

**EMERGENCY SUPPORT FUNCTION #3**

**Public Works and Engineering**

**ANNEX COORDINATOR:**

Public Works

**PRIMARY AGENCY:**

Public Works

**SUPPORT AGENCIES:**

Central Services

Community Planning and Economic Development

Emergency Management

LOTT Clean Water Alliance

Public Health and Social Services

Public Utilities and Private Purveyors (Water Systems)

**I. INTRODUCTION**

A. Purpose

Provide technical advice and evaluations, engineering services, construction management and inspection, emergency contracting, emergency repair of water and wastewater facilities, provision of potable water, disposal of solid waste and debris management, and provision of emergency power.

B. Scope

Activities within the scope include:

1. Participation in mitigation and preparedness activities.
2. Participation in needs and damage assessment immediately following the incident.
3. Coordinating and contracting for the clearance of debris to allow for reconnaissance of the damaged areas and passage of emergency personnel and equipment for lifesaving, life protecting, and health and safety purposes during response activities.
4. Coordinating and contracting for the removal, temporary storage, and reduction of debris per the Debris Management Plan (refer to Debris Management Plan Appendix / Attachment).

5. Coordinating and contracting for the temporary repair or replacement of emergency access routes. Routes include: damaged streets, roads, bridges, ports, waterways, airfields, trails and bike routes and any other facilities necessary for passage of rescue personnel.
6. Coordinating and contracting for the restoration of critical public facilities including temporary restoration of water supply and wastewater treatment systems.
7. Coordinating and contracting for the demolition or stabilization of damaged structures and facilities, designated as immediate hazards to the public health and safety, or as necessary to facilitate the accomplishment of life saving operations.
8. Emergency contracting to support public health and safety.
9. Technical assistance including structural inspection of county facilities, commercial buildings, private residences, and structures, as resources permit.
10. Assisting in the preparation of Project Worksheets (PWs) and Preliminary Damage Assessments (PDAs) as required.

## **II. POLICIES**

A. If debt is incurred by Thurston County and/or its authorized representatives, contractors, and sub-contractors in carrying out any necessary work on property needed to protect public health and safety, including but not limited to debris removal, demolition of unsafe or abandoned structures, removal of debris and wreckage and administration costs, Thurston County may seek compensation from the property owner for said costs as authorized by state law or the Thurston County Code. If lawful collection via billing statement is attempted and unsuccessful, Thurston County may then exercise any means authorized by law to collect upon said debt.

Nothing in the above paragraph shall prohibit a property owner from legally challenging any billing statement submitted by the County as described above if the property owner believes the statement is inaccurate or has been submitted in error.

B. Permitting fees and normal inspection procedures will stay in effect following a disaster unless otherwise directed by the Board of County Commissioners.

C. Debris from damaged structures usually contains reclaimable property, valuables, and mementos of disaster victims. Victim reclamation of damaged property should be accommodated as a priority consistent with health and safety.

D. It is the policy of Thurston County to provide public works services to lands and facilities under county jurisdiction. Other services to private property, such as debris collection or fee adjustments, may be offered on a case by case basis by the Board of County Commissioners (BOCC). The Disaster Policy Advisory Group (DPAG) may make recommendations to the BOCC.

### III. SITUATION

#### A. Emergency/Disaster Conditions and Hazards

Refer to Hazards and Disaster Conditions (Section II.A.) of the Basic Plan.

#### B. Planning Assumptions

1. A major emergency or disaster may cause extensive damage to property and infrastructure. Structures may be destroyed or severely weakened. Homes, public buildings, bridges, and other facilities may have to be reinforced or demolished to ensure safety. Debris may make streets and highways impassable. Public utilities may be damaged or be partially or fully inoperable.
2. Access to disaster areas may be dependent upon the re-establishment of ground routes. In many locations, debris clearance and emergency road repairs will be given top priority to support immediate lifesaving emergency response activities.
3. It may be necessary to use bicycle routes and trails for motor vehicles before some roads because of limited damage to them or importance in reaching critical resources or impacted areas.
4. Damage assessment of the disaster area will be required to determine potential work load.
5. Thurston County will utilize the inspection guidance in the Applied Technology Council's (ATC) appropriate field manual (e.g. *ATC-20-1, Field Manual for Post Earthquake Safety Evaluation of Buildings* or *ATC 45, Field Manual for Safety Evaluation of Buildings after Windstorms and Floods*) to survey damaged buildings for safety.
6. Assistance from the federal government may be needed to clear debris, perform damage assessments, structural evaluations, make emergency repairs to essential public facilities, reduce hazards by stabilizing or demolishing structures, and provide emergency water for human health needs and firefighting.
7. Emergency environmental waivers and legal clearances may be needed for disposal of materials from debris clearance and demolition activities for the protection of threatened public and private improvements.
8. Significant numbers of personnel with engineering and construction skills along with construction equipment and materials may be required from outside the disaster area.
9. Earthquake aftershocks will require re-evaluation of previously assessed structures and damages.

