Patriot Technical Consultants, Inc.
105 MacArthur
Richland, WA 99354

Statewide CBRNE Response Program Final Report

Chemical
Biological
Radiological
Nuclear
Explosive

October 2006

Prepared for the
Washington State Emergency Response Commission

Contract Administered by
Washington State Department of Ecology

Statewide CBRNE Response Program Final Report

Authors
Brian Day
Paul Day
Michelle LeClair
David Lincoln
Chrysoula Nigl

Prepared for:	Washington State Emergency Response Commission
Contract Administered by:	Washington State Department of Ecology 300 Desmond Drive Lacey, Washington 98504-7775
Prepared by:	Patriot Technical Consultants, Inc. 105 MacArthur Richland, Washington 99354

Approvals:

Paul Day, Project Manager — 10/19/2006 (Date)

Executive Summary

Washington State Emergency Response Needs

One primary responsibility of any government is to protect the safety and well-being of its citizens. In today's world, a dangerous incident involving chemical, biological, radioactive, nuclear, or explosive (CBRNE) agents would threaten that safety and well-being. Washington remains susceptible to these incidents. Previous studies examined the state's current hazardous materials (HazMat) response capabilities, and commented on: the absence of HazMat teams along the I-5 corridor between Vancouver and Tacoma and along the Columbia River between Vancouver and the Tri-Cities; the lack of common procedures, training and equipment standards; the lack of training in the new CBRNE environment; the lack of sustainable funding sources, and the variety of programs and procedures in place across the state.

The Statewide CBRNE Response Program (Program) will:

- Achieve Goal 5.8 of the State's Statewide Homeland Security Strategic Plan, which is "*To Enhance Regional CBRNE Response Capability and Capacity Statewide*".
- Build on the existing HazMat teams and bomb squads and create new teams for a system of fully-trained and equipped regional response teams that operate with standardized training, equipment, and procedures.
- Be supported by a sustainable funding source.
- Administer an aggressive cost recovery program to recover the costs of responding to CBRNE incidents from responsible parties.

The Program was developed during an extensive review of the existing response capabilities and alternative program components by four State Emergency Response Commission Committees: Strategic/Legislative, Administration, Technical, and Contracts.

Statewide CBRNE Response Program Overview

The Office of the State Fire Marshal (OSFM) will administer the Program. The Program develops at least one highly qualified response team in each of the existing nine regions. It creates a coordinated, statewide network of regional teams that avoids duplication by using existing HazMat teams, bomb squads, and health protection teams, integrated through common procedures, training and equipment. These teams can respond effectively within their region and can travel to any other region in the state to work cooperatively on major incidents.

This Program will provide over 600 trained technicians to respond to CBRNE incidents, as well as training for personnel at other levels of competency (awareness, operations, specialist, and command). The response personnel will remain employees of their response agencies. The number of response employees is not increasing, but there is a major expansion in their capabilities. The location, type of team, and numbers of technicians were chosen after a detailed review of the recent history of incidents and exposure factors (e.g., infrastructure) using a risk-based model.

A Technical Advisory Committee will be created to assist the OSFM in establishing Program policy and guidelines.

The Program does not pay for CBRNE incident response; rather, it creates a trained, equipped response force, and a cost recovery system to make the responsible parties pay. The Program establishes a sustainable source of funding to ensure the reliability and continuity of these services. Draft legislation to implement this Program has been drafted and included in this report.

Fiscal Management

Washington's citizens already pay for the existing HazMat teams and bomb squads. Local emergency response agencies have received much equipment through federal grants, but are stretched to support their maintenance and training needs. The new Program could reduce local tax requirements in regions that already support HazMat teams and/or bomb squads, and creates an efficient, cohesive, and sustainble statewide CBRNE program. The Program centralizes the training, equipment purchases, medical surveillance, and cost recovery efforts to increase effectiveness and to optimize available resources. The budget was developed after a detailed analysis of the response requirements, current capabilities, and similar programs in other states, including Oregon. The first year estimated budget is $15.412 million, which includes the initial investment in training and equipment. The second year budget estimate is $8.240 million, which represents the ongoing annual costs.

Several alternatives are presented as possible funding sources for the Program, with suggested criteria for consideration in selecting the funding option(s) for the initial Program startup and for sustainable Program implementation in the future. Candidate funding sources include:

- Grants from government and private sources
- Cost Recovery from responsible parties
- General Fund Transfers, if the CBRNE Program account drops below a minimum threshold
- A Surcharge on residential and commercial insurance policies
- Hazardous Substance Tax, either use of proceeds or increase in the rate
- Transfers from the Local Toxics Control Account
- Direct appropriations.

Next Steps

1. Identify state legislators to sponsor the legislation.
2. Identify a sustainable funding source for the annual funding of the Program and a source for the initial start-up costs in the first biennium.
3. Submit the legislation to the Office of the Code Reviser, the official bill-drafting arm of the Legislature.
4. Communicate the Program with stakeholders and legislators.
5. Submit the legislation at the opening of the 2007 Legislative session.
6. Pass the legislation in the 2007 Legislative session.
7. Begin implementing the legislation ninety days after passage.

Table of Contents

List of Figures

List of Tables

Appendices

1.0 Need for a Statewide CBRNE Response Program

One primary responsibility of any government is protecting the safety and well-being of its citizens. In today's world, a dangerous incident involving chemical, biological, radioactive, nuclear, or explosive (CBRNE) agents would threaten that safety and well-being.

Washington remains susceptible to these CBRNE incidents. It has a large, concentrated population along the I-5 corridor. It is the home to major technology and aerospace industries. Chemical spills from industries continue to pose a major threat to its citizens and are the major contributing factor of all CBRNE incidents.

The increase of terrorism throughout the world is further cause for alarm. Most terrorist attacks will result in some type of CBRNE incident. Washington was the point of entry for a terrorist who planned to bomb the Los Angeles International Airport. It is home to numerous other potential targets including: major military bases, a series of dams on the Columbia River, ports and international borders, which are a major gateway for materials entering or leaving the country, and a large nuclear program in the Tri-Cities region.

A CBRNE incident could be devastating to Washington's people, economy, and environment. It could kill or injure thousands of people. It could destroy millions, potentially billions, of dollars worth of property and infrastructure. The cascading impacts of a CBRNE incident could permanently degrade the state's environmental resources and could severely disrupt the operations of government, commerce, and society. Simply put, we live in a much different world today than we enjoyed prior to September 11, 2001, with terrorism risks adding to existing risks associated with hazardous materials.

Washington currently relies on a "catch-as-catch-can" approach to hazardous materials (HazMat) response, with local jurisdictions bearing most of the responsibility and cost. The lack of uniform interoperable communications, procedures, training, and equipment for emergency responders makes it difficult, if not impossible, for jurisdictions to cooperate in the event of a catastrophic incident. The TOPOFF 2 exercise in Seattle in 2003 involved an explosion containing radioactive materials and underscored the need for the state's response organizations to improve readiness to act quickly and effectively to a serious attack.

A well-formed CBRNE response program cannot stop a terrorist attack or prevent hazardous material releases, but it can ensure that the response teams are prepared to provide the fastest and most effective response possible. A full and speedy recovery is our best mechanism to minimize the impacts of these events. It is our responsibility to ensure that the responders who put their lives on the line to protect us have the appropriate training and equipment to do their jobs in a safe and effective manner.

Several studies regarding statewide emergency response capabilities are identified and referenced in *Establishing Sustainable Regional CBRNE/HazMat Response Capability in Washington State*

(See Appendix A). These studies were considered and helped form the recommendations for that report, which in turn were used as the basis for the Statewide CBRNE Response Program (Program) introduced in Section 2.0. These studies examined Washington's current HazMat response program, and commented on absence of HazMat teams along the I-5 corridor between Vancouver and Tacoma and along the Columbia River between Vancouver and the Tri-Cities; the lack of common procedures, training and equipment standards; the lack of training in the new CBRNE conditions; the lack of sustainable funding sources; and the inadequacy of the variety of programs and procedures across the state.

The following photograph is a low-speed train car derailment that occurred recently in downtown Vancouver, Washington. The railcar contained 146,000 pounds of highly flammable liquefied petroleum gas that fortunately did not leak and ignite. Emergency responders were prepared to evacuate as many as 5,000 people if the railcar had begun to leak. This was a case where local hazmat responders worked closely with the private sector (Burlington Northern Santa Fe Railroad) to combine their emergency response and technical skills.

The next photograph is from an October 2006 fire at a hazardous waste storage and treatment facility in Apex, Virginia. This fire involved pesticides, herbicides, chlorine, solvents, and other hazardous chemicals and resulted in the immediate evacuation of over 17,000 citizens. The first responders faced the challenge of working in a very dangerous environment where unknown chemical reactions were occurring during the fire and where multiple response agencies were required to work together in a coordinated manner.

Washington State is in a position to establish an effective Program to substantially improve the safety of its citizens with respect to CBRNE incidents. The Program, as designed, will:

- Create a coordinated, comprehensive, statewide program of fully-trained CBRNE response teams that operate using standardized training, equipment, and interoperable procedures and communications.
- Be supported by a sustainable funding source for these teams as described in Section 4.2.1.

Currently, Washington State and local agencies utilize federal government grants to support major components of their emergency response capabilities. It is true that public awareness and the visibility of emergency management have increased markedly over the past five years, and federal funding increased dramatically after

2001. That level of federal support, however, is not sustainable and has already started to decline. Washington is now forced to depend on the budget decisions of its many state, county, and city jurisdictions to fund the response organizations. The state's response capability cannot rely on so many individual budget decisions to build a dedicated, cooperative, and efficient statewide system. The Program must have sustainable funding for CBRNE response.

Washington's citizens already pay for the existing HazMat teams and bomb squads.

> Al Qaeda video discovered in Afghanistan contained surveillance photos of the Washington State ferry system, the largest in the United States.

At the State level, this includes the training, equipment, medical surveillance, and unreimbursed response costs for the four bomb squads operated by the Washington State Patrol. At the local level, this includes training, equipment, medical surveillance, and unreimbursed response costs for fifteen existing HazMat response teams and eleven additional bomb squads. The local agencies have received much equipment with federal grants, but are stretched to support its maintenance and training needs.

The Program described in this report could reduce local tax requirements, and create an efficient, cohesive, and sustainable statewide CBRNE program. The Program will go a long way toward minimizing the impact of CBRNE incidents for the benefit of Washington's citizens, economy, and environment. The Program:

- Achieves Goal 5.8 of the State's Statewide Homeland Security Strategic Plan "*To Enhance Regional CBRNE Response Capability and Capacity Statewide.*"
- Builds on the existing capabilities and statewide regional structure.
- Is based on a detailed needs and risk analysis performed by state and local subject matter experts and emergency responders.
- Was developed during an extensive review of the existing response capabilities and alternative program components through four committees of the State Emergency Response Commission (SERC): Strategic/ Legislative, Administrative, Technical, and Contracts.

The Program components and costs were identified, analyzed, and refined to include only the elements that are essential to performance. Legislation to implement this Program has been drafted and is provided in Appendix B.

2.0 Program Overview

The existing model forces CBRNE emergency response decisions down to the local level and produces instances of incompatible policy, training, procedures, and equipment. This hinders interoperability between teams, which, in turn, could lead to tragedy. Local agencies do not have a sustainable funding mechanism, or the resources to pursue cost recovery from responsible parties effectively. It is imperative that the State implements a focused, consistent system with clear lines of authority and clear standards that apply to every region of the state.

The Program remedies documented shortfalls in Washington's emergency response system. The goal of the Program is to create at least one qualified CBRNE response team in each of the existing nine Regional Homeland Security Coordination Districts (regions) (Figure 2-1). Eight regions will meet that goal within two years after the Program is implemented. Region 7 is taking an incremental approach to that goal, and will consider additional steps in the future. The Program will be administered under the authority of the Office of the State Fire Marshal (OSFM). The Program creates a statewide network of consistently trained and equipped regional response teams. These teams can respond effectively within their regions and can travel to any other region in the state to work cooperatively with that region's team on major incidents. The Program does not pay for CBRNE incident response; rather, it creates a cost recovery system to make the responsible parties pay. The Program must be supported by a sustainable source(s) of funding to ensure the reliability and continuity of services through training, equipping, and coordinating the teams.

July 11, 2002, 11:00 am, Cosmopolis, WA: Chemical explosion at Weyerhaeuser Pulp Mill chlorine dioxide systems. At 11:25 am a second chemical release occurred. Approximately 55 pounds of highly toxic chlorine dioxide were released into the atmosphere.

Figure 2-2 depicts the organization chart for the Program:

- The OSFM administers the Program, and contracts with government agencies to staff and equip each of the regional CBRNE response teams. A limited number of staff will be required within OSFM to administer the Program.
- Regional response teams of technicians respond to and stabilize CBRNE incidents. Regional response team members remain employees of their emergency response agencies, but receive CBRNE medical surveillance, training, and equipment support from the Program. The Program provides a base level of response capability statewide, with increased capacity in high-risk areas. The Program increases the response capabilities of existing HazMat teams and bomb squads without adding significantly to the existing number of responders. The team members maintain local responsibilities, and have new added responsibilities for regional

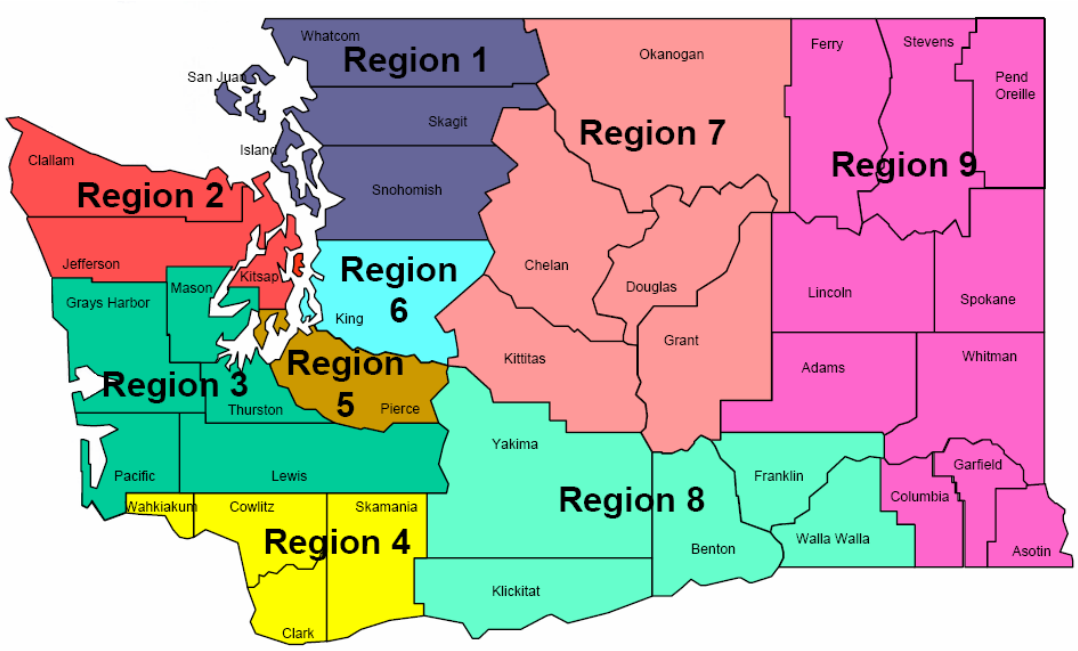


Figure 2-1. CBRNE Regions.

CBRNE incidents, and statewide responsibilities if needed.

- Non-technician responders, with competencies at the awareness, operations, specialist, and command levels, also receive CBRNE training. They remain employees of their emergency response agencies.
- Bomb squads provide the specialty skills to respond to explosives incidents. The technicians remain employees of their emergency response agencies.
- Radiation protection responders are used for radiation and nuclear incident response. They remain the employees of the Department of Health (DOH).
- Additional technical resources, including personnel and laboratories, for chemical, biological, radiological, and nuclear incidents are part of the DOH, and are available to the regional CBRNE teams.
- A Technical Advisory Committee advises the OSFM on issues concerning policy and field operations.
- Regional CBRNE teams assist local emergency planning committees (LEPCs) in the nine regions. CBRNE teams assist with planning, and participate with first responders in annual exercises to evaluate the regional CBRNE response plan.

The Program is a partnership between the OSFM, state and local government agencies, and the private sector. The OSFM provides:

- Program administration.
- Reimbursement funds to regional response teams for approved responses.
- Funds for specialized training.
- Funds for response vehicles and specialized equipment.
- Funds for the medical surveillance program.
- Cost recovery from responsible parties.

State government provides:

- Trained personnel for four bomb squads to respond 24/7.
- Trained personnel for radiation protection response.
- Subject matter experts and laboratories for identifying unknown biological agents, evaluating CBRNE incident effects on human health and the environment.
- The OSFM personnel for administration and coordination of the CBRNE Program.

Local government provides:

- Trained personnel to staff regional CBRNE response teams 24/7.
- Housing for state-owned equipment.
- Existing locally-owned equipment.

Private sector provides:

- Trained teams to respond to specific types of incidents, which can be a resource to the regional teams (further discussed in Section 3.7).

This partnership will be formalized by contracts that describe the specific authorities, responsibilities, and resources of each member.

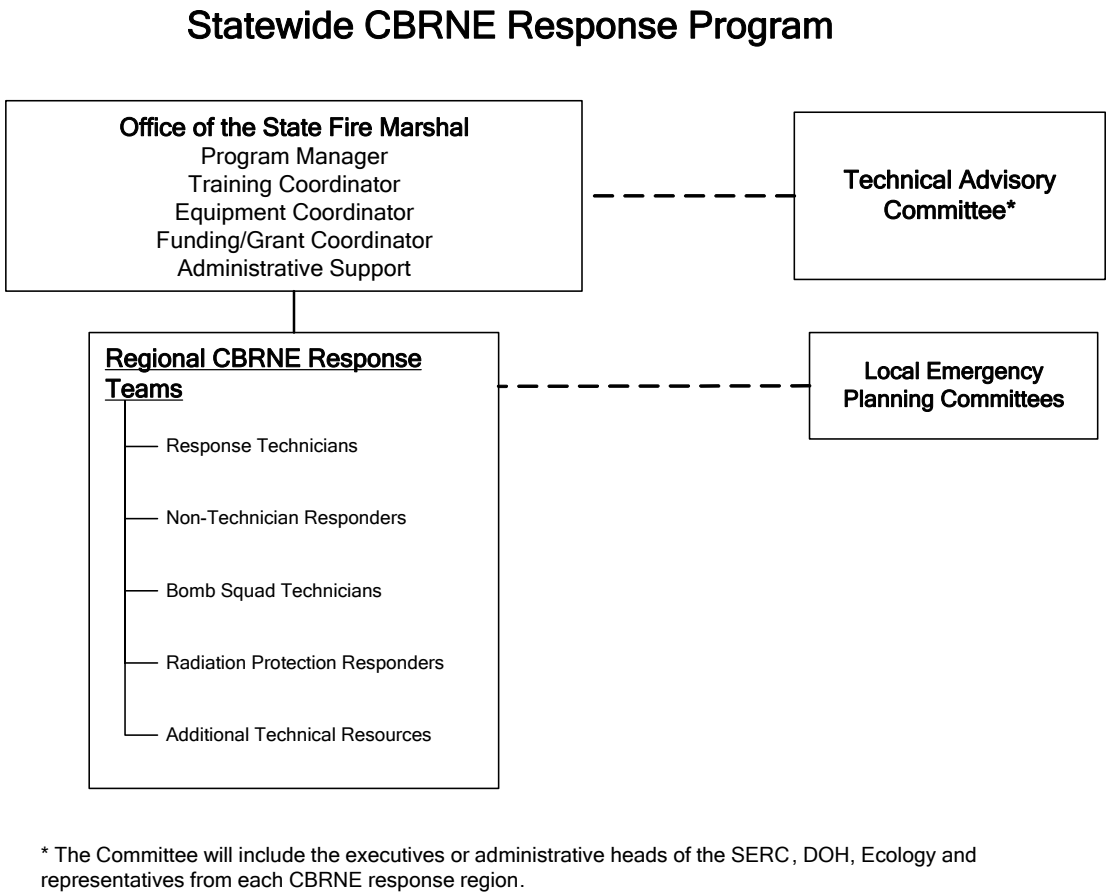


Figure 2-2. Program Organization Chart.

3.0 The Statewide CBRNE Response Program

This section provides details of Program agencies, committees, and operations.

3.1 Program Administration

The SERC Administration Committee determined that the Program should be administered by the OSFM, which is administratively located within the Washington State Patrol (WSP). The WSP is the designated incident command agency along state and interstate highways (RCW 70.136.030). The OSFM is the logical choice to administer the Program. It is a first response agency, has experience in statewide response through the fire mobilization program, and maintains contacts with local responder agencies.

Staff within the OSFM will serve several functions in support of the Program. The Program staff includes (Figure 2-2):

- Program Manager: Oversees and manages the Program.
- Training/Equipment Coordinators: Maintain the response team training and equipment standards and lists.
- Funding Coordinator: Manages Program financial accounts, and seeks cost recovery and grant support.

The Program will also require a Duty Officer whose role is discussed in Section 3.4.1. This 24/7 position will rotate among existing staff.

3.2 Technical Advisory Committee

The Technical Advisory Committee will have a strictly advisory role to the OSFM. The Committee will assist the OSFM in the implementation of the legislation creating the Program, help to formulate administrative rules, and render advice on policy issues. The Committee will provide subject matter experts to advise the OSFM on equipment and training standards, and operating protocols. The Committee will include the executives or administrative heads of the SERC, DOH, Ecology, and representatives from each CBRNE response region.

3.3 Response Organization

The SERC Technical Committee examined the history of HazMat incident locations throughout the state, and considered the factors that contribute to these incidents (e.g., transportation, manufacturing, and pipelines). It also considered the current geographical distribution of HazMat responders, and concluded that the existing Washington regions shown in Figure 2-1 are the most appropriate regional structure to support the program. Each region's response capability will be enhanced to meet the requirements discussed later in this section.

Emergency response agencies (fire departments, law enforcement, etc.) will employ the response technicians who staff the regional CBRNE response teams. Personnel at other levels of competency (awareness, operations, specialist, and command) will also receive CBRNE training.

When a regional CBRNE response is warranted, the trained technicians will assemble to form a regional CBRNE

response team. The Program will reimburse responding regional teams if the incident meets the reimbursement criteria, discussed in Section 3.4.1. Regional CBRNE response technicians will receive their medical surveillance, training, and equipment support from the Program. In regions with existing HazMat and bomb squad teams, the Program increases the response capabilities without adding to the existing number of teams. In some regions, the number of teams will decrease, but the number of technicians will remain the same. The CBRNE responders continue to have local incident response responsibilities, with new added responsibilities for regional and, as necessary, statewide CBRNE incidents.

3.4 Response Preparedness

The main objective of the Program is to create a trained and equipped emergency response force that can respond swiftly, safely, and effectively to all CBRNE incidents. The scope of incidents to which these teams must be able to respond has increased in the past few years. Federal and state governments have developed detailed requirements for response standards and performances for CBRNE response teams.

