

DEBRIS MANAGEMENT PLAN

Updated March 2023



THURSTON COUNTY
PUBLIC WORKS

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Overview

The Thurston County Public Works Debris Management Plan provides information on how debris management operations, including response levels, organization, roles and responsibilities, communications strategies, and health and safety strategies, will be specifically carried out for unincorporated Thurston County areas.

The three key objectives are to (1) provide effective public services in an organized manner, (2) operate in an efficient and financially trackable methodology, and (3) be ready to assist other municipalities as necessary.

Situation: Natural and manmade disasters precipitate a variety of debris that include, but are not limited to, trees, soil, mud, sand, gravel, vehicles, vessels, construction and demolition material, vehicles, personal property, commercial and household hazardous materials, white goods, electronic waste, putrescents, infectious waste, and biological waste.

The quantity and type of debris generated from any disaster will be a function of the location and kind of event experienced as well as its magnitude, duration, and intensity.

The quantity, type, and location of debris generated, as well as the size of the area over which it is dispersed, will have a direct impact on the type of collection and disposal methods utilized to address the debris problem, associated costs incurred, and how quickly the problem can be addressed.

In a major or catastrophic disaster, Thurston County will have difficulty in locating staff, equipment, and funds to devote to debris removal, in the short-term as well as long-term.

Assumptions: A natural disaster that requires the removal of debris from public or private lands and waters could occur at any time. The volume of debris resulting from an event or disaster could exceed Thurston County Public Work's ability to dispose of it. If required, the Governor would declare a State of Emergency that authorizes the use of state resources to assist in the removal and disposal of debris. In the event federal resources are required, the Governor would request, through the Federal Emergency Management Agency (FEMA), a Presidential Disaster Declaration. Private contractors will play a significant role in the debris removal, collection, reduction, and disposal process. The debris management program implemented by the Thurston County will be based on the waste management approach of reduction, reuse, reclamation, resource recovery, incineration, and landfilling.

There are several types of emergencies Thurston County is vulnerable to that could require the activation of this incident operational procedure, including but not limited to:

- **Windstorms:** Characterized by vegetative waste and may also include construction/demolition materials from damaged or destroyed structures. Extended power outages may result in large amounts of putrescible waste from private residences and grocery stores.
- **Flooding:** Characterized by construction/demolition waste and solid waste including sediment, vegetation, animal carcasses, and hazardous materials.
- **Earthquake:** Characterized by construction/demolition waste and solid waste including sediment, vegetation, animal carcasses, and hazardous materials.

- Urban and Wild-Land Fires: Characterized by burnt vegetation, burnt construction/demolition waste and solid waste including ash, charred materials, and ash-covered debris.
- Ice Storms: Characterized primarily by vegetative waste from broken tree limbs and branches. May also include construction/demolition waste and putrescible waste from extended power outages.
- Volcano: Characterized by ash and ash-covered debris.
- Landslides: Characterized by sediments and construction/demolition waste.
- Nuclear, Chemical, or Biological Incident: Characterized by various amounts of contaminated soil, water, construction/demolition waste and solid waste that could require special handling.

Authorities:

- FEMA-325 Public Assistance Debris Management Guide.
- FEMA Appendix B Debris Management Plan Outline Example.
- If a disaster strikes the City, the City Council may proclaim a Declaration of Emergency if the disaster has the potential to affect life, property, or the public peace under the provisions and limitations of RCW 35.33.081, RCW 36.40.180, and RCW 38.52.070(2). They may also command the service and equipment of citizens under the provisions and limitations of RCW 38.52.110(2).

Health and Safety Strategy:

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

All debris operations shall be done in compliance with the health and safety requirements found in the Thurston County Public Health and Safety Policies and Procedures

<https://www.thurstoncountywa.gov/departments/public-health-and-social-services/environmental-health/about-environmental-health>, and in the Washington State Occupational Safety and Health Administration Plan <https://www.osha.gov/dcsp/osp/stateprogs/washington.html>.

Compliance with Thurston County Public Health and Safety Policies and Procedures enables Thurston County employees and contractors to reduce or mitigate the incidence of accidents during debris management operations and to protect workers from exposure to hazardous materials.

Health and safety strategies establish minimum safety standards for Thurston County employees and contractors to adhere. In addition, the strategy provides emergency workers with information on how to identify hazardous conditions and specific guidelines on the appropriate and proper use of personal protective equipment.

To facilitate compliance, the health and safety strategy specifies how the safety information

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

Concept of Operations

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

Debris Management Response Levels

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

Level One: Routine Operations

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

Level Two: Medium Impact Disaster

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

Level Three: High Impact Disaster

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

Debris Management Operational Phases

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

Increased Readiness

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

1. Review and update plans, standard operating procedures, generic contracts, MOUs with other agencies or jurisdictions, and checklists relating to debris removal, storage, reduction, and disposal operations.
2. Alert local departments that have debris removal responsibilities to ensure that personnel, facilities, and equipment are ready and available for emergency use.
3. Relocate personnel and resources out of harm's way and stage in areas where they can be effectively mobilized.
4. Review potential local, regional, and temporary debris storage and reduction sites that may be used in the response and recovery phases in the context of the impending threat.
5. Begin public information messaging regarding debris removal and collection per the County Public Information Office (PIO) procedure. The public should be kept informed of debris pick-up schedules, disposal methods, and ongoing actions to comply with state and federal Environmental Protection Agency (EPA) regulations, disposal procedures for self-help and independent contractors, and restrictions and penalties for creating illegal dumps. The Public Information Officer should be prepared to respond to questions pertaining to debris removal from the press and impacted residents. The following questions are likely to be asked:
 - What is the pick-up system?
 - When will the contractor be in my area?
 - Who are the contractors and how can I contact them?
 - Should I separate the different debris materials and how?
 - How do I handle Household Hazardous Waste?
 - What if I need assistance due to mobility limitations?