10. A severe natural disaster or other significant event can sever key utility lifelines, constraining supply in impacted areas, or in areas with supply links to impacted areas, and also affect firefighting, transportation, communication, and other lifelines needed for public health and safety.
11. There may be extensive pipeline failure in water, wastewater, and gas utilities. These may take hours, days, or even weeks to repair.
12. Water pressure may be low, hampering firefighting and impairing sewer system function.
13. Thurston County departments, under Emergency Proclamation, may need the authority to go on private property to evaluate and repair utilities that jeopardize public and private property or threaten public health or the environment.
14. In the aftermath of floods, fires, windstorms, or earthquakes, solid waste debris can impact emergency responders, delay repair and reconstruction, and pose a threat to the public, health and safety, and the environment.
15. If private property owners remove solid waste debris, they are normally responsible for all costs, including Waste and Recovery Center (WARC) tipping fees, which may be covered by insurance.
16. Several years of solid waste storage capacity may be used up by a disaster. Loss of debris storage capacity may have an impact on the rates charged customers. Rates may increase depending on how much debris waste is disposed.
17. Debris removal may have environmental consequences including erosion or landslides, falling trees or structures, and the release of asbestos or other contaminants.
18. County, state, and federal environmental regulations (air quality, solid waste handling, etc.) may severely limit options in solid waste removal and disposal.
19. Water supply systems within the county are either publicly or privately owned and are organized at municipal or local private levels. Since these systems are not normally interconnected, emergency planning for water utilities is concerned with restoration efforts.
20. To the maximum extent possible during a disaster, utility systems will continue to provide services through their normal means.
21. Solid waste cleanup is an essential component to terminating emergency conditions.

22. State government will provide engineering services primarily to lands and facilities under its jurisdiction and will lend support to local government as requested and as circumstances allow.

#### **IV. CONCEPT OF OPERATIONS**

##### **A. General**

The Thurston County Public Works Director and the Community Planning and Economic Development Director or their designees will serve as the primary coordinators of the public works and engineering function for Thurston County. When the Emergency Coordination Center (ECC) is activated, they will send a representative to coordinate activities as necessary. For small localized events the Emergency Support Function (ESF) 3 will operate out of the Public Works Building A. If communication demands increase and response becomes more complex due to a regional or a catastrophic event, then an ESF 3 position will be established at the Thurston County ECC. Other county departments may be contacted to provide manpower, equipment, or technical advice. Supplemental public works assistance may be requested through normal mutual aid channels or through the ECC. All costs directly related to an incident will be documented and reported to the Thurston County Emergency Management or the ECC.

External support may be requested to Washington State Emergency Operations Center of the possible requirements for emergency engineering services, coordination, state assets and requests for federal assistance to support local emergency engineering efforts. Supplemental assistance shall be requested through local and state emergency management channels.

The National Response Framework, ESF #3 - Public Works and Engineering provides for the federal response and support to assist state and local government. In the event of federal activation, Thurston County will coordinate with other local, state, and federal agencies.

##### **B. Organization**

Communications to Public Works and Community Planning and Economic Development field personnel will be accomplished by the most efficient means. When departmental Emergency Operations Centers (EOCs) are activated, information will flow from the field, to the departmental EOC and from the departmental EOC to the County ECC (ESF 3 Coordinator). The ESF 3 coordinator in the County ECC will receive and request information from departments identified as support agencies in this plan.

The Public Works Departmental EOC will be activated during an incident and staff the ESF 3 coordinator position in the County ECC. The ESF 3 coordinator will be the liaison between the Public Works (PW) EOC and the County ECC for ESF 3 coordination. When

practical, Public Works may staff the County ECC with a person to coordinate both ESF 1 and ESF 3 concurrently.