3.4.1 Incident Response

Required CBRNE response team capabilities go beyond those of HazMat teams, since CBRNE response teams are required to respond to a broader spectrum of incidents. Examples of events that may exceed the capabilities of first responders and require CBRNE regional team responses include:

- A transportation incident involving the release, or potential release of an unknown hazardous substance.
- An incident involving the release of a known hazardous substance at a manufacturing facility.
- An incident involving a suspicious object or substance.
- An incident involving explosive material.
- An incident involving the release of radioactive materials.
- An incident involving the release of biological pathogens.
- An incident involving a chemical warfare agent that causes a large number of contaminated victims.

The Program will establish incident response criteria to determine which incidents necessitate regional CBRNE team response. The Program Duty Officer will consider these criteria when contacted during an incident response, and authorize state reimbursement for responses as appropriate. The state will reimburse local jurisdictions for costs associated with an authorized regional CBRNE team incident response.

3.4.2 Response and Performance Standards

The Program has identified the appropriate standards, legal requirements, and codes that will guide training, equipment, protocols, and policy decisions. In addition, the SERC Technical Committee has established performance measures for the Program. This body of response and performance standards is presented below.

The U.S. Department of Homeland Security has issued the following guidelines, available on its website:

- National Response Plan – establishes a comprehensive, all-hazard national plan to manage emergency incidents.
- National Incident Management System – provides a national template to enable government, private industry, and non-governmental organizations to work together during an incident.
- Typed Resource Definitions – provides standardized definitions of capabilities for common reference points (e.g., fire and hazardous materials, law enforcement, security resources, etc.) during discussions and incident response.
- Target Capabilities List – provides a common framework to identify incident response needs.

Washington State and other partner states and organizations have developed standards, regulations, and guidance:

- Washington State Comprehensive Emergency Management Plan – establishes emergency management responsibilities and functions that address statewide mitigation, preparedness, response, and recovery activities. This is available on the Emergency Management Division (EMD) website.
- Northwest Area Contingency Plan – provides an oil spill and hazardous substance release response plan for the federal and state government agencies in the Northwest, and is also available on the EMD website.
- Washington Statewide Homeland Security Strategic Plan, also on the EMD website.
- Compliance regulations for HazMat response (WAC 296-824).
- Compliance regulations for bomb squad technicians (WAC 296-52-64040 and 64100).

The National Fire Prevention Association (NFPA) has developed three applicable recommended practices and competencies:

- NFPA 471: Recommended Practice for Responding to Hazardous Materials Incidents, 2002 Edition.

- NFPA 472: Standard for Professional Competence of Responders to Hazardous Materials Incidents, 2002 Edition.
- NFPA 473, Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents, 2002 Edition.

Three national standards and guidelines are available for use by the bomb squads:

- National Bomb Squad Commanders Advisory Board Standards.
- National Strategic Plan for U.S. Bomb Squads (Revised October 2005).
- FBI – Bomb Data Center National Guidelines for Bomb Technicians (Revised April 2006).

The SERC Technical Committee developed pre-response and response goals for CBRNE incidents, as discussed in Appendix C. The Committee's key statewide performance goals are listed in Table 3-1.

3.5 CBRNE Response Teams

The Program coordinates several statewide resources for CBRNE incident response.

3.5.1 Response Technicians

The SERC Technical Committee examined several risk-based models that could identify the number of technicians required to meet the response requirements in each of the nine regions. The details of these models are discussed in Appendix D. The SERC Technical Committee conducted two workshops in the summer of 2006 to review the staffing, equipment, and training needs for the Program. The meeting minutes from these workshops are in Appendix C. The Committee developed and used a risk factor model, which explicitly estimates the number of technicians based on several regional exposure factors, including:

- population,
- population density,
- geographical size,
- transportation modes and terminals,
- gas and petroleum pipelines,
- manufacturing,
- dams,
- international border crossing, and
- chemical weapons facilities.

Following a discussion of the factors, and their implications, the Committee further accepted the allocation of response technicians shown in Appendix D. Subsequently, some regions decided to place fewer technicians into the Program (Table 3-2) than the allocated number. Any region may support more than the allocated number, but would do so at its own cost.

It is important to note that the total number of technicians is about the same as currently employed by the local response agencies, but few teams are currently prepared to meet the requirements discussed in Section 3.4. Thus, the major expansion by the Program is in the capabilities of the existing technicians, not an increase in the number of technicians.

CBRNE training at other levels of competency (awareness, operations, specialist, and command) will also be provided.

3.5.2 Bomb Squad Technicians

The WSP and several local law enforcement agencies currently maintain bomb squads throughout the state. The Program will coordinate the training and equipment of these teams. Bomb squads and technicians were allocated as discussed in Appendix D. No change in the number of teams or technicians is planned, but there is a planned upgrade in the capabilities in several regions (Table 3-2).

Table 3-1. Statewide Performance Goals for CBRNE Response Teams and Bomb Squads.

Regional Performance Goals on 24/7 Basis	Time Limit
Response Technicians (other than Bomb Squad)	
Telephone/radio contact occurs.	15 minutes
Assessment team arrives to make an onsite hazard and risk assessment	2 hours
Appropriate response team personnel and equipment mobilize, capable of making multiple "Hot Zone" entries during the first 24 hours.	2 hours
Five regional CBRNE teams respond to a major incident, with each team capable of making multiple "Hot Zone" entries during a 24-hour period.	8 hours*
Bomb Squad	
Telephone/radio contact occurs.	15 minutes
Bomb team is on-scene, capable of handling a single incident.	1 hour
Bomb teams are on-scene, capable of handling multiple incidents.	2 hours
Bomb teams are on-scene, capable of handling multiple and simultaneous incidents.	4 hours
Maintain response team readiness, in both capacity and capabilities, to achieve these goals.	

*Modified from the goals in Appendix C.

3.5.3 DOH Resources

DOH has the primary state responsibility for the preservation of public health. DOH provides several response resources for CBRNE incidents:

- Chemical incidents. The DOH, along with the Poison Control Center, will provide heath advice and toxicological information to regional response teams, hospitals, exposed individuals, and local jurisdictions regarding exposure to chemicals from the incident.
- Biological incidents. DOH is the principal state resource agency for information on biological terrorism, but does not maintain response technicians in this discipline.

- Radiation and nuclear incidents. DOH's Office of Radiation Protection has expertise and response capabilities for nuclear and radiation incidents. They respond to incidents at fixed nuclear facilities and non-fixed incidents, which include transportation accidents or terrorist incidents involving radioactive or nuclear materials. The Office has approximately 50 personnel located statewide, and trained to respond to incidents in many different roles, including: field teams, laboratory support, various emergency operations centers, and incident command.

The DOH will assist in preparing environmental sampling plans to determine if there has been human exposure to chemical, biological, or radiological agents. The DOH will also provide assistance in the collection and the laboratory analysis of clinical specimens from exposed individuals. The Program will enhance the interactions between DOH and the incident response teams by integrating DOH's knowledge and capabilities into CBRNE training and response assistance.

Table 3-2. CBRNE Response Teams and Bomb Squads.

Region	Response Teams		Bomb Squads		Key Considerations
	Types[a]	Technicians	Types[b]	Technicians	
1	2 Type I	73	1 Type II 1 Type III	9	Moderate population, medium transportation network, medium industry, gas/petroleum pipelines, international border
2	1 Type I	24	1 Type II	5	International border, ferry
3	1 Type I	43	1 Type I	5	State Capitol, ports, power plant
4	1 Type I	24	1 Type III	2	Moderate density, moderate transportation network, dams, port
5	2 Type I	82	1 Type I 1 Type II	9	High population density, medium industry, port
6	3 Type I	160	1 Type I 3 Type II 1 Type III	27	High population density, large infrastructure, high industry, major transportation network
7	3 Type III	39	-	0	Large area, low population, dams, international border
8	1 Type I	47	2 Type II	8	Hanford, gas/petroleum pipelines, power plants, dams, port, nearby weapons depot
9	1 Type I	44	1 Type I	10	Large area, metropolitan area, gas/petroleum pipelines, international border, dams, port
Total	**15**	**536**	**15**	**75**	

[a]Response Team types:
Type I teams have response capabilities for unknown hazardous materials, including CBRNE agents.
Type II teams have response capabilities for unknown hazardous materials.
Type III teams have response capabilities for known hazardous materials.
[b]Bomb squad types:
Type I squad is capable of handling multiple/simultaneous incidents in a CBRNE environment, and has robot capable of handling vehicle explosive devices, and a bomb transport vessel. Minimum of six technicians.
Type II squad is capable of handling multiple incidents in a CBRNE environment, and has robot capable of handling non-vehicle improvised explosive devices, and bomb transport vessel. Minimum of four technicians.
Type III squad is capable of handling a single incident, but has no CBRNE capability, robotic capability, or bomb transport vessel. Minimum of two technicians.

3.6 Standardized Training and Equipment

Currently, the training and equipment used by the emergency response teams in different regions of Washington are not always consistent or compatible. Thus, if called to respond jointly, problems may arise in the areas of communications, response protocols and equipment. This can present major difficulties in a coordinated response effort involving teams from multiple jurisdictions. The Program's approach to interoperability meshes well with the state's ongoing initiative for interoperability for communications.

Funding and equipping all HazMat teams within the state to handle CBRNE responses of any magnitude would be cost-prohibitive;

therefore, training and equipping regional response teams to support each other is a more practical solution. This is accomplished by standardizing the training, capabilities, and equipment across the state.

Teams can then respond effectively together because they will have similar procedures and will have worked with similar equipment. The Technical Advisory Committee will assist the Program in developing the specific standardized training and equipment requirements of the regional response teams.

June 2004 derailment in Texas causes chlorine gas and other chemical releases. 3 deaths, 41 injuries with 22 of those being members of the general public. 20 railroad employees and 80 first responders required decontamination.

3.7 Private Sector

Major companies often establish their own emergency response units that are familiar with the processes and materials at their facilities. They typically respond effectively when a hazardous materials incident occurs at their facility. These response units also have capabilities that can contribute to the state's readiness, potentially beyond their company's own fences. The Program will reach out to these private companies to find areas of mutual benefit, which can contribute to the protection of the human health, environment and the economy of Washington. Regional subcontracts may be one option for responses beyond the fence line.

4.0 Fiscal Management

Washington's citizens already pay for the existing HazMat and bomb squad teams. At the State level, this includes the training, equipment, medical surveillance, and unreimbursed response costs for the bomb squads under the WSP. At the local level, this includes training, equipment, medical surveillance, and unreimbursed response costs for existing HazMat response teams, and additional bomb squads. However, the State and local agencies are substantially reliant on federal grants for CBRNE equipment purchases and that level of federal support is not sustainable and has already started to decline.

Funding for the Program will:

- Increase the capabilities and efficiency of the local responders through program coordination, as well as training, procedures, and equipment standardization.
- Improve the ability of regional responders to respond to the breadth of potential CBRNE incidents and to effectively collaborate in response to a major incident.
- May reduce the tax requirements of local jurisdictions that already support HazMat teams and/or bomb squads, depending on the chosen funding mechanism.

This section addresses the budget and funding for the Program. It contains a detailed budget for the program and lays out the process to generate the necessary funding to meet the Program's requirements on a sustainable basis. The budget also includes administrative costs for implementing the program.

4.1 Projected Budget

The following sections discuss the budgetary requirements to operate the Program. Table 4-1 contains a summary of the first and second year budgets for the Program. The total Program budget, including the State resources and regional teams, is $15,412,000 for the first year, including new equipment purchases, and $8,239,550 for the second year. The second year is more representative of the long-term sustainable annual budget.

4.1.1 State Level Funding

OSFM staff met with their counterparts in the Oregon State Fire Marshal's Office to discuss its current HazMat program, which is similar to the proposed Washington Program. During the meetings, Oregon's program administration and responsibilities were carefully reviewed as a basis for the staff and budget in Washington.

Washington's program has a larger scope than Oregon's program because of the full CBRNE capabilities and the larger population and manufacturing base. The

Washington Program will include a staffing level to support five full-time equivalent positions, as shown in Figure 2-2.

Technical Advisory Committee meetings are anticipated to occur more frequently and be

of longer duration in the first year than in subsequent years. This is necessary to support effective initiation of the coordinated Program of personnel, training, and equipment across the state.

The first year OSFM budget is $430,900 (Table 4-1) and new equipment purchases are budgeted at $98,000 (as part of the total new equipment purchases shown in the note to Table 4-1). The second year budget, which is representative of the Program's sustaining annual cost, is $446,150.

The DOH Radiation Protection Program's budget is $62,600 and $52,600 for the first and second years, respectively, to support staff CBRNE training, and the development of training materials for the CBRNE regional teams. It has an initial equipment purchase of $8,000 for equipment to assist in the training.

The Attorney General Office's annual budget of $9,100 is to support cost recovery from responsible parties.

Table 4-1. First and Second Year Budgets for the Statewide CBRNE Response Program.

	First Year	Second Year
OFFICE OF STATE FIRE MARSHAL		
Program Personnel	$380,400	$380,400
Goods and Services	$32,500	$32,500
Travel	$12,000	$12,000
Non-Capitalized Equipment and Equipment Replacement	$6,000	$21,250
Subtotal	$430,900	$446,150
REGIONAL CBRNE RESPONSE TEAMS		
Response Technician Training	$2,334,000	$1,535,000
Bomb Squad Technician Training	$892,900	$911,500
Non-technician Training (awareness, operations, specialist, command)	$295,400	$295,400
Medical Surveillance	$240,900	$260,000
Unreimbursed Responses	$750,000	$750,000
Equipment Installation, Maintenance and Replacement	$3,281,400	$3,399,000
Team Administration/Planning	$580,800	$580,800
Subtotal	$8,375,400	$7,731,700
DEPARTMENT OF HEALTH		
Radiation Protection Program	$62,600	$52,600
OFFICE OF THE ATTORNEY GENERAL		
Cost Recovery Action	$9,100	$9,100
STATEWIDE TOTAL	**$8,878,000**	**$8,239,550**

Note: In the first biennium, there are also new equipment purchases that total $6,534,000 for the OSFM, regional response teams, and the Radiation Protection Program.

4.1.2 Regional Funding

The regional budget (see Appendix E for details) was developed based on the Response and Performance Standards defined in Section 3.4.2. The SERC Technical Committee developed a list of standardized equipment needed for the Type I and Type III teams. Year one equipment cost estimates were developed by comparing the standardized equipment lists to current regional inventories. The budget also includes estimates for the cost of the technician medical surveillance programs, unreimbursed response actions (e.g., when a responsible party cannot be identified), and regional program administration.

Table 4-1 provides the budget estimates for the first and second years. The first year budget is $8,375,400, which includes the initial investment to bring all regional CBRNE response teams up to the level required to meet the response and performance standards of Section 3.4.2. Of the $6,537,000 new equipment purchase, 98 percent ($6,428,000) is for the regional teams.

The second year budget of $7,731,700 represents the anticipated annual funding required to sustain the Program. The two principal components for the statewide Program budget are training (33% of the second year budget) and equipment (41% of the second year budget).

The unreimbursed response costs are primarily associated with incidents requiring a bomb team to respond. Often with such incidents, a responsible party cannot be identified or the responsible party has no assets to pay for the response costs. Any responses related to terrorist activities are also expected to be non-reimbursable.

4.2 Funding Mechanism

It is vital that the funding for the Program be both sustainable and consistent. To that end, the SERC Strategic/Legislative Committee examined several funding mechanisms as potential sources of funding for the Program:

- Option 1 – Grants (from the U.S. Department of Homeland Security [DHS] and other sources).
- Option 2 – Cost recovery. Recovery of response cost from parties responsible for the CBRNE incident.
- Option 3 –Washington State General Fund Transfers.
- Option 4 – A surcharge on insurance policies (residential and commercial).
- Option 5 – The use of proceeds from the state hazardous substance tax.
- Option 6 – An increase in the rate of the state hazardous substance tax.
- Option 7 – Transfers from the Local Toxics Control Account (a revenue account established under the Model Toxics Control Act).
- Option 8 – Direct appropriations.

Each of these options is compared in Table 4-2 and described in further detail in Appendix F.

A funding approach combining multiple sources could be chosen to generate the funds necessary to initiate and sustain the Program (Figure 4-1). For example, transfers from one source could provide

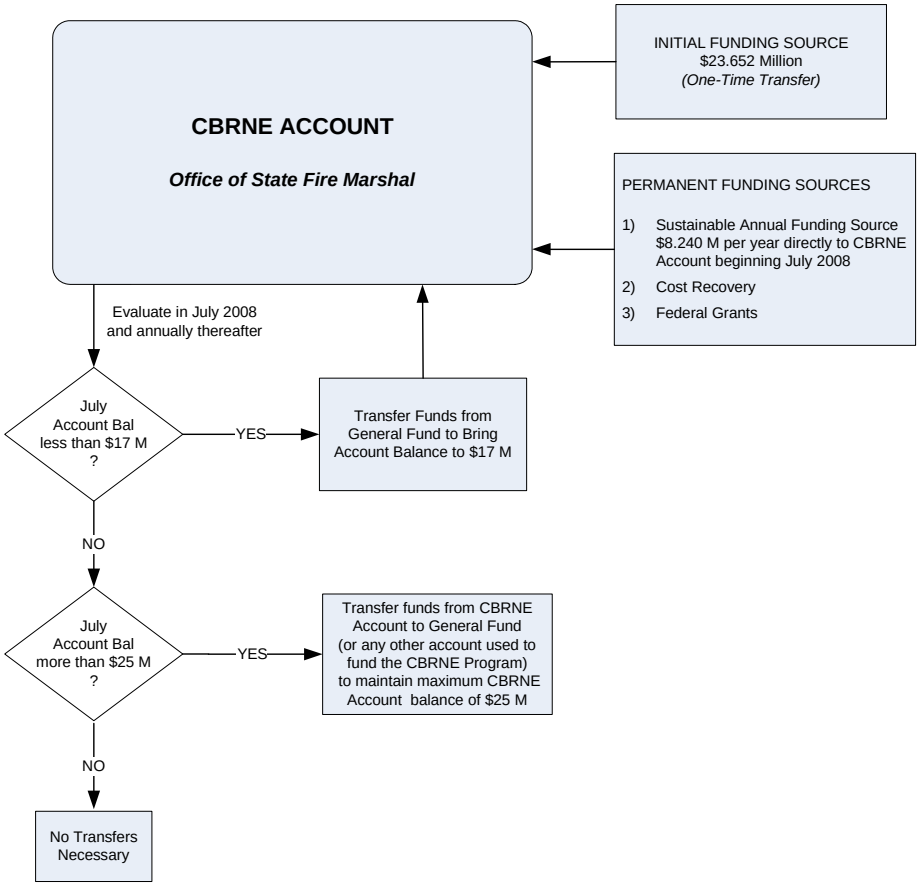


Figure 4-1. Funding Mechanism Flowchart.

funding for the first biennium of the Program, while subsequent sustainable annual funding is provided by another source.

The state's general fund should serve as a source of funding only if insufficient funds are available from the other sources.

This multi-source funding mechanism is recommended because it may provide both sustainable and dedicated sources of funding for the Program. The Program will be required to seek to recover costs from responsible parties and actively search out grant funding, which will reduce the burden on Washington taxpayers.

Table 4-2. Possible Funding Mechanisms (3 Sheets).

Funding Mechanism	Advantages	Disadvantages
Option 1 – Grants (from DHS and other sources) The Program, in cooperation with EMD and other appropriate state agencies, will seek to obtain grants from federal or other public or private sources. Seeking grants will be a requirement of the Program.	➤ Dependent upon the year and the skill of the grant writer, significant funds can be obtained. ➤ May be a significant revenue source for the Program, thus reducing the burden on the selected sustainable funding source.	➤ Not a sustainable funding source. DHS grants have started to decline. ➤ Grant criteria change each year. There may not be a grant for which the Program can qualify in a given year. ➤ Is unlikely to generate sufficient funds to cover 100% of the Program costs.
Option 2 – Cost recovery (recovery of response cost from parties responsible for the CBRNE incident) The Program will seek to recover, from responsible parties, the costs of responding to a CBRNE incident. This will be a required part of the Program.	➤ Responsible parties pay for the cost of cleanup, thus reducing the burden on the selected sustainable funding source. ➤ Will serve as a deterrent to CBRNE incidents in the state. ➤ May be a significant revenue source for the Program.	➤ A responsible party cannot always be identified. ➤ Cases involving illegal activities or terrorism are not realistic scenarios for cost recovery. ➤ Will not generate sufficient funds to cover 100% of the Program costs.
Option 3 – Washington State general fund transfers An amount would be transferred from the general fund to the CBRNE Program Account. This would be used only to the extent that funds from other sources are not available.	➤ Would allow the Program to continue operation if other funding sources proved to be insufficient to meet the Program needs.	➤ This is neither a sustainable nor dedicated funding source. ➤ May place the Program in competition with other state programs that use general fund revenues.

Table 4-2. Possible Funding Mechanisms (3 Sheets).

Funding Mechanism	Advantages	Disadvantages
Option 4 – A surcharge on insurance policies (residential and commercial) A new $3.50 surcharge on insurance policies of single-family homeowners, mobile homeowners, condominium owners, and renters and a $6.75 surcharge on insurance policies for commercial fire, commercial multiple peril, and business owner's property insurance. The insurance companies would retain $0.25 per policy to defray the collection costs. This would generate annual revenue of about $8 million. The proceeds of the surcharge would be placed into the CBRNE Program Account.	➤ The proper surcharge amounts would create an annual sustainable revenue source for the Program with only a slight increase to the burden on taxpayers. ➤ As a new revenue source, it would remove the Program from competition with other state programs for existing state revenues.	➤ This is a new tax and would increase, however slightly, the cost of property insurance in the state. ➤ This new tax is substantially similar to the existing 2% insurance premium tax associated with training and retirement accounts for firefighters. As a result, policyholders will pay two taxes on the same transaction. ➤ Pending legislation has identified insurance surcharges as the funding mechanism within the Washington State Emergency Management Association.
Option 5 – The use of proceeds from the state hazardous substance tax. Those revenues that are attributable to that portion of the tax rate equal to nine one-hundredths of one percent (approximately 13% of the tax proceeds) would be deposited into the CBRNE Program Account. This would result in a Program revenue stream of approximately $8 million per year.	➤ The change in distribution of the tax would create an annual sustainable revenue source for the Program without increasing the burden on taxpayers. ➤ This tax, historically, has generated significantly more revenue than has been expended by the state.	➤ The use of these tax proceeds may place the Program in competition with other interested stakeholders for use of the revenue generated by the tax. ➤ This tax was created specifically for hazardous waste site cleanups.

Table 4-2. Possible Funding Mechanisms (3 Sheets).

