

# EMERGENCY SUPPORT FUNCTION #3 - PUBLIC WORKS AND ENGINEERING

## CEMP - ANNEX IV DOCUMENTATION



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Note: This Emergency Support Functions (ESF) is part Annex IV of the Comprehensive Emergency Management Plan (CEMP) and this version includes the 2018 revision. Seattle Public Utilities (SPU) acts as the current ESF Coordinator and collaborated with many partners for respective input.

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**No table of figures entries found.**

# 1. STAKEHOLDERS

**Table 1**

PRIMARY AGENCY	ESF COORDINATOR
Seattle Public Utilities	Seattle Public Utilities

**Table 2**

SUPPORT AGENCIES	
Seattle Department of Construction and Inspection (SDCI)	Seattle Parks and Recreation
King County, Dept of Natural Resources (KCDNR) <ul style="list-style-type: none"> <li>• Solid Waste</li> <li>• Wastewater Svc</li> <li>• Surface Water / Flood Control Ctr</li> </ul>	Seattle District, U.S. Army Corps of Engineers (USACE)

## 2. INTRODUCTION

### 2.1 Purpose

The main purpose of Emergency Support Function 3 (ESF-3) is to provide disaster response and recovery activities in the areas of Utilities (water supply, waste and drainage water collection, and solid waste collection) Engineering, and parks facilities and services. Emergency support is provided by city departments and by public and private agencies. Together, city departments and supporting agencies coordinate planning, resources and capabilities to enhance the City's ability to prepare for, respond to and recover from a natural or human caused emergency or disaster.

### 2.2 Scope

This document applies to all primary and support agencies. City departments and their supporting agencies respond to day-to-day emergencies and large-scale disasters affecting buildings, city parks, roads and bridges; water, storm water and wastewater sewer systems; the local power grid; and natural gas, electric, and steam service. City departments and partner agencies/companies give a wide perspective and provide the city's emergency liaisons the ability to coordinate response and recovery activity with County, State and private responders.

ESF-3 Public Works, Engineering and Parks

Seattle Public Utilities

- Water and wastewater system assessment, restoration and repair
- Potable water distribution services
- Maintain water supply for fire protection
- Collection and disposal of solid waste
- Coordinate debris management plan
- Construction management services in support of other departments
- Slope stabilization
- Dam/ reservoir failure plans for SPU facilities
- Flood and run-off control for SPU structures
- Customer service call center

Department of Construction and Inspections

- Provide Applied Technology Council (ATC)-20 Training to City Departments and qualified volunteers
- ATC-20 Hazard Assessment of damaged buildings (tagging and retagging) utilizing City staff and qualified & certified volunteers
- Permits – demolition, land use, construction (including damage repair, cribbing and shoring of damaged buildings)

Seattle Parks & Recreation Department

- Facilities systems maintenance and repair
- Fencing maintenance and repair
- Slope stabilization
- Tree removal
- Recruit and train volunteers from City staff and from the community to support Parks Department functions as appropriate.

#### Support Agencies:

Agencies and companies pledged to support the City through ESF-3, (e.g. US Army Corps of Engineers, KC-DNRP etc.) are expected to have plans in place, such that following a major disaster, they can promptly restore their primary service; and support tasking by SPU/ESF-3 (See: IV. Planning Assumptions, and VIII Response Activity – Support Agencies).

Each department is responsible for facilitating effective relationships with those “supporting agencies” identified on Page 10 “ESFs, Departments, and Supporting Agencies.” This should include contact names (including title, phone, e-mail address, etc.). Department liaison is encouraged to insure supporting agencies have emergency preparedness plans developed to a level compatible with departmental emergency preparedness plans.

### 2.3 Coordination among ESFs 1, 3, 12

Prior Public Works ESF documents have jointly included Transportation (ESF-1) and Energy (ESF-12) as they have overlapping and complementary missions to respond to emergencies which impact critical infrastructure systems.

ESF-1 & 12 agencies have plans in place and are the lead agencies according to their respective documents.

Experience has demonstrated that most large-scale incidents require closely coordinated responses from the City Departments that constitute ESFs 1, 3, & 12. Therefore, City Department Directors for the three ESFs have agreed to coordinate their efforts wherever possible. By consensus among the City Departments that make up ESFs 1, 3, & 12, when necessary a lead “Coordinator” will be identified from one of the departments. In addition, each of the remaining departments will designate an individual to serve as “Coordinator Backup.” Priority of backup coordinators (i.e. first backup, second backup, etc) will be determined by the designated Lead Coordinator. Names and emergency contact information will be provided to Seattle Office of Emergency Management.

