

EMERGENCY SUPPORT FUNCTION #3—PUBLIC WORKS AND ENGINEERING

LEAD AGENCY

Pierce County Planning & Public Works Department

SUPPORT AGENCIES

Municipal Public Works Departments
Regional Water Cooperative of Pierce County:
City of Bonney Lake
City of Fife
City of Milton
City of Puyallup
City of Sumner
City of Yelm
Firgrove Mutual Water Company
Fox Island Mutual Water Association
Fruitland Mutual Water Co.
Graham Hill Mutual Water Company, Inc.
Lake Josephine Riviera Water
Lakewood Water District
Mt. View-Edgewood Water Company
Parkland Light & Water
Peninsula Light Company
Public Utility District No. 1 of Thurston County
Rainier View Water
Spanaway Water Company
Summit Water & Supply Co.
Tacoma Public Utilities-Tacoma Water
Town of Steilacoom
Valley Water District
Washington Water Service
Tacoma-Pierce County Health Department
Pierce County Facilities Management Department
Pierce County Finance Department-Risk Management

I. INTRODUCTION

A. Purpose

To coordinate and organize the public works and engineering needs related to the continuity of wastewater services, storm water management and flood control, solid waste management services, engineering expertise and facility inspections. This plan is also intended to capture the coordination of potable water providers, both public and private within Pierce County.

B. Scope

1. This Emergency Support Function (ESF) addresses necessary county public works, engineering and infrastructure inspection and emergency repair activities including but not limited to:

- a. wastewater systems;
 - b. supporting the county's flood management system and surface water management;
 - c. debris and wreckage clearance;
 - d. waste management;
 - e. initial critical infrastructure assessment and temporary repair of damaged county facilities, infrastructure and supporting utilities, as resources allow;
 - f. assessment and repair of traffic control devices and traffic management systems; and
 - g. traffic control assistance and safety by providing barricades and signs, as necessary.
2. This ESF includes the coordination and communication with public and private water providers.
 3. Planning for every contingency needing these services is beyond the scope of this ESF. This ESF does not imply that Pierce County government will remedy all needs in the event of an emergency or major disaster.

C. Core Capabilities and Actions

The following table lists the core capabilities that ESF #3 most directly supports along with the related ESF #3 actions. In addition to the core capabilities listed in the table, all ESFs support the following core capabilities: Planning, Operational Coordination, and Public Information and Warning.

Mission Area	Core Capability	Description and Actions
Response	Environmental Response/Health and Safety	<ol style="list-style-type: none"> 1. Minimize public exposure to environmental hazards through assessment of the hazards and implementation of public protective actions. 2. Manage clean-up of debris contaminated by hazardous materials and proper disposal of waste. 3. Identify, evaluate, and implement measures to prevent and minimize impacts to the environment and natural resources from all-hazard emergencies and response operations.
	Logistics and Supply Chain Management	<ol style="list-style-type: none"> 1. Synchronize logistics capabilities and enables the restoration of impacted supply chains.
	Fatality Management Services	<ol style="list-style-type: none"> 1. Support decedent remains recovery in debris removal processes.

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Mission Area	Core Capability	Description and Actions
Response <i>(continued)</i>	Mass Care Services	<ol style="list-style-type: none"> 1. Provide resources to assess structures and infrastructure used for emergency sheltering as well as other housing options for the affected population. 2. Engineering permitting for housing.
	Infrastructure Systems	<ol style="list-style-type: none"> 1. Stabilize, decrease impacts, and re-establish critical infrastructure functions, to minimize health and safety threats to support a viable, resilient community. 2. Coordinate the disposal of debris. 3. Formalize partnerships with governmental and private sector cyber incident or emergency response teams to accept, triage, and collaboratively respond to cascading impacts in an efficient manner.
Recovery	Infrastructure Systems	<ol style="list-style-type: none"> 1. Restore and sustain essential services (public and private) to maintain community functionality. 2. Develop a plan with a specified timeline for redeveloping community infrastructure to contribute to resiliency, accessibility, and sustainability. 3. Provide systems that meet the community needs while minimizing service disruption during restoration within the specified timeline in the recovery plan.