Funding Mechanism	Advantages	Disadvantages
Option 6 – An increase in the hazardous substance tax The tax rate would be increased, and the amount of that increase would be deposited into the CBRNE Program Account. An increase from 0.7% to 0.78% on all hazardous substances would likely generate about $8 million per year. An increase from 0.7% to 1.6% on all hazardous substances other than petroleum products would likely generate about $8 million per year.	➤ A sustainable dedicated funding source would be established. ➤ Using only the amount of the increase in the tax will reduce competition with other interested stakeholders for use of the existing revenue generated by the tax.	➤ This is a tax increase on products in the state, the cost of which would likely be passed to consumers. This would increase the price of those products, including, potentially, the price of gasoline. ➤ This tax, historically, generates more revenue than is expended by the state. An increase in the tax, therefore, may be viewed by some as unnecessary. ➤ This tax was created specifically for hazardous waste site cleanups. ➤ Will likely face strong opposition from the petroleum and chemical industries.
Option 7 - Transfers from the local toxics control account (a revenue account established under the Model Toxics Control Act) Each year, an amount equal to the operating costs of the Program (approximately $8 million) would be transferred from the Local Toxics Control Account to the CBRNE Program Account.	➤ The change in distribution of the tax would create an annual sustainable revenue source for the Program without increasing the burden on taxpayers. ➤ The local toxics control account has historically contained a large balance of unexpended moneys.	➤ The use of these tax proceeds may place the Program in competition with other interested stakeholders for use of the revenue generated by the tax. ➤ This account was created specifically for hazardous waste site cleanups.
Option 8 - Direct appropriation Each budget cycle, a sufficient amount would be appropriated by the Legislature to fund the Program for the next biennium.	➤ Allows for flexibility for funding the Program with respect to the entire state budget.	➤ This is neither a sustainable nor dedicated funding source. ➤ May place the Program in competition with other state programs that use state revenues. ➤ Appropriations must be requested from the Legislature as part of the biannual budget process.

4.2.1 Components of a Successful Funding Mechanism

The ideal funding mechanism for the CBRNE Program has three components:

- Payment of the Program's initial costs.
- Payment of the continued operational costs.
- Distribution of any surpluses.

Initial Costs: The Program must receive a sufficient amount to begin operations as soon as possible. It is imperative that the Program begin operating as soon as possible, because of the danger posed by the threat of a CBRNE incident. The people of Washington cannot wait for tax revenues to accrue over a period of years before the Program begins. It is, therefore, necessary that the state supply the initial start-up costs to allow the Program to begin immediately.

Continued Operational Costs: There must be a sustainable source of funding. The most significant component of the funding mechanism is the coverage of the continued annual operational costs. It is this component that must be consistent and sustainable. There must be a sufficient stream of revenue to cover the continued day-to-day expenses of the Program after the initial costs are paid.

Disbursement of Surpluses: Funds within the Program account cannot be allowed to grow significantly beyond the Program's needs. The funding mechanism should have a process to transfer surpluses out of the Program. This will accomplish two objectives: (i) it will further the public good by freeing up public money to be used for other important programs; and (ii) it will prevent people from looking to use the Program surpluses as a method of funding unrelated programs.

4.2.2 Funding Mechanism Selection Criteria

In order to meet the needs of the CBRNE Program, any funding mechanism for the continued operational costs must meet all of the following criteria:

- Sufficiency.
- Sustainability.
- Compatibility.

Sufficiency: The first and most important criterion is sufficiency. The funding mechanism must be able to generate a sufficient amount of revenue to cover the actual costs of the Program. If this criterion is not met, the Program will be unable to meet its mission and will become a drain on state resources.

Sustainability: The funding source must be sustainable. The purpose of the Program is to enable the state to provide an effective, coordinated, and standardized response to a CBRNE incident. This requires advanced preparation, planning and training. The Program cannot operate effectively if it is forced to rely solely on intermittent or uncertain sources of funding.

Compatibility: The funding source must be compatible with the existing state laws, procedures, and funding priorities. The funding mechanism must fit within constitutional and legal parameters, but it must also be compatible with the state's existing revenue structure. This means that, to the extent possible, the funding mechanism should avoid imposing redundant taxes or fees on a single transaction or activity.

4.2.3 Create Program Accounts

There are two types of accounts that are necessary for the operation and administration

of the Program: the Operations Account and any required dedicated grant accounts. Both accounts will be administered by the OSFM and together comprise the CBRNE Program Account.

The Operations Account will serve as the primary account for the operation and administration of the Program. The account will be an appropriated account created in the State Treasury. The account will hold moneys received from the selected sustainable funding source, grants, cost recovery, and any other transfers or appropriations. The OSFM will administer the Program from this account.

Federal grants often come with conditions that require that the grant moneys be used for very specific purposes, so separate accounts may be necessary to track and report on expenditures of these funds. The OSFM will be able to create and manage any dedicated accounts required for these conditional grants.

4.2.4 Transfer of Initial Operating Costs

Within 60 calendar days after the effective date of the legislation creating the Program, the State Treasurer will transfer the amount of $23.652 million from the selected initial funding source to the Program Operations Account. The amount transferred is equal to (i) the initial equipment costs required to establish the Program and (ii) the projected costs of operating the Program for the first biennium.

4.2.5 Grant Funding

The OSFM will establish procedures to actively seek grants from public or private sources for the operation and administration of the Program. The OSFM will work in cooperation with EMD and local jurisdictions to obtain grant funding for the Program.

Grant proceeds will be deposited into the Operations Account if expenditures are unrestricted by the grant conditions. If restrictions apply (e.g., the funds can be used only for purchase of certain types of equipment or special accounting is required by the grant), the funds will be placed into a dedicated grant fund, as discussed in Section 4.2.1.

4.2.6 Cost Recovery

The OSFM will administer an aggressive cost recovery program similar to the model employed by the Washington State Department of Ecology to recover costs associated with oil spills (RCW 90.56.400). The Program will serve as a deterrent to future responsible parties and will help keep unreimbursed responses to a minimum. All proceeds collected from the cost recovery will be placed in the Operations Account.

The OSFM will initiate an investigation for each CBRNE incident to identify a responsible party. If a responsible party is identified, the OSFM will issue an Order for Reimbursement of Expenses. If the responsible party fails to render payment in a timely manner, the order will be referred to a collection agency or submitted to the Attorney General's Office for a collection action in Superior Court. The benefit to this approach is that litigation is not required to instigate the initial reimbursement procedure. This will be more cost-effective for the State and will encourage the timely payment by responsible parties who wish to avoid the expense of litigation.

The Oregon HazMat Response Program, which has been operational since 1989, recovers 80% of the response costs when a responsible party is identified. The Washington Statewide CBRNE Response Program should achieve a similar rate.

4.2.7 Transfers to the Program Operations Account

The OSFM shall notify the State Treasurer if on July 1 of any year, beginning in July 2008, the combined total amount in the Program Operations Account and the unrestricted portion of dedicated grant accounts is less than $17 million.

Within 30 days after receiving this notification, the State Treasurer shall transfer, into the Operations Account, the amount needed to bring the moneys for the Program to $17 million. The Treasurer shall transfer this amount from the general fund. (See Figure 4-1).

4.2.8 Transfers from the Program Operations Account

The OSFM shall notify the State Treasurer if on July 1 of any year, beginning in July 2008, the combined total amount in the Operations Account and the unrestricted portion of dedicated grant accounts exceeds $25 million. Within 30 calendar days after receiving this notification, the State Treasurer shall transfer, from the Operations Account, the amount exceeding $25 million into the general fund or any other fund from which funds were originally transferred into the Operations Account.

January 6, 2005 Graniteville, SC:
Two freight trains collided releasing an estimated 11,500 gallons of chlorine gas, which caused 9 deaths and required the examination of 529 persons for possible chlorine exposure.

5.0 Next Steps

The following is a brief list of actions that must be taken to create the Statewide CBRNE Response Program.

1. Identify state legislators to sponsor the legislation, based on the draft contained in Appendix B.
2. Identify a sustainable funding source for the annual funding of the Program and a source for the initial start-up costs in the first biennium.
3. Submit the legislation (Appendix B) to the Office of the Code Reviser, the official bill-drafting arm of the Legislature.
4. Communicate the Program with stakeholders and legislators.
5. Submit the legislation at the opening of the 2007 Legislative session.
6. Pass the legislation in the 2007 Legislative session.
7. Begin implementing the legislation ninety days after passage.

Appendix A – Establishing Sustainable Regional CBRNE/HazMat Response Capability in Washington State

DMJM technology

Establishing Sustainable Regional CBRNE/HazMat Response Capability in Washington State

Final Report

November 2005

Prepared for
Washington State
Department of Ecology

3250 Port of Benton Blvd.
Richland, WA 99354-1670
Phone: 509.375.7774
Fax: 509.375.5331

An AECOM Company

DMJM technology

Establishing Sustainable Regional CBRNE/HazMat Response Capability in Washington State

Final Report

Author(s)
Ketra Clark, Paul Day, David Lincoln, Chrysoula Nigl

Prepared for: State of Washington
Department of Ecology
300 Desmond Drive
Lacey, Washington 98504-7775

Prepared by: DMJM H&N, Inc.
dba DMJM Technology
3250 Port of Benton Boulevard
Richland, Washington 99354-1670

Approval:

// Original Signature on File //

Paul Day, Project Manager — Date

3250 Port of Benton Blvd.
Richland, WA 99354-1670
Phone: 509.375.7774
Fax: 509.375.5331

An AECOM Company

DMJM technology

DISCLAIMER

This report was prepared as an account of work sponsored by a department of the State of Washington. Neither the State of Washington nor any department thereof, nor DMJM H&N, Inc. (dba DMJM Technology), nor any of their employees, make **any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information or process disclosed.** The view and opinions of authors expressed herein do not necessarily state or reflect those of the State of Washington or any departments thereof.

DMJM Technology

3250 Port of Benton Blvd.
Richland, WA 99354-1670
Phone: 509.375.7774
Fax: 509.375.5331

An AECOM Company

The increased expectation for planning and response to potential chemical, biological, radiological, nuclear, and explosive (CBRNE) incidents has stretched the resources of Washington State's hazardous material (HazMat) teams.

The two principal objectives of this study are to:

- Prepare an assessment of the current CBRNE/HazMat response capabilities within the State of Washington, identify gaps between current capabilities and required capabilities, and prepare recommendations for actions to reduce those gaps.

- Review the emergency response programs in other states, identifying features that support sustainability of the programs, and prepare recommendations for actions that could be taken to develop a more sustainable program in Washington.

State Capabilities Assessment and Respondent Recommendations

This study used a gap analysis to assess whether each regional homeland security coordination district (RHSCD) has adequate capabilities to implement a CBRNE/HazMat response program. Target capabilities were developed for each RHSCD through consideration of the Department of Homeland Security's Draft Target Capabilities List, regional HazMat incident rates, and regional demographics.

A questionnaire was prepared to assess current the CBRNE/HazMat response capabilities, vulnerabilities, funding, and recommendations. State and local emergency management and response personnel interviewed represented over 90 percent of Washington State's population.

Key recommendations from the survey respondents included regionalization of CBRNE/HazMat teams, sustainable funding for the teams, improvements in interoperable communications, more effective mutual aid mechanisms, and increased training.

The study team's comparison of the target capabilities to current response capabilities identified major gaps common to nearly all regions, as follows:

- Formal mutual aid agreements,

- Additional training,

- Budget for equipment replacement, and

- Interoperable communications.

Other State Emergency Response Programs

The study team developed a separate questionnaire to gather information about the emergency response programs in several other states. The intent was to identify features in other state programs that might be used serve as bases for improvements to the Washington State program. This questionnaire addressed perceived state vulnerabilities, state emergency response program status, and funding sources.

Interviews were conducted with representatives of the following 12 states: Arizona, California, Florida, Massachusetts, Michigan, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, and Tennessee.

The respondents recommended the following as key elements of a successful program:

- Organize HazMat teams into a regional structure,
- Implement statewide mutual aid agreements, and
- Develop a diverse and sustainable funding source for the program. Examples given were fees from bulk petroleum transactions, insurance policy surcharges, and fees from nuclear power plant operations, in addition to general state operating revenue and grants.

Study Team Recommendations

The study team developed five program options with different levels of local and state involvement. One of the options, termed the "state-supported option", has a superior balance of desired features for a Washington State CBRNE/HazMat program. This option would provide for regionalized HazMat teams with state support for training, equipment and responses outside local boundaries. All options, however, have advantages and disadvantages, and a more detailed assessment, including a cost/benefit analysis would be required for a comprehensive comparison.

An assessment of funding sources for the selected program option should consider the potential for non-traditional HazMat events such as biological, radiological, nuclear and explosive incidents. This suggests that fees should be collected from a broader spectrum of commercial operations, including agriculture, biotechnology, medicine, and nuclear materials and waste operations.

Additional recommendations include the following:

- Develop common boundaries for all emergency response agencies.
- Develop response capabilities consistent with regional vulnerabilities and risks.
- Develop standardized equipment, training and personnel statewide.

- Prepare program for multi-agency and cross-jurisdictional training and exercise.
- Facilitate funding to regions that document their vulnerabilities and risks.
- Evaluate the need for additional or revised legislation to provide liability protection for trained volunteers during a CBRNE/HazMat response.

This page intentionally left blank.

Contents

Contents

Appendices

Contents

Final Report
November 2005

List of Figures

List of Tables

Acronyms and Abbreviations

Agriculture	Washington State Department of Agriculture
CBRNE	chemical, biological, radiological, nuclear, and explosives
CERFP	CBRNE Enhanced Response Force Package
CST	Civil Support Team
DHS	U.S. Department of Homeland Security
DOH	Washington State Department of Health
Ecology	Washington State Department of Ecology
EMAC	Emergency Management Assistance Compact
EMC	Washington State Emergency Management Council
EMD	Emergency Management Division, Washington State Military Department
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
ERP	Emergency Response Plan
FTE	full time equivalents
HazMat	hazardous materials
LEPC	Local Emergency Planning Committee
MAA	mutual aid agreement
MTR	Marine Terrorism Response
NOAA	National Oceanic and Atmospheric Administration
NIMS	National Incident Management System
NSS	National Strategic Stockpile
OPS-CAN	Olympic Public Safety Communication Alliance Network
PPE	personal protective equipment
RHSCD	Regional Homeland Security Coordination District
SERC	State Emergency Response Council
SFM	State Fire Marshal
SIEC	State Interoperability Executive Committee
TCL	Target Capabilities List
WISHA	Washington Industrial Safety and Health Act
WMD	weapons of mass destruction
WSP	Washington State Patrol

1.0 Introduction

Emergency management in the State of Washington has long-focused on an all-hazards approach and an increased emphasis has been given to terrorist events following September 11, 2001. Planning and response to a chemical, biological, radiological, nuclear, and explosives (CBRNE) incidents have stretched the resources of state and local governments' hazardous material (HazMat) teams throughout the nation and the State of Washington is no exception. Public awareness and the visibility of emergency management have changed markedly over the past four years and federal support funding has increased dramatically.

A network of local, state, and federal resources provides emergency response to CBRNE/ HazMat incidents. Typically, the first responders are from the city or county in which an incident occurs. If additional response resources are needed, nearby jurisdictions or the state are called upon for assistance. Large disasters will usually require federal support.

The Washington State Patrol is the designated incident command agency along state and interstate highways (RCW 70.136.030). The Washington State Department of Ecology (Ecology) has the state responsibility for response and cleanup for any oil or hazardous substance spill into the navigable waters of the state (RCW 90.56.020). Ecology works closely with organizations within the state that are involved with emergency planning and response, including the Washington State Emergency Management Division (EMD), the Washington State Emergency Management Council (EMC), the Washington State Department of Health (DOH), the Regional Homeland Security Coordination Districts (RHSCD), and various local jurisdictions.

1.1 Study Objectives

The two principal objectives of this study are to:

- Prepare an assessment of the current emergency response capabilities, identify gaps between current capabilities and required capabilities, and prepare recommendations for actions to reduce those gaps.

- Prepare an assessment of response programs in other states, identifying those features that implement a sustainable program, and prepare recommendations for actions that could be taken in Washington to develop a sustainable program.

The information obtained through this study will provide the EMC with a better understanding of the current status of statewide response capabilities for CBRNE and HazMat incidents. Improvements in the current response capabilities within the RHSCDs can then be identified and

implemented, and an appropriate mechanism to support a sustainable response program throughout the state can be developed.

This study is consistent with the goals and objectives stated in the *Interim 2005 Washington Statewide Homeland Security Strategic Plan.* Goal 5.8 in this *Plan* is to "enhance regional CBRNE response capability and capacity statewide". Objective 5.8.1 is "to establish and sustain regional CBRNE and Hazardous Materials (HazMat) response capability and capacity statewide." Among the key performance indicators for Objective 5.8.1 are to document the "as-is" capability/capacity situation, to identify stakeholders, and to propose legislation and funding in 2005.

Preparing, implementing, and analyzing surveys of the applicable groups were the principal methods used to achieve these objectives. The results of the surveys were analyzed and recommendations were prepared. The specific methodologies for each type of survey are discussed under "Methodology," in Sections 2.0 and 3.0 of this report.

1.2 Scope of Project

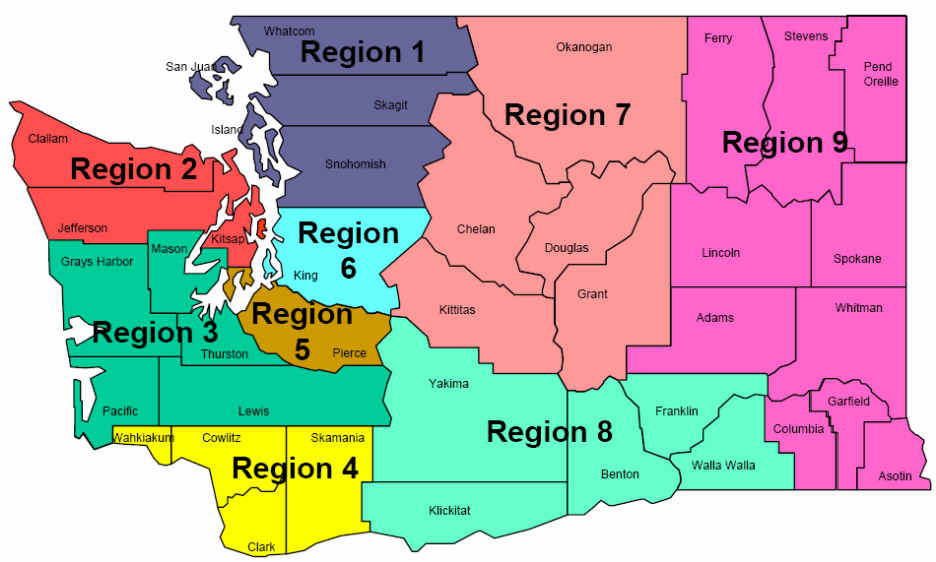
The scope of this project is limited to CBRNE/HazMat planning and response activities in the State of Washington. Certain recommendations, however, require statewide solutions that will result in beneficial impacts to other programs within the state (e.g., alignment of district boundaries or responses to natural disasters). The scope is also limited to local and state organizations, because this is the level at which first responder planning and execution occurs. The federal government (including military installations), Native American Tribes, and private firms were interviewed to better understand their programs and capabilities for CBRNE/HazMat response, but were not included in the study in terms of their capabilities to provide assistance on state or local responses. The study team did not conduct an independent verification of statements made by the interviewees. All statements, opinions, and data were recorded in Sections 2.0 and 3.0 and in the appendices as provided by the interviewees. Other data were based on publicly available sources.

1.3 Background

Previous studies on the topic of state and local emergency response capabilities have been conducted and were reviewed as background information for this study. Examples include the *Hazardous Materials Response Study* (South Seattle Community College 1993) and the *Study of Emergency Management at the Local Program Level* (Task Force on Local Programs 2004). The overviews and general recommendations from these two studies are included in Appendix A to this report.

The nine RHSCDs in the State of Washington are shown in Figure 1.

Figure 1. Regional Homeland Security Coordination District Map.



There is a documented history of HazMat incidents throughout the state. Table 1 summarizes the recent history of HazMat incidents by RHSCD. The number of incidents in each region has been reasonably constant for the past five years. Region 6 (King County) has the largest number of incidents, and the regions east of the Cascades (7, 8 and 9) have the fewest. The number of incidents in Region 9 is dominated by those reported in Spokane County.

1.4 Organization of Report

Section 2.0, Capabilities Gap Assessment and Section 3.0, Analysis of Emergency Management Programs of Other States, comprise key sections of this report. Section 2.0 pertains to information gathered through an extensive interview process with representatives in the RHSCDs and within other State of Washington organizations. Section 3.0 is a summary of information obtained from the emergency response and HazMat agencies in several other states. A complete list of persons interviewed for Sections 2.0 and 3.0 is included as Appendix B to this report. Section 4.0, Study Recommendations, provides the summary recommendations for consideration by the EMC and other decision-making organizations in Washington State. These recommendations include recommendations to improve specific methods of operations within the Washington State CBRNE/HazMat program and also include recommendations for achieving a sustainable statewide program.

Table 1. History of HazMat Incidents in Washington.

RHSCD	Year				
	2000	2001	2002	2003	2004
1	326	354	370	366	420
2	159	124	150	139	120
3	199	215	180	188	195
4	125	148	150	122	148
5	260	304	276	255	321
6	554	552	528	488	543
7	58	52	43	33	47
8	110	97	78	59	91
9	109	127	115	66	73

Note: Incidents may have been reported in multiple counties, resulting in more apparent incidents than actually occurred.

Source: EMD Duty Officer Annual Activity Statistics, received by Mark Ligman, EMD, Camp Murray, Washington, August 30, 2005.

2.0 Capabilities Gap Assessment

Successful emergency response to CBRNE/HazMat incidents depends on sufficient response capabilities within each jurisdiction. The capabilities gap assessment is the process of measuring the applicable or recommended CBRNE/HazMat requirements or target capabilities for each jurisdiction against the current capabilities within each jurisdiction. The next steps in the process are defining any gaps that may exist between the requirements and existing capabilities and offering recommendations closing those gaps. A summary of the recommendations, as received from the interviewees, is included in Section 2.2.3 and a complete record of all recommendations from each interviewee is included in Appendix C. Recommendations from the study team are provided in Section 4.0.

2.1 Methodology

Response target capabilities provide the means for responding to incidents in the emergency planning scenarios. The *National Preparedness Guidance* (U.S. Department of Homeland Security (DHS) 2005a) uses a capabilities-based methodology for assessing the degree of preparedness. This includes several steps in the first stage:

- *What we should be prepared for?* This step has been accomplished at the national level through the development of National Planning Scenarios (DHS 2005a).

- *What tasks need to be performed?* This step has been accomplished through the preparation of the universal task list (DHS 2005c).

- *Which tasks are critical?* This is also provided in the task list.

- *What capabilities are required to perform the critical tasks?* These capabilities have been described (DHS 2005b).

- What level of capability is needed for a major event? This has also been discussed (DHS 2005b).

- *How do we share responsibility to develop and maintain capabilities?* The capabilities have been allocated to different levels of government (national, state, region, local, tribe) (DHS 2005b).

Steps in the next stage can be used by government agencies to determine their current level of preparedness.

- *What capabilities are required?* These are the capabilities that achieve the desired level of preparedness (the "target capabilities").

- *Do we have adequate capabilities?* This requires a comparison of the current level of capabilities to the target capabilities.

This study uses a "gap analysis" to address the question of whether a RHSCD has adequate capabilities to plan and implement a CBRNE/HazMat program. This is a capabilities-based approach to determine the degree of adequacy in the current capabilities. This study addresses only response capabilities for CBRNE and HazMat incidents, either accidental or intentional. The incident focus, thus, is similar to the National Planning Scenarios 1 through 8 and 11 through 14 (DHS 2005a).