Notification: Thurston County will use all available and appropriate means of communication to inform the public including, but not limited to, press releases, social media, radio, local news and television, the county website, etc.

Household Hazardous Waste: The Public Information Officer will communicate to county residents HHW eligibility following an event. It is important that residents separate HHW from other disaster debris to ensure that HHW does not enter the debris stream at Solid Waste locations. HHW removal is eligible for FEMA reimbursement if the debris is a result of the disaster. If curbside collection of HHW, which helps ensure proper disposal of HHW, is established then measures should still be taken jointly by the certificated haulers, the county, and the monitoring departments to identify, segregate, and dispose of intermingled HHW at Solid Waste locations. Thurston County, Revised Code of Washington (RCW), and federal laws should be followed regarding the final disposal of removed refrigerants, mercury, or compressor oils.

Household Hazardous Waste Includes:

Lawn chemicals	Aerosol spray cans
Cleaning agents	Fluorescent lamps
Batteries	Fuel

Fire extinguishers	Paint
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White Goods: The public information officer will communicate with residents regarding white goods' eligibility following an event. It is important that residents separate white goods from other disaster debris to ensure that white goods do not enter the debris stream at Solid Waste locations.

White goods debris removal is eligible for FEMA reimbursement if the debris is a result of the disaster and removed from publicly maintained property and roadways whose maintenance is the responsibility of the county. White goods debris that contains ozone depleting refrigerants, mercury, or compressor oils need to have such materials removed by a certified technician before recycling. White goods collection will be determined based on input from county staff and certificated haulers. White goods must be properly disposed of at a licensed disposal facility.

White Goods Include:

Refrigerators	Heat pumps
Freezers	Ovens
Air conditioners	Ranges
Washing machines	Clothes dryers
Commercial chillers	Water heaters

Review resource listing of private contractors who may assist in debris removal process, making necessary arrangements to ensure their availability in the event of the disaster.

Response

Debris management response operations are designed to address immediate or short-term effects of a debris causing incident. Prior to deployment, staff will be briefed on the debris removal plan and all safety issues concerning it, to include issuing any personal protective equipment that may be needed. During the response phase, staff will initiate the following tasks:

1. Activate debris management plan and coordinate with damage assessment team.
2. Begin documenting costs.
3. Begin debris clearance from transportation routes, based on debris removal priorities.
4. Coordinate and track resources (public and private).
5. Establish priorities regarding allocation and use of available resources.
6. Identify and activate temporary debris storage and reduction sites (local and regional).
7. Address any legal, environmental, and health issues relating to the debris removal process.
8. Continue to keep public informed through the County Public Information Office (PIO) procedure.

Recovery

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

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

Incident Command System (ICS)

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

Roles and Responsibilities

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

Thurston County Departments

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

Lead Agency, Thurston County Public Works: Public Works oversees both phases of debris management and coordinates activities with other departments, regional partners, and contractors when necessary.

- The Road Operations Division conducts emergency road clearing activities during the post-event response phase following a debris-generating event.
- The Administrative Services Division provides general administration support including contracts and record keeping.
- The Solid Waste Division manages all debris collection, storage, and reduction processes.
- The Parks and Trails Section provides general support for debris collection, storage, and reduction processes.

Public Works staff will provide debris operations support during response and recovery operations as directed by ECC Executive Planning Group. This staff, designated as Emergency Support Function (ESF#3), will be selected depending upon the type of emergency.

Debris operations staff members are responsible for directing debris operations during and after an

event. The number and type of staff needed to complete debris operations will be dependent upon the scope and magnitude of the disaster. Debris operations staff will likely be comprised of Thurston County full-time personnel, personnel from neighboring jurisdictions, and/or contractors. Some support roles may be filled by volunteer Registered Emergency Workers.

During an incident, staff may be needed to assume one or more roles as described below. The Debris Plan Manager will be responsible for appointing appropriate staff to fulfill the roles in the PW Debris Management Team.

Debris Removal Manager: The Debris Removal Manager coordinates all debris clearance and removal activities related to an incident. Activities include communication among other members of the Debris Management Team, communication of project status activity and reporting, and dissemination and implementation of policy directives to debris removal personnel. This function is performed by Road Operations Manager.

Debris Collection Supervisor: The Debris Collection Supervisor oversees collection (clearance and removal) activities on roads in unincorporated Thurston County prior to debris arrival at the disposal site, and coordinates debris routing, staffing and field reporting activities. This function is performed by the Road Operations Supervisor.

Debris Site Supervisor: The Debris Site Supervisor manages one or more Temporary Debris Collection Sites and is responsible for overseeing waste separation and environmental protection concerns as well as completing required reporting documentation. This function is performed by the Solid Waste Manager.

Debris Team Finance, Administration and Logistical Staff: These positions track time for personnel, equipment, and incident costs related to debris management within each department or division. These positions also assist with contracting and purchasing resources, completing documentation required for reimbursement of expenses, and coordinating the de-mobilization of resources.

Supporting Agencies: Thurston County Emergency Management: Emergency Management will coordinate activities and resource needs through the County ECC. This department will coordinate with the Auditor's Office – Financial Services, which is the applicant agent for FEMA reimbursement.

Additional specialized staff may be needed to act as technical specialists during all phases of a debris-generating event. These include the following:

Debris Management Subject Matter Expert (SME): A Debris Management SME provides information and guidance to command staff working in the operations and planning sections to help guide disaster operations.

Quality Assurance Personnel: Quality Assurance Personnel ensure the debris operations are cost effective and that the debris is collected, removed, and disposed of in compliance with federal, state, and local laws. This is accomplished through the monitoring of debris type and amount during collection, sorting, reduction, and disposal.