II. POLICIES

- A. Pierce County government will provide services to public land, roads, bridges, and facilities under county jurisdiction. Response to private property problems will be addressed only when a county facility or structure (such as a culvert) is causing the problem; when action on private property is necessary to prevent a likely harm to publicly-owned infrastructure (such as the removal of flood debris to protect a downstream levee, road, or bridge); when life or public health is threatened; or as requested by fire services or law enforcement through Pierce County Emergency Management.
- B. Procedures identified in the ICBO (International Conference of Building Officials) Disaster Mitigation Handbook and the ATC-20-1 Field Manual: Post Earthquake Safety Evaluation of Buildings will be standard for the inspection of county facilities for damage.
- C. Water purveyors will follow drinking water regulations as delineated in WAC 246.290 and the Safe Drinking Water Act.
- D. County Individual Preparedness Guidelines (addressed in CEMP Basic Plan).

- E. Follow all local, state, and federal guidelines relating to ADA compliance regarding permitting and restoration of services as much as practicable. Considerations should include people with disabilities and/or others with access and functional needs

III. SITUATION

- A. Emergency/Major Disaster Conditions and Hazards

Refer to the Pierce County Hazard Identification and Risk Assessment (published separately).

- B. Planning Assumptions

- An emergency or major disaster may cause extensive damage to property and infrastructure. Public utilities may be damaged or be partially or fully inoperable.
- Access to disaster areas may be dependent upon the re-establishment of ground, air, and water routes. Debris may make streets and highways impassable. In many locations, debris clearance and emergency road repairs will be given priority to support immediate lifesaving response activities.
- Damage assessments will be required to determine impact and potential workload. In the event of an earthquake, aftershocks will require re-evaluation of previously assessed structures and damages.
- Expedited environmental and legal clearances may be needed for disposal of materials and demolition activities for the protection of threatened public and private improvements.
- Private-sector, mutual aid, and assistance networks facilitate the sharing of resources to support response efforts.
- Wastewater treatment plants may experience damage to infrastructure which could cause discharge of untreated effluent to the receiving waters. Likewise, water distribution and transmission, sanitary and storm water sewer collection systems, may experience damage. Human resource capacity may be impacted and therefore be limited.

IV. CONCEPT OF OPERATIONS

- A. General

1. The Pierce County Planning and Public Works Department is the lead agency for the coordination of public works emergency operations for the county. The Planning and Public Works Department will send their liaison(s) to the Tacoma-Pierce County Emergency Operations Center (EOC)—hereafter called the “EOC”—when requested.

2. Pierce County Planning and Public Works Department has seven operating divisions:
 - a. Airport and Ferry Administration
 - b. Office of County Engineer
 - c. Maintenance and Operations (Roads)
 - d. Sewer
 - e. Sustainable Resources (Solid Waste)
 - f. Surface Water Management (SWM)
 - g. Planning and Land Services (Engineering, Permitting, Natural Resources)

In addition to the above, the Strategic Business Division and Innovation and Technology Division support all other operating divisions.

3. Supplemental public works assistance may be requested through normal mutual aid channels. Requests for state resources are made through the EOC.
4. The Pierce County Facilitates Management Department will coordinate with other Pierce County Departments to ascertain building viability.
5. Triggers for activating the EOC are described below (coordination with other entities is described in the Areas of Coordination Crosswalk table):
 - a. Airport and Ferry Administration
 - NOAA issues a Storm Watch or Warning
 - Threat of terrorism
 - b. Office of the County Engineer
 - NOAA issues a Storm Watch or Warning
 - Significant impacts to roads and bridges
 - c. Maintenance and Operations (Debris Clearance)
 - NOAA issues a Storm Watch or Warning
 - High wind warnings (sustained 40mph and above)
 - Excessive rain (2 to 4 inches in 24hrs or less)
 - Snow and ice freezing events any event that causes relocation of staff to an alternate facility
 - d. Sewer
 - Threat Level 2—Potential or actual incident/emergency—or Threat Level 3—Hazardous conditions dangerous to life, health, or property—including:
 - any system failure or damage that affects more than 20% of sewer facility capability or capacity;