The Lead Coordinator may delegate the Coordinator role to another agency representative when appropriate and with the concurrence of the acting EOC Director.

The City’s EOC Director may determine which department has the “lead role” in responding to a given event. Within SPU/ESF-3, the Coordinator and agency representatives may agree among themselves to shift the lead, as circumstances warrant, throughout the course of an incident.

In concert with department EOC representatives, the Coordinator will request EOC coverage as needed based on the scope and needs of the incident.

## 3. SITUATION

### 3.1 Emergency Conditions and Hazards

The City of Seattle, its citizens, and transportation infrastructure are exposed to a variety of natural and human caused disasters such as severe weather, earthquakes, and acts of terrorism. The Seattle Hazard Identification and Vulnerability Analysis (SHIVA) identifies Seattle’s hazards and examines their consequences so we can make smart decisions about how best to prepare for them. It provides information regarding potential impacts of hazards to the people, economy, the built and natural environments of the City of Seattle. The SHIVA provides a foundation for all the City of Seattle’s disaster planning and preparedness activities. The list of all natural and human-hazards includes: Emerging Threat; Geophysical Hazards; Biological Hazards; Intentional Hazards; Transportation and Infrastructure Hazards; and Weather and Climate Hazards.

Damage to water, drainage/wastewater systems may force large-scale water distribution, and severely limit firefighting capabilities. Parks may have to respond by providing staging and/or sheltering facilities. Seismic or otherwise inflicted damage to buildings and attendant evaluations and tagging may cause significant interruption to both private enterprise and city services. (ESF-3)

Infrastructure systems are interrelated and interdependent; therefore, planning and response are mutually dependent.

Infrastructure damage to transportation facilities such as roads, bridges, and traffic signals may isolate sections of the City and limit emergency access to repair SPU’s systems. (Jointly managed between ESF-1 and ESF-3)

Widespread loss of electric power will cause disruptions to water and drainage pumping and control. (Jointly managed between ESF-12 and ESF-3)

Disaster response and recovery efforts may exhaust departmental resources and require county, state, and/or federal assistance to obtain supplemental assets.

### 3.2 Planning Assumptions

- Water, drainage, collection of garbage and putrescible waste, debris removal, and assurance of structure integrity will be high priority objectives following any major disaster as these contribute to public safety and health, and incident stability.
- Primary and support agencies for ESF-3 will operate autonomously, under their own authorities as applicable. In addition, they will address needs and tasks received via their representative to the EOC (EOC Liaison), and through the SPU/ESF-3 Liaison per the City’s CEMP.
- Upon mobilization by the City EOC, SPU/ESF-3 will promptly activate their Department Operating Center (DOC) and provide staffing appropriate to support the efficient provision of services.
- Primary and support agencies should maintain accurate, current inventories of key assets (vehicles, radios, pumps, generators, etc.) and have a practiced method of tracking asset availability throughout a disaster.
- Each support agency should have in place an emergency response and recovery plan which supports the City’s CEMP, consistent with The National Incident Management Plan, and is sufficient to insure the department or agency can provide its essential services and support its ESF.
- The SPU/ESF-3 department liaison, and alternates, should have personal preparedness plans in place such that they can report to the EOC within one hour of mobilization.
- In most cases, adequate numbers of personnel with engineering and construction skills and construction equipment will be available from City department staff. Regional contractors

may be used to supplement response and recovery activities, subject to applicable contracts and regulations. However, under extreme conditions there may be a significant competition in obtaining these services.