A "gap" is the difference between the current capabilities and the target capabilities. In other words, a gap is what is missing and must be added to achieve the target. The current county and regional capabilities were assessed with a survey of emergency managers and responders in Washington counties, discussed in Section 2.1.1. The target capabilities are discussed in Section 2.1.2.

2.1.1 Capabilities Survey

The study team developed a questionnaire to gather information from various state, local, and tribal organizations that have roles in CBRNE/HazMat response within each of the RHSCDs. This survey did not include emergency response to natural disasters (e.g., earthquakes), although several capabilities for CBRNE/HazMat incident responses would also be helpful for natural

disaster response. Telephone interviews were conducted in most cases; however, a few respondents elected to complete the questionnaire without the interview and returned the completed forms to the study team. The questionnaire is comprised of the following four sections:

- Part I asks general questions of the interviewee regarding their capabilities and needs and any recommendations they might have to improve their CBRNE/HazMat response capability;
- Part II focuses on potential hazards, both accidental and terrorism related, and asks the interviewee's concern level with each of those hazards;
- Part III asks the interviewee about the CBRNE/Hazmat response resources available in their jurisdiction; and
- Part IV records the training levels of the personnel in the interviewee's office, jurisdiction or HazMat team.

A blank copy of the questionnaire is provided in Appendix D.

County emergency managers were contacted, either to serve as the interviewee or to identify the appropriate people to serve as the interviewees. This process often led to contacts with local fire and police responders. Additionally, selected military bases, Native American Tribes, other Washington State organizations, and private sector organizations were contacted. The survey was sent to the potential respondent in advance, and a time was scheduled to conduct the one-hour interview over the telephone.

It was not possible to interview a representative from each of the 39 counties. The jurisdictions represented by these interviewees, however, covered over 90 percent of the Washington State population. A list of the individuals interviewed is included as Appendix B.

2.1.2 Target Capabilities

Target capabilities, as used in this study, are the set of capabilities necessary for a jurisdiction to respond safely and effectively to a CBRNE/HazMat incident. The DHS's *Target Capabilities List*, Draft Version 2.0 (DHS 2005b) states, "The Target Capabilities List provides a framework for the development of a network of capabilities that will be available, when and where needed, to prevent, protect against, respond to, and recover from incidents of national significance".

Some response target capabilities are universal. For example, all counties and regions should have response plans in place, even if the major response action is to call upon outside resources. Counties and regions should maintain response capabilities based on performance requirements. If a capability is needed frequently, then it should probably be available locally. If a capability must be applied quickly, then it will need to be local. Capabilities that are used infrequently or

are less time sensitive could be managed regionally, or at a statewide level. Some capabilities require specialized training and exercises, such as bomb squads, and should be located in organizations with sufficient demand and resources to maintain them at a level of high proficiency, and to serve a regional need.

Several regional population, economic, and infrastructure characteristics were used as indicators of exposure to potential negative consequences from HazMat and CBRNE incidents in Washington. The following list of characteristics is based on input from the DHS Target Capabilities List (TCL) (DHS 2005b) and from additional demographic and logistical information for each county. The county information rolls up into a RHSCD total for each of the nine regions, as shown on the tables in Appendix E.

- Population, population density, and urban areas, which serve as inputs to the determination of the target capability tiers in the methodology developed by DHS (DHS 2005b).
- TCL tier, which is used as an indicator in allocating target capabilities to different government levels (DHS 2005b). In general, higher tiers need fewer resources.
- Current HazMat incidence rate, which demonstrates the current level of hazardous material spills.
- Intermodal transportation (air, water, rail, road, mass transit), which is a critical infrastructure (DHS 2003).
- Industrial manufacturing, which includes the defense industrial base, a critical infrastructure, and commercial key assets (DHS 2003).
- Government facilities (civilian and military), which are key assets (DHS 2003).
- Agriculture, which is one element of critical infrastructure (DHS 2003).
- Special characteristics. Other infrastructures at risk include hydroelectric facilities, nuclear power plants, Department of Energy facilities, nearby nerve-gas incineration facilities, airports, ports, ferries, major airports, and hazardous waste facilities.

The details of the regional target capabilities development are discussed in Appendix E. The target capabilities were divided into three types: resources, training and exercises, and trained personnel. Tables 2, 3, and 4, from Appendix E, summarize these three types of target capabilities for each of the regions.

Table 2. Target Resource Capabilities for Each Region.

	Region								
	1	2	3	4	5	6	7	8	9
Trained HazMat Teams[a]	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bomb Disposal Squad			✓	✓	✓	✓		✓	✓
Level A Personal Protective Equipment (PPE)					✓	✓		✓	
Level B PPE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mass Decontamination Unit[a]	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mass Casualty Hospital[a]	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hospital Isolation[a]	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pharmaceutical Stockpile	✓ [b]	✓ [b]	✓ [b]	✓ [b]	✓ [b]	✓ [b]	✓ [b]	✓ [b]	✓ [b]
Chemical Warfare Agent Antidotes					✓	✓		✓	
Emergency Response Center	✓	✓	✓	✓	✓	✓	✓	✓	✓
Common Responder Communications	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chemical Air Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓
Radioactivity Air Monitoring			✓	✓	✓	✓		✓	✓
Biological Air Monitoring					✓[c]	✓[c]	✓[d]	✓[d]	
Search and Rescue C: Collapse U: Urban	C	C	C	C	U	U	C	C	C
Comments	Medium, Border	Medium, Border	Medium, Focus Area (Thurston)	Medium	High	High	Low, Agriculture	Low, Agriculture, Special	Medium, Special, Focus Area (Spokane)

[a]Level consistent with the population base and economy of the region.

[b]Local distribution plan for materials from the National Strategic Stockpile (NSS).

[c]Animal, plant, and human disease agents.

[d]Animal and plant disease agents.

Table 3. Target Training and Exercises for Each Region.

	Region(*)								
	1	2	3	4	5	6	7	8	9
NIMS Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
WISHA Level A/B Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chemical Agent Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
Biological Agent Trained					✓	✓	✓	✓	
Radiological Agent Trained			✓	✓	✓	✓		✓	
Nuclear Agent Trained					✓	✓		✓	
Explosives Trained	✓	✓	✓	✓	✓	✓		✓	✓
Mass Evacuation Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
CBRNE Crime Scene Trained					✓	✓		✓	
Public Communications Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mass Fatality Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
Antidote Trained					✓	✓		✓	
Mass Decontamination Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trained with Industrial Teams	✓	✓	✓	✓	✓	✓		✓	✓
Trained with Other Agencies	✓	✓	✓	✓	✓	✓	✓	✓	✓
Comments	Medium, Border	Medium, Border	Medium, Focus Area (Thurston)	Medium	High	High	Low, Agriculture	Low, Agriculture, Special	Medium, Focus Area (Spokane)

(*)Regions should be trained to the awareness level if there is no check mark.

Table 4. Target Trained Response Personnel for Each Region.

	Region								
	1	2	3	4	5	6	7	8	9
First Responder Awareness Level	✓	✓	✓	✓	✓	✓	✓	✓	✓
First Responder Operational Level	✓	✓	✓	✓	✓	✓		✓	✓
Hazardous Materials Branch Officer				✓	✓	✓			✓
Hazardous Materials Branch Safety Officer				✓	✓	✓			✓
Hazardous Materials Technician	✓	✓	✓	✓	✓	✓		✓	✓
Incident Commander	✓	✓	✓	✓	✓	✓	✓	✓	✓
Private Sector Specialist Employees					✓	✓			
Technician with a Cargo Tank Specialty				✓	✓	✓			
Technician with a Tank Car Specialty				✓	✓	✓			
Technician with an Intermodal Tank Specialty					✓	✓			
Comments	Medium, Border	Medium, Border	Medium, Focus Area (Thurston)	Medium	High	High	Low, Agriculture	Low, Agriculture, Special	Medium, Focus Area (Spokane)

A "✓"in a table cell indicates a target capability for that region. Generally, regions with similar characteristics were assigned similar target capabilities, and were divided into three categories (high, medium, low) for needs (before assessing their current capabilities). In some cases, the "special characteristics" of a region resulted in an increased number of target capabilities compared to what it would have had without those special characteristics (e.g., Benton County). In some cases, a "Focus Area" was designated because the needs of that county were greater than others in the region, suggesting that response capabilities should be based in that county. If a region is not designated for a specific target capability, it should at least have awareness-level knowledge of the capability and aid agreements for obtaining such capability from nearby regions if the need arises.

2.2 Survey Results

The detailed results of each survey or interview are included in Appendix C. This includes results for each of the nine RHSCDs, for Native American Tribes, and each of the other federal or Washington State organizations that were interviewed. The following is a summary of information gathered during the interviews.

2.2.1 Hazard Concerns

Section II of the questionnaire was developed to ascertain the level of concern the emergency management agencies and responders have for certain CBRNE/HazMat events, including those that are due to terrorism. The interviewees were asked to rate their level of concern for these events, with a 5 being extremely concerned and 1 being not at all concerned.

The concern for explosions ranked between a 1 and a 5, depending on the region and county. Region 2 was not concerned based upon their lack of industry, whereas Regions 4, 5 and 8 rated it much higher due to gas pipelines, the larger chemical industrial areas and the transportation of these chemicals.

Oil spills were a concern for most regions. Oil refineries, pipelines, the close proximity to the ports, and oil transportation mechanisms (e.g., highways, railroads, barges, etc.) were all stated as reasons behind this concern. In addition, the history of oil spills in the state has shown that this type of event is a reality.

The concern for chemical spills and the concern for hazardous material releases typically ranked between 3 and 5, depending on the region and county. Interviewees were concerned about the industrial facilities (aluminum production, anhydrous ammonia storage, and chlorine storage), agricultural chemicals/pesticides, natural gas pipelines, and the transportation of chemicals and other hazardous materials throughout the state.

Radiological release concern was again either high or low. The interviewees that rated their concern as a 1 or 2 stated they did not feel that there was a high chance of exposure and that all the radioactive sources were contained. However, most of the interviewees that rated this concern high did so because of the lack of response capabilities, not because of the likelihood that an event like this would occur. This was not the case in Regions 8 and 9 where concern for this type of event was due to the close proximity to Hanford and the transportation of radiological material to and from Hanford.

The overall concern for terrorism in general was rated as a 3. Counties that had a higher population density tended to rate their concern a little higher due to the critical infrastructure. The border counties also tended to be more concerned, including Spokane County, which has a history of domestic terrorism. An event targeting Hanford or the Umatilla Weapons Depot also was a concern.

Explosions and chemical release concerns due to terrorism activities were ranked higher because of the easy access to these types of weapons. Therefore, the interviewees felt that there is a high probability that an event like this could occur.

The concern for a radiological dispersal device or an improvised nuclear device being used as a terrorist weapon typically rated between a 1 and a 3. This was because of the difficulties a terrorist would have obtaining these types of devices and the low likelihood that a device like this would be used in most of the regions in Washington. King County expressed more of a concern for these devices, due to their high population density and location as a large transportation hub.

The overall concern for a terrorist contaminating a food supply or a biological release was about a "3". The agriculture communities tended to have a higher concern. They felt that an attack on the state's crops could have detrimental effects on the agricultural economy. The health department interviewees also ranked the concern for a biological release high due to the impact this would have on a broader range of the public and the ease that a terrorist would have carrying out such a release.

The tribes were only slightly concerned about CBRNE/HazMat events in general. They were not very concerned about terrorism events, however. They felt that they did not have the vulnerabilities, so the likelihood of a terrorism event was small. The only real concern that one of the tribes had was an event occurring at Grand Coulee Dam.

The interviewees were asked about other events that they had concerns about. They mentioned water contamination, cyberterrorism, and destruction to critical infrastructure in their jurisdictions (e.g., utilities, dams, etc.). The pandemic flu was also a major concern, especially to the health department interviewees. Many stated that a pandemic flu could be devastating, especially if the communities' first responders were infected.

2.2.2 Capabilities and Gaps

The following section addresses the capabilities and gaps at the state and regional levels.

2.2.2.1 State Agencies. Interviews with state agency personnel in the EMD, Ecology, and DOH revealed overarching needs for development of a statewide system for HazMat response with sustainable funding and for additional HazMat training.

There is a need to determine who will pay for HazMat responses and who is responsible for a response in unincorporated areas of the state. Liability issues for CBRNE/HazMat response and statewide-specific funding for HazMat response are currently not covered. There is a "piecemeal" approach to HazMat and it is left up to the local jurisdictions to have the appropriate mutual aid agreements for response.

There was an overwhelming need stated for reaching local jurisdictions, especially rural areas, with basic awareness level HazMat training. Having better prepared and trained local response teams would make Ecology and the state as a whole more effective. Providing core CBRNE training and sustaining current training requirements in HazMat has proven to be difficult throughout the state. Cross-border training is reported to be lacking for areas in the north. There is also a great need to train HazMat teams on how to use the equipment they have received through grant programs. Currently, many HazMat teams are having problems finding the time to train on the new equipment, while also keeping up with their basic training requirements and performing their normal job functions (e.g., firefighting).

A few other specific needs mentioned were:

- Better communications (networking) between local responders, state agencies, industry, etc.;
- Better resource management;
- Additional staff/responders;
- Radio interoperability; and
- Sustainability of current equipment caches.

The public health issues of HazMat and CBRNE have been "rediscovered" only in the past few years and, therefore, DOH had the greatest resource development and learning curve.

Additional state capabilities that were not mentioned in the state or county interviews include:

- In Washington, the National Guard 10th Civil Support Team (CST) has expertise in weapons of mass destruction (WMD) and provides support to civil authorities during a domestic CBRNE incident. The Team contains 22 full-time personnel with the capabilities to assess

WMD agents and substances, current and projected consequences, and advises on appropriate response measures. It can also assist the state in requesting additional resources.

- The Washington National Guard has also recently formed the CBRNE Enhanced Response Force Package (CERFP) as a regional asset to provide specialized capabilities. It consists of a core of full-time staff augmented with National Guard soldiers trained to respond to chemical incidents. Local, state, or federal authorities may request its services through the governor. The response group is activated by a governor's proclamation. The Washington based team is responsible for responding to all incidents within FEMA Region 10 at the governor's request.

  The goal is to build up the team to approximately 100 trained soldiers, that would consist of three teams of 30 soldiers each and ten soldiers in the command structure. The team has been trained to perform casualty decontamination at or near CBRNE incidents, medical triage, casualty search and extraction, and agent detection and identification. Its specialized equipment includes: medical supplies, extraction equipment, live-feed camera, personal protective equipment, casualty/patient decontamination, advanced agent detection alarms and monitors, and dosimeters. The CERFP supports the CST and is a much larger unit.
- The Marine Terrorism Response (MTR) Project (website www.marineresponse.org) is a joint activity of the Puget Sound Marine Firefighting Commission and the Port of Seattle. With funding from the Office for Domestic Preparedness, the project is developing and validating a response system to aid in the safe and effective mobilization of local, state, and federal resources for marine terrorism incidents. The project began in December 2004, and is scheduled to be completed later this year.

The state has received 40 CHEMPACKS, with antidotes for up to 40,000 chemical release victims, and located them in caches in Seattle, Tacoma, and Spokane.

2.2.2.2 Regions. Regional capabilities are identified by RHSCD region in Appendix C. The major response capabilities gaps common to nearly all regions are:

- Lack of interoperable communications;
- Lack of formal mutual aid agreements;
- Lack of budget for equipment replacement; and
- Lack of training.

Each of these gaps is discussed in more detail below.

Interoperable Communications. Washington has recognized this communication problem for several years. In 2003, the State Interoperability Executive Committee (SIEC) (website http://siec.wa.gov) was formed to manage the use of wireless communications by the emergency

agencies. A detailed survey of nine counties examined specific "in-use" equipment and reported on 55,571 devices, including pagers, cell phones, mobile radios, portable radios, and base units, which gives some idea of the magnitude of the problem. Very few of these devices are capable of meeting the Project 25 interoperability standards, which are a set of standards that enable radio vendors to build radios that, within a given frequency, allow all agencies to communicate with each other regardless of manufacturer (SIEC 2004). In 2004, SIEC also completed a web-based survey of public safety communications systems that reached 11 percent of 1400 agencies in the state's public safety and emergency response community. The agencies included in the survey account for about 83 percent of the state's population. Sixty-two percent of the responders indicated that they plan to make changes, with most of the changes to be accomplished in the next three years. Just over half of the responders have plans to use narrow band channels (SIEC 2005a). In October 2005, the SIEC issued its technical implementation plan based on a multiple subsystems architecture to be implemented over a six-year period, with an early implementation of a Radio over Internet Protocol (RoIP) network to provide an interim, near-term improvement in the interoperability of the current system (SIEC 2005b).

The Olympic Public Safety Communication Alliance Network (OPSCAN) is an initiative with federal and state funding to develop a collaborative plan to improve communication connectivity and interoperability among first and emergency responders on the Olympic Peninsula. Clallam County is the lead agency. A Voice over Internet Protocol (VoIP) network was implemented this year.

Mutual Aid Agreements. Survey interviewees identified some formal agreements, such as between Whatcom County and British Columbia, and between Snohomish County and Seattle/King County. Many interviewees stated, however, that their agreements were informal. Informal agreements cannot be relied upon in an emergency and they will create problems later when the jurisdictions attempt to resolve cost reimbursement questions. Some jurisdictions do not even have informal agreements and thus lack access to HazMat and CBRNE response capabilities. Some response organizations with substantial equipment and resources will not go outside their jurisdictions because the funding reimbursement mechanisms for such responses are unclear.

The EMD has a mutual aid handbook and standard agreement on its website (http://emd.wa.gov). It is apparent from the information on this website, with its map of signatory counties, that very few counties participate.

Equipment Replacement Budget. In the past four years, DHS grants have provided substantial new quantities of CBRNE and HazMat response equipment. The shelf life for many of these items is limited. It is unclear whether funds will be available in the future to maintain and replace this equipment. Regions and counties do not have the funds, and there is always the risk that federal grant programs may not be continued or may be continued at a lower level of funding. The response capability is therefore likely to decline over time, unless funding is available for equipment replacement.

Training. The interviewees identified several types of training issues:

- General lack of funding for training;
- Increased variety of potential events requiring response (e.g., CBRNE), and the recognition that public health is a key player in some types of responses;
- Receipt of new equipment that requires training for effective use;
- Employee turnover, requiring training of new hires; and
- Increased types and number of responders.

Significant amounts of new equipment have been obtained through the DHS grants over the past few years; however, training has not always received the same level of priority within these grants. Budgets do not appear adequate to support widespread awareness training, and specialized operational capabilities, for the number of first responders involved. Training is an ongoing requirement that is necessary to keep the skill base of the emergency response community. Therefore, it must be funded through a reliable, sustainable process.

Some interviewees expressed the concern that training budgets were heavily dependent on DHS grants. Thus, their training programs could be greatly affected by changes in federal budget priorities.

Public Health. The health districts are relatively new to emergency management. They identified several gaps or needs during the interviews:

- More training and exercises in incident command, the National Incident Management System (NIMS), and public health emergency response;
- Experts to help in the arena of medical surge capacity;
- Highly trained volunteers who can be activated and organized quickly;
- Additional personnel to take on the new emergency response missions and stay very current with their training and their contacts with other agencies; and
- Sustainable funding so they can maintain their equipment and pharmaceutical caches.

Native American Tribes. Both Native American tribes interviewed (Colville Confederated and Lummi) are in the process of writing their emergency response plan and believe that their CBRNE/HazMat response effectiveness will increase once the plans are complete. The Native American tribes suggested that they know who to call in the federal, state and local emergency response communities. The Colville tribe says it has a good relationship with Ecology's office in

Spokane, especially for the common concerns such as Lake Roosevelt. They have spoken about conducting exercises together and have an informal aid agreement. The Colville tribe is working on establishing an oil spill response team both for Lake Roosevelt and to protect its agricultural assets from a spill. Currently they have minor, almost incidental, spill response capabilities on the ferries.

The Lummi tribe interviewee is a member of the Northwest Tribal Emergency Management Council and is currently establishing communication links with emergency managers in each tribe of Washington State.

Although only two tribes were contacted, it appears that the Native American tribes need continued improvements in planning and levels of staffing for emergency response. Their current plan is to limit CBRNE/HazMat response to calling in appropriate outside help. Even with this strategy they need to train staff to the plan and to conduct exercises on the plan. The overarching need for the Native American tribes was training and exercises (training for ferry workers in Colville, on-going HazMat training, awareness and operations/technician/maybe specialist training, sustainability training for turnover, etc.). Communications are also an issue due to the remote environment in which they are located. Cell phones do not always work, so satellite phones would be needed. Finally, some basic equipment, particularly transportation equipment (trucks/ambulance), was mentioned as a need.

2.2.3 Respondent Recommendations

The interviewees were asked to provide recommendations for changes in state programs or rules that would improve their emergency response capabilities. They were also asked if they had any comments or suggestions regarding effective and/or ineffective emergency response in their specific jurisdiction or within the State of Washington. Regionalization of CBRNE/HazMat teams and sustainable funding for these teams were recommendations specific to CBRNE/HazMat response in the State of Washington. Other recommendations for overall emergency response capabilities included interoperable communications, effective mutual aid and increased training. This section provides an overview of the recommendations made by the interviewees.

Most of the interviewees mentioned the regionalization of CBRNE/HazMat response capability via a state-organized system. A few interviewees recommended enacting legislation similar to that of the State of Oregon. One interviewee suggested that the individual teams already located in the regions should be provided with additional funding/equipment so they would be available for a regional response. Standardization of HazMat team types and capabilities could be accomplished with regionalization. It was recommended to have key trained personnel and minimal equipment staged throughout each region to facilitate response to more than one incident occurring at the same time within the region.

A recommendation was to have one state agency lead the coordination of funding, resource sharing, cost recovery and cooperative training among jurisdictions. Coordinating the HazMat response in the state would be simplified with a single lead agency, and gaps in the state program could be easily identified. The day-to-day operations, however, should be left to the local HazMat response units. One person suggested that the Washington State Patrol should be this lead agency.

Most interviewees stated that a state-managed, state-funded system for regional HazMat teams with a sustainable funding source would be desirable, but would require legislation to be passed. Funding for team training, maintenance, and response would have to be included as part of the legislation. Taxing of industry (e.g., transportation permits, trucking tariffs, etc.) was suggested as a funding source. This source could also be similar to Oregon, where the state collects a fee from facilities, transporters and industries.

Most interviewees also suggested statewide emergency preparedness/training enhancements:

- Developing a state program for funding (currently, training is funded out of the hosting agency's budget), which could include compensating volunteers for training;
- Organizing cross-jurisdictional multi-agency training events;
- Increasing minimum training requirements for the Washington State Patrol and ensuring that they have adequate HazMat response equipment;
- Educating first responders/emergency personnel on resources and how to tap them (EPA, Ecology, contractors and local private HazMat teams);
- Developing a system to inform emergency management of the levels to which the first responders in their regions/counties/cities are trained;
- Hiring a Circuit Writer (i.e., trainer) that visits individual fire departments throughout the state;
- Developing more realistic training scenarios;
- Educating local responders about the availability of training through the SFM;
- Training the public health sector as an equal partner with emergency response personnel; and
- Training public agency personnel and private industry personnel together.