- any event that causes relocation of staff to an alternate facility;
 - a train derailment near a wastewater treatment plant;
 - severe wastewater containment issues or severe damage or destruction of critical infrastructure such as fire, explosion, or exposure to hazardous materials;
 - significant or severe long-term environmental impacts; and
 - extreme adverse weather or weather forecast.
- e. Sustainable Resources (Solid Waste)
- NOAA issues a Storm Watch or Warning.
 - High wind event.
- f. Surface Water Management
- NOAA issues a Storm Watch or Warning.
 - SWM triggers response for elevated freezing levels of 7,000 feet or above, atmospheric rivers and 2 to 4 or more inches of rain in 24 hours or less.
- g. Planning and Land Services (Engineering, Permitting, Natural Resources)
- NOAA issues a Storm Watch or Warning.
 - High wind event.
 - Earthquake, tsunami/flood damages.
- h. Water Purveyors
- Response exceeds the capacity of local coordination resources and WA WARN system (Water/wastewater Agency Response Network).
6. The Pierce County Engineer, in coordination with Planning and Public Works Department engineers will oversee building inspections, assessment of structural integrity of public roads/bridges, and traffic control systems. County engineers will coordinate with the Pierce County Facilities Management Department for prioritization of inspection, repair, or relocation of county facilities.
7. Public and private water purveyors will support their own response capabilities but will coordinate with the EOC and Planning and Public Works Department for situational awareness and information sharing concerning affected areas and restoration times.
- B. Preparedness Activities
1. Notify residents regarding flood preparedness.
 2. Continual maintenance of storm systems. Facilitate training and exercises that include emergency response.

3. Maintain water systems (as possible) with regular upgrades/maintenance.
 4. Build in system redundancies.
 5. Conduct resident outreach.
 6. Promote individual staff preparedness such as personal go bags, and family preparedness.
 7. Maintain departmental emergency response plans.
 8. Select and train department liaisons to serve in the EOC, when requested.
 9. Develop a list of priority facilities for damage assessment.
- C. Mitigation Mission
1. The county will ensure hazard mitigation measures are taken in consideration in the design and maintenance of public works facilities and infrastructure.
- D. Response Mission
1. Resume operations and services
 2. Mitigate immediate hazards (shut down water mains / pipelines, close roads, and bridges).
 3. Coordinate debris removal / debris management.
 4. Coordinate damage assessment (of critical infrastructure, systems).
 5. Provide trained personnel to restore services.
 6. Prioritize restoration of services.
 7. Identify, prioritize, and coordinate repair work for local roads, bridges, and culverts.
 8. Inspect buildings (both public and private).
 9. Assess the structural integrity the roads and bridges.
 10. Stabilize, decrease impacts, and re-establish critical infrastructure functions.
 11. Coordinate with ESF #12 to repair/restore utility services (gas, electric, telephone. etc.) for critical infrastructure.
 12. Coordinate with DEM and/or the EOC for the acquisition and allocation of response resources.
- E. Recovery Mission
1. Restore infrastructure operations and services.
 2. Manage debris.
 3. Prioritize restoration of services.

4. Expedite permitting.
5. Repair local roads, bridges, and culverts.
6. Restore local water distribution systems.
7. Restore local wastewater collection and treatment systems.

V. RESPONSIBILITIES

Lead Agency	ESF Responsibilities
Pierce County Planning & Public Works (PPW) Department	<p>General</p> <ol style="list-style-type: none"> 1. Function as lead agency in the implementation of this ESF and the associated response, recovery, mitigation, and preparedness activities. 2. Obtain the required authorizations as related to this ESF and as appropriate. 3. Provide a liaison to the EOC, when requested. 4. Perform or contract for major recovery work to repair damages to public facilities or infrastructure. 5. Provide the EOC with damage assessment and priority repair information, when requested. 6. Provide construction and emergency equipment, supplies and personnel for response and recovery activities as practicable. 7. Provide, procure, and maintain equipment. 8. Coordinate with regulatory agencies and tribal liaisons when work impacts environmentally sensitive areas as practicable
PPW-Building and Code Enforcement	<p>Building Inspections</p> <ol style="list-style-type: none"> 1. Lead agency for the inspection of county facilities and other appropriate buildings or homes in the unincorporated county for structural integrity when indicated. 2. Support activities related to the inspection, repair, or relocation of county facilities. 3. Expedite the issuance of building permits necessary for the recovery process. 4. Ensuring federal ADA requirements will be met within the permitting process.
PPW-Office of County Engineer, Surface Water Management, Maintenance and Operations, Sewer, Planning and Land Services	<p>Engineering</p> <ol style="list-style-type: none"> 1. Design, manage, and oversee repairs of various public systems with respect to the divisions listed 2. Support activities related to the inspection of bridges 3. Patrol, inspect, repair county public road systems and related infrastructure