Diversion Program Staff / Debris Management Site Staff: Staffing is estimated to be 3 Full-Time Equivalents (FTEs) for Diversion Programs and 10 FTEs per Temporary Debris Sorting and Reduction Site for each hour of operation and each hour of set-up and clean-up during non-operating hours.

External Agencies

Washington State Department of Ecology (Ecology): The Department of Ecology is responsible for the protection of Washington’s environment. The department provides statewide regulation of municipal solid and hazardous waste. During a disaster, Ecology may support and advise local health departments and solid waste agencies, regarding disaster debris operations. Ecology may also issue temporary permits or recommend certain regulations be suspended, to hasten response and recovery.

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

Washington State Emergency Management Division (WAEMD): During state emergencies, WAEMD manages the State Emergency Operations Center (EOC) located on Camp Murray, near Tacoma, and coordinates the response to ensure quick and effective help is provided to those who need it. The EOC is designated as the central location for information gathering, disaster analysis, and response coordination. At the EOC, information gathered is used by executives to make decisions concerning emergency actions and to identify and prioritize the use of state resources needed to respond to the emergency. The EOC may issue emergency warnings or disseminate critical information and instructions to government personnel and the public who may need to take emergency protective actions.

Washington State Enterprise Services: Enterprise Services is the state agency responsible for coordinating Emergency Support Function (ESF#3): Public Works and Engineering under the Washington State Comprehensive Emergency Management Plan. During a debris-causing incident, Enterprise Services will support state agencies, provide coordination of logistical and engineering support for state facilities, and provide resources to local requests that are coordinated through the Washington State Emergency Management Division.

Washington National Guard: The Washington National Guard may provide equipment, personnel, and technical assistance to protect the State of Washington. During debris-causing incidents, National Guard resources provide security for equipment staging and debris sorting and reduction sites, limited electrical power and sheltering, traffic control, and aerial reconnaissance. After local resources have been exhausted, National Guard resources are available through a request to the State Emergency Management Division.

Washington State Patrol (WSP): WSP is the lead law enforcement agency within the State of Washington. During a debris-causing incident, WSP supports local law enforcement with evacuation of persons and property, coordination (along with the Washington Department of Natural Resources) of disaster firefighting and firefighting resources through the Washington State Fire Mobilization Plan, and augmentation of local law enforcement resources.

Olympic Regional Clean Air Agency (ORCAA): The ORCAA is responsible for regulating air quality in Puget Sound. During debris-causing disasters, the ORCAA provides advice on outdoor burning of debris and the removal and disposal of asbestos-containing debris. They also provide information and possible monitoring of air quality for debris operations that create large quantities of dust. Depending on the disaster severity, ORCAA can suspend all or part of the Washington Clean Air Act or Regulations I, II, and III.

Contractors and Vendors

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

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

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

Debris Management Monitoring Contractors: Debris monitoring contractors provide oversight and documentation of debris management operations. This may include supervising other debris management contractors, documenting debris clearance and disposal operations for potential reimbursement, and operating temporary debris sorting and reduction sites.

Federal Resources

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

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

ESF #3 – Public Works and Engineering is responsible for infrastructure protection, emergency repair, and restoration. Also provides engineering services and construction management, and serve as a critical infrastructure liaison. The United States Corps of Engineers is the lead agency for ESF #3.

ESF #10 – Oil and Hazardous Material Response is responsible for responding to oil and hazardous material issues, environmental safety, and short- and long-term cleanup. The two most commonly deployed agencies that deal with these debris-related activities are the United States Environmental Protection Agency (EPA) and the United States Coast Guard (USCG).

All Mission Assignments have the following requirements:

- The community must demonstrate that required disaster-related efforts exceed state and local resources

- The scope of work must include specific quantifiable measurable tasks
- FEMA must issue the Mission Assignment

Debris Collection and Hauling Operations

This section provides information on disaster debris response and recovery operations, including damage assessment, debris collection, and the establishment of temporary debris sorting and reduction (TDSR) sites.

Damage Assessment and Debris Estimates

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

The Damage Assessment Teams will determine the estimated quantity and mix of debris generated as soon as possible. Methods for debris estimation include:

The United States Army Corps of Engineers (USACE) Hurricanes Debris Estimating Model, which has a predicted accuracy of $\pm 30\%$. Although the likelihood of a hurricane or typhoon, when occurring in the Pacific Ocean, impacting the Thurston County is low this model is still viable as the primary factor is the number households in a developed urban/suburban area. Supporting factors include cubic yards generated per household per storm category, vegetative cover, commercial density, and precipitation.

For individual properties the following formula will be used to estimate the debris volume generated by a destroyed single-family home: $L \times W \times S \times 0.20 \times VCM$.

- L = Length of the building.
- W = Width of the building.
- S = Height expressed as number of stories.
- 0.20 = reduction factor due to airspace in a single-family dwelling.
- VCM = Vegetative cover multiplier.

Light	1.1 multiplier	Includes new home developments where more ground is visible than trees and canopy cover is sparse
Medium	1.3 multiplier	Generally, has a uniform pattern of open space and tree canopy cover and is the most common description for vegetative

		cover
Heavy	1.5 multiplier	Found in mature neighborhoods and woodlots where the ground or houses cannot be seen due to the tree canopy cover

Drive-through “windshield” damage assessments may also be conducted to estimate the amount of debris visually. If available, an aerial assessment by flying over the area using State Police and/or National Guard helicopters and Civil Air Patrol reconnaissance flights may be conducted. The damaged area can be assessed either visually or using aerial photography.

- Estimate damage costs
- Determine impact on critical facilities
- Identify impact on residential and commercial areas
- Identify what additional resources are needed for response and recovery

Once the area has been assessed, actions can be taken to implement Phase I debris clearing procedures and institute requests for additional state or federal assistance.