An all-hazards mobilization plan was recommended similar to the Fire Mobilization Plan. The plan should encompass Fire, HazMat, Law Enforcement, Health and Special Rescue and could describe the regional organization, resources throughout the state, and the processes for

mobilizing these resources. The plan could also provide specifics for reimbursement. The all-hazards mobilization plan would be similar to an intrastate mutual aid agreement that was recommended by a few interviewees.

Another suggestion for the state was to have emergency frequencies and/or communications standardized (i.e., interoperable communications). Currently, it is difficult for the local responders to communicate with mutual aid partners, state agencies and federal agencies because there are few identified emergency frequencies. When phone lines are down or overloaded during an emergency, they have no way of communicating to the other parties which channel to use.

Other respondent recommendations included:

- Enactment of a law to deal with compensation and liability issues. The liability issue was a major concern in the public health arena;
- Improving the capabilities of the State Health Department to deal with biological events;
- Establishing a single set of regions with the same boundaries for all purposes (e.g., fire mobilization, RHSCD, Ecology, and DOH) (See Appendix F);
- Funding from the state for implementation of its mandates and enforcing these mandates. Examples of the mandates are: the requirement to have a comprehensive Emergency Response Plan and Hazards Vulnerability Assessment that both have to be updated regularly, the requirement to have an LEPC, exercise requirements, and using and practicing NIMS; and
- Improving communications with Native American tribes in the state at all levels of the process ranging from emergency response to planning at the city, county, regional and state levels.

3.0 Analysis of Emergency Management Programs of Other States

This study included an analysis of emergency management programs, specifically CBRNE/HazMat, in other states nationwide to determine the types of implementation activities that are working well and to develop recommendations on how the State of Washington might develop and maintain a sustainable program for CBRNE/HazMat response. Interviews were conducted with program representatives in twelve states throughout the country.

This section includes detailed descriptions of the input received through interviews conducted with program representatives in other states. A discussion of what is working well in the other

states, suggestions for sustainable funding, and general recommendations from the state representatives are included.

3.1 Methodology

The study team prepared a questionnaire (Appendix G) designed to collect CBRNE/HazMat program information from other states. A preliminary list of 20 states was developed based on two factors:

- Recommendations by Ecology HazMat response personnel, based on personal knowledge of states known to have good CBRNE/HazMat programs; and
- Similarity of state characteristics compared with Washington State (e.g. population, size, economy, types of natural and technological disasters, etc.).

By coincidence, the study interview period occurred during a period of intense hurricanes that reached the US coast, and thus several states were unavailable. Eventually, program representatives from twelve states were interviewed, with the questionnaire serving as the basis for the interview:

- Arizona
- California
- Florida
- Massachusetts
- Michigan
- New Jersey
- North Carolina
- Ohio
- Oregon
- Pennsylvania
- South Carolina
- Tennessee

Several states submitted written questionnaires due to time constraints of their staff: Arizona, California, North Carolina, Pennsylvania, Ohio, and Tennessee. These written interviews were followed up with a phone call when additional clarification was needed.

3.2 Survey Results

The following sections summarize the results from the surveys of the twelve states interviewed. The information most pertinent to Washington State has been included in this summary. The detailed survey responses are summarized in Appendix H and include discussions of regionalization, local mobilization and reimbursement, mutual aid agreements, and funding mechanisms.

3.2.1 Regionalization

The importance of regionalization of emergency response programs, staff and/or specific services was mentioned by ten of the twelve states that were interviewed. In many cases, the state's regionalized program was specific to a certain emergency response service, such as

HazMat. In other states, the regionalization was an organizational structure to enable more efficient distribution of funds and/or mutual aid.

One of the most notable regionalized programs was the Oregon HazMat Team Program. As detailed in Section 3.2.2 below, the state government is responsible for the CBRNE/HazMat response in Oregon and local first responders are not expected to mitigate HazMat situations that require skills and capabilities beyond the basic awareness level. The State Fire Marshal's (SFM) office enters into contracts with local agencies to provide HazMat response and cost recovery when the regional teams respond. The state supports fifteen HazMat teams in addition to the limited HazMat capabilities of the local fire departments. The SFM is also responsible for assisting all local agencies with CBRNE/HazMat planning and training.

The Oregon State SFM office has one full-time equivalent position dedicated to resource coordination for the HazMat teams. The regional HazMat team can operate outside of its region at the request of the SFM. The HazMat team criteria includes the ability to respond to HazMat anywhere in the state within 30 minutes for urban areas, one hour for suburban areas, one and one-half hours for rural communities, and two hours for the frontier. The Office of the SFM also manages the Oregon Right-to-Know Program.

The Florida emergency response staff is located in seven different regions of the state, but report to one central command. The local fire departments have Regional Domestic Security Task Forces within these regions, which consist of at least three fire departments that assist each other in responding to emergency incidents. During an emergency, the requesting partner on the task force must reimburse all costs incurred by the responding fire department.

The individual interviewed for Michigan State coordinates the Emergency Management Assistance Compact (EMAC), works as the operations group chief and coordinates regional emergency response teams. The interviewee recommended regionalization as the best organizational model for any state's emergency response program. Michigan emphasized the need to obtain input from local entities during this regionalization process and to give the local entities leadership within the program.

The Department of Crime Control and Public Safety, Division of Emergency Management coordinates the North Carolina Hazardous Materials Regional Response program. This program consists of seven teams strategically located in the state to provide HazMat response services. These teams are responsible for responding to events greater than local jurisdictions are able to handle by providing technical support, manpower, specialized equipment and/or supplies.

The State of Ohio's emergency response staff location depends on the state agency. Ohio EPA, SFM, and the Public Utilities Commission of Ohio have regional responders, whereas the Ohio Emergency Management Agency and Ohio Department of Health rely primarily on the central Ohio offices.

Pennsylvania's regional approach to planning, training and exercises is one of the top three things working well for their state's emergency response program. Pennsylvania recommended that other states begin the process to regionalize their emergency response programs only after the appropriate legislation is in place.

South Carolina has a regionalized system for Department of Health and Environmental Control chemical and radiological emergency response staff. South Carolina has resources stationed in each of its eight regional offices. Emergency response can be implemented at any location within a very reasonable amount of time. South Carolina recommended that any state evaluate this type of regionalized system.

In Massachusetts, the State Department of Fire Services is charged with coordinating regional HazMat teams. In New Jersey, the Domestic Security Task Force has set up five regions for homeland security activities. In Tennessee, the state's emergency response staff is regionalized and they have statewide formal regional mutual aid agreements. The regional HazMat Team concept is one of the top three things that are working well in Tennessee.

3.2.2 Local Mobilization and Reimbursement

The primary responsibility for first response lies with the local jurisdictions in every state interviewed except Tennessee. The reimbursement of local responders by the state for a mobilization was very uncommon, occurring only when there was a declaration of emergency, an incident on state property, or reimbursement of a local jurisdiction responding via some type of mutual aid to another jurisdictions needs. Beyond these situations the affected local jurisdictions are expected to first exhaust their resources and mutual aid before requesting assistance from the state.

Florida, North Carolina, Oregon and Tennessee do not expect the local jurisdictions to be solely responsible for the costs of mitigating a major HazMat incident. Florida's Bureau of Emergency Response is a state asset that assists local HazMat teams when a HazMat incident is beyond their control. The Bureau finds other available HazMat teams in the state and deploys them to the requesting jurisdiction. The responding HazMat team is eligible for reimbursement by the state. However, local jurisdictions in Florida are required to have their own HazMat teams and are responsible for the response when it is within their capabilities.

The North Carolina Hazardous Materials Regional Response program is a system of seven teams strategically located in the state to provide hazardous materials response services. These teams are responsible for responding to events greater than local jurisdictions are able to handle by providing technical support, manpower, specialized equipment and/or supplies.

The Oregon State sponsored teams respond to all CBRNE/HazMat events. Local responders are not expected to mitigate HazMat situations beyond the basic awareness levels. In Tennessee the Tennessee Emergency Management Agency is the lead response agency for HazMat incidents.

Michigan does not have state HazMat teams, but its state troopers are trained to an operations level so they can mitigate a HazMat situation until the fully trained local teams arrive.

HazMat response costs were frequently mentioned to be the responsibility of the spiller.

3.2.3 Mutual Aid Agreements

Mutual Aid agreements and statewide mutual aid coverage was the most common program feature among the states interviewed. Of the 12 states interviewed, 10 mentioned some type of statewide mutual aid agreement. The states that stood out for the quality and depth of their mutual aid programs were California, Arizona and South Carolina.

Each of California's cities and counties, as well as the state, has signed an intra-state mutual aid agreement. The mutual aid is provided without expectation of reimbursement and with a neighbor helping neighbor philosophy. California has divided the state into three mutual aid regions with multiple operational areas within each region. There are mutual aid coordinators at the operational, regional, and state levels who receive mutual aid requests, coordinate the provision of resources from within their region, and pass on unfilled requests to the next governmental level. In Arizona's mutual aid program, the state pays 100 percent of the expenses for jurisdictions responding with mutual aid support. Finally, South Carolina has memorandums of understanding for conducting operations during an event. The South Carolina Emergency Management Division requires that any jurisdiction that receives state equipment funding must sign a statewide mutual aid agreement to provide such equipment to any jurisdiction in the state, upon request.

Florida, North Carolina and Ohio all had good mutual aid programs, but in each case the requesting jurisdiction is responsible for reimbursing the responding jurisdiction. This becomes an issue when rural areas request mutual aid from areas with high technology, expensive resources. Florida has solved this problem to a certain extent by having regional emergency response staff who respond to an incident if the local jurisdiction can not afford to pay for the mutual aid.

Michigan, New Jersey, Oregon and Tennessee also had mutual aid agreements covering the state. Oregon covers HazMat incidents by the state funded HazMat teams and their fire departments have mutual aid agreements amongst themselves. New Jersey's statewide mutual aid agreement is written into the state's laws. Michigan has mutual aid agreements between local agencies, counties and the state. Tennessee also has a statewide formal regional mutual aid agreement.

3.2.4 Funding Mechanisms

Most of the states receive the majority of their funding (over 60%) from grants. These states, with the exception of New Jersey and Tennessee, did not have sufficient funds to maintain their

programs and have seen decreases in their funding in the recent past. Part of the problems with maintaining and obtaining funding is that they frequently do not have increases in the state funds, and they do not have control over the federal funds.

Florida and Oregon use fee structures to fund almost their entire programs and have not had any trouble maintaining the necessary funding.

- Florida places a surcharge on insurance policies: $2/policy/year surcharge for home, rental, and condo insurance policies, and $4/policy/year surcharge on commercial insurance policies. This money is set up in trust funds from which funds are appropriated to the emergency management programs. The money can be used for state and local emergency management, but not for emergencies (see Appendix H, Section H3.0).

- In Oregon, the owner of a bulk tanker truck pays a fee (maximum of $10 by law) every time the truck fills up. Petroleum imports into state pay a fee as well. The money is used to carry out the state's oil, hazardous material and substance emergency response program as it relates to the maintenance, operation, and use of public highways, roads, streets, and roadside rest areas in Oregon. The fee is currently set at $4.75/withdrawal, but went to $2.50/withdrawal temporarily on October 1st to reduce the cash buildup in the program. Diesel is excluded from these fees (see Appendix H9).

Ohio has had some trouble achieving a good political balance between charging industry and funding the State Emergency Response Council (SERC), which in turn funds the LEPCs. The Ohio SERC funding comes from the filing fees of chemical companies reporting their chemical inventories to the SERC.

The two states that had the majority of their funding come from general operating funds were North and South Carolina. North Carolina has not had problems maintaining their current funding level and 100 percent of their funding is from general operating funds. Approximately 75 percent of South Carolina's program funding comes from general operating funds and it has also not had any problems maintain this funding level.

4.0 Study Recommendations

This section contains the study team's recommendations based upon the analysis of the Washington State survey and the Other States survey results. The gap analysis conducted for Washington State has also been included in the formulation of these recommendations, as have the recommendations from the interviewees. These recommendations consist of the study team's best judgment after evaluating responses from all interviewees and the study team's own expertise in emergency response. The recommendations are focused on improving the CBRNE/HazMat pre-response and response program within the state, and developing a more sustainable program.

4.1 Program Features and Funding Mechanisms

This section discusses five program management options, and alternative funding mechanisms, ranging from an option with only small changes compared to the current program, to one that would involve major program and funding changes.

4.1.1 Program Options

The diverse nature of the current emergency response capabilities and structure in the State of Washington has led to a number of possible concepts for program packages. Table 5 outlines five program options that would improve the state's CBRNE/HazMat response capabilities for a sustainable program. The options present different programs and funding mechanisms to fit within each program, thus, creating five bundled options for CBRNE/HazMat programs. The options are outlined and numbered in a graded approach from the current system, with only a few elements in each option differing from the one before it.

Several interviewees raised the subject of "regionalization," but used the term in different contexts. The term in Options 3, 4 and 5 below refers to a structure in which resources are distributed and managed by regions (generally a group of counties). These options describe the varying methods and programmatic features by which regionalization could be achieved.

The fee-based funding mechanisms discussed below would not necessarily have to serve as the sole revenue source for Washington's CBRNE/HazMat program. Consideration should be given to adopting legislation to phase in this fee structure, coupled with grants from DHS or other sources. Ultimately, Washington State could move toward a 100 percent fee-based system to fund its CBRNE/HazMat program statewide. Section 4.1.2 discusses funding sources in more detail.

Table 5. Summary Table of CBRNE/HazMat Program Options.

Program	HazMat Team		Mutual Aid	Activity Funding		
	Organization	Employer		Pre-Response[a]	Response[b,c]	
					Inside	Outside
Current System	Local	Local	Incomplete	Local Funding: General Revenue, Grants	Local Funding: Responsible Party, General Revenue, Grants	Often ad hoc
Option 1: Local Mutual Aid	Local	Local	All-state	Local Funding: General Revenue, Grants	Local Funding: Responsible Party, General Revenue, Grants	Local Funding: Responsible Party, General Revenue, Grants
Option 2: State-Supported Mutual Aid	Local	Local	All-state	Local Funding: General Revenue, Grants	Local Funding: Responsible Party, General Revenue, Grants	State Funding: Responsible Party, General Revenue, Grants, Fees
Option 3: Regional Mutual Aid	Regional	Local	All-state	Local Funding: General Revenue, Grants	Local Funding: Responsible Party, General Revenue, Grants	State Funding: Responsible Party, General Revenue, Grants, Fees
Option 4: State Supported	Regional	Local	All-state	State Funding: General Revenue, Grants, Fees	Local Funding: Responsible Party, General Revenue, Grants, Fees	State Funding: Responsible Party, General Revenue, Grants, Fees
Option 5: State Managed	Regional	State	Unnecessary	State Funding: General Revenue, Grants, Fees	State Funding: Responsible Party, General Revenue, Grants, Fees	State Funding: Responsible Party, General Revenue, Grants, Fees

[a] Includes planning, equipment, training, and exercises.
[b] "Inside" and "Outside" refer to inside and outside the local jurisdiction.
[c] First responders could quality for FEMA reimbursement for declared emergencies in all scenarios.

4.1.1.1 Option 1 – Local Mutual Aid System. This option uses the existing HazMat team structure in the state. Regionalization is incomplete, as all emergency response agencies are not aligned and organized into regions. Each city, county and the state would sign a formal statewide mutual aid agreement. This mutual aid agreement would be signed with a neighbor-helping-neighbor concept with expectation of reimbursement by the receiving jurisdiction when there is no responsible party. This option is the most similar to the current system, but with provisions for providing aid all across the state.

A statewide mutual aid system of this type could also be used in an all-hazards program, which would not be limited to CBRNE/HazMat response. This mutual aid system would provide a high level of assurance that all areas of the state would be covered for any type of event. The funding mechanism would be the same as in the current system.

> Basis: This recommendation is based on the graded approach to changing the state's HazMat program. It is also based upon the high number of respondents from other states who said their statewide mutual aid systems were instrumental to the success of their emergency response programs.

4.1.1.2 Option 2 – State-Supported Mutual Aid System. Option 2 differs from Option 1 in that the state would cover HazMat response outside the responder's local jurisdiction. As mentioned for Option 1, a statewide mutual aid system of this type could also be used in an all-hazards program.

The funding mechanism for the state portion of this program would be a fee-based system. These fees would be used for cost-reimbursement for response when a responsible party cannot be identified, or if the responsible party is unable to pay

> Basis: This recommendation is based on the high number of respondents from other states who said their state wide mutual aid systems were instrumental to the success of their emergency response programs.

4.1.1.3 Option 3 – Regional Mutual Aid System. This option is similar to Option 2 except that regionalization is complete, with the boundaries of the emergency response agencies aligned, and their management coordinated. The regions and jurisdictions they contain would all sign mutual aid agreements. The mutual aid agreement could be expanded into an all-hazards agreement, as appropriate.

This program option includes state funding for responses to CBRNE/HazMat incidents outside a responder's jurisdiction. This program includes regionalized teams that would be coordinated and administered by a state office, such as the Office of the SFM or other state agency, with all regional team leaders reporting to this agency for responses outside the local jurisdictions. The regional boundaries would coincide with the boundaries of the current RHSCDs. The

CBRNE/HazMat team members would continue as city or county employees, and would be available to respond anywhere within their entire region (and the state, if necessary).

The funding mechanism for the state reimbursements to regions would be a fee-based system.

> Basis: The majority of the other states interviewed recommended regionalization. Also many Washington State interviewees suggested that the current HazMat teams be funded to respond throughout their region. This program is a regionalized program that is tailored to fit the current HazMat team structure of Washington State, which would allow for an easier transition. The recommendation of having the program run by the State Fire Marshal was given because the three states with good HazMat programs (Ohio, Oregon, and South Carolina) each had demonstrated success using this approach.

4.1.1.4 Option 4 – State-Supported System. This program is the same as in Option 3 except the HazMat teams are funded entirely by the state for pre-response and response activities, both inside and outside their local jurisdictions. The HazMat team members would remain city or county employees and a regional HazMat team structure would be used throughout the state. The HazMat teams would be developed by region, based on the need of each region and would be staffed, equipped, and funded accordingly. The funding allocations to the regions would be based upon state-determined regional needs using a process as suggested in Section 4.2. The local jurisdictions would be free to supplement the state funding with their own funds to increase the size and capabilities of their teams.

The funding mechanisms could be the same as Option 3, but the fees would have to be higher to cover the pre-response funding requirements. Local funding requirements, however, would be reduced. Under this option, the state would have an increased opportunity to standardize equipment, training, and HazMat team proficiency levels compared to Option 3.

> Basis: The majority of the other states interviewed recommended regionalization. Also many Washington State interviewees suggested that the current HazMat teams be funded to respond throughout their region. Additionally, Washington State interviewees often suggested that standardization of training and HazMat team levels/capabilities would enable more efficient responses to incidents. This option is similar to the current Oregon HazMat program.

4.1.1.5 Option 5 – State-Managed System. This option is similar to Option 4 except the program is not only state-supported but also state-managed. State employees would perform the pre-response and response activities, coordinated and administered through the SFM or other state agency. Regional team leaders would report to this agency. Local jurisdictions would no longer have responsibility for responding to CBRNE/HazMat incidents.

The funding mechanism for this program would be a fee-based system. These fees would be used for planning, training and equipment costs. Option 5 involves the highest level of state funding, but local funding would not be required.

Basis: The recommendation of a regionalized HazMat system is based upon the Washington State interviewees' recommendations.

Based on the information and data that the study team has available, it appears that Option 4 has superior balance of desired features of a Washington State CBRNE/HazMat program. Option 4 gives the larger metropolitan areas funding to cover less populated areas outside their jurisdiction, and the rural areas funding to increase their response capabilities. The state could standardize equipment, training, and personnel in conjunction with its funding. Option 4 also does not require the substantial change in program management of Option 5. All options, however, have advantages and disadvantages, and a more detailed assessment would be required for a comprehensive comparison.

4.1.2 Program Funding

Washington uses two taxes to pay for state-level HazMat response activities.

- Hazardous Substance Tax (RCW 82.21). Petroleum products, pesticides, and about 8,000 different hazardous substances are taxed at a rate of 0.7 percent of their wholesale value to the first possessor in the state. In 2004, about $69 million were collected, with about 90 percent coming from gasoline possession. The revenue, thus, is very dependent on the price of gasoline. Of the total receipts, about 47 percent is allocated to the state toxics control account for cleanup of hazardous waste sites and related planning and regulation activities. The remaining 53 percent goes to toxics control accounts of local governments for hazardous waste programs. The accounts are restricted to specific uses, which include hazardous materials emergency response training (RCW 70.105D.070).

- Oil Spill Tax (RCW 82.23B). A tax of $0.04 per barrel, paid by the owner of a taxable product when it is off-loaded into storage tanks at a marine terminal, goes to the oil spill administration account. The account can be used to fund oil spill prevention, response, and restoration programs. An additional $0.01 per barrel is collected for the oil spill response account, contingent on the size of the account. These funds are used for cleanup costs on navigable waters when the event cost is expected to exceed $50,000. In 2004, the administration account collected about $6 million. The oil spill response account is at $7 million, and its associated tax is not collected at this time. These taxes are directly dependent on the volume of petroleum, not its price.

Ecology uses these revenues to pay for planning and response activities, in addition to grants and cost recovery from responsible parties. The response program of the DOH is fully dependent on grants. The Washington State Patrol has a combination of general revenue and grants.

Closing the gaps will require additional funds in the short-term. There will also be a long-term cost increase compared to the current system because some activities need to be shifted from DHS grants to sustainable funding (e.g., DOH CBRNE/HazMat activities). Because there is an

ongoing HazMat program, the sum of the long-term local and state costs, however, would probably be roughly the same across all options, including the current system. The key difference between the options is the shift from local costs to the state. Options 2 and 3 shift the costs of the "outside" response actions to the state. Option 4 also shifts the cost of the pre-response activities to the state, which would substantially reduce the local funding requirements. Option 5 shifts all costs to the state, further reducing local requirements. From the state perspective, Options 4 and 5 would require substantial increases in funding for a sustainable program, particularly for Option 5. From the local perspective, Options 4 and 5 would result in substantial cost reductions. Thus, a cost comparison of the options will be complicated because funding and costs involve multiple levels of government, and multiple agencies at each level. A cost assessment will have to examine systematically the local and state funding and cost categories in order to maintain a consistent analysis. The cost assessment should consider the total program costs, including initiation, design, development, operations and maintenance, although several of these items are largely one-time setup costs.

On the benefits side, the move toward increased state responsibility could provide sustainable funding, consolidate program administration (including cost recovery), provide standardized equipment and training across regions, and maintain regional equipment and training capabilities consistent with their vulnerabilities and risks.

