDSR Sites

Site	Size (acres)	Location	Ownership
Park and Ride		Near Junction of Hwy. 22 and 18, South of Willamina	
Buell County Park		Near Junction of Hwy 22 and Harmony Road	Polk County
Stockyard		Mill Creek Road, south of Hwy 22	
Ballston Park		Ballston, Oregon	Polk County
Parking Lot across from post office		Falls City, Oregon	
Brandt's Closed Landfill		Hwy. 51 between Hwy 51 and Fishback Road	
Public Works Facility		Independence, Oregon	Polk County
Public Works Facility and HHW		Dallas, Oregon	Polk County
College parking lots		Independence, Oregon	
Airport		Independence, Oregon	
Park North of Independence Bridge		Independence, Oregon	
Helmick State Park		Helmick Road South of Helmick Road and Old Fort Road Junction	State of Oregon
Luckiamute Landing		South of Buena Vista	State of Oregon
Buena Vista Park		Buena Vista, Oregon	Polk County
City of Dallas Shops		Dallas, Oregon	
ODOT weigh station and parking lot		West Salem, Oregon; near intersection of Hwy. 22 and Doaks Ferry Road	State of Oregon
Park and Ride		West Salem, Oregon; Hwy. 221	
Wallace Marine Park		West Salem, Oregon	City of West Salem
Polk County Fair Grounds		South of Rickreall	Polk County

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Polk CSA Figures

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Polk County Critical Route Map to be developed and inserted here.

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Aerial images of potential TDSR sites to be developed and inserted here.

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Polk CSA Contracts and Agreements

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Polk County Mutual Aid Agreements, Debris Removal Contracts, Debris Removal Scopes of Work, and legal agreements to be inserted here when developed.

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CSA 6

Yamhill County

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1.1 Potential Disaster Scenarios – Debris Volume Estimation

In 1999 DOGAMI published *Earthquake Damage in Oregon: Preliminary Estimates of Future Earthquake Losses* (Wang et al. 1999), which analyzes all counties in the State for earthquake losses related to an M 8.5 Cascadia Subduction Zone earthquake and Statewide earthquakes within a 500-year return interval.

According to the report a total of 247,000 tons of debris could be generated during an M 8.5 Cascadia Subduction Zone earthquake. Because the 500-year return interval earthquake includes several earthquakes, the amount of debris generated for this model is not considered for this plan.

To convert tons of debris to cubic yards of debris, FEMA suggests a multiplying factor of four. The resulting cubic yards of debris would be 988,000. To account for the population increase between 1999 and 2008 the 988,000 cubic yards of debris was increased by 11.4 percent, which is the percentage population increase for Benton County estimated by the U.S. Census Bureau. Therefore the estimated volume of debris for a Cascadia Subduction Zone earthquake is 1,101,000 cubic yards.

Based on one acre holding 6,453 cubic yards of debris and a TDSR being cycled at least once during the recovery period, a total of 85 acres of TDSR sites would be needed for a Cascadia Subduction Zone earthquake.

2.1 Concept of Operations – Emergency Coordination Center Activation

When emergency situations arise and it is determined that the normal organization and functions of County government are not sufficient to meet the needs of response activities effectively, the Yamhill County EMD will activate and implement all or part of the County EOP. In addition, the Yamhill County EMD may partially or fully activate and staff the County EOC. Activation and operation of the EOC is outlined in ESF #5 of the County EOP.

2.2 Concept of Operations – Organization and Assignment of Responsibilities

Debris Management is addressed in ESF #3 of the County EOP. ESF 3 provides and coordinates infrastructure and engineering services during all phases of emergency management. The lead agency for ESF #3 is Yamhill County Public Works Department. ESF #3 activities and resources (personnel, equipment, facilities, materials, and supplies) are coordinated through the County EOC and managed through the incident command structure established for the incident. Within Yamhill County, the Public Works Department is the LDMD for the RDMP. The DM will be from the Public Works Department. The remainder of this section discusses debris management–specific organization and responsibilities within Yamhill County not addressed in the County EOP.