- Response time will likely be slowed. ESFs 1, 3, & 12 constituent departments are often “first responders” for transportation incidents, power outages, water main breaks, landslides, and other frequent and typical emergencies. The need to conduct “field size-ups” after a disaster event will slow a departments’ initial response. Faced with requests for services routed through the EOC as well as other potentially competing demands for assistance, department control centers will need to prioritize disaster response efforts. Department response to lower priority requests, therefore, may be substantially delayed.
- A significant portion of a department’s workers may be directly affected by the disaster. Some may be unable to report for work for an extended period, (possibly three days or longer). Under some conditions, the work tasks and schedules of some employees may be altered.
- The majority of staff who work for the ESF 1, 2 & 12 departments live beyond a 5-mile radius of their normal work place. Transportation disruptions may lead to inability of staff to return home and back to work within a reasonable time between operational periods or work shifts. Central housing, feeding and other support may be necessary for staff.
- The City communicates life-safety notifications to the community in ways that can be understood, regardless of language, as a foundational part of response during incidents. Specific communications strategies have been developed to ensure notification to those with limited-English proficiency (LEP). Details can be found in the Alert & Warning Support Operations Plan.
- The City’s comprehensive incident response policies, strategies, and practices can be found in the City Emergency Operations Plan (EOP).
- The City-specific operational procedures supporting response policies, strategies, and practices are maintained separately. Please refer to the Reference Section of this document, if applicable procedures have been identified at this time.



## 4. CONCEPT OF OPERATIONS

### 4.1 Organization

Each city department has named a Department Liaison (and at least three trained back-up Liaisons) to represent the department within their ESF organization. Each city department is expected to have depth at the Department Liaison position sufficient to cover extended operations (often exceeding 24 hours). Whenever necessary and possible, a Liaison shall also be assigned within the SPU DOC as a primary point of contact with the EOC Liaison. Together they will serve as a team to track information, status, and resource requests.

The SPU/ESF-3 Department Liaison conveys requests for SPU/ESF-3 resources to and from the SPU DOC under the City's Consolidated Action Plan. The SPU DOC will prioritize resources according to internal priorities coordinated with other City priorities.