FEMA Preliminary Damage Assessment

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

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

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

Debris Clearance and Removal Guidelines

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

- Life Safety
- Situation Stabilization
- Property Protection
- Economic Stability and Environmental Protection

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

Debris Removal

Natural disasters including severe storms and earthquakes can generate unprecedented amounts of debris in a few hours or a few minutes. The debris may be equally heavy in both urban and rural areas depending on the magnitude of the tree blow-down and associated structural damage such as homes, businesses, utilities, and signs. This section provides guidelines on debris removal issues, including emergency roadway clearance, public right-of-way removal, mobile home park removal, private property removal, navigation hazard removal, and Household Hazardous Waste (HHW) removal.

Debris removal, regardless of source, becomes a high priority following a disaster. A debris management strategy for a large-scale debris removal operation divides the operation into two phases.

Phase I: consists of the clearance of the debris that hinders immediate lifesaving actions being taken within the disaster area and that which poses an immediate threat to public health and safety.

Phase II: operations consist of the removal and disposal of that debris which is determined necessary to ensure the orderly recovery of the community and to eliminate less immediate threats to public health and safety.

Historic and Cultural Preservation: This plan incorporates guidance for compliance with Section 106 of the National Historic Preservation Act. If there is a Native American burial site in the vicinity of the site, the work will be performed under the guidance of an archeologist.

Archeological or historical objects such as ruins, sites, buildings, artifacts, fossils, or other objects of antiquity that may have significance from a historical or scientific standpoint, shall not be further disturbed. If any such object is encountered by contractors or Thurston County personnel, the contractor or Thurston County personnel shall immediately notify county engineers and the county engineer will notify an archeologist of any such findings.

Discovery of Human Remains and Personal Property: Debris material will be visually screened for remains, belongings, and hazardous materials. If human remains are discovered on a roadway or in debris, all work in that area will cease immediately. All efforts must be made to leave any potentially identifying items exactly where they are at the time of discovery. A medical examiner team will be assigned to the site to handle, collect, and remove the remains. The contractor and county personnel will attempt to return discovered private property to legal owners when ownership can be determined and if the owner is available to receive the property within Thurston County.

Thurston County has developed the following priorities for debris clearance and will use the snow routes protocol. Circumstances such as mutual aid, ECC Strategic Planning Group Priorities, crime scene preservation, and/or accident investigation may require a delay of debris clearing during disaster operations until approval can be obtained from the lead ICS organization.

Clear Emergency Access Routes and Lifelines: Lifelines are those routes in a traffic network that provide access for emergency responders, alternate and evacuation routes, and damage assessment routes. Lifelines should include areas identified for potential staging, temporary shelters, and other resources available in the community that supports emergency response. Thurston County will work closely with neighboring jurisdictions to identify priorities for clearing transportation access routes.

Clear Access to Critical Facilities and Infrastructure: Assets, systems, and networks, whether physical or virtual, so vital that their incapacitation or destruction would have a debilitating effect on security, economic security, public health, or safety. These typically include hospitals, fire stations, police stations, and emergency operation centers as well as cellular and land-line telephone services, drinking water and power utilities, and sanitation facilities.

Clear Major Freeways or Arterial Routes: Major freeways and arterial routes are portions of the public transportation network that are needed to aid in response and recovery operations but may not have been cleared as an emergency access route.

Clear Areas Necessary for Movement of Goods and Services/Economic Restoration: These areas include the portions of the public transportation network necessary for effectively transporting goods and services throughout the region that are not included in one of the previous categories. These may include access to warehouses, airports, seaports, and major business districts.

Clear Minor Arterial Routes: These routes include those portions of the public transportation network that receive moderate traffic flows but are not included in one of the previous categories.

Clear Local Routes: These areas include those portions of the public transportation network in residential neighborhoods that are not included in one of the previous categories.

Debris Operations

Debris-clearing and removal operations predominately focus on public roads and other critical infrastructure; they should be prioritized based on the methodology described above.

Debris Clearance

Initial debris clearance will focus on removing debris from public property based on the County's identified priorities. Additional debris clearance from private or commercial property may be necessary if the debris presents a health or safety risk to the community. Private property debris removal is not common but may be necessary in extreme cases. Dangerous structures should be the responsibility of the owner to demolish to protect the health and safety of adjacent residents. However, experience has shown that unsafe structures will remain because of a lack of insurance or absentee landlords. Consequently, demolition of these structures may become the responsibility of Thurston County based upon determination of the Board of County Commissioners and/or Public Health Officer that they are a threat to public health, safety, or welfare.

Items to be considered during debris clearance and collection include the following:

Debris Composition: Commingling of debris creates problems with reduction and recycling techniques, which may impact future reimbursement. Whenever possible, immediate action should be taken to prevent or reduce commingling of debris during debris collection operations.

Location of Debris: In Washington State, debris removal is the legal responsibility of the property owner. Therefore, Thurston County's Debris Management Plan focuses on the removal and disposal of disaster debris from county-operated roads and other county-owned or operated facilities. Debris clearance on private property is not allowed by state law without the written permission of the property owner and is usually not a reimbursable expense from the Federal

Emergency Management Agency (FEMA). However, removal of disaster debris from private commercial or residential property may occur as determined on a case-by-case basis.

Collection Methods

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

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

Permanent Solid Waste Handling Facilities: Thurston County Public Works will attempt to maximize the use of existing transfer facilities after an emergency using operational measures such as increased staffing or hours.