Regardless of the preferred option, additional funding options should be explored to obtain a sustainable program. Based on the state surveys, these options include:

- Collection of a bulk petroleum product withdrawal fee, which funds its statewide regional HazMat program. Basis: State of Oregon (See Appendix H, Section H9.0);

- Collection of a surcharge on residential and commercial insurance policies to fund its Emergency Management Trust Fund. Basis: State of Florida (See Appendix H, Section H3.0); and

- Collection of funds from the utilities with nuclear power plants. Basis: States of Massachusetts (See Appendix H, Section H4.0), Michigan (See Appendix H, Section H5.0), and South Carolina (See Appendix H, Section H11.0).

All funding options, however, should consider not just the historical past of HazMat spills, which have largely been petroleum products and chemicals, but potential future biological, radiological, nuclear and explosive incidents. This suggests that fees should be collected from a broader spectrum of commercial operations, including agriculture, biotechnology, medicine, and nuclear materials and waste operations.

The most appropriate mix of funding sources depends on the magnitude and types of needs. An assessment will have to await further refinement of the program options, and a consideration of the planning scenarios, vulnerabilities, risks, target capabilities, and spill cost recovery.

Although this study focused on CBRNE/HazMat incidents, an all-hazards approach should also consider natural disaster responses, which may be enhanced by the alternatives discussed in this report.

4.2 Additional Program Features

Regardless of the preferred CBRNE/HazMat program and funding options, an efficient, effective, and sustainable Washington program should contain several additional features, as discussed below. These features would also support an all-hazards response program.

4.2.1 Emergency Response Agencies with Common Boundaries

Emergency response teams for CBRNE/HazMat incidents can include personnel from the state (e.g., Ecology, Health), as well as the local jurisdictions (e.g., fire, police, emergency medical services), depending on the characteristics of the incident. Currently, these team members come from organizations that have different geographical alignments. For example, boundaries for RHSCDs, Ecology regions, State Patrol districts, Fire Mobilization Regions, Fire Protection Regions, and EMS Regions are presently different, as shown on the maps in Appendix F. Regional alignment should improve the planning and response coordination, add efficiency, increase resource sharing, decrease duplication of equipment and/or training, and ease administrative burdens.

It is not clear what regional structure should serve as the base, although the RHSCD is used most often. The structures for each program were chosen for different purposes, so some tradeoffs would exist no matter which one is chosen. The impacts of the new common boundary would have to be weighed and balanced for all emergency response agencies. Washington should form a committee with representatives from the affected agencies to develop a common set of boundaries.

> Basis: Many Washington interviewees commented on the absence of common agency boundaries as hindering their response measures.

4.2.2 State, Regional, and Local Capabilities Consistent with Vulnerabilities and Risk

Incident response data clearly indicate that some regions and counties have high incidence rates and some have low rates. In addition, some counties have substantial infrastructure that may be targets for terrorist actions, thereby significantly increasing the threat of an intentional CBRNE incident. While this study addresses whether the regions meet minimal target capabilities, it does not examine whether the regional magnitudes of current capabilities are consistent with current

vulnerabilities and risks. Some regions may be under-supplied or oversupplied, with equipment, training, and/or personnel relative to their vulnerabilities. Washington cannot depend on federal grants in the long run. Thus, it needs to develop and use resources based on needs, irrespective of the CBRNE/HazMat program option selected.

DHS's *Target Capabilities List (version 2.0)* (DHS 2005c) provides the current federal guidelines on the appropriate capabilities for each type of jurisdiction. This study has progressed to the next level of applying these guidelines to Washington, but additional effort is needed for increased operational detail. Washington needs to move ahead to create its capabilities structure based on its own population and infrastructure characteristics, consistent with the federal guidelines.

> Basis: Many Washington interviewees commented on the fact that they will not be able to maintain their current levels of response capability when the DHS grants start to decline. It appears likely that DHS grants will be increasingly based on potential risks. Decisions on regional equipment, training, and personnel need to be based on vulnerability and risk in order to present the strongest case for continued federal funding, and to ensure the needs of the state are met.

4.2.3 A Response System with Standardized Equipment, Training, and Personnel on Hazmat Teams

Washington needs an effective response to a CBRNE/HazMat incident, regardless of where it happens in the state or who responds. Each management option in Section 4.1 depends on bringing in resources from other parts of the state if the local response (via local or state employees) is insufficient. This can only be done efficiently if the equipment and personnel are, in essence, interchangeable. Standardized equipment, training, and personnel on CBRNE/HazMat teams are key to an efficient response. This was recognized earlier with the communications problems, and the State Interoperability Executive Committee is presently working on a solution. The state should initiate additional committees, with local and state personnel, to develop equipment, training, and personnel standards for CBRNE/HazMat teams of various levels.

> Basis: Many interviewees recognized this problem in the lack of interoperable communications. The recommendation of standardized equipment, training, and competencies is based in part upon the Washington State interviewee's recommendations and on the very successful program in Oregon.

4.2.4 A Statewide Program for Multi-Agency and Cross-Jurisdictional Training and Exercises

A statewide system for multi-agency and cross-jurisdictional training and exercises should link directly into the standardized training for the CBRNE/HazMat teams recommended in Section 4.2.3. This program would accomplish the training requirements for each agency and would also enable the state to track the training levels of its response teams throughout the state. In turn, the training organization would be able to develop appropriate or "more realistic" training scenarios for the state.

This system should be flexible and should allow for traveling trainers, in order to reduce backfill requirements and to accommodate the large numbers of local volunteer responders. Local responders would greatly benefit from such a system because they would develop at least the essential awareness level skills, which would make the overall state's response of the CBRNE/HazMat teams more effective.

This type of formalized training program would also greatly benefit public health workers. Currently the public health training is not to the level it should be because the public health community is relatively new as a "first responder" in Washington State and in other states. Now that they are members, an effort must be made to standardize their training levels and include them in multi-agency and cross-jurisdictional training events.

Local and elected public officials could also benefit from additional training programs. The need for effective, rapid response and coordination by elected officials is particularly important when multiple agencies and different jurisdictions may be working together during a response. This case was made very clear in the response to Hurricane Katrina.

Washington should develop and market a statewide training organization, either through an agency branch or by private sector contract. Web-based training may be a cost-effective way to obtain some types of training

> Basis: Emergency responders and public health personnel throughout Washington State commented on the need for additional training, the problems with backfilling for those traveling to training, and the training of volunteers.

4.2.5 Liability Protection for Trained Volunteers

Under current law, any person who renders emergency care in good faith is not liable for civil damages, except in cases of gross negligence or willful or wanton misconduct, if the person or agency has been requested to assist by the incident command agency and has entered into a written assistance agreement (RCW 70.136.050). However, certain interviewees, especially in the public health agencies, had concerns over the extent of liability coverage of volunteers who are medical providers with malpractice insurance. The absence of liability protection, whether

actual or perceived, may result in fewer available resources to provide critical response assistance. The State of Washington should conduct a review of the liability of medical volunteers to determine whether changes to the existing legislation are required. The extent of liability coverage for other trained volunteers (e.g., private sector response teams) should also be addressed during the review of existing legislation.

> Basis: Public health personnel throughout the state identified this gap. Private sector liability was also raised as an issue.

4.2.6 Facilitate Distribution of Available Funding to Regions through Documentation of Hazards and Threats

Distribution of funds for CBRNE/HazMat programs within Washington State should be based on a documented, equitable process. This can be done in a number of ways, but the best way is through a detailed demonstration of need by the local jurisdiction (county or RHSCD). Clark County's LEPC provided an excellent example of a study (*2005 Hazardous Material Commodity Flow Study, Preliminary Report*) that demonstrated the county staff has refined its hazard analysis and is prepared to focus available funding on the strategic areas that would be most vulnerable to a HazMat incident.

The knowledge represented by this type of report demonstrates to the board that distributes available funds to the counties and RHSCDs that money could be linked to specific needs and used effectively. An accurate depiction and understanding of the threats and hazards within jurisdictions would help the board by removing some of the inherent subjectivity that is a part of the funding allocation process. Any process that provides accurate, defensible information will make the job of the approval board easier and will result in a more equitable distribution of funds.

> Basis: This recommendation was based on one example from Clark County's LEPC, with the recognition that other jurisdictions within the state each have their own effective planning methods and could provide similar objective evidence to support funding requests. Several interviewees also noted that the practice of allocating grant funds could be done more equitably.

5.0 References

DHS, 2003, *National Strategy for the Physical Protection of Critical Infrastructures and Key Assets*, U.S. Department of Homeland Security.

DHS, 2005a, *National Preparedness Guidance*, U.S. Department of Homeland Security, April 27.

DHS, 2005b, *Target Capability List, version 2.0*, U.S. Department of Homeland Security.

DHS, 2005c, *Universal Task List, version 2.1*, U.S. Department of Homeland Security.

EMD, 2001, *Mutual Aid and Interlocal Agreement Handbook*, Emergency Management Division, Washington Military Department.

Emergency Management in California, October 2003, Governor's Office of Emergency Services, http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/EMGuide/$file/EMGuide.pdf.

NEMA, 2004, *Proposed Model Intrastate Mutual Aid Legislation*, National Emergency Management Association.

Region Diagrams from "Regionalization of Homeland Security and Emergency Management Presentation", Partners in Preparedness Conference, April 20, 2005, Presenters: Tom Griffith, Judy Harmon, TJ Harmon, Kathryn Howard, and Tom Mattern (www.capps.wsu.edu/presentations/ emergencyprep/presentations_23.pdf).

SIEC, 2004, *Inventory of Statewide Public Safety Communication Systems*, Phase 1 Report, State Interagency Executive Committee, July 30.

SIEC, 2005a, *Inventory of Public Safety Communications Systems*, Phase 2 Report, State Interagency Executive Committee, February.

SIEC, 2005b, *Technical Implementation Plan*, Final Draft Version 8, State Interagency Executive Committee, October.

South Seattle Community College and the Washington State Department of Ecology, 1993, *Hazardous Materials Response Study Report*, February.

Task Force on Local Programs, 2004, *A Study of Emergency Management at the Local Level*. Report to the Washington State Emergency Management Council, September 2, 2004.

This page intentionally left blank.

Appendix A

Overview of Previous Studies

This page intentionally left blank.

A1.0 Hazardous Materials Response Study

In February 1993, South Seattle Community College presented a study examining hazardous materials responses in Washington. The principal study method was a survey sent to approximately 590 public and private response organizations, which obtained a 24 percent response rate. Five states were also surveyed to obtain additional information for study recommendations.

The study concluded that the State of Washington is able to handle most hazardous materials (HazMat) spills, but found that formal mutual aid agreements did not generally exist. The report included several recommendations to improve the response process:

- The State Emergency Response Commission (SERC) should be expanded beyond the then members of the Departments of Ecology and Community Development, and the Washington State Patrol;
- HazMat team certification should be encouraged;
- A common HazMat regional system across all state agencies responsible for monitoring, promoting, and enforcing regulations regarding hazardous materials should be developed;
- The Washington State Patrol should investigate the feasibility of providing communication service to HazMat incident response;
- HazMat responders should be encouraged to purchase low cost "quick response" kits in types and quantities appropriate to their level of training;
- Local first responders should receive awareness training to the recognition and identification level;
- A uniform HazMat response incident database should be established;
- The Legislature should enact or strengthen the existing hazardous materials response "Good Samaritan" act provisions to allow qualified responders to provide service as needed when designated response units are unable to respond in a timely manner;
- A uniform cost recovery system should be established; and
- Options for funding recommended improvements were presented.

A2.0 Task Force on Local Programs

The Washington Task Force on Local Programs (Task Force) submitted a questionnaire on response capabilities to all 39 counties, 87 cities responsible for their own emergency management services, and ten federally recognized Native American tribes. All counties, 53 of the cities, and ten Native American tribes responded. The Task Force reported in September 2004 that while overall planning, response capabilities, and funding has increased in the state, the resulting conditions vary considerably across the state.

- Nearly three out of every four counties provide emergency management services for some or all of their cities. While many of these counties have an established joint local organizations or formal contracts with those cities, nearly one-half operate under less formal, often unwritten, agreements.

- While performance standards for emergency management are gaining broader acceptance, the absence of a single standard applied consistently across the state makes it difficult to define baseline capabilities or assess current levels of preparedness.

- While most local programs report that state and local laws are sufficient to support local emergency management and anti-terrorism efforts, a lack of procedural compliance and limited enforcement contribute to a patchwork of capable and less-than-capable programs as well as inconsistencies in disaster preparedness.

- Most local programs lack the funding, training, exercises, facilities, equipment, and staff to mitigate and recover from emergencies or disasters adequately.

- Reliance on funding sources that are sometimes insufficient, inaccessible, or restricted is increasing the administrative requirements for grants management and limiting local programs' ability to maintain adequate disaster preparedness effectively.

A2.1 Task Force Recommendations

Systemic Change

1. Evaluate the benefits and feasibility of aligning the boundaries of existing Emergency Medical Services Regions, Bio-Terrorism Regions, Fire Mobilization Regions, Law Enforcement Mobilization Regions, and RHSCD.

2. Establish emergency management planning regions for planning, collaborating, coordinating, and sharing information among disaster preparedness and response entities.

3. Examine the potential benefits and increased efficiencies of sub-regional operational areas defined around individual county boundaries and administered through representative participation as determined by the county and the cities within it.

4. Establish designated local liaisons within the Washington State Emergency Management Division.

5. Establish a stable state fund and funding source to support emergency planning and mitigation efforts.

Administrative Action

1. Develop and market an ongoing training program and curriculum for local elected and appointed officials.

2. Develop adaptive performance guidelines for local emergency management programs.

3. Adopt and implement the Incident Command System (ICS) for disaster response in accordance with the National Incident Management System (NIMS).

4. Review existing mutual aid agreements and evaluate their ability to effectively support disaster response operations.

5. Develop and market guidelines for local emergency management directors, including essential functions, roles and responsibilities, desirable qualifications, and minimum training and performance recommendations.

6. Develop or update, and then disseminate sample documents, templates, and guides of necessary emergency management ordinances, plans, agreements, and other helpful resources.

7. Continue to increase public awareness and participation in emergency preparedness.

Legislative Action

1. Review state laws governing emergency management. Pursue revisions to update Washington State Administrative Code and Revised Code of Washington.

2. Pursue the necessary legislative revisions to codify organizational and other changes resulting from recommendations in this report.

This page intentionally left blank.

Appendix B

List of Participating Interviewees

This page intentionally left blank.

We thank the following people for giving us their time and thoughts during the preparation of this study.

Name	Title	Organization or Department	Interview Date *
Other States Interviewees			
Moustafa Abou-Taleb	*Manager Hazardous Material Unit*	*Governors Office of Emergency Services of California*	10/04/2005
Bob Albers	*HazMat Services Manager*	*Office of State Fire Marshal/Oregon State*	09/22/2005
Lloyd Bockman	*Hazardous Materials Planner*	*Ohio Emergency Management Agency*	09/22/2005
Ted Cashel	*Emergency Response Specialist*	*New Jersey State Police HazMat Response Unit*	09/26/2005
Chris Clonsky	*Lieutenant with Michigan State Police*	*Michigan State Police, Emergency Management Division*	09/22/2005
Evalyn L. Fisher	*Director*	*Bureau of Plans/Pennsylvania*	09/26/2005
Tim Holden	*Hazardous Materials Program Manager*	*Tennessee Emergency Management Agency*	09/27/2005
Amy Ikerd	*Regional Response Team Program Coordinator*	*North Carolina Emergency Management*	09/27/2005
Christine Packard	*Preparedness Branch Chief*	*Massachusetts Emergency Management Agency*	09/27/2005
Chris Staton	*Acting Assistant Director of Waste Management Assessment & Emergency Response*	*South Carolina Department of Health and Environmental Control*	09/22/2005
Louis Trammell	*Deputy Director*	*Arizona Division of Emergency Management, Department of Emergency & Military Affairs*	10/04/2005
Doug White	*Emergency Response Manager*	*Florida Department of Environmental Protection*	09/23/2005

*This is the date the information was entered in to the database for surveys received in writing.

Name	Title	Organization or Department	Interview Date *
Washington State Interviewees			
Rick Anderson	*Deputy Director*	*Stevens County Department of Emergency Services*	08/29/2005
Brian Arcement	*Regional Emergency Response Coordinator*	*Kitsap County Public Health*	09/06/2005
Ron Bowen	*Deputy State Fire Marshal*	*State Fire Marshal's Office, Office of Washington State Patrol*	08/29/2005
Dave Byers	*Response Section Manager*	*Department of Ecology*	08/24/2005
Joe Ciarlo	*Emergency Management Division Manager*	*Emergency Management-Utilities Division/Clallam County*	08/29/2005
Niel Clement	*Deputy Director*	*Sheriffs Office Division of Emergency Management Council*	08/23/2005
Steve Davis	*Lieutenant Corneal, Battalion Commander 420th Chemical Battalion*	*Washington State National Guard*	10/19/05
Kathy Estes	*Emergency Management Manager for Thurston County*	*Roads and Transportation Services Department*	08/23/2005
Dick Fabbro	*Safety Manager*	*Safety-Georgia Pacific Pulp & Paper Mill*	08/30/2005
Jim Hall	*Director*	*Yakima Valley Office of Emergency Management*	08/23/2005
T.J. Harmon	*Regional Coordinator of Public Health*	*Snohomish Health District, Emergency Preparedness & Response Program*	09/07/2005
Brad Harp	*Hydrogeologist*	*Tacoma-Pierce County Health Department*	09/16/2005
Eric Holdeman	*Director.*	*King County Office of Emergency Management*	08/25/2005
Don Hurst	*HazMat Substance Program Manager*	*Environmental Trust Department of Colville Confederated Tribes*	08/29/2005
Jeff Jensen	*Assistant Chief*	*City of Tacoma Fire Department*	08/23/2005
Alisa Johnson	*Emergency Planner*	*Benton County Emergency Management*	08/23/2005
Chuck Johnson	*Regional Emergency Response Coordinator*	*Region 7 Public Health/Douglas*	09/09/2005
Leslie Koenig	*Regional Emergency Response Coordinator*	*Region 8 Public Health*	09/01/2005
Mark Ligman	*Program Manager (HazMat SERC LEPC)*	*Washington Military Department, Emergency Management Division*	08/25/2005
Patrick Lonegren	*Program Specialist*	*Chelan County Emergency Management*	08/26/2005
Phyllis Mann	*Director of Emergency Management Kitsap County*	*Kitsap County Emergency Management*	08/29/2005

Name	Title	Organization or Department	Interview Date *
Washington State Interviewees			
Don Marlatt	*Walla Walla County Emergency Management Director*	*Walla Walla County Emergency Management*	08/31/2005
Tom Mattern	*Deputy Director*	*Department of Emergency Management*	08/30/2005
Mike McCallister	*Coordinator and Planner*	*Snohomish County Department of Emergency Management*	08/26/2005
Dan Monaghan	*Manager of Special Operations Division*	*City of Vancouver Fire Department*	09/19/2005
Jim Oberlander	*Program Manager Surface Water Programs*	*Public Works Division, City of Tacoma*	08/25/2005
Ken Parrish	*Homeland Security Program Manager and Emergency Operations Manager*	*Pierce County Department Emergency Management*	08/19/2005
Ted Ricci	*HazMat Team Coordinator*	*Benton County*	09/08/2005
Curt Russell	*Director of Homeland Security for Tribal Council*	*Northwest Tribal Emergency Management Council*	09/01/2005
John Sheer	*Director of Franklin County-Region Lead*	*Region 8Franklin County Office of Emergency Management*	08/19/2005
Travis Skidmore and Sam Lorenz	*Project Planner on Homeland Security*	*Grant County Department of Emergency Management*	08/25/2005
Greg Sieloff	*Lieutenant*	*Lynwood Fire Department*	
Ken Smith	*Chief of Operations Branch for Environmental and Natural Resources*	*Fort Lewis/Pierce County*	09/16/2005
Stan Smoke	*Fire*	*Wenatchee Fire and Rescue*	10/03/2005
Mark Soper	*Bomb Squad Commander (Trooper and Bomb Tech)*	*Bomb Squad, Washington State Patrol*	08/30/2005
Mike Spring	*Fire Chief, Fire District 4*	*Benton County Fire Department*	08/19/2005
Rich Tokarzewski	*HazMat Program Manager*	*King County Office of Emergency Management*	08/24/2005
Brian VanCamp	*Fire Chief*	*Thurston County Fire Protection District 8*	09/02/2005
John VanSant	*Emergency Management Coordinator*	*Spokane Regional Health District*	09/14/2005
AD Vickery	*Asst. Chief of Operations*	*Seattle Fire Department*	10/14/2005
John Wheeler	*Emergency Management Coordinator*	*Clark Regional Emergency Services Agency*	08/24/2005
Trudy Winterfeld	*Emergency Management Director*	*Cowlitz County. Emergency Management*	09/02/2005

*This is the date the information was entered into the database for surveys received in writing.

This page intentionally left blank.

Appendix C

Summaries of Washington State Resources Data

This page intentionally left blank.

C1.0 Regional Survey Results

The survey results are summarized in the following sections by DHS regions (1-9) and by statewide interviews. The jurisdictions represented by these interviewees cover over 90 percent of the state's population. Each region's specific section has three subsections; current capabilities, gaps and interviewee recommendations. These interviewee recommendations were used as inputs to the final study recommendations provided in Section 4.0 of this report.

C1.1 Region 1

Whatcom, Skagit and Snohomish

C1.1.1 Current Capabilities

Responses were obtained from Lummi Tribe, Snohomish County and Whatcom County. Both counties have developed emergency response plans, identified terrorist targets, prepared CBRNE responses, and have public information plans. Their response teams have knowledge of their emergency response plans. Responses ranged from 1 to 5 on the 5-point scale (with 5 high) rating the response effectiveness to the CBRNE/HazMat events, with the lowest score associated with concerns over the public health capabilities. The Lummi Tribe does not have a dedicated emergency management office and noted that they are frequently not included in the planning process. They have not identified terrorist targets in their plan, and will give the plan to their staff once it is finished.

Snohomish County has support agreements and memorandums of understanding with Seattle/King County. Whatcom County has a large Federal presence due to the border crossing and thus states that it has effective lines of communication with the federal agencies. This county has also arranged for a cross border Mutual Aid Pact for support from British Columbia, which will increase its capability to respond to CBRNE/HazMat incidents.

Snohomish County currently has a regionalized HazMat response system within the county. Currently they have three zones of operation and Everett. The zone that incorporates Everett has a mutual aid agreement with the city. Throughout the county, the initial response is always by the members of the zone team; if additional resources are needed the response is upgraded to all-team response (all three zones). Each fire district that houses team members is responsible for their training and the maintenance of their equipment. The Snohomish County teams recover response costs from the spiller. The most rural of the three zones also charges each of their fire districts an annual fee to maintain their zone's vehicle and other team costs. Finally, the zones have incorporated a joint training program with an all team classroom training three times a year and a zone on-hands training three times a year.

Both counties have response resource equipment to meet almost all the capabilities (Table C1-1), either directly or through mutual aid agreements. Only one element of the response resources was apparently missing: pharmaceutical stockpile, which is actually supplied at the national level. There also appears to be some concern about the availability of common responder communications equipment. Snohomish County is in the process of moving toward a countywide 800 MHz communications system. The Lummi Tribe achieves its resource needs often through mutual aid agreements.

