

EMERGENCY SUPPORT FUNCTION #10 - OIL AND HAZARDOUS MATERIALS

CEMP - ANNEX IV DOCUMENTATION



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Date

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Date

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

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FIGURES

No table of figures entries found.

1. STAKEHOLDERS

Table 1

PRIMARY AGENCY	ESF COORDINATOR
Seattle Fire Department	Seattle Fire Department

Table 2

SUPPORT AGENCIES	
Seattle Police Department	Seattle-King County Public Health Department
Seattle Public Utilities	King County Office of Emergency Management
Pierce County Department of Emergency Management	Washington State Emergency Management Division
Washington State Patrol	Federal Emergency Management Agency
US Coast Guard	

2. INTRODUCTION

2.1 Purpose

Emergency Support Function #10 (ESF #10) describes the policies and procedures administered by the Seattle Fire Department during incidents. It also defines the roles and responsibilities of the Seattle Fire Department Management Team during EOC activation.

2.2 Scope

This document applies to Fire Department personnel, uniformed and non-uniformed, on and off duty. The focus is on the policies and procedures, resources, and objectives to address issues before, during and after major city-wide incidents.

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.

- The City of Seattle encompasses an array of structures and occupancies engineered to serve the transportation, occupational, recreational, and residential needs of a population over 704,352.
- Among the daily activities in the City's business and industrial community, it is recognized that various amounts of hazardous materials (HazMat) are used in a myriad of processes. In addition to the normal and regulated amounts used and stored, larger bulk quantities are transported in and through the City over the highways and major arterials, the railroad system, in pipelines, and on ships through Elliott Bay and the Port of Seattle. Examples of Hazardous Materials incidents may include: Transportation incidents; Clandestine drug labs; Fixed site incidents; Spill or release; Multiple incapacitated patients; Visible environmental.
- Despite modern life safety and fire protection systems federal, state and municipal laws governing the use, transportation and storage of hazardous materials, the possibility exists that natural, mechanical or human-caused incidents could result in releases, spills, fires and other catastrophic events. These events would require immediate and effective response of fire protection, emergency medical and hazardous materials services provided by the Department.
- Seattle has been designated an Emergency Planning District by the State Emergency Response Commission (SERC) as prescribed in WAC Section 118-40-150. As such, and consistent with WAC Section 118-40-170, the Fire Department is primarily responsible for administering and supporting the requirements of the City's Local Emergency Planning Committee, to include maintenance of the City's Hazardous Material Emergency Response Plan as set forth in WAC Section 118-40-180.

3.2 Planning Assumptions

- The Fire Department will be responsible for the stabilization of all hazardous materials incidents that threaten public safety, except those incidents that are normally resolved by the Seattle Police Department's Explosives Disposal Unit or other federal/state response groups.
- The Fire Department maintains strategically located fire stations and equipment to address fire, medical and other incident needs of the public. Among these resources is the Hazardous Materials Response Team. The Hazardous Materials Team is comprised of firefighters specially trained in the mitigation of hazardous materials events. Team members are trained to a Technician Level (highest possible).
- The Hazardous Materials Response Team will respond to incidents inside the city limits and in support of jurisdictions where current mutual aid agreements exist with the City.
- In situations of major proportions that exceed the physical limitations of the Fire Department, help from outside the City will be requested through other fire departments by way of mutual

aid agreements, the King County Fire Resource Plan, and from other state and federal agencies arranged through the Seattle EOC.

- In addition, should there be radiological incident, technical assistance and specialized resources from the State Department of Health, State Military Department, US Department of Energy, and the Federal Nuclear Regulatory Commission can be made available through the City of Seattle EOC or Emergency Management Staff Duty Officer. (A catalog of supplemental radiological assistance is maintained by the Seattle Office of Emergency Management.)
- Despite the best efforts of the Fire Department, and other agencies that respond to assist, a catastrophic incident could cause delays in response by emergency personnel and equipment.
- 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

The Fire Department plays a vital role in City government and will be one of the most active entities during a city-wide incident. As a Department Head, the Fire Chief reports directly to the Mayor. Similarly, Assistant Chiefs report to the Fire Chief and assume various responsibilities.

During an incident, the Assistant Chief of Operations will have a major role in the mitigation of any significant event. Designated Fire Department members, including the Fire Chief, or his designee, will respond to the EOC.

The Operations Division of the Fire Department will be integral in the mitigation of any significant event. The foundation of any response will be Firefighters assigned to: Engines; Ladders; Medical Aid Units; Command Units; Other Specialty Units.

In paramilitary configuration, approximately 209 Firefighters are on-duty per shift and are assigned to 33 fire stations strategically located throughout the City. There are 4 platoons. Off-duty personnel are recalled per calling plans in the event of a city-wide incident.

4.2 General Response

To plan, respond and mitigate the many potential incident, the Fire Department operates in five levels, each reflecting the severity of the incident.