Existing Transfer and Recycling Center:

**Thurston County Waste and Recovery Center
2420 Hogum Bay Rd NE
Lacey, WA 98516**

Debris Disposal Voucher Program

Following debris causing disasters, authorized Thurston County personnel may issue Debris Disposal Vouchers to homeowners, tenants, and businesses with verified debris disposal needs. The Voucher will be usable for reduced cost or free disposal at specified disposal facilities for a fixed period. The Voucher can only be used to dispose of materials accepted at the facilities. The property owner, tenant, or business must take an online survey provided by the County to determine their eligibility for a Voucher. If eligible, they will be instructed where to get a Voucher. Unless special permission is granted, the property owner, tenant, or business receiving the Voucher will need to accompany the waste to the transfer station or landfill.

Program Initiation

The Thurston Disaster Policy Advisory Group recommends program initiation to the Board of County Commissioners. The Board of County Commissioners then chooses to initiate the program.

Emergency Services Program Responsibilities:

The Operations Section Chief and the Logistics Section Chief are responsible for coordinating Emergency Services responsibilities.

- Create and manage individual assistance online survey to determine voucher eligibility.
- Create color-coded Vouchers with unique identification numbers and Voucher tracking sheet.
- Distribute Vouchers to eligible members of the public.

Public Works Program Responsibilities:

The Solid Waste Manager is responsible for coordinating Public Works responsibilities

- Create a unique material code for debris disposal in the Paradigm scale software.
- Public Works communication team promotes voucher program to the public.
- Scale-house staff accept vouchers from the public for free disposal of debris.

TDSR Site or Drop Box: Residents may be asked to bring disaster debris to collection sites to temporarily store, segregate, and process debris before it is hauled to its final disposal site. If possible, the sites should remain at the same location for each debris-causing incident and should be included in the incident communication strategy. Facilities that can be used for drop-off's include debris drop boxes, TDSR sites, landfills, and transfer stations. If additional sites are needed, public property should be used first followed by private property.

Temporary Debris Sorting and Reduction Sites

Site Management

A map identifying the pre-designated TDSR sites in Thurston County can be found at the end of this document. TDSR site preparation and operation may be managed by Thurston County personnel or a contractor. To meet overall debris management strategy goals and to ensure that the site operates efficiently, a site manager, debris monitoring personnel, and safety personnel should be assigned to each site.

Site Manager: The Site Manager is responsible for supervising day-to-day operations, maintaining daily logs, preparing site progress reports, and enforcing safety and permitting requirements during site operations. The Site Manager is also responsible for scheduling the environmental monitoring and updating the site layout. The Site Manager has oversight of the activities of the debris removal contractors and the on-site debris processing contractors to ensure that they comply with the terms of their contracts.

Monitoring Staff and Assignments: Regional monitors (whether county employees or contractors) should be placed at ingress and egress points to quantify debris loads, issue load tickets, inspect and validate truck capacities, check loads for hazardous waste, and perform quality control checks. The specific duties of the monitors would depend on how debris is collected.

Safety Personnel: Safety personnel are responsible for traffic control and ensuring that site operations comply with local, state, and federal occupational safety regulations.

Establishment and Operations Planning

Whenever possible, TDSR sites will be identified and established prior to an incident to allow appropriate planning and permitting to be completed.

TDSR Site Locations

Thurston County PW has identified the Waste and Recovery Center, Rochester Drop Box and Rainier Drop Box, and several county gravel pits that meet the TDSR criteria. Attachment 1, *TDSR Site Map*, provides a list of TDSR sites currently identified.

Locating Additional TDSR Sites

Thurston County is working to identify additional TDSR sites in areas of unincorporated Thurston County where a higher level of disaster debris is expected to be generated.

When identifying additional TDSR sites, Thurston County staff will first consider sites that already have solid waste handling permits and, secondly, public lands. Existing disposal or recycling facilities close to lifelines and major access routes are ideal TDSR sites. County-owned sites that will not require extensive repair costs, such as parks, vacant lots, or sports fields, may be considered as well. State-to-state or county-to-county agreements may provide solutions for public land use; however, if these are not available, planning staff will develop criteria for identifying potential private property locations for the TDSR sites. County legal staff will review private land easements for suitability and possible use.

Additional selection considerations for TDSR sites include the following:

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

Site Preparation:

Site preparation may require the development of a Memorandum of Understanding, a Memorandum of Agreement, or lease/use agreement, if appropriate. The site will be prepared as directed by the Thurston County Health Department. All preparation and operation requirements will be included in the scope of work if TDSR Site preparation is to be contracted with an outside vendor. Site closure and restoration considerations will be included during preparation. Site preparation will identify responsibilities for gathering and documenting initial baseline data and developing an operational plan, including a closure plan. In extreme disaster situations, the appropriate regulating authority may grant exemptions to site preparation requirements.

Control of possible contaminants (including ash, household hazardous waste, fuels, and other materials) will be addressed during site preparation. This will be included as a requirement in the scope of work if the TDSR site preparation will be contracted out. Site topography and soil/substrate conditions will also be evaluated to determine the best site layout.

Site Layout

Significant accumulation of debris should not be allowed to occur at temporary storage sites because of environmental and safety concerns such as the risk of fire. Permits for such sites may specify maximum capacity restrictions.

Although FEMA recommends 100 acres as the minimum size for a TDSR site, Thurston County may be limited by facility availability. Additional debris management sites may be necessary if actual debris quantities are greater than the site storage and processing capacity.

Operational Boundaries

Operational boundaries are the boundaries or areas that clearly define the different use areas on the Debris Management Site. In establishing the operational boundaries, the TDRS site design staff will consider using earthen berms, temporary barriers, or other physical restrictions. This aids traffic circulation and keeps the backlog of debris to a minimum. Common operational areas may include the following:

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

Separation of the areas listed above will be clearly delineated and defined. As operations proceed, these areas may change with the various types of debris. The reduction, recycling, tipping, and loading areas require adequate space for equipment operations. The site design will consider the possibility of multiple pieces of equipment engaging in the same activity at one time. Depending on the scale of operations, each debris stream may have its own tipping area and the site will be designed accordingly.