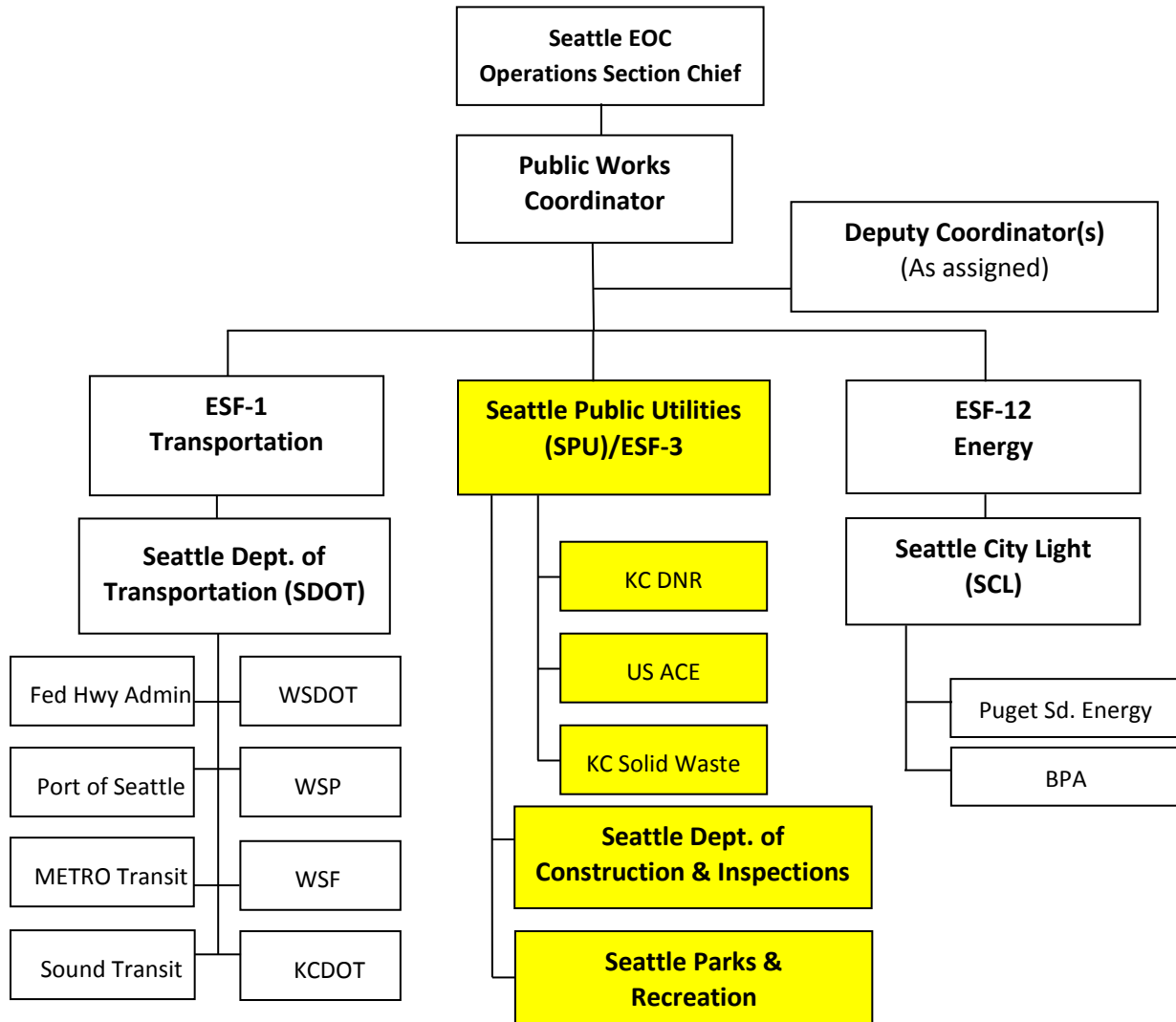
### 4.2 General Response

The City EOC will contact the Lead Coordinator, who will then mobilize ESF-1, 3, & 12 department designated liaisons as the incident demands. Department liaisons will activate/notify their DOC, assign department resources to the EOC as required, and insure the department's damage assessments and disaster response activity are carried out and reported to the EOC. DOCs will prioritize their response efforts and produce timely and regular "Size-up Summary Reports" to their ESF Liaison.

The Coordinator and Department EOC Liaison will meet regularly at the City EOC to evaluate and consolidate the Size-up Summary Reports, coordinate response activity, allocate resources, and develop timely and regular ESF Action Plans for submission to the EOC Planning Section.

The Coordinator will receive and review the City's "Consolidated Action Plan," and distribute it to each of the ESFs and their Department EOC representatives. Each Department EOC representative will ensure the Plan is relayed to their agency and that it is integrated into their response work schedule. Completed activity is reported in each agency's next Size-up Summary Report.

**ESFs 1, 3, & 12 – Departments and Supporting Agencies**



1. Departments to have at least “3-deep” coverage at Department Liaison position.
2. Departmental Operations Control Centers to maintain liaison with utilities on routine basis.
3. City EOC to maintain current call-out lists.

## 5. RESPONSIBILITIES

### 5.1 Departmental

- Ensure Department is in compliance with Mayoral Executive Order No. 02-05 and any subsequent executive orders/requirements
- Notify/activate department's DOC when appropriate
- DOC is to provide data to EOC through WebEOC in accordance with EOC SOPs
- Assign Incident Commander if department is "lead agency" or a senior department representative if incident is being managed by "Unified Command."
- Initiate departmental cost tracking in keeping with each department's procedures.
- Conduct damage assessment in keeping with department's Disaster Response & Recovery Plan
- Mobilize department resources and track resource availability.
- Submit timely and regular Size-up Summary Reports to provide emergency managers and city officials with information, valid assessments, and appropriate recommendations.
- Ensure adequate supplies, equipment, sustenance, sanitation facilities accommodations, etc. are made available to DOC, response and recovery personnel.
- Develop and implement a sustainable work schedule.
- Integrate tasks received via City's Consolidated Action Plan into the department's response & recovery work.
- Reconstitute damaged capabilities and resources.

### 5.2 Public Works ESF Coordinator (if designated within SPU/ESF-3)

- Respond to EOC when called, or self-respond if a call-out is apparent.
- Receive EOC initial briefing.
- At the request of the EOC Director and depending on the primary hazard encountered, the Public Works ESF Coordinators may be asked to become or to provide the EOC's Operations Section Chief.
- Determine if additional Public Works ESF liaisons need to be called out and arrange call-out of these people.
- As soon as Public Works ESF liaisons arrive:
  - Brief on current situation and immediate requirements;
  - Establish initial Public Works ESF objectives;
  - Instruct department representatives to;
  - Request activation of their respective Control Centers;
  - Ensure they are functional; and
  - Advise Public Works ESF liaisons of EOC Reports Schedule.
- Assure requests for outside assistance gets immediate attention and is referred to ESF-7 Coordinator.
- Monitor Size-up reports.
- Develop and Maintain SPU/ESF-3 Action Plans.
- Advise ESF-7 (Planning) of recommended plans and or actions as may be developed by ESF-3 support agencies
- Participate in general staff meetings to develop Consolidated Action Plan.
- Provide or coordinate information for public release by Public Information (ESF-15)
- Assist in briefing the Mayor as requested by EOC Director.
- Advise the Operations Section Chief of any serious or critical issues.