- IMPLEMENTATION LEVELS
 - **LEVEL V** - This is the day to day operations level where incidents can be handled with minimal resources and the number of concurrent incidents is manageable. Command and general staff positions are typically handled by the Incident Commander, written Incident Action Plans (IAPs) are not implemented, and incidents are contained within the first few hours. The Resource Management Center would typically not be activated at this level. Note that the Resource Management Center (RMC) may be activated at Level V during planned events such as Seafair. Event Action Plans (EAPs) will be generated and multiple operational periods are possible.
 - **LEVEL IV** - The Fire Alarm Center shall implement this level when minor impacts to city-wide coverage occur due to planned events such as New Year's Eve or Fourth of July, during two or three-alarm situations, or when multiple separate incidents deplete available resources. Multiple-alarm incidents may require activating some Command or General Staff functions, but a written IAP would not generally be required and the control phase of the incident would usually be resolved in a single operational period
 - At this level, the RMC may be activated and staffed as indicated in the RMC Activation Procedures and Orange Book, Annex A (Personnel Reporting Procedures). Dispatch Level 4 reduces Automatic Fire Alarms (AFAs) to a single unit, and Aid Units are left off certain fire responses to enhance EMS coverage. Limited call-back of off-duty personnel may occur in accordance with the Calling Plans.
 - **LEVEL III** - This level is implemented when city-wide coverage and response capacity is severely limited, such as during four or five-alarm fires, simultaneous multiple-alarm incidents, earthquakes, or other situations with city-wide impacts, such as wind/snow storms and power outages. Most fire responses will be reduced in size and Code Yellow

- responses will be at the discretion of the Fire Alarm Center (FAC). Requests for additional alarms may provide less than normal resource levels.
- Most Command and General Staff positions will be activated and mutual aid will be requested, if available. Incidents may extend into multiple operational periods requiring written IAPs. The RMC will be activated and will fill the role of Area Command for the Fire Department when needed. The City EOC may be activated. If so, it will be staffed in accordance with Orange Book, Annex A (Personnel Reporting Procedures). Call-back of off-duty personnel will occur in accordance with the Calling Plans.
 - **LEVEL II** - This level is implemented when Department resources are catastrophically diminished but the FAC is still functional, such as during an earthquake or pandemic response. Most or all responses will be single units at the discretion of the FAC. Mutual aid resources will be requested if available, up to and including State and Federal assets. In a regional situation, such as an earthquake, mutual aid resources are unlikely and Seattle Fire Department personnel and resources may be on their own for 24-72 hours.
 - Most or all Command and General Staff positions will be filled on incidents that are not city-wide in nature, i.e. a plane crash into a building or multiple IED attacks, versus an earthquake or pandemic incident. Multiple operational periods are likely with written IAPs necessary. The RMC will be activated and will fill the role of Area Command for the Fire Department when needed. It will be staffed as indicated in the RMC Activation Procedures. The City EOC will be activated and will be staffed in accordance with Orange Book, Annex A (Personnel Reporting Procedures). Call-back of off-duty personnel will occur in accordance with the Calling Plans.
 - **LEVEL I**-This level is implemented when the conditions of Level II are experienced and the FAC is out-of-service due to damage or loss of communications. This will result in decentralized Battalion Dispatching with the RMC coordinating city-wide priorities and coverage.
 - At Levels III, II, and I, certain response assets may be unavailable, such as battalion chiefs, medic units, and specialty units. Personnel must maintain situational awareness and continuously reassess priorities. Highest priority should be given to immediate life-safety actions and defensive operations to contain growing incidents.

The foundation of any HazMat response is the Hazardous Materials Response Team. A Hazardous Materials response will place the following fire resources at the scene: Hazardous Materials Team (Engine 10; Ladder 1; Aid Car 10; Battalion Chief; HazMat Van; Medic Unit); Additional Engines; Additional Ladder Trucks; Medic Unit; Additional Battalion Chief; Deputy Chief of Operations; Safety Chief; Staffing Officer; Air Support Unit; Public Information Officer; Fire Buffs as required to support the incident.

- Chemical Release with Fire - A chemical release has its own challenges and it becomes more complex with the addition of fire. In this situation, additional tactics will be implemented, e.g. positioning of hose streams to cool the fire; confinement of the fire; and application of firefighting foam to extinguish.
- Patient Care-Patient care will be conducted after emergency decontamination per EMS guidelines. If necessary, an MCI response will be requested.

4.3 Direction and Control

Direction and control are maintained through the paramilitary chain of command. The FAC has the authority to dispatch the necessary response type base on the incident and available resources. The Fire Department utilizes the Incident Command System (ICS) to manage and mitigate incidence with the following priorities: Life safety; Incident stabilization; Property conservation; and Environmental protection.