During the response phase of the disaster, debris management strategies will be formulated by solid waste management professionals from the impacted area and will be implemented through jurisdictional emergency centers. As incident operations transition into long-term recovery, specific debris management programs, processes, and projects will be developed and coordinated by solid waste program managers.

2.2.1 Yamhill County Public Works

1. Gather and track information regarding debris locations/amounts involving areas of departmental responsibility (i.e., roads, bridges, drainage ditches/culverts, residential and commercial buildings, etc.) (Planning Section, Operations Section).
2. Report debris locations/amounts to the EOC (Planning Section).
3. Recommend debris removal site priorities (Operations Section, Incident Commander).
4. Coordinate removal of debris from County rights-of-way, drainage ditches/culverts, etc. (Operations Section, Logistics Section).
5. Track departmental debris removal costs and ensure that eligible costs are provided to the County EOC, through the Solid Waste District, for inclusion in the Initial Damage Assessment (Finance Section, Planning Section).

6. Gather and track information on debris locations/amounts involving areas of division responsibility (i.e., County buildings and parks).
7. Report debris locations/amounts.
8. Coordinate with the Solid Waste to identify temporary storage and landfill sites for debris removed during departmental operations.
9. Coordinate the removal of debris from County facilities and parks.
10. Ensure compliance with regulations governing the management of hazardous wastes “generated” by the County as a consequence of debris removal activities.
11. Track departmental debris removal costs and ensure that eligible costs are provided to the County EOC for inclusion in the Initial Damage Assessment (e.g., contracted debris removal from County buildings and parks).

2.2.2 Yamhill County Solid Waste

1. Coordinate with Public Works Divisions and advise the EOC.
2. Advise EOC on the status, capacity, and operating hours of solid waste handling/processing facilities.
3. Track tonnage/volume of debris processed.
4. Provide technical assistance to local governments.
5. Act as liaison between haulers, debris processing facilities, the public, cities within Yamhill County, and other public agencies (e.g., Oregon Department of Environmental Quality, Oregon Department of Human Services, and Oregon Department of Agriculture).
6. Identify temporary storage sites for disaster-related debris and advise the County EOC.
7. Develop and manage a debris estimation program.
8. Formulate the County’s strategic debris management plan, including:
 - f. A summary of debris management services to be provided by County government
 - g. A list of disaster debris drop-off points and temporary storage locations
 - h. Modifications in solid waste franchise operations such as amended hauler schedules, regulatory waivers, and adjusted disposal rates
 - i. Procedures for putrescible surge abatement and processing of medical and contaminated wastes
 - j. Controls to prevent or minimize illegal dumping and theft of services
9. Coordinate the distribution of public education materials through the County EOC, through local jurisdictions, and through waste haulers and disposal facilities.
10. Contract for services necessary to train site monitors and debris estimators.
11. Coordinate specific regulatory issues directly with the State (e.g., burning of wastes, storage/refrigeration of medical wastes, etc.).

12. Enforce proper removal and disposal of debris by entities contracted to provide service.
13. Adjust hours of operation of disposal sites as needed.
14. Adjust fees for public and private use of disposal sites as appropriate.
15. Arrange for the survey (i.e., soil and water samples, access routes, photos, etc.) of temporary storage sites prior to their use.
16. Execute necessary franchise and other agreements with haulers, contractors, and facilities for collection, processing, and disposal operations.