General public drop-off areas for recycling, reduction, and construction and demolition debris may be included within a TDSR site. These public use areas will be carefully designed for passenger vehicle traffic and public safety, as well as provide an accurate accounting for all weight or volume of materials received.

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

Monitoring towers on large sites may be located at ingress and egress points; and will be constructed of durable structural materials, designed to withstand active and static loads. Thurston County notes that a ladder is not an acceptable monitoring tower.

Equipment and fuel will have a designated storage area with appropriate signage posted. These fuel storage areas will be designed to contain spills and will contain class B fire suppressant devices. For

dust and fire suppression (non-fuel material), water will always be readily available throughout the site.

Traffic Patterns

Traffic circulation will be well defined throughout the entire TDSR site. Vehicle traffic through the site will be managed by the utilization of signs, barricades, and flag personnel. The designed traffic pattern may allow trucks to enter and exit through different access points, providing an adequate number of monitors are employed. Monitors stationed at ingress and egress points ensure that every truck releases their entire load prior to leaving the site. If possible, empty trucks that enter the site to remove the processed (reduced) debris may enter and exit through an access point other than that of all other traffic.

Environmental Monitoring Program:

Environmental data will be collected during site operations to support site closeout and quality assurance. The data will be compared to the previously established information to determine any site remediation that may be necessary.

TDSR Site operations may expand, contract, or shift on the site. The locations of all hazardous materials and equipment storage will be tracked in order for soil and water samples to be tested for contaminants. If the site is also an equipment staging area, site operators will monitor fueling and equipment repair to prevent and mitigate spills (e.g., petroleum products and hydraulic fluids). Site management plans (and/or contracts) will require immediate cleanup of any spills by the site operators. Any areas of concern will be mapped and tracked to facilitate any required remediation.

Site Closure:

After the site operations are complete, the property (either county-owned or leased) must be restored to its pre-activity environmental state. Restoration activities include, but are not limited to, removal of all traces of the operations (e.g., debris, processing equipment, storage tanks, protection berms, and other structures) and any required remediation of any contamination that may have taken place during the operations. Thurston County Public Health and Social Services Department will review all closed TDSR sites.

Site Evaluation and Restoration

Final restoration of the landscape must be acceptable, within reasonable expectations, to the Health Department and the landowner. Site designers will address landscape restoration as early as possible, incorporating restoration provisions into the MOU, MOA, or lease as appropriate.

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

Based on the results of the testing, additional remediation may be required before the owner takes final acceptance of the site. The MOU, MOA, or lease agreement will have provisions to release

Thurston County from future damages when the site is returned to its original condition or when final acceptance is received from the Health Department and the owner.

Neighborhood Collection Sites

In addition to TDSR sites, Thurston County may elect to establish neighborhood collection sites to support disaster debris operations. These sites are used to collect debris from a small area and transport the debris to an established TDSR site or a recycling or disposal facility.

Debris Reuse, Reduction, and Disposal Methods

Numerous methods are available that reduce the overall volume of disaster debris by diverting from disposal at a landfill.

Recycling and Reuse

Trained county or contractor staff will monitor disaster debris to identify items for diversion and recycling and to ensure that the disaster debris sent to the Thurston County solid waste system complies with established Thurston County waste acceptance requirements.

Trained county or contractor staff will collect data on the volumes of disaster debris diverted and disposed. This reporting and data collection will be designed under the direction of FEMA staff assigned to the specific disaster to ensure that this documentation complies with the current FEMA requirements and expectations.

The recycling and reuse of disaster debris may be limited to metals, soils, construction and demolition debris, and organic composting materials.

Metals: Most non-ferrous and ferrous metal debris is suitable for recycling. Metal maulers and shredders can be used to shred trailer frames, trailer parts, appliances, and other metal items. Ferrous and non-ferrous metals are separated using an electromagnet and then sold to metal recycling firms.

Soil: Soil can be combined with other organic materials that will decompose over time. This procedure produces significant amounts of material, which can be sold, recycled back into the agricultural community, or stored onsite to be used as cover when the site is returned to its pre-incident state. In agricultural areas where chemical fertilizers are used heavily, recovered soil may be too contaminated for use on residential or existing agricultural land. Public Works will consult with Thurston County Public Health and Social Services department to establish what monitoring and testing is necessary to ensure that soil is not contaminated with chemicals. If the soil is not suitable for agricultural or residential use, it may ultimately need to be disposed of at a permitted landfill.

Construction and Demolition: Building demolition materials will need to be sorted based on end materials uses and removal of contaminants such as asbestos. Concrete, asphalt, and masonry products can be crushed and used as base material for certain road construction products, or as trench backfill. Debris targeted for base materials needs to meet certain size specifications as

determined by the end user. Clean wood products used in construction can also be chipped or ground and used as mulch or hog fuel.

Composting: Composting is the controlled decomposition of organic materials, such as leaves, grass, wood, and food scraps, by microorganisms. The result of this decomposition process is compost, a crumbly, earthy smelling, soil-like material. Yard trimmings and food scraps make up about 25 percent of the waste generated in the average household; composting can greatly reduce the amount of waste that ends up in landfills or incinerators. A section of TDSR sites should be reserved to receive compost material after a disaster and monitored to mitigate vectors and spontaneous combustion. Composting can be used not only for backyard garden soil additives, farmlands, highways, and other landscaping projects, they can also be put to many innovative uses.

Volume Reduction Methods

The volume of disaster debris may be reduced using methods such as chipping or grinding wood for landscaping or hog fuel. Currently, incineration is not a viable volume reduction strategy in Thurston County.