#### C. Procedures

1. ESF 3 may be activated at either the request of Public Works or when an activation of the County ECC includes ESF 3 activation.
  - a. When an incident exceeds the PW and/or PW EOC capability to stabilize the incident, or requires the support of other County Departments, PW may request the activation of ESF 3 through Emergency Management.
  - b. When the County ECC is activated, ESF 3 may be activated as part of a full or partial activation.
2. When ESF 3 is activated, Emergency Management will coordinate staffing of the ESF 3 coordinator position with Public Works Director or designee. The position may require staffing for multiple operational periods, until demobilized. The ECC Manager will determine staffing requirements for the ECC.

#### D. Prevention and Mitigation Activities

For specific mitigation initiatives reference the Hazard Mitigation Plan for the Thurston Region.

During response and recovery phases, activities may be taken for life safety and to reestablish lifelines that will create a need for mitigation actions. These mitigation actions will be documented and acted upon at the earliest practical opportunity.

Central Services will inspect county facilities to identify likely damage from high probability hazards and to identify potential mitigation strategies.

Owners of water, waste water, and storm water systems will continue to pursue back up power generation, and seismic retrofit of vulnerable systems.

#### E. Preparedness Activities

1. County departments and elected offices will identify their essential facilities in their Continuity of Operations Program (COOP) and Continuity of Government (COG) plans. The essential facility identification from their plans will be shared with Central Services-Facilities so that they can identify inspection priorities for post-disaster building inspections.
2. Emergency Management will seek training opportunities to build and sustain the capability of inspecting buildings post-disaster and mitigation screening for potential hazards.
3. Community Planning and Economic Development (CPED) and Central Services will plan for augmentation of building inspection personnel to assist during an incident. Planning will consist of recruiting, vetting and identifying personnel in advance of an incident; collecting data on potential volunteers for registration as temporary emergency workers in accordance with WAC 118-04; caching of

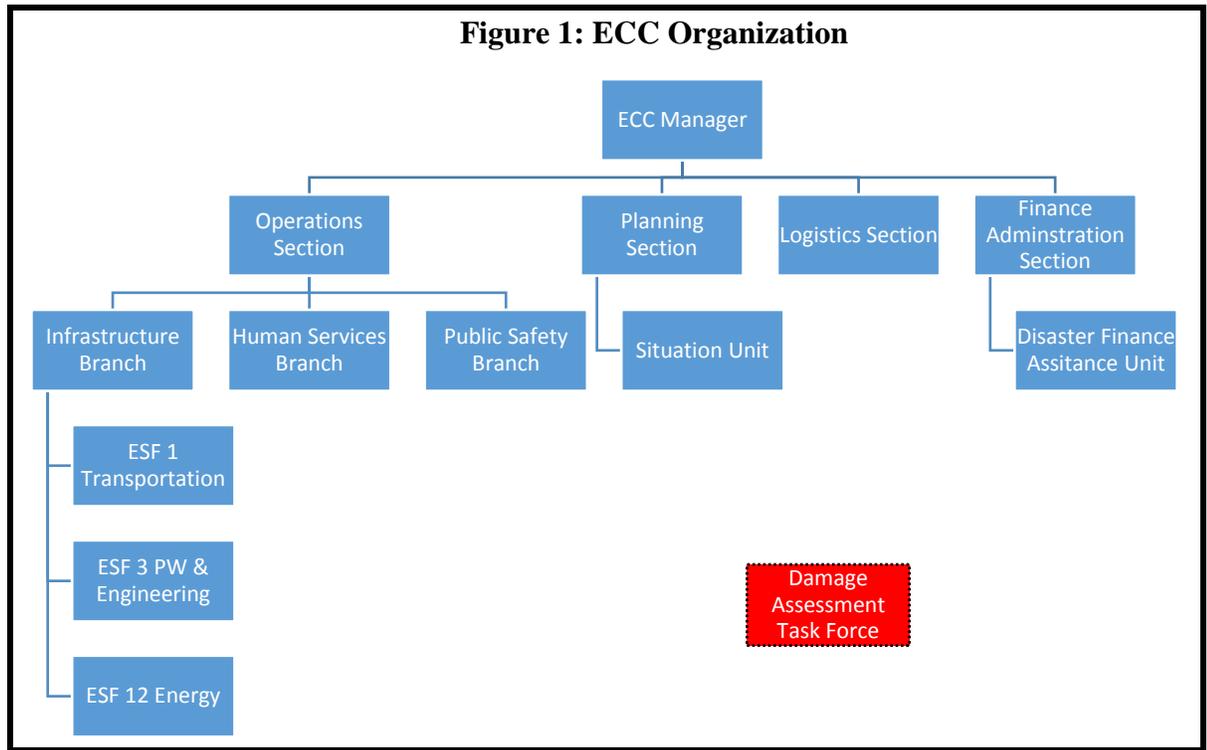
equipment and supplies for inspectors; and integrating volunteer inspectors in training and exercises.