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Lead Agency	ESF Responsibilities
PPW-Sewer	<p>Wastewater</p> <ol style="list-style-type: none"> 1. Conduct laboratory testing and plant operations to ensure wastewater regulatory compliance. 2. Inspect and make necessary emergency repairs to the department's mains, pump stations, treatment plants, and community systems. 3. Coordinate strategies with DEM and other local wastewater providers responsible for other systems, as requested. <ol style="list-style-type: none"> a. Each wastewater service provider is responsible for wastewater collection and treatment within their own service area boundaries, as circumstances permit. 4. Contract with local temporary wastewater collection service providers, as needed. 5. Assess emergency initiatives for diversion of wastewater. 6. Implement existing mutual aid agreements for wastewater services.
PPW-Sustainable Resources	<p>Waste Management</p> <ol style="list-style-type: none"> 1. Coordinate disposal sites for debris removed for emergency protective measures, emergency and temporary repairs and/or construction on county land, roads, bridges, and facilities. 2. Coordinate demolition and disposal of debris at appropriately identified receiving facilities.
PPW-Maintenance and Operations, Roads, and Surface Water Management	<p>Surface Water Management/Flood Control</p> <ol style="list-style-type: none"> 1. Patrol, inspect, and repair county flood control facilities. 2. Coordinate with regulatory agencies and tribal liaisons when work impacts environmentally sensitive areas. 3. Deliver sand and sandbags to appropriate locations for flood fighting operations. 4. Stock supplies of sandbags and sand and make deliveries as requested by the EOC. 5. Perform water quality monitoring, when necessary. 6. Provide a liaison to the EOC, when requested.

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Support Agency	ESF Responsibilities
Pierce County Facilities Management Department	<ol style="list-style-type: none"> 1. Maintaining an operational back-up power source to support the EOC. 2. Coordinate with the Pierce County Department of Planning & Public Works for the inspection of county facilities. 3. Coordinate with public and private utilities providers to ensure county facilities are properly connected to providers. 4. Maintain a back-up power source for critical county operations to cope with an emergency. 5. Coordinate with Planning & Public Works for the repair or relocation of county facilities.
Regional Water Cooperative of Pierce County	<ol style="list-style-type: none"> 1. Make temporary repairs to provisionally restore service and operations. 2. Maintain and control water systems within members' respective jurisdictions. 3. Perform damage assessment and identify problems or shortfalls in the water supply. 4. Regulate water usage in times of shortage as appropriate, assuring priority use set to meet essential emergency needs. 5. Continue to operate in the self-help and mutual aid realms before calling for area, regional, or state assistance. 6. Provide information necessary for compiling damage and operational capability reports. 7. Identify areas for potential mitigation strategies. 8. Provide a liaison to the EOC, when requested. 9. Repair/restore local water systems, as much as practicable. 10. Provide temporary water distribution systems. Ensure access to alternate water sources is accessible to those with functional needs.

VI. AREAS OF COORDINATION CROSSWALK

The following table describes the typical functions concurrently active during incidents involving ESF #3. Other ESF annexes are listed as a reference to guide coordination.

Function	Agency	ESF Annex
Roadway Debris Removal	Pierce County Maintenance and Operations	ESF #1
Utility repair within right-of-way	Utility owners/operators	ESF #12
ADA consideration in restorative access to critical infrastructure	All agencies	ESFs #1, #6, #8, and #12

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Function	Agency	ESF Annex
Hazardous Materials Response	Ecology	ESF #10
Environmental Health/Health Violations	Tacoma-Pierce County Health Department/State DOH	ESF #8
Public Information	Pierce County Communications Department	ESF #15

VII. AUTHORITIES AND REFERENCES

- ATC-20-1 Field Manual: Post earthquake Safety Evaluation of Buildings.
- International Code Council, www.iccsafe.org.
- Support Annex 10—Debris Management Plan.
- Title 246 WAC: Health, Department of, as amended.

VIII. TERMS AND DEFINITONS

- (See Appendices I and II)

IX. ATTACHMENTS

- (None)

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