Chipping and Grinding: Chipping and grinding reduces the volume of some debris types by as much as 75 percent. This method is commonly used to reduce the volume of disaster debris including vegetative debris, construction demolition debris, plastics, rubber, and metals. Clean wood can also be reduced and used for mulch, while other debris such as plastic and metals can be chipped to reduce the overall volume of the material prior to transportation or disposal. The benefit of using a reduction method can be increased by identifying alternate uses for the residual material. The ability to use recycled wood chips as mulch for agricultural purposes, fuel for industrial heating, or in a cogeneration power plant helps to offset the cost of the chipping and grinding operations. When using chipped and ground materials, they must be carefully monitored to ensure that contaminants such as plastics, soils, rocks, metals, and special wastes are not present in the vegetative debris to be processed.

Problem Waste Processing and Disposal

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

Household Hazardous Waste (HHW): Thurston County Public Works will instruct county businesses and residents to dispose of their HHW using the County's established HHW program.

White Goods: White goods will be recycled. Refrigerators, freezers, air conditioners, and other appliances that contain refrigerants will be processed by a qualified recycler to remove the refrigerant before being recycled. Food waste must be removed before the appliance will be accepted for recycling.

Electronic Waste (E-waste): E-waste should be separated from other waste and recycled by an E-waste processor.

Treated Wood: Treated wood may be disposed at a construction and demolition debris receiving facility designated by Thurston County. Treated wood may not be chipped, shredded, mulched, composted, or incinerated.

Gypsum Drywall: Gypsum drywall may be recycled or disposed at a construction and demolition debris receiving facility designated by Thurston County.

Asbestos: Regulations for asbestos handling are well established by several different local, state, and federal agencies, including the Washington State Department of Ecology and the Olympic Regional Clean Air Agency. Asbestos-containing materials may be disposed of using proper waste handling procedures such as abatement permitting and dust containment.

Human Waste: Human waste cannot be included in the debris stream. The Health Department and wastewater personnel will work to properly collect and dispose of this waste.

To the extent possible, Thurston County will attempt to segregate hazardous substances from the waste stream as early in processing as possible to prevent contamination of larger amounts of waste. The county will consult with the local hazardous waste staff, public health officials, the Washington State Department of Ecology, and the U.S. Environmental Protection Agency to ensure the protection of public health.

Debris Sorting and Diversion

When establishing and operating Debris Management Sites and/or Neighborhood Collection Sites, the Site Manager is responsible for ensuring that appropriate staff are available to monitor debris and to ensure that debris is sorted into appropriate categories for recycling, reuse, special waste processing, and disposal.

Debris Management Operations Monitoring

Debris monitoring operations document the debris clearance and removal operations, including the location and volume of debris collected. Monitoring is needed to ensure that the any debris removal contractor(s) are performing the scope of work required by the contract and to determine eligibility for FEMA reimbursement.

Debris monitoring can be accomplished by Thurston County staff or by a debris monitoring contractor hired by Thurston County. The key elements to record when monitoring and documenting debris operations include:

- Type of debris collected
- Amount of debris collected
- Original collection location

Documentation and Reporting Requirements

During the operation of TDSR sites, any operations that will have a bearing on site closeout such as petroleum spills at fueling sites, hydraulic fluid spills at equipment breakdowns, discovery of household

hazardous waste, and commercial, agricultural, or industrial hazardous and toxic waste storage and disposal, need to be documented. This information will be used during site closeout operations.

Debris Management Contractor Monitoring

If Thurston County utilizes contractors for debris operations, the county will establish a contract monitoring plan. The purpose of a monitoring plan is to protect the county's financial interest.

Monitoring debris removal operations achieves two objectives:

- Verifying that the work completed by the contractor is in the contract scope of work
- Document justification, as required, for FEMA reimbursement

Contractor monitoring can be accomplished by county staff or by a separate contract company. Failure to document eligible work and costs may jeopardize FEMA reimbursement. In federally declared disasters, FEMA periodically validates a region's monitoring efforts to ensure that eligible debris is being removed and processed efficiently.

Considerations for Unit Price Contracts

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

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

Load Tickets

The term "load ticket" refers to the primary debris-tracking document. A load ticket system tracks the debris from the original collection point to the TDSR site or landfill. By positioning debris monitors at each point of the operations (collection, TDSR site, and/or final disposition), the eligible scope of work can be properly documented. This process enables the jurisdiction to document and track debris from the initial collection location, to the TDSR, and to final disposal locations. Should Thurston County use contract haulers, these tickets will be used to verify hauling activities. Load tickets should be multi-copy and sequentially numbered. All copies of load tickets presented for payment must match for payments to be made.

Truck Certification and Periodic Recertification

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

- Volume of the truck bed in cubic yards or empty truck weight
- Truck license and DOT number
- Any identification number assigned by the owner
- A brief description of the truck, including FEMA truck rental reimbursement rate.

Monitors may need to be trained to measure truck capacities for certification purposes. Recertification of the hauling trucks on a random and periodic basis should be implemented for contract compliance and reimbursement considerations. A listing of certified trucks will be maintained by debris monitors to ensure that truck identifications have not been altered.

Awareness of Improper Unit Price Contractor Strategies

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

- Reporting improper truck volumes
- Adding improper debris to a load to increase weight (i.e., steel, boulders, excess soil, or concrete)
- Soaking debris with water
- Tipping half of the load
- Switching a truck number
- Using large fuel tanks that are almost empty on initial weigh-in and full when delivering debris
- Adding steel plates or other weights to the bottom of the truck bed

Considerations for Time and Materials Contracts

If Thurston County opts to enter into time and materials contracts, the county will document the length of time that equipment and personnel is used and will endeavor to ensure that equipment and personnel are being used efficiently. FEMA does not reimburse for "down time" of equipment or personnel.

Considerations for Debris Monitoring Contracts

Thurston County may utilize debris monitoring contractors to monitor and document debris operations, or to manage other debris management contractors.