## F. Response Activities

### 1. Damage Assessment

Damage Assessment Methodology is described in Thurston County ECC procedures. A precursor to identifying and prioritizing emergency work during response operations is to assess and report the damage resulting from the incident. Damage assessment information is processed by many entities within the Thurston County ECC (refer to text below and Figure 1).

- Damage assessments are organized and prioritized by the ECC *Operations Section*.
- The ECC *Planning Section-Situation Unit* collects damage assessment information for situational awareness and develops and shares a common operating picture.
- The ECC *Finance/Administration Section-Disaster Financial Assistance Unit* collects and tracks damage data, coordinates FEMA/State Preliminary Damage Assistance (PDA) teams. And submits damage reports to the State.
- The *ESF 3 coordinator* will collect damage assessments for critical infrastructure and key facilities to determine technical inspection and emergency repair requirements. An ESF 3 representative and support agency personnel may be required as part of a damage assessment team, to provide technical advice and evaluations. In large scale incidents or incidents resulting in significant damage, the ECC may appoint a *Damage Assessment Manager* as part of a damage assessment task force. The ECC Manager will determine where the Damage Assessment Task Force is assigned in the ECC organization. The ESF 3 coordinator would coordinate the requirements of appropriate personnel to staff the task force.



Specific areas of responsibility for damage assessment are identified in *Section V: Responsibilities*.

2. Roads, Bridges, and Emergency Work

Public Works will provide temporary repair of damaged county roads and bridges, if possible. Emergency work to clear debris and wreckage from roads and bridges will establish priority to opening lifelines after an incident. Debris removal will be accomplished through the debris management plan. Long term road repair will be accomplished through the *ESF 1 Annex: Transportation*. Inspection of county roads, bridges and culverts will be coordinated between the PW Departmental EOC and the ESF 3 coordinator in the County ECC.

Information and designation of useable roads and bridges will be collected from PW field operations and flow from the field, to the PW EOC, to the County ECC via the ESF 3 coordinator.

The Snow and Ice Removal Map (see Attachment # 1) will be used to prioritize road clearance to reestablish lifelines after an incident.

Public Works will fix what can be repaired immediately. What cannot be repaired immediately, will be coordinated through Engineering and Contracting.

Public Works will provide sand and gravel for emergency work. This also includes providing sand and sandbags for support of flood control. Public Works will provide sand/bags for public pick up at the Tilley Road campus, fire stations, or other designated locations.

3. Water / Storm Water / Waste Water Facilities and Systems

Water/Storm Water/Waste Water utility resources will be used to meet immediate local needs. If shortages exist, requests to meet needs will be submitted through information flow identified in the *Organization* section above.

Private water providers will support their own response capabilities but will coordinate with the Thurston County ECC and ESF 3 coordinator for situational awareness and information sharing concerning affected areas and restoration times.

Actions may be taken to curtail use of energy, water or other utilities until normal levels of service can be restored or supplemented. These resources, when curtailed, will be used to meet immediate and essential emergency needs (e.g. hospitals, etc.). These actions are a policy decision that will be recommended by the DPAG for approval by the Board of County Commissioners and/or other elected authorities having jurisdiction.

Water/Waste Water utility information will be furnished to emergency government officials at all levels to inform the public on proper use of services. Media notifications, media advisories and information access (such as boil water orders and other instructions) will be coordinated with ESF 15 and Washington Department of Health (DOH) – Office of Drinking Water.

Coordination will be made with Bridge Inspection Teams to inspect for damage to utilities such as leakage from exposed pipes on bridges as part of bridge inspections after an incident.

4. Structural Inspection of Buildings

The CPED department is the lead agency for coordinating the inspection of structures in unincorporated Thurston County after a disaster to determine building safety and health issues. This will be a cooperative effort with other departments and jurisdictions, and with assistance from private sector engineers.

Central Services–Facilities is the lead agency for coordinating the inspection of county owned facilities and structures after a disaster to determine building safety and health issues. CPED will augment Central Services-Facilities to complete inspection of county owned/leased facilities.