5. RESPONSIBILITIES

5.1 Prevention and Mitigation Activities

- The Fire Department will be responsible for the stabilization of all hazardous materials incidents that threaten the public safety, except those incidents that are normally resolved by the Seattle Police Department's Explosives Disposal Unit or other federal/state response groups.
- The Hazardous Materials Response Team will respond to incidents inside the city limits and in support of jurisdictions where current mutual aid agreements exist with the City.
- The Fire Department maintains strategically located fire stations and equipment to address fire, medical and other incident needs of the public. Among these resources is the Hazardous Materials Response Team. The Hazardous Materials Response Team is comprised of firefighters specially trained in the mitigation of hazardous materials events. Team members are trained to a Technician level (highest possible).
- In situations of major proportions that exceed the physical limitations of the Fire Department, help from outside the City shall be provided through other fire departments by way of mutual aid agreements, the King County Fire Resource Plan, and from other state and federal agencies arranged through the City of Seattle EOC.
- In addition, should there be a radiological incident, technical assistance and specialized resources from the State Department of Health, State Military Department, US Department of Energy, and the Federal Nuclear Regulatory Commission can be made available through the Seattle EOC or Emergency Management Staff Duty Officer. (A catalog of supplemental radiological assistance is maintained by the Seattle Office of Emergency Management).
- Despite the best efforts of the Fire Department and other outside agencies that respond to assist, a catastrophic incident could cause delays in response by emergency personnel and equipment.

5.2 Preparedness Activities

- The Fire Department trains and plans regularly for HazMat events. Training is locally, state and federally mandated and certified.
- The Fire Department Disaster Management Plan (a.k.a. The Orange Book) contains the detailed procedures and operational guidelines for incidents and including those of high consequence such as earthquake, pandemic, and terrorism. Those plans are maintained in the Seattle Fire Department Orange Book and the Operating Guidelines Section 5007.

5.3 Response Activities

- The first arriving units (usually non-Hazardous Materials team units) will:
 - Establish command and scene control
 - Attempt to Identify the product spilled or released
 - Isolate the chemical and establish control zones: Hot, Warm and Cold
 - Evacuate or shelter in place potential victims
 - Rescue those unable to evacuate themselves
 - Establish emergency decontamination procedures
 - Set-up a decon corridor and flush patients with water for 15-minutes
 - Establish command through the ICS
- Hazardous Materials team members, upon their arrival, will interface with the first-in companies and:
 - Identify of the product spilled or released
 - Plot the travel of the chemical plume if applicable
 - Mitigate by: Containing, Neutralizing, Diluting, Shutting off at the source
 - Facilitate clean-up
 - Release the scene

5.4 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.

The clean-up of a HazMat scene will be coordinated with the Fire Marshal and the City of Seattle EOC who may contact the: Washington State Department of Ecology; Washington State Emergency Management Division; Washington State Patrol; US Environmental Protection Agency; US Coast Guard; City of Seattle Fleets and Facilities Department for city-owned property; Private licensed contractors.

6. RESOURCE REQUIREMENTS

6.1 Logistical Support

- Computer Aided Management of Emergency Operations (CAMEO), a hazardous materials product identification and mitigation program, is used by the Seattle Fire Department. The HazMat Response Van is equipped with a mobile computer that runs the CAMEO program. This program was developed through the cooperation of the Seattle Fire Department and the National Oceanic and Atmospheric Administration (NOAA) and is the standard among the Fire Service.
- Many chemicals or hazardous products produce a plume or cloud of potentially lethal gas. CAMEO can plot the plume based on the chemical, quantity, wind direction and speed through Aerial Location of Hazardous Atmospheres (ALOHA). Evacuation or shelter in place of the surrounding community may be accomplished with more direction and clarity of the toxic cloud travel.

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.

SFD 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. SFD 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	Capt. W Barrington L Meyers	Completed revision. Document voted and approved by DMC and EEB.
December 2016	Update	W Barrington L Meyers	Completed annual update.
May 2015	Update	K Neafcy	Completed annual update.

8. TERMS AND DEFINITIONS

- HazMat: Hazardous Materials
- Hazardous Materials Response Team: Engine 10, Ladder 1, Aid 10, Staff 10
- Decon Corridor: An on-scene, temporary structure designed to provide emergency decontamination of the victim

9. ACRONYMS

- ESF: Emergency Support Function
- EOC: Emergency Operations Center
- SHIVA: Seattle Hazard Identification and Vulnerability Analysis
- HazMat: Hazardous Materials
- SERC: State Emergency Response Commission
- WAC: Washington Administrative Code
- EOP: Emergency Operations Plan
- LEP: Limited English Proficiency
- ADA: Americans with Disabilities Act
- EMS: Emergency Medical Systems
- FAC: Fire Alarm Center
- ICS: Incident Command System
- IAP: Incident Action Plan
- RMC: Resource Management Center
- EAP: Event Action Plan
- AFA: Automatic Fire Alarms
- CAMEO: Computer Aided Management of Emergency Operations
- NOAA: National Oceanic and Atmospheric Administration
- ALOHA: Aerial Location of Hazardous Atmospheres
- CEMP: Comprehensive Emergency Management Plan
- SFD: Seattle Fire Department
- OEM: Office of Emergency Management
- WAMAS: Washington State Intrastate Mutual Aid System
- MCI: Mass Casualties Incidents

10. REFERENCES

- Orange book – Seattle Fire Department Disaster Management Plan
- Policy & Operating Guidelines Section 5007 – Disaster Management Plan
- Washington State Intrastate Mutual Aid System