Emergency management of the two counties identified needs for additional training, including biological agents and nuclear materials (Table C1-2). However, only NIMS training, public information training, and training with other agencies received confirmation from all respondents, with the public health respondent having the most deficiencies. The Lummi Tribe uses other personnel to meet the training levels.

Of the trained response personnel (Table C1-3), the two counties indicated current personnel only for first responder awareness and operational levels, hazardous material technician, and incident commander. The Lummi Tribe has awareness and operational trained personnel only.

C1.1.2 Gaps

Interoperable communications is the most significant gap in Region 1's resources. They also should be able to communicate with Canadian emergency response officials.

Lynnwood fire department would like a new truck, and also noted the coming need for equipment replacement funding when the federal grants end. The two counties meet the target capabilities for trained personnel. Respondents indicated that they feel they need more training and exercises, particularly in response to biological and nuclear incidents. The lack of available time for training, not necessarily the funding support, appears to be a significant constraint in further training. Funding for backfilling those personnel in training is also needed. It has not been possible to pay volunteers to attend training sessions.

The HazMat teams in Whatcom County are funded with DHS grants, so they need a more sustainable funding source.

C1.1.3 Region 1 Recommendations

A state funded regionalized HazMat program was recommended as a logical way to organize the HazMat teams in the state. It was suggested that for Region 1 a south and north branch of the team would be most effective. It was also recommended that one centralized area for all of the emergency management throughout a county would be beneficial, while allowing the individual cities to have a voice in the council. Having LEPCs that are up and running and include the people that need to be at the table is important.

The storage and security of hazardous chemicals in transportation arena is not good, especially at the local level. DOT provides background investigations on propane truck drivers to improve this and the state does a good job of keeping track of Tier 2 chemicals. Unfortunately, gasoline has been taken off of Tier 2 requirements. The suggestion was made that it would be good for the Tier 2 program to recover the additional petroleum sites that have been removed, as well as the storage of agricultural chemicals.

Lynnwood fire department mentioned the usefulness of statewide GPS mapping.

The Lummi tribe interviewee suggested that the state as a whole needs to improve tribal communications at all levels of the process ranging from emergency response to planning at the city, county, regional and state levels. This will enable better cooperation during an emergency event. Face to face communication is a necessary part of establishing and retaining communications links with the appropriate tribal personnel. Part of the communication problem stems from the differing organizational structures of the various Native American tribes and of the Native American tribes compared to the state agencies. It was suggested that generally broadcasting a message to a central agency in the tribe does not ensure that the information is passed to the appropriate member of the tribe. Continued efforts need to be made to have current tribal contact information and to confirm that the appropriate tribal member has been contacted when announcing meetings, training opportunities and exercises.

Table C1-1. Response Resources (Region 1).

	Target Capabilities Required	Current Capabilities				
		Snohomish County Lynnwood Fire Department	Snohomish County Emergency Management	Snohomish County Public Health	Lummi Tribe	Whatcom County Emergency Management
Trained HazMat Teams	✓	Yes[b]	Yes[g]	Via Contract[j]	Mutual Aid[p]	Yes[q]
Bomb Disposal Squad		Yes[c]	Yes	Via Contract[j]	Mutual Aid[p]	Yes
Level A PPE		Yes	Yes	Via Contract[j]	Mutual Aid[p]	Yes
Level B PPE	✓	Yes	Yes	Via Contract[j]	Mutual Aid[p]	Yes
Mass Decontamination Unit	✓	Yes[d]	Yes	Via Contract[j]	Mutual Aid[p]	Yes
Mass Casualty Hospital	✓	Yes[e]	Yes	Yes[k]	Mutual Aid[p]	Yes
Hospital Isolation	✓	Don't know	Yes[h]	Yes, No[l]	Mutual Aid[p]	Yes[r]
Pharmaceutical Stockpile	✓[a]	Yes, Don't Know[f]	No	No	Don't know	No
Chemical Welfare Agent Antidotes		Don't know[f]	Yes	Mutual Aid[m]	Don't know	Yes
Emergency Response Center	✓	Yes	Yes	Yes	Yes	Yes
Common Responder Communications	✓	Yes	Yes	No[n]	Yes	Yes, No[s]
Chemical Air Monitoring	✓	Yes	Yes	Yes	Mutual Aid[p]	Yes
Radioactive Air Monitoring		Yes	Yes	Yes	Mutual Aid[p]	Yes
Biological Air Monitoring		Yes	No	Don't know[o]	Don't know	Yes, No[t]
Search and Rescue	C	Yes	Yes[i]	No	Mutual Aid[p]	Mutual Aid

[a] Need to have a plan for access to NSS.
[b] 90 trained in county. 25-30 on duty any given day. More trained as people leave and new agencies are added.
[c] Washington State Patrol team out of Marysville.
[d] One.
[e] The county has been planning these incidents, but it is out of his area of expertise.
[f] Currently working on building one.
[g] 115-120 people and growing.
[h] Minimal capability.
[i] County wide team with multiple locations.
[j] Within the county but not in public health.
[k] Required to do so, but no standard as to what mass casualty is.
[l] They are working on defining that currently hospitals can each provide it for one patient.
[m] Exists in military installations (federal assets), access through informal MAA.
[n] Can talk by telephone; no single radio system is in common across first responders in region.
[o] The available technologies are not accurate for field use.
[p] Informal Mutual Aid.
[q] 30 people. New ones are trained as others leave.
[r] Not a lot in Region 1. 500 people would be more than they can handle.
[s] Partial system.
[t] Have capture technologies. Not acceptable technology to all agencies.

Table C1-2. Response Exercises and Training (Region 1).

	Target Capabilities Required	Current Capabilities				
		Snohomish County Lynnwood Fire Department	Snohomish County Emergency Management	Snohomish County Public Health	Lummi Tribe	Whatcom County Emergency Management
NIMS Trained	✓	Yes	Yes	Yes	Yes	Yes
WISHA Level A/B Trained	✓	Yes	Yes	No	N/A[k]	Yes
Chemical Agent Trained	✓	Yes	Yes	No	Yes, Other[l]	Yes
Biological Agent Trained		Yes	Don't know[g]	Yes	Other	Yes
Radiological Agent Trained		Yes[a]	Yes	No	Other	Yes
Nuclear Agent Trained		No	Don't know	No	Other	Yes[p]
Explosives Trained	✓	No[b]	Yes, Other[h]	No	Other	Mutual Aid
Mass Evacuation Trained	✓	No[c]	Yes	No	No, Other [m]	Yes, Mutual Aid[q]
CBRNE Crime Scene Trained		Yes	No, Other[i]	Yes	Other[n]	Yes
Public Communications Trained	✓	No[c]	Yes	Yes	Yes	Yes
Mass Fatality Trained	✓	Yes[d]	Yes	No	Other[o]	Yes, MAA[r]
Antidote Trained		Yes[e]	Yes[j]	No	Other[o]	Other[s]
Mass Decontamination Trained	✓	Yes[f]	Yes	No	Other[o]	Yes
Trained with Industrial Teams	✓	N/A, No	Yes	No	N/A	Yes
Trained with Other Agencies	✓	Yes	Yes	Yes	Yes, Other	Yes

[a]Basic radiation training and sent 15 members to the advanced training.
[b]They support the bomb squad.
[c]Emergency management trains on this.
[d]They have a plan and are working to ensure coroner's office has what they need.
[e]A few personnel are trained.
[f]Still need to drill with the decontamination unit.
[g]No detection systems accurate for field use.
[h]Call in bomb squad.
[i]Law enforcement.
[j]HazMat technicians that are trained as emergency medical technicians.
[k]OSHA is "yes".
[l]One person, himself.
[m]There are people around that will help.
[n]FBI/Washington State Patrol.
[o]May exist in county.
[p]But would like more training.
[q]Small evacuations are "yes", and large ones via mutual aid agreement.
[r]Medical examiners can provide identification and body storage. Large event would use mutual aid agreement.
[s]Antidote recently received. Working on contracts for use and future training.

Table C1-3. Trained Response Personnel (Region 1).

	Target Capabilities Required	Current Capabilities				
		Snohomish County Lynnwood Fire Department	Snohomish County Emergency Management	Snohomish County Public Health	Lummi Tribe	Whatcom County Emergency Management
First Responder Awareness Level	✓	90	3	0, N/A	1	3
First Responder Operational Level	✓	90	3	0, N/A	1	3
Hazardous Materials Branch Officer		30[(a)]	0[(b)]	N/A	0	0
Hazardous Materials Branch Safety Officer		15	0[(b)]	N/A	0	0
Hazardous Materials Technician	✓	90	2	0, N/A	0	3
Incident Commander	✓	30	1	0, N/A	0	0
Private Sector Specialist Employees		2	0[(b)]	N/A	0	0
Technician with a Cargo Tank Specialty		20	0, Don't know	N/A	0	0
Technician with a Tank Car Specialty		20	0, Don't know	N/A	0	0
Technician with an Intermodal Tank Specialty		20	0, Don't know	N/A	0	0

Trained to the NFPA 472 standard. The numbers in the cell represent the number of trained personnel in that category. Note they do not represent a county-wide assessment, as the respondent was generally knowledgeable only about his/her operating unit. Respondents usually indicated some personnel trained to WAC 296-824-30005.

[(a)]There are quite a few this is an estimate.

[(b)]HazMat Team has them.

C1.2 Region 2

Jefferson, Clallam, Kitsap

C1.2.1 Current Capabilities

Responses were obtained from Clallam and Kitsap Counties. They indicated that the response teams are familiar with the emergency response plans, which contain a public communications plan. They have identified terrorist targets, and planned for CBRNE incidents. All respondents gave a "3" on the 1 to 5 scale of county's response effectiveness to CBRNE/HazMat events.

Clallam County does not have a HazMat team, but would like to (Table C2-1). The county depends on Ecology. Kitsap County has enough equipment and training to meet the current needs of the county, "but need more time in day to finish work." The first responders are trained to an awareness level for CBRNE and operations level for HazMat. They would like to have their own HazMat team, but do not have the funding. The emergency management office has good communications with first responders and mutual aid partners. Clallam County appears to have very little training (Table C2-2).

None of the respondents knew much about the types of trained personnel available (Table C2-3).

C1.2.2 Gaps

Resource gaps for Region 2 include a HazMat team. Clallam County has a major international border crossing, and other resources (Ecology and the military) are at a distance or potentially unavailable when needed. Other than military, there are no HazMat teams in the region.

Region 2 needs training to improve their own response capabilities, including fighting defensively until additional resources arrive. Clallam County appears to have substantial gaps in their training and trained personnel, including training with other agencies. Kitsap County currently meets the target capabilities with other trained individuals. At a minimum, some of the fire fighters in both counties need technician training to support defensive actions until a HazMat teams can arrive.

Region 2 also needs a permanent funding source for emergency management staff because they are now fully funded by DHS grants.

C1.2.3 Region 2 Recommendations

There were a few recommendations of how to provide a regionalized state funded HazMat system. Kitsap County tried to start a civilian HazMat team in their region, but they cannot

support/sustain it, since HazMat is only needed a few times a year in the region. There were two recommendations on how the state should support a regionalized HazMat team system. The first suggestion was for the state to ensure that all services (e.g., HazMat, law enforcement, and special rescue) are incorporated into the Fire Mobilization Plan. The second option given was for the state to enact legislation similar to Oregon's to form a system of state-supported HazMat teams.

Table C2-1. Response Resources (Region 2).

	Target Capabilities Required	Current Capabilities		
		Clallam County Emergency Management	Kitsap County Public Health	Kitsap County Emergency Management
Trained HazMat Teams	✓	No[b]	Yes, N/A[c]	Mutual Aid[h] [c]
Bomb Disposal Squad		Mutual Aid	Yes, N/A[d]	Mutual Aid[d]
Level A PPE		Yes	Yes, N/A[c]	Mutual Aid[c]
Level B PPE	✓	No	Yes, N/A[c]	Yes[i]
Mass Decontamination Unit	✓	Yes	Yes[e]	Yes
Mass Casualty Hospital	✓	Yes	Yes[f]	Yes
Hospital Isolation	✓	Yes	Yes	Yes[j]
Pharmaceutical Stockpile	✓[a]	No	Yes	No
Chemical Welfare Agent Antidotes		No	No[g]	Yes, Don't know
Emergency Response Center	✓	Yes	Yes	Yes
Common Responder Communications	✓	Yes	Yes	Yes[k]
Chemical Air Monitoring	✓	Yes	Via Contract, N/A[c]	Mutual Aid
Radioactive Air Monitoring		Yes	Via Contract, N/A[c]	Mutual Aid
Biological Air Monitoring		No	No[g]	Mutual Aid
Search and Rescue	C	No	Yes	No[l]

[a]Need to have a plan for access to NSS.
[b]Would call Ecology.
[c]They rely on the military for "imminent danger" HazMat incidents.
[d] Washington State Patrol Bomb Squad.
[e]Portable and fixed one in Kitsap County.
[f]They would go to the morgue if "casualty".
[g]State asset.
[h]Don't know size of the military team, somewhere between 12 and 24.
[i]All 3 counties have one.
[j]Limited.
[k]Entire region has worked on it with DHS money.
[l]Technical rescue for light urban rescue.

TableC2-2. Response Exercises and Training (Region 2).

	Target Capabilities Required	Current Capabilities		
		Clallam County Emergency Management	Kitsap County Public Health	Kitsap County Emergency Management
NIMS Trained	✓	No	Yes, No[a]	Yes, Mutual Aid[h]
WISHA Level A/B Trained	✓	No	Don't know	Yes, Mutual Aid[h]
Chemical Agent Trained	✓	No	Yes[b]	Yes, Mutual Aid[h]
Biological Agent Trained		No	Yes[b]	Yes, Mutual Aid[h]
Radiological Agent Trained		No	Yes[b]	Yes, Mutual Aid[h]
Nuclear Agent Trained		No	Yes[b]	Yes, Mutual Aid[h]
Explosives Trained	✓	No	N/A	Yes, Mutual Aid[h]
Mass Evacuation Trained	✓	No	N/A[c]	Yes[i]
CBRNE Crime Scene Trained		No	N/A	Don't know[j]
Public Communications Trained	✓	No	Yes[d]	Yes
Mass Fatality Trained	✓	No	N/A	Yes
Antidote Trained		No	No, N/A[e]	Mutual Aid
Mass Decontamination Trained	✓	Yes	N/A	Yes
Trained with Industrial Teams	✓	No	Yes, No[f]	N/A
Trained with Other Agencies	✓	No	Yes[g]	Yes[l]

[a]Working on this year.
[b]One employee is receiving WMD training.
[c]They make isolation and quarantine determinations - don't make mass evacuation determinations, they give opinions during incident command table discussions.
[d]Participate in joint information center.
[e]Administered by the individual – auto inject.
[f]Assume they would be represented in the exercise if affected by the exercise, but have not done one to date.
[g]The unified command.
[h]County has awareness level; Military has HazMat level.
[i]Pinpoint evacuation – trained single site emergency.
[j]Military not allowed to, FBI would do it.
[k]Military.

Table C2-3. Trained Response Personnel (Region 2).

	Target Capabilities Required	Current Capabilities		
		Clallam County Emergency Management	Kitsap County Public Health	Kitsap County Emergency Management
First Responder Awareness Level	✓	Don't know	N/A	Don't know
First Responder Operational Level	✓	Don't know	N/A	Don't know
Hazardous Materials Branch Officer		Don't know	N/A	Don't know
Hazardous Materials Branch Safety Officer		Don't know	N/A	Don't know
Hazardous Materials Technician	✓	Don't know	N/A	Don't know
Incident Commander	✓	Don't know	N/A	Don't know
Private Sector Specialist Employees		Don't know	N/A	Don't know
Technician with a Cargo Tank Specialty		Don't know	N/A	Don't know
Technician with a Tank Car Specialty		Don't know	N/A	Don't know
Technician with an Intermodal Tank Specialty		Don't know	N/A	Don't know

Trained to the NFPA 472 standard. The numbers in the cell represent the number of trained personnel in that category. Note they do not represent a county-wide assessment, as the respondent was generally knowledgeable only about his/her operating unit. Respondents usually indicated some personnel trained to WAC 296-824-30005.

This page intentionally left blank.

C1.3 Region 3

Thurston, Lewis, Pacific, Mason, Grays Harbor

C1.3.1 Current Capabilities

Responses were obtained only from Thurston County. The two respondents indicated that the response teams are familiar with the emergency response plans, which contain a public communications plan. They have identified terrorist targets, and planned for CBRNE incidents. The respondents gave a "2" and a "3" on the 1 to 5 scale of county's response effectiveness to CBRNE/HazMat events. While there was good communications between local groups, there was some concern about the lack of good communications with state and federal agencies.

The first responders can analyze a HazMat situation and evacuate per an operations/awareness level training (i.e., they have the ability to take defensive action until a HazMat team can arrive). Olympia has a mutual aid agreement for HazMat with the military (Ft. Lewis and McCord), which estimates a one-hour response time.

Thurston generally has the resources in Table C3-1, with the exception of limited Level A personal protective equipment, limited CWA antidotes, radioactivity monitoring equipment, and urban search and rescue. The respondents represented groups with different levels of training (Table C3-2), with at least one person stating that training did not include chemical, radioactive agents, mass evacuation, and training with other agencies. They agreed that they had few types of trained personnel (Table C3-3).

C1.3.2 Gaps

The most significant gap for this region is the absence of dependable access to a HazMat team. It is not cost effective for the region to support a dedicated HazMat team out of the local fire/emergency management budgets. Thurston County should be a focus for the response resources and training because of its relative population, relative frequency of current HazMat incidents, presence of a port, and position as capital of the state.

The region has training gaps, which are reinforced by the statements of both respondents who want more training for their jurisdictions. Gaps appear to include at least chemical, radioactive agents, mass evacuation, and training with other agencies. The respondents also stated that more exercises with potential partners (e.g., state agencies) are also desired. The region also needs trained individuals in the categories of hazardous materials technician and incident commander. The emergency management staff also struggles to compete with the schedules of the volunteers for firefighting and emergency response services, much less CBRNE/HazMat training.

C1.3.3 Region 3 Recommendations

The recommendations of the interviewees in this region included a state managed, state funded system for regional HazMat teams with a sustainable funding source. These regional teams should be run through either the Washington State Patrol or through the fire departments. It was also recommended that the state should better train and equip the Washington State Patrol for HazMat response, since they currently have statutory responsibility for HazMat events. Another recommendation was to develop training programs that allowed for routine exercises with potential partners (state agencies) and would have a method for compensating volunteers for training. Finally, more emphasis should be placed on enforcing the mandates for the emergency response community to adopt, such as using and practicing NIMS.

Table C3-1. Response Resources (Region 3).

	Target Capabilities Required	Current Capabilities	
		Thurston County Fire Chief	Thurston County Emergency Management
Trained HazMat Teams	✓	No	No, Mutual Aid[e]
Bomb Disposal Squad	✓	No	Yes[f]
Level A PPE		No	No, Mutual Aid[g]
Level B PPE	✓	Yes	Yes
Mass Decontamination Unit	✓	No[b]	Yes
Mass Casualty Hospital	✓	Yes	Yes
Hospital Isolation	✓	Don't know	Yes
Pharmaceutical Stockpile	✓[a]	Yes	No
Chemical Welfare Agent Antidotes		Yes[c]	Yes[h]
Emergency Response Center	✓	Yes	Yes[i]
Common Responder Communications	✓	Yes	Yes
Chemical Air Monitoring	✓	Yes	Yes
Radioactive Air Monitoring	✓	No	No[j]
Biological Air Monitoring		No	Don't know[k]
Search and Rescue	C	No[d]	No[l]

[a]Need to have a plan for access to NSS.
[b]County has mass decontamination unit, which is field deployable.
[c]Limited.
[d]State function.
[e]Some cities have mutual aid agreements. Don't know how large the teams are.
[f]County-wide.
[g]Some cities may have mutual aid agreements (limited capacity).
[h]Very limited local supplies.
[i]Incident command post for each incident and they have an emergency operations center.
[j]Geiger counter type of monitoring.
[k]Post office has biological detection in their mail processing system.
[l]Access to federal resources.

Table C3-2. Response Exercises and Training (Region 3).

	Target Capabilities Required	Current Capabilities	
		Thurston County Fire Chief	Thurston County Emergency Management
NIMS Trained	✓	Yes	Yes
WISHA Level A/B Trained	✓	[a]	Yes [a]
Chemical Agent Trained	✓	No	Yes
Biological Agent Trained		No	Yes
Radiological Agent Trained	✓	No	No
Nuclear Agent Trained		No	No
Explosives Trained	✓	Yes	Yes
Mass Evacuation Trained	✓	No	Yes
CBRNE Crime Scene Trained		No	Yes
Public Communications Trained	✓	Yes	Yes
Mass Fatality Trained	✓	Yes[b]	Yes
Antidote Trained		No	Don't know
Mass Decontamination Trained	✓	Yes[c]	Yes
Trained with Industrial Teams	✓	N/A	No
Trained with Other Agencies	✓	N/A	Yes[d]

[a]Level B only.
[b]Indirectly.
[c]Partially.
[d]Neighboring jurisdictions, federal/state agencies.

Table C3-3. Trained Response Personnel (Region 3).

	Target Capabilities Required	Current Capabilities	
		Thurston County Fire Chief	Thurston County Emergency Management
First Responder Awareness Level	✓	40	0
First Responder Operational Level	✓	20	N/A
Hazardous Materials Branch Officer		0	N/A
Hazardous Materials Branch Safety Officer		0	N/A
Hazardous Materials Technician	✓	0	N/A
Incident Commander	✓	[a]	N/A
Private Sector Specialist Employees		0	N/A
Technician with a Cargo Tank Specialty		0	N/A
Technician with a Tank Car Specialty		0	N/A
Technician with an Intermodal Tank Specialty		0	N/A

Trained to the NFPA 472 standard. The numbers in the cell represent the number of trained personnel in that category. Note they do not represent a county-wide assessment, as the respondent was generally knowledgeable only about his/her operating unit. Respondents usually indicated some personnel trained to WAC 296-824-30005.

[a] 39 trained as incident commander, but not for HazMat.

This page intentionally left blank.

C1.4 Region 4

Clark, Cowlitz, Skamania and Wahkiakum

C1.4.1 Current Capabilities

Responses were obtained only from Clark and Cowlitz Counties. The respondents indicated that the response teams are familiar with the emergency response plans, which contain a public communications plan. They have identified terrorist targets, and planned for CBRNE incidents. The government respondents gave "2", "3" and "4" on the 1 to 5 scale of county's response effectiveness to CBRNE/HazMat events.

The government respondents indicated that they have the resources in Table C4-1 either directly or via mutual aid. Interoperable communications is under development. The private sector respondent indicated a strong capability for HazMat response. This private sector team is even considered the East Clark County HazMat Team, but has not planned for CBRNE incidents.

The government respondents indicate current training and exercises in the categories in Table C4-2, with apparently less capability in some CBRNE incidents.

The two counties trained personnel in the categories in Table C4-3, with Clark County apparently having substantially greater numbers than Cowlitz County.

C1.4.2 Gaps

The principal resource gaps are:

- Interoperable communications within the region.
- Mutual aid agreements to cover response to areas outside Vancouver, including across the Columbia River. Reimbursement mechanisms are not formalized.