Once county facilities are inspected, county inspectors may provide inspection support to schools, hospitals, and fire stations, etc. Coordination will be made with the appropriate ESFs.

CPED will perform neighborhood inspections through “windshield” rapid inspections immediately after an incident based on situational awareness and public reports.

Building safety evaluation procedures will follow Applied Technologies Council methodology:

1. *Rapid Evaluation*: (typically 10-30 minutes per building) is the first, and many times the only, safety evaluation performed. These evaluations are often cursory in nature because there are insufficient personnel available to perform more thorough inspections.
2. *Detailed Evaluation*: (typically 1-4 hours per building) is a thorough visual examination of a damaged building and is often, but not always, performed after an initial Rapid Evaluation. Detailed evaluations usually begin after sufficient numbers of structural engineers and other specialists become available, and it may be the only evaluation performed. Often these evaluations begin a day or more after the event.
3. *Engineering Evaluation*: (typically 1-7 days or more per building) is performed on questionable and badly damaged buildings that have been turned over to the owner’s engineer for further evaluation and repairs. In some situations, the owner’s engineer may take over the Rapid Evaluation stage and Detailed Evaluation.

*Note: Geotechnical or hazardous material specialists are required for assessment of geotechnical hazards or hazardous material spills.*

#### G. Recovery Activities

##### 1. Permitting and Inspections

The CPED department is the lead agency for the Thurston County permitting system in coordination with Public Works and Public Health & Social Services - Environmental Health.

CPED responds to disasters in three phases:

##### Phase 1 Initial Damage Assessment

Provide teams of inspectors to sweep affected areas and report to the ECC.

##### *Response*

- Close unsafe structures

Phase 2 Emergency Permitting and Inspections

Expedite Permit Assistance Center and field operations for emergency operations to: *Recovery*

- Review damages and assist application process
- Issue permits
- Permit construction
- Provide final inspections

Phase 3 Abandoned Buildings Recovery

- Identification
- Inspection
- Demolition
- Legal process

2. Debris / Solid Waste Management

Coordination of emergency solid waste management is the responsibility of Public Works, Public Health & Social Services - Environmental Health, Emergency Management, and other related support departments.

Emergency solid waste management is usually an incremental process: Refer to the Debris Management Plan for details

- a. Solid waste debris removal from streets to provide access.
- b. Removal of hazardous and/or moderate risk waste.
- c. Solid waste debris removal of damaged public structures.
- d. Salvaging or recycling of solid waste.
- e. Expedite the permits and inspections required for repairing, rebuilding, or demolition of damaged structures.

Emergency workers and volunteers may need to be assigned to solid waste debris cleanup. They must be provided with: Refer to the Debris Management Plan for details.

## V. RESPONSIBILITIES

### A. Primary Agency

Public Works, as the primary agency, will be responsible for staffing, training, implementation, and coordination of this annex.

### B. Specific Primary Agency Responsibilities

#### 1. Public Works

- a. Provide inspections of county roads and bridges to determine damage and safety.
- b. Provide damage assessments of WARC and transfer stations, county owned water and waste water systems, equipment yards/pit sites, Stormwater systems, county parks, and the Nisqually River Levy.

- c. Emergency Work to clear debris and wreckage from roads and bridges to open lifelines.
- d. Provide temporary repair of damaged county roads and bridges, if possible.
- e. Coordinate public information releases and information to the public with the Public Information Officer.
- f. Provide sand and gravel for emergency work.
- g. Contract for trucks and drivers to transport debris and wreckage related to emergency work.
- h. Provide flood control support (e.g. sand/bags for public pick up at Tilley, Fire Stations or other designated locations).
- i. Coordinate with private contractors and suppliers.
- j. Relocate Public Works shops if conditions warrant
- k. Document damages and costs and report to ECC.

## C. Support Agencies

### 1. CPED

- a. Coordinate damage assessment and post disaster safety inspections of buildings and facilities. Coordinate post-earthquake ATC-20 inspections or post windstorm/flood ATC-45 inspections, depending on incident type.
- b. Coordinate damage assessment and post disaster safety inspections of private businesses in the county.
- c. Coordinate private assessment and inspection resources. Plan for augmentation by volunteers and registration as temporary emergency workers.
- d. Coordinate emergency permitting and inspection process for private cleanup work to ensure compliance with cleanup standards and procedures. Expedite permitting and required inspections as appropriate and feasible.
- e. Coordinate for the demolition of damaged and/or abandoned structures posing a threat to human safety.
- f. Provide damage assessment of disaster area regarding debris and wreckage. Coordinate expeditious removal of debris and other non-hazardous materials.
- g. Assess and make recommendations for environmental damage to streams, bluffs, shore lines, and river banks.
- h. Review repair, reconstruction, and replacement of structures for compliance with building, land use, and environmental regulations.
- i. Coordinate with the ECC and Public Information Officer on public information.
- j. Inspectors may distribute public repair and recovery information.
- k. Document damages and costs, and provide necessary reports.
- l. Coordinate stormwater and drainage needs and designs.