2.2.3 Yamhill County Emergency Services and EOC

1. Gather and track Countywide information on debris locations and amounts (Planning Section, Operations Section)
2. Notify other jurisdictions of debris sites in or affecting their jurisdictions. For example, notify ODOT of debris sites located on State rights-of-way (Planning Section, Operations Section).
3. Determine status of local debris collection resources (Planning Section).
4. Determine status of local debris recycling and disposal facilities (Planning Section).
5. Coordinate with Public Works, Solid Waste, and other County departments and divisions to identify temporary storage sites for disaster-related debris (Planning Section).
6. Prioritize the County's debris removal sites (Operations Section, Incident Commander, Policy Group).
7. Coordinate the removal of debris from County buildings and parks in cooperation with the Facilities Management Division (Operations Section, Logistics Section).
8. Disseminate debris-related public education materials (JIC).
9. Coordinate debris removal support for local jurisdictions (Logistics Section, Planning Section, Operations Section).
10. Track County debris removal costs and ensure that eligible costs are included in the Initial Damage Assessment (Finance Section, Planning Section).

2.2.4 Private Citizens and Businesses

Private citizens and businesses are responsible for the removal of disaster-related debris from their properties. Although some local governments are prohibited by law or policy from removing debris from private property, many other agencies (e.g., fire districts) will provide some assistance when the debris poses a risk to lives, public health, or property.

Private companies engage in franchise hauling activities; operate recovery and landfill sites; provide recycling and composting options for vegetative (i.e., woody) debris; and contract to pick up and transport medical and hazardous wastes.

Many nonprofit and volunteer organizations can assist with debris removal activities. Convergent volunteers (i.e., those who show up and offer assistance in time of emergency) can also help with debris removal.

3.1 Response and Recovery Operations – Critical Route Maps and List of Critical Facilities

Critical route maps are available in Appendix B of this Annex. Appendix A of this Annex contains a list of critical facilities and a table showing major routes in Yamhill County separated by County, State, and Federal roads.

4.1 Contracts and Agreements

The Yamhill County Public Works Department has established the following service and equipment agreements with local, State, and regional entities. These agreements are on file with the Public Works Department and Emergency Management. They will be made available at the County ECC during an emergency incident.

- Oregon Department of Transportation Flexible Services Agreement for Equipment and Services. February 2007.
- Inter-County Omnibus Mutual Aid Agreement for Emergency Services. 2005.

Appendices C and D of the RDMP contain Sample Mutual Aid Agreements, contracts, and Scopes of Work. Appendix C of this Annex contains any sample Mutual Aid Agreements, contracts, Scopes of Work, and legal agreements to limit liability that the County has prepared.

5.1 Temporary Debris Storage and Reduction Sites – List of Potential TDSR sites

Appendix A contains a list of potential TDSR sites that identifies their size, location, ownership, latitude and longitude (if available), and easting and northing (if available). Appendix B contains aerial photos of the potential TDSR sites.

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Yamhill CSA Tables

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List of Critical Facilities to be developed and inserted here.

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List of County, State, and Federal Roads within the County to be developed and inserted here.

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Regional Debris Management Plan

County-Specific Annex 6. Yamhill County

Yamhill County Potential TDSR Sites

Site	Size (acres)	Location	Ownership
Decommissioned Quarry		East of Newburg, Oregon; north of Hwy. 99	CC Meisel
Newberg Closed Landfill		8010 S. Waterfront Street, Newburg, Oregon	Yamhill County Planning & Development
Whiteson Closed Landfill		South of McMinnville; north Hwy 99 and Hwy 233 Junction	
NW Greenlands Landscape and Supply		2200 NE Orchard Ave, McMinnville, Oregon	Yamhill Valley Material Recovery Facility
Riverbend Landfill		13469 SW Highway 18	Riverbend Landfill Co., Inc.
County Parks		Multiple Locations within the County	Yamhill County
Foreclosed Land/County Land		Multiple Locations within the County	Various Owners
ODOT Facilities		Multiple Locations within the County	State of Oregon

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Yamhill CSA Figures

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Yamhill County Critical Route Map to be developed and inserted here.

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Aerial images of potential TDSR sites to be developed and inserted here.

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Yamhill CSA Contracts and Agreements

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Yamhill County Mutual Aid Agreements, Debris Removal Contracts, Debris Removal Scopes of Work, and legal agreements to be inserted here when developed.

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