- Establish coverage schedules and staff accordingly.

### 5.3 Prevention and Mitigation Activities

Mitigation initiatives by Public Works ESF Departments are guided by the Seattle All-Hazard Mitigation Plan. In this context, Public Works ESF Departments focus on:

- Provide emergency preparedness training for workplace, home, and family.
- Educate all employees and encourage them to identify and mitigate hazards at home and in the workplace to minimize injury, damage and disruption.
- Ensure field personnel that may be exposed to hazardous conditions are equipped with appropriate Personal Protective Equipment (PPE) and trained in its proper use and care.
- Annually review The City of Seattle All-Hazards Mitigation Plan. Recommend modifications/additions/deletions based on experience and observations of P/W ESF departments. Insure that P/W ESF mitigation plans/activities are complementary to and coordinated with The City of Seattle All-Hazards Mitigation Plan.

### 5.4 Preparedness Activities

- Develop policies for personal emergency preparedness
- Implement procedures for emergency call up of managers and field crews.
- Develop damage assessment priority lists of facilities/assets and “windshield survey” routes.
- SDCCI will maintain a current list of buildings, prioritized for initial response.
- Select and train Emergency Liaisons in EOC operations and the Incident Command System (ICS).
- Train DOC staff in CEMP reporting requirements, protocols, and procedures.
- Take actions necessary to assure staff are prepared to accomplish internal agency/departmental response and recovery activities.
- Take actions necessary to assure staff are prepared to support ESF requirements
- Schedule and conduct an annual coordination meeting and exercise for DOC managers and Department EOC representatives
- Provide timely updates to the Seattle EOC of changes to EOC Liaison staffing.

### 5.5 Response Activities

- When appropriate, participate in the ICS structure in response to a major incident and, if warranted, provide trained Incident Commander.
- Provide trained senior manager to serve as Public Works ESF Coordinator (or Public Works ESF Coordinator backup).
- Activate DOC if required.
- Provide “Size-up Summary Reports” to Public Works ESF Coordinator, as requested.
- Provide trained personnel to conduct damage assessment of department assets.
- Coordinate damage assessment.
- Provide trained personnel/crews to restore services and/or repair assets.
- Provide transportation for crews and equipment.
- Dispatch trained personnel/crews to perform repair/restoration work per appropriate plans.
- Provide equipment and trained personnel to perform debris clearance per appropriate plans.

- Provide heavy equipment and trained operators to perform work per appropriate plans.
- Integrate personnel and equipment from other departments/agencies/juris-dictions into appropriate plans.
- Coordinate with Public Works ESF support agencies to supply requested services and resources.
- Execute Public Works ESF assigned missions.
- Arrange for contracting with design or engineering professionals, contractors and equipment suppliers to augment/replace critical goods and services.
- Ensure that access to core services during emergencies is accessible to those with functional needs and provided in accordance with Americans with Disabilities Act (ADA) requirements and guidance.

Support Agencies-Public Works ESF will coordinate with various “support agencies” during a response and will encourage and support the following actions by Support Agencies:

- Provide trained representative to serve as the ESF “agency liaison.”
- Activate a DOC (if appropriate).
- Provide “Size-up Summary Reports” to SPU/ESF-3, as requested.
- Provide personnel/crews to conduct damage assessment of agency assets.
- Provide personnel/crews to restore agency services and/or repair assets.
- Provide transportation for crews and equipment.
- Provide personnel/crews to perform repair/ restoration work as required.
- Provide equipment and personnel to perform debris clearance as required.
- Provide heavy equipment and operators to perform work as required.

## 5.6 Recovery Activities

Disaster-related response and restoration can be very costly. While not all costs are reimbursable, it is in the City’s interest to make best use of funding that may become available through federal agency programs, such as FEMA, and insurance.

To assist with this effort, departments, organizations, or agencies with a lead or support role for this ESF are responsible for tracking and documenting of actual and anticipated costs related to the incident. Costs should be tracked based on guidance from OEM or the home organization.