When developing scopes of work for debris management contractors or when evaluating their performance, the county will consider and evaluate following:

- Documentation of the type and amount of debris collected
- Documentation of the original collection location
- Measurement and certification of truck capacities (recertify on a regular basis)

- Completion and physical control of load tickets to ensure chain of custody (in monitoring towers and the field)
- Validation of hazardous trees, including hangers, leaners, and stumps (use appropriate documentation forms)
- Confirmation that trucks are accurately credited for their load
- Confirmation that trucks are not artificially loaded to maximize reimbursement (e.g., debris is wetted, or debris is fluffed instead of compacted)
- Confirmation that hazardous waste is not mixed in with loads
- Confirmation that all debris is removed from trucks at the DMS
- Notification to project manager if improper equipment is mobilized and used
- Notification to project manager if contractor personnel safety standards are not followed
- Notification to project manager if public safety standards are not followed
- Notification to project manager if completion schedules are not on target
- Confirmation that only debris specified in the scope of work is collected and identification of work as potentially eligible or ineligible
- Monitoring of site development and restoration of the TDSR
- Confirmation that daily loads meet permit requirements
- Confirmation that work stops immediately in an area where human remains or potential archeological deposits are discovered
- Notification to project manager if debris removal work does not comply with all local ordinances as well as state and federal regulations
- Completion of a pre- and post-event environmental assessment of each TDSR site

Contracted Resources

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

During a debris-causing event, it may be necessary to contract with other resource providers to augment Thurston County's staff and equipment. These resources can be used to assist with specific tasks such as debris clearance or the management of Temporary Debris Sorting and Reduction (TDSR) sites.

LeMay, Inc. is the Waste and Recycling Center contracted manager responsible for most on-site operations and will be used as a Force Account during an emergency event.

Contract Debris Management Resource Needs

Thurston County has identified that additional resources may be needed to support disaster debris operations in these areas:

- Right-of-way (ROW) vegetative debris removal
- ROW construction and demolition debris removal
- ROW household hazardous waste collection and disposal
- ROW tree trimming and clearing
- General debris collection
- General debris hauling
- Debris processing and reduction
- Commercial and private property demolition and debris removal
- Commercial and private property sediment removal
- Temporary Debris Sorting and Reduction (TDSR) site management
- Debris monitoring and inspection

Emergency Contracting and Procurement Procedure

Thurston County's emergency contract implementation process will comply with the following Federal Emergency Management Agency (FEMA) stipulations:

- FEMA does not certify, credential, or recommend debris contractors.
- Thurston County will not execute debris removal or any other contracts until they have been reviewed by the Thurston County Prosecuting Attorney's Office and received written approval from that office.
- Contractors cannot be awarded pre-disaster/stand-by contracts with mobilization costs or unit costs that are significantly higher than what they would be if the contract was awarded post-disaster.

If emergency contracts for unanticipated emergency work had to be established during an event, the following general emergency contract rules apply:

- The contractor must be licensed and bonded.
- The contractor must have adequate insurance.
- The contract must comply with state and federal procurement standards including provisions of 44 CFR Part 13.
- The contractor cannot be on the Washington State Department of Labor and Industries Debarred Contractors list.

Types of Contracts

The type of contract used to supply debris management services will vary depending on the type of work to be performed and how soon after the incident the work is planned. When developing contracts for emergency work, Thurston County will utilize scope of work reference terms such as “eligible work,” “work eligible under FEMA Public Assistance regulations, policies, and guidance,” “work performed on public property and/or public rights-of-way,” or other similar elements if the performed work is to be potentially reimbursed by FEMA.

The three recommended contract vehicles for debris operations are:

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

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

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

The following contract types should not be used because they do not meet FEMA contracting guidelines:

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

Conditional upon Federal Reimbursement: This kind of contract only reimburses contractors if the region receives federal funding and is not an eligible contract under FEMA guidelines.

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

Competitive Bid Process

In some situations, such as clearing road for emergency access (moving debris off the driving surface to the shoulders or rights-of-way) or removal of debris at a specific site, FEMA allows for awarding a non-competitive contract for site-specific work “only if the emergency is such that the contract award cannot be delayed by the amount of time required to obtain competitive bidding”¹.

¹ https://emilms.fema.gov/is_0632a/groups/117.html

During an emergency, it is possible to develop an expedited process to competitively bid work. Should this situation arise, Thurston County may develop scopes-of-work, identify contractors that can do the work, make telephone invitations for bids, and receive competitive bids for the desired work.

Thurston County Public Works TDSR Site Map Index

February 2023

MAP ID	FACILITY NAME	SITE ADDRESS	Acres
1	MUD BAY PIT BULL PEN #06	4503 2ND AVE NW	6
2	RAINIER PIT BULL PEN #02	11414 133RD AVE SE	29
3	TOWNSHIP PIT BULL PEN #03	7401 183RD AVE SW	9
4	36TH AVE PIT #08	36TH AVE NE	5
5	DEMPSEY PIT (InActv)	NEAR WADDELL CREEK RD SW	20
6	JACKSON PIT #11	174TH AVE SE	10
7	MARVIN/56TH AVE PIT #17	56TH AVE NE	22
8	OWL HILL PIT #01	15730 BALD HILL RD SE	36
9	SARGENT PIT #19	16500 SARGENT RD SW	20
10	TILLEY PIT #4	9605 TILLEY RD S	34
11	WALDRICK PIT #12	3121 WALDRICK RD SE	12
12	RAINIER DROP BOX	13010 RAINIER ACRES DR SE	5
13	ROCHESTER DROP BOX	16500 SARGENT RD SW	9
14	WARC	2420 HOGUM BAY RD NE	128

- WARC & Transfer Stations
- County Pits
- County Bull Pens
- Areas 1-5
- County Parks
- Cities