### 2. Central Services – Facilities

- a. Coordinate damage assessment and post disaster safety inspections of county owned/leased buildings and facilities and Tilley campus water system.
- b. Prioritize restoration of essential county facilities.

- c. Provide fuel storage.
- e. Repair equipment.

### 3. Emergency Management

- a. Coordinate ECC activation and call-out of essential staff.
- b. Coordinate roads, facility, and infrastructure recovery efforts.
- c. Coordinate requests for outside labor, equipment, and technical experts. If additional resources are needed, coordinate volunteer, state and federal support through ECC-Logistics Section.
- d. Issue warnings to the public.
- e. Coordinate public information and warnings.
- f. Identify and recommend training opportunities for public works ESF 3 coordinators and support agencies (such as *ATC-20 Post Earthquake Damage Assessment Training / ATC-45 Post Windstorm and Flood Damage Assessment Training*).
- g. Maintain liaison with local utilities, including the ability to contact on a 24-hour a day basis.
- h. Coordinate assistance to support local utility providers, as requested.
- i. Coordinate all public information and instructions and media relations as defined in ESF 15 External Affairs.

### 4. Public Health & Social Services – Environmental Health

- a. Coordinate inspections of waste water systems.
- c. Provide for testing of wells and water supplies.
- d. Provide permitting and monitoring of WARC and other solid waste sites.
- e. Monitor unpermitted dumping.
- f. Advise on collection and disposal of household hazardous waste.
- g. Coordinate all public information releases through the Thurston County Public Information Officer.

### 5. Public Utilities, LOTT, and Private Purveyors

- a. Maintain and control owned water, sewer, and solid waste systems within their jurisdictions.
- b. Perform damage assessment on systems and identify problems or shortfalls in water supply. Report findings to the ECC.
- c. Regulate water and utility usage in times of shortages as appropriate, assuring priority use set to meet immediate and essential emergency needs.
- d. Within available means, protect existing water supplies and restore damaged systems.
- e. Continue to operate in the tradition of self-help and interservice mutual aid before calling for area, regional, or state assistance.
- f. In conjunction with the ECC operations, determine priorities among users if adequate utility supply is not available to meet all essential needs.

- g. Provide information necessary for compiling damage and operational capability reports for main treatment plant, satellite treatment plants, pump stations, and reclaimed water facilities.
- h. Identify potential areas for mitigation strategy.

## **VI. RESOURCE REQUIREMENTS**

Additional heavy equipment may be required to expedite emergency road clearance.

Additional qualified personnel, supplies, and vehicles may be required to expedite building inspections after earthquakes, floods or windstorms.

## **VII. REFERENCE AND SUPPORT PLANS**

ATC-20-1, Field Manual for Post-Earthquake Safety Evaluation of Buildings

ATC 45, Field Manual for Safety Evaluation of Buildings after Windstorms and Floods

Thurston County Bridge Emergency Response Plan

Washington Administrative Code (WAC) 118-04: Emergency Worker Program

WAWARN Operational Plan

## **VIII. TERMS AND DEFINITIONS**

**ATC** – Applied Technology Council

**BOCC** – Board of County Commissioners

**COG** – Continuity of Government

**COOP** – Continuity of Operations Program

**CPED** – Community Planning and Economic Development

**DOH** – Department of Health

**DPAG** – Disaster Policy Advisory Group

**ECC** – Emergency Coordination Center

**EOC** – Emergency Operations Center

**FEMA** – Federal Emergency Management Agency

**PDA** – Preliminary Damage Assessment

**PW** – Project Worksheet or Public Works

**WAC** – Washington Administrative Code

**WARC** – Waste and Recovery Center

**WAWARN** – Washington Water/Wastewater Agency Response Network

## **IX. ATTACHMENTS**

Appendix A: Thurston County Debris Management Plan

Attachment #1: Snow and Ice Removal Map

**Attachment #1: Snow and Ice Removal Map**