SPU will focus of initially restoring core services, then broader restoration to higher priority areas and facilities. Full restoration and recovery will be planned for in conjunction with EOC and City of Seattle recovery planning.

## 5.7 Supporting other ESFs and jurisdictions

The Public Works ESF Coordinator may task an ESF, department or agency to support other ESFs or jurisdictions if so directed by the City’s Operations Section Chief. Public Works ESF support to other ESFs or jurisdictions will be directed via the Public Works ESF Action Plan.

## 6. RESOURCE REQUIREMENTS

### 6.1 Logistical Support

Resources-Under normal operating conditions ESF-1, 3, and 12 departments are self-reliant with respect to the equipment, vehicles, personnel, facilities, etc. required to provide their services. Each ESF city department is expected to have and maintain an accurate account of equipment, fixed and mobile assets, and response personnel. Resources should be “typed” by capability based on measurable standards of performance and capability in keeping with NIMS. Departments should have the ability to track resource availability and status throughout a disaster response and recovery effort.

When public works ESF departments are no longer operating under normal operating conditions, they will begin to require additional resources and support logistics. They will typically need to escalate their resources needs with related logistical support

- Obtain support from normal and emergency contractors, through tasking and resources
- Activate established mutual aid agreements
- Request through EOC Logistics function

Requests for resources typically are more complex than just acquiring the resource. The logistics of acquisition, transport, and ongoing support may need to be shared among agencies and different level of the logistics chain.

Demobilizing ESF Resources-As Department Operations Center managers determine that their work is done, or when their equipment/resources are no longer needed to accomplish the Public Works ESF Action Plan, they shall advise their EOC Liaison. The EOC Liaison will then advise the Public Works ESF Coordinator. The Public Works ESF Coordinator will check with EOC Operations Section Chief and if it is deemed that those services are no longer needed shall advise the EOC Liaison that department personnel and/or resources may be de-mobilize per the Consolidated Action Plan and/or Demobilization Plan.

### 6.2 Communications and Data

Communications and data systems are identified in operational documentation.

## 7. MAINTENANCE

In the OEM Planning Guide, a planning schedule describes when documents, including plans that are part of the CEMP, shall be maintained, evaluated, and revised. Lessons learned from exercises, special events, incidents, or disasters may result in a decision to evaluate portions of the documents ahead of the schedule. This document is on a three-year revision cycle, but evaluations can occur at other times as necessary.

SPU as the ESF Coordinator has primarily responsibility for this document and will ensure it is evaluated as outlined in the schedule with updates and revisions being made to ensure guidance remains current. SPU will facilitate the evaluations in consultation and coordination with OEM.

**Table 3**

RECORD OF CHANGES			
DATE	TYPE	CONTACT	SUMMARY
August 7, 2018 July 26, 2018	Revision	N Worcester L Meyers	Completed revision. Document voted and approved by DMC and EEB.
December 2016	Update	N Worcester L Meyers	Completed annual update.
May 2015	Update	K Neafcy	Completed annual update.

## 8. TERMS AND DEFINITIONS

Nothing identified at this time.



## 9. ACRONYMS

- ADA: Americans with Disabilities Act
- ATC: Applied Technology Council
- BPA: Bonneville Power Administration
- CEMP: Comprehensive emergency Management Plan
- DOC: Department of Corrections
- EOC: Emergency Operations Plan
- EOP: Emergency Operations ACRONYMS
- ADA: Americans with Disabilities Act
- ATC: Applied Plan
- ESF: Emergency Support Function
- ICS: Incident Command System
- KCDNR: King County Department of Natural Resources
- KCDOT: King County Department of Transportation
- LEP: Limited English Proficiency
- OEM: Office of Emergency Management
- PPE: Personal Protective Equipment
- SCL: Seattle City light
- SDCl: Seattle Department of Construction and Inspection
- SDOT: Seattle Department of Transportation
- SHIVA: Seattle Hazard Identification and Vulnerability Analysis
- SOP: Standard Operating Procedures
- SPU: Seattle Public Utilities
- USACE: United States Army Corps of Engineers
- WAMAS: Washington State Intrastate Mutual Aid System
- WSDOT: Washington State Department of Transportation
- WSF: Washington State Ferries
- WSP: Washington State Patrol

## 10. REFERENCES

Nothing identified at this time.