Training gaps also exist. Clark County apparently needs mass fatality training. The substantial trained capabilities in Vancouver need to be maintained. Areas outside Vancouver need to obtain training beyond awareness level in order to act defensively until additional resources arrive. Backfill funding is needed for those being trained.

C1.4.3 Region 4 Recommendations

The primary recommendation from Region 4 was the regionalization of CBRNE/HazMat response capability via a state-organized system. The team that is already in the region should

be provided with additional funding/equipment so they would be available for a regional response. Except for extenuating circumstances, the regional team would not respond outside the region. Also in the situation of more than one incident occurring at the same time within the region, it was recommended to have key trained personnel and minimal equipment staged throughout the region. These regionalized teams would require legislation to be passed for a sustainable funding source. This source could be similar to Oregon where the state collects a fee from facilities, transporters and industries. This type of system would also allow the state to lead the coordination of funding, resource sharing, and cooperative training among jurisdictions.

Another suggestion was to turn the wildfire incident management teams (Type 1 and 2) into all-hazards incident management teams. Similar to how all HazMat training is focused on a small portion of fire departments, the focus of all-hazards incident management training should be focused on a few groups, so they become very good at handling large incidents. It was also recommended to continue training the incident management teams and bringing more non-fire expertise into those teams, such as public health, law enforcement, and public works personnel.

It was suggested that the state provide funding for its mandates. Examples of the mandates are: the requirement to have a comprehensive Emergency Response Plan and Hazards Vulnerability Assessment that both have to be updated regularly, the requirement to have an LEPC, and unfunded exercise requirements.

Table C4-1. Response Resources (Region 4).

	Target Capabilities Required	Current Capabilities			
		Clark County Division Manager, Vancouver Fire	Clark County Georgia Pacific Inc.	Clark County Emergency Management	Cowlitz County Emergency Management
Trained HazMat Teams	✓	Yes[(b)]	Yes[(d)]	Yes	Mutual Aid[(h)]
Bomb Disposal Squad	✓	Yes	Mutual Aid[(e)]	Yes	No, Mutual Aid[(i)]
Level A PPE		Yes	Yes	Yes	Mutual Aid[(h)]
Level B PPE	✓	Yes	Yes	Yes	Yes[(j)]
Mass Decontamination Unit	✓	Yes	Yes	Yes	Yes
Mass Casualty Hospital	✓	Yes	Yes	Yes	Yes[(j)]
Hospital Isolation	✓	Yes	Yes	Yes	Yes
Pharmaceutical Stockpile	✓[(a)]	Yes	Don't know	Yes	No[(k)]
Chemical Welfare Agent Antidotes		Yes	Don't know	Yes	No
Emergency Response Center	✓	Yes	Yes	Yes	Yes
Common Responder Communications	✓	Yes, No[(c)]	Yes[(f)]	Yes, No[(g)]	No[(l)]
Chemical Air Monitoring	✓	Yes	Yes	Yes	Yes[(j)]
Radioactive Air Monitoring	✓	Yes	No	Yes	Yes[(j)]
Biological Air Monitoring		No	No	No	No
Search and Rescue	C	Yes	Mutual Aid	Yes	No, Mutual Aid[(m)]

[(a)]Need to have a plan for access to NSS.
[(b)] 16 people. New personnel being trained all the time.
[(c)]Limited capability. Spending about $1 million of DHS grant money to fix some of the problems.
[(d)] 25 people, typically 2-3 new people with less than 1 yr in training.
[(e)]Portland.
[(f)]All personnel have 800 MHz.
[(g)]Cannot communicate outside Clark County. Currently working on problem.
[(h)]Informal agreement with the City of Vancouver.
[(i)]Washington State Patrol.
[(j)]Limited.
[(k)]Don't know where they would get them, but would call the state.
[(l)]Currently working on it.
[(m)]Informal agreement with Clark County.

Table C4-2. Response Exercises and Training (Region 4).

	Target Capabilities Required	Current Capabilities			
		Clark County Division Manager, Vancouver Fire	Clark County Georgia Pacific Inc.	Clark County Emergency Management	Cowlitz County Emergency Management
NIMS Trained	✓	Yes	Yes	[d]	Yes
WISHA Level A/B Trained	✓	Yes	Yes	[d]	Yes[e]
Chemical Agent Trained	✓	Yes	Yes	[d]	Yes[e]
Biological Agent Trained		Yes	Mutual Aid	[d]	Yes [e]
Radiological Agent Trained	✓	Yes	Mutual Aid	[d]	Yes [e]
Nuclear Agent Trained		Yes	Mutual Aid	[d]	Yes [e]
Explosives Trained	✓	Yes	Mutual Aid	[d]	Yes[f]
Mass Evacuation Trained	✓	Yes	Yes, Mutual Aid[b]	[d]	Yes
CBRNE Crime Scene Trained		Yes	Mutual Aid	[d]	Yes[g]
Public Communications Trained	✓	Yes	Yes[c]	[d]	Yes
Mass Fatality Trained	✓	No	Yes	[d]	Yes
Antidote Trained		Yes	No	[d]	No, Other[h]
Mass Decontamination Trained	✓	Yes	Yes	[d]	Yes
Trained with Industrial Teams	✓	Yes[a]	Yes	[d]	Yes
Trained with Other Agencies	✓	Yes	Yes	[d]	Yes

[a] Private teams. They have a rotating system on which facilities they train with which years and how frequently they train with facilities that have the target hazards and rank in the top 20.
[b] For mill, not for community around the mill.
[c] Limited.
[d] Deferred to other Vancouver Fire contact for responses.
[e] Some awareness.
[f] Law enforcement.
[g] 1 or 2 people.
[h] May come with HazMat team. Don't have auto-injectors. Emergency medical services and hospitals may have some of this training.

Table C4-3. Trained Response Personnel (Region 4).

	Target Capabilities Required	Current Capabilities			
		Clark County Division Manager, Vancouver Fire	Clark County Georgia Pacific Inc.	Clark County Emergency Management	Cowlitz County Emergency Management
First Responder Awareness Level	✓	164	25	[b]	3[c]
First Responder Operational Level	✓	164	25	[b]	1[c]
Hazardous Materials Branch Officer	✓	6	6	[b]	N/A
Hazardous Materials Branch Safety Officer	✓	6	15	[b]	N/A
Hazardous Materials Technician	✓	16	25	[b]	1[c]
Incident Commander	✓	25	5	[b]	1[c]
Private Sector Specialist Employees		0	0[a]	[b]	N/A
Technician with a Cargo Tank Specialty	✓	8	15	[b]	N/A
Technician with a Tank Car Specialty	✓	8	15	[b]	N/A
Technician with an Intermodal Tank Specialty		0	15	[b]	N/A

Trained to the NFPA 472 standard. The numbers in the cell represent the number of trained personnel in that category. Note they do not represent a county-wide assessment, as the respondent was generally knowledgeable only about his/her operating unit. Respondents usually indicated some personnel trained to WAC 296-824-30005.
[a]To help contain a HazMat incident they may need to cut power etc.
[b]Referred to other Clark County contact for responses.
[c]Emergency Management Office.

This page intentionally left blank.

C1.5 Region 5

Pierce County

C1.5.1 Current Capabilities

The respondents from Region 5 indicated that the response teams are familiar with the emergency response plans, which contain a public communications plan. They have identified terrorist targets, and planned for CBRNE incidents. The respondents gave "3" and "4" on the 1 to 5 scale of county's response effectiveness to CBRNE/HazMat events.

The respondents indicate that they have the resources listed in Table C5-1, but common communications is the area needing the most improvement. DHS grants have been used to purchase equipment. Fort Lewis says that storage is a problem for all the equipment they have received, but replacement will be a problem because there is no budget for it.

In the training categories (Table C5-2), mass evacuation training may be insufficient. All respondents, however, expressed general concerns about the level of training and the number of experienced staff. Turnover requires constant training of new staff. Trained staff in the categories in Table C5-3 may be insufficient; although it is also possible other potential respondents may have been able to provide more detail.

Tacoma Fire and Emergency Management are considered a hub for high-technology equipment, resources, and trained teams throughout the state. They receive many requests for assistance, but do not have the funding to respond.

The military worries that they cannot meet expectations of surrounding jurisdictions for emergency response. They generally only respond off base to military accidents.

Mutual aid agreements are not often formalized.

C1.5.2 Gaps

Resource gaps include:

- Interoperable communications is the most significant gap in their resources, and
- Equipment replacement will be an ongoing concern because it has not been budgeted.

Sufficient trained staff is apparently also a gap, crossing all major categories, but this may be only a result of who was contacted. Others should be contacted to clarify this gap. In any case,

high turnover requires constant training. Training also requires backfilling those being trained, which adds additional expense. Tacoma cannot support the needs of the region. Mutual aid agreements are needed to assure desire responsiveness and reimbursement when called by others.

The military recommends more cross-jurisdictional training and realistic scenarios.

C1.5.3 Region 5 Recommendations

All three interviewees in Region 5 recommended a regionalized-type response program.

Tacoma fire department mentioned a few reasons for supporting a regionalized HazMat response program: (1) there are a lot of resources on the I-5 corridor that could be useful to eastern Washington. (2) A tighter organization in Pierce Co. would allow the Tacoma team to rely on resources from other organizations and visa versa. (3) A regionalized organization would allow for the standardization of HazMat teams throughout Washington.

(1) The Tacoma fire department and emergency management stated that they have so much expertise and they are a hub for high-tech equipment throughout the state that they get called on to help with incidents throughout the state. Since the state mobilization plan does not include a formal HazMat response plan, there are no resources to support state deployment (unless a governor's or presidential proclamation is in effect). If they had a statewide regional response plan with state funding, then they could go anywhere in the state to mitigate a situation. However, this law needs to be deeper than State Mobilization Plan; it needs to be a specific regionalized HazMat response plan. Their expertise needs to be replicated throughout the state, so it does not put as much pressure on them to be the only responders. That also is true for the search and rescue teams as well as other types of response; the bulk of them are in Pierce Co. and they have to help respond throughout Washington because that expertise does not exist elsewhere. When you buy DHS equipment it is stated that you cannot deny deployment of that equipment to any other region in Washington or other states as long as it is possible that it can go. But you need the funding to sustain that. Having the equipment and expertise spread throughout the state would serve everyone better than having it all concentrated in the Puget Sound area. The funding for such programs could come through transportation permits, trucking tariffs, to give established teams ability to mobilize outside of jurisdiction.

(2) Tacoma Fire does not have a hard fast MAA with other jurisdictions in Pierce County, so when they do respond to incidents outside of Tacoma it is arbitrary. Occasionally, costs can be recovered through the spiller, but if the event is a jurisdiction with a small fire department and no responsible party they cannot rely on the jurisdiction to pay for it. A tighter organization would also allow the Tacoma Fire Department to draw on resources throughout the county for a big incident in Tacoma. Currently, the City of Tacoma HazMat team staffing is at low levels.

(3) A coordinated regional approach to HazMat response would also standardize the Washington HazMat teams. The concept of a HazMat team in Washington is so diverse that if

you ask Seattle what a Level A HazMat team is and then you ask Tacoma, you may get different answers. There could be a coordinated effort to look at a statewide regional response plan that can be funded by industry (tax on containers in the port, trucks, trains etc).

Another recommendation was to have a state employee that could assist local jurisdictions with the paperwork associated with following the current cost recovery laws. There are some good cost recovery laws on the books, but they are cumbersome to follow.

Also the military team stated recommended a state program for funding and organizing cross-jurisdictional events. Currently, any such training is funded out of the hosting agency's budget. They are required to do an annual exercise and they invite partners from outside agencies to attend, but the exercises are sometimes not very realistic or they are only at the command level. They need to be more realistic about where these training scenarios are conducted (a terrorist attack in rural Ft. Lewis is less likely than the Port).

Table C5-1. Response Resources (Region 5).

	Target Capabilities Required	Current Capabilities			
		Pierce County Health Department	Pierce County Assistant Chief, Tacoma Fire	Pierce County Emergency Management	Pierce County Fort Lewis
Trained HazMat Teams	✓	Via Contract[b]	Yes[j]	Yes[n]	Yes[r]
Bomb Disposal Squad	✓	Via Contract[b]	No[k]	Yes	Yes[s]
Level A PPE	✓	Yes	Yes	Yes	Yes
Level B PPE	✓	Yes[c]	Yes	Yes	Yes
Mass Decontamination Unit	✓	Via Contract[b] [d]	Yes	Yes	Yes[t]
Mass Casualty Hospital	✓	Yes[e]	Yes	Yes, No[o]	Yes
Hospital Isolation	✓	Yes	Yes[l]	Yes, No[o]	Yes
Pharmaceutical Stockpile	✓[a]	Yes[f]	Yes	Yes, No[p]	Via Contract
Chemical Welfare Agent Antidotes	✓	Yes[g]	Yes	Yes, No[p]	Yes
Emergency Response Center	✓	Yes	Yes	Yes	Yes
Common Responder Communications	✓	Yes	Yes[m]	Yes	Yes
Chemical Air Monitoring	✓	Yes[h]	Yes	Yes	Yes
Radioactive Air Monitoring	✓	Don't know[i]	Yes	Yes	Yes
Biological Air Monitoring	✓	Yes	Yes	Yes	No[u]
Search and Rescue	U	Yes	Yes	Yes[q]	No

[a] Need to have a plan for access to NSS.
[b] County has teams, but not public health department.
[c] Use all the time for drug labs. Public Health does the evaluation of level of contamination. They work with state certified contractors to make sure that they do the cleanup correctly.
[d] Emergency management was asking public health how to handle the decontamination of fire/police responders.
[e] Hospitals have been designated as hospitals of choice, including Ft. Lewis.
[f] Limited.
[g] Hospitals and emergency management.
[h] Public health uses them in its day-to-day work.
[i] Military would probably respond to that.
[j] 31 members. On-going training for replacements.
[k] Police departments.
[l] Treatment but not isolation or quarantine.
[m] Within the city yes; different in the rest of the county.
[n] 3 teams (25 people) in fire departments. New people are trained on a regular basis.
[o] All hospitals are commercial. Unless someone forces them to, they don't have to accept contaminated patients. There is some capacity, but doubt it is more than 5-10 patients in isolation/quarantine.
[p] Limited quantity, to last a few hours.
[q] 110 members; only team in the state.
[r] 6-8 people are on duty at any given time. Training new personnel, to bring them up to standards.
[s] Explosive ordnance disposal detachment.
[t] Limited to using hoses which people walk through.
[u] Biotickets are used as an indicator prior to sending something to the laboratory.

Table C5-2. Response Exercises and Training (Region 5).

	Target Capabilities Required	Current Capabilities			
		Pierce County Health Department	Pierce County Assistant Chief, Tacoma Fire	Pierce County Emergency Management	Pierce County Fort Lewis
NIMS Trained	✓	Yes[a]	Yes	Yes	Yes
WISHA Level A/B Trained	✓	Yes[b]	Yes	Yes	Yes
Chemical Agent Trained	✓	Yes[c]	Yes	Yes	Yes
Biological Agent Trained	✓	Yes	Yes	Yes	Yes[l]
Radiological Agent Trained	✓	Yes	Yes	Yes	Yes[m]
Nuclear Agent Trained	✓	Other[d]	Yes	Yes	Yes[n]
Explosives Trained	✓	N/A	Yes	Yes	Yes[n]
Mass Evacuation Trained	✓	N/A	Yes[e]	Yes[h]	Yes[o]
CBRNE Crime Scene Trained	✓	N/A	Yes[f]	Yes[i]	Yes[p]
Public Communications Trained	✓	Yes	Yes	Yes[j]	Yes[q]
Mass Fatality Trained	✓	Don't know	Yes	Yes[k]	Yes[r]
Antidote Trained	✓	Don't know	Yes[g]	Yes	Yes[o]
Mass Decontamination Trained	✓	Yes	Yes	Yes	Yes
Trained with Industrial Teams	✓	No	Yes	Yes	No
Trained with Other Agencies	✓	Yes	Yes	Yes	No

[a] All staff had to receive certification on NIMS.
[b] Some staff are trained for HazMat, 40-hour trained.
[c] Respond to HazMat spills on a day-to-day basis.
[d] Contact Ft. Lewis.
[e] Not done by HazMat team. Other fire department personnel do this.
[f] Police department.
[g] Medics within the fire department do this.
[h] Puyallup and Tacoma a little bit. Graham none.
[i] Minor amount for police in Puyallup and Tacoma, but Graham has none.
[j] Graham has some training. Puyallup and Tacoma give to public information officer.
[k] Capability in Graham and Tacoma, but not in Puyallup.
[l] Some training but need more.
[m] Have been in some training exercises, but fire department would respond to that.
[n] Spill response team is trained but others are first responders.
[o] Fire department responds and spill response team assists.
[p] Law enforcement.
[q] Public affairs office.
[r] Medical.

Table C5-3. Trained Response Personnel (Region 5).

	Target Capabilities Required	Current Capabilities			
		Pierce County Health Department	Pierce County Assistant Chief, Tacoma Fire	Pierce County Emergency Management	Pierce County Fort Lewis
First Responder Awareness Level	✓	N/A	Don't know	2[(a)]	[(b)]
First Responder Operational Level	✓	N/A	Don't know	2[(a)]	[(b)]
Hazardous Materials Branch Officer	✓	N/A	Don't know	Don't know	[(b)]
Hazardous Materials Branch Safety Officer	✓	N/A	Don't know	Don't know	[(b)]
Hazardous Materials Technician	✓	N/A	Don't know	1[(a)]	[(b)]
Incident Commander	✓	N/A	Don't know	Don't know	[(b)]
Private Sector Specialist Employees	✓	N/A	Don't know	Don't know	[(b)]
Technician with a Cargo Tank Specialty	✓	N/A	Don't know	Don't know	[(b)]
Technician with a Tank Car Specialty	✓	N/A	Don't know	Don't know	[(b)]
Technician with an Intermodal Tank Specialty	✓	N/A	Don't know	Don't know	[(b)]

Trained to the NFPA 472 standard. The numbers in the cell represent the number of trained personnel in that category. Note they do not represent a county-wide assessment, as the respondent was generally knowledgeable only about his/her operating unit. Respondents usually indicated some personnel trained to WAC 296-824-30005.
[(a)]Everyone on team.
[(b)]Deferred responses to the fire department.

C1.6 Region 6

King County

C1.6.1 Current Capabilities

The respondents indicated that the response teams are familiar with the emergency response plans, which contain a public communications plan. They have identified terrorist targets, and planned for CBRNE incidents. The respondents gave "4" and "5" on the 1 to 5 scale of county's response effectiveness to CBRNE/HazMat events.

The county is split into three zones with nine HazMat teams in the public sector. Zone 1 is Shoreline across the north side of the county (Kenmore, Bothell, and Kirkland) to Maple Valley Highway, Zone 3 is Maple Valley and south, and Zone 5 is the City of Seattle. In Zone 1, cash and equipment move around between the partners, whom have established formal mutual aid agreements. The housing of equipment also moves between partners. They respond together as a zone. In Zone 3, each partner department has its own equipment. If there is an event at the Port of Seattle, the equipment will come from the Port of Seattle fire department, and additional staff will come from throughout the zone to help in the response.

The nine public sector HazMat teams are in Federal Way, Auburn, Kent, Tukwila, Port of Seattle, Renton, City of Seattle, and two teams in the east side of King County. There are also a few private sector HazMat teams in the area, such as Boeing.

Region 6 has sufficient resources (Table C6-1). Radio systems at 800 MHz may not reach all parts of the county because of the topography. One respondent noted that the calibration and replacement of existing equipment may be a problem. With nine HazMat teams, they probably have the training discussed in Table C6-2, although specific training details were not obtained from the respondents. The respondents did comment generally on the need for more intra-regional and cross-discipline training.

The multi-zone approach has created some problems in joint exercises because of the multiple contracts that must be signed. In addition, individual agencies are reluctant to host exercises because of liability concerns.

C1.6.2 Gaps

King County apparently achieves the target resource and training capabilities with the exception of the problem with the radio system in some parts of the county. The respondents also commented on budgetary problems with replacement equipment. Thus the resource gaps include:

- Sustainable funding for replacement equipment, and
- Potential problems with 800 MHz radio system in specific parts of King County.

The respondents also identified training elements not covered in the tables below, which included training gaps in intra-regional and cross-discipline responses and training needed on new equipment.

Additional legislation may be needed to address the liability concerns in exercises involving multiple jurisdictions.

C1.6.3 Region 6 Recommendations

Region 6 interviewees stated that they do not see a lot of interaction with other counties/jurisdictions in Washington State on the operational level. However, there is interaction on the administrative level. The recommendation was for the state to establish operating regions, and to establish a single set of regions for all purposes (fire, DOT, ecology, health). Ecology, DOT, Fire Mobilization regions are all different, but legislation needs to be enacted in order to standardize the regions. There needs to be a common regional division of counties across all departments and purposes. A standardization of HazMat team capabilities for a certain type was also recommended.

An interviewee suggested that the state does not have a good feel for where the hazardous chemicals are located. Due to "just in time delivery" and storage of chemicals on site, the "Community Right to Know Act" has been negated. The chemicals are in constant movement and since Title 3 Community Right to Know is based on storage, the state does not have a good idea of where the chemicals are.

The difficulty in emergency response capabilities within King County is more on the administrative/preparedness side. Emergency preparedness/training for Zone 1 is easy, since they operate together as one entity; however, to train as a single unit for Zone 3 is harder because of their autonomy. Currently, the state has to issue six contracts to give them funding to do an exercise together. This process makes it cumbersome to get state funding. The Zone 3 participants also do not want to take the legal risk and liability of hosting the exercise for the zone. There needs to be a state system put in place that would alleviate this issue.

Table C6-1. Response Resources (Region 6).

	Target Capabilities Required	Current Capabilities		
		King County Director, Emergency Management	King County HazMat Program Coordinator, Emergency Management	King County Seattle Fire Department
Trained HazMat Teams	✓	Yes	Yes[g]	Yes[q]
Bomb Disposal Squad	✓	Yes	Yes[h]	Yes
Level A PPE	✓	Yes[b]	Yes	Yes
Level B PPE	✓	Yes[c]	Yes	Yes
Mass Decontamination Unit	✓	Yes[b]	Yes	Yes
Mass Casualty Hospital	✓	Yes	Yes[i]	Yes
Hospital Isolation	✓	Yes[e]	No[j]	Yes
Pharmaceutical Stockpile	✓[a]	Yes[e]	Yes[e]	Yes
Chemical Welfare Agent Antidotes	✓	Don't know	Yes	Yes
Emergency Response Center	✓	Yes	Yes	Yes
Common Responder Communications	✓	Yes	Yes, No[k]	Yes
Chemical Air Monitoring	✓	Yes	Yes	Yes
Radioactive Air Monitoring	✓	Yes	Yes	Yes
Biological Air Monitoring	✓	Yes	Yes	Yes
Search and Rescue	U	Yes[f]	Yes[f]	Yes

[a]Need to have a plan for access to NSS.
[b]HazMat teams.
[c]Trying to get it to every law enforcement group in county.
[d]Every hospital should have at least one room.
[e]City has some. NSS is main source.
[f]Combined Pierce, King, and Seattle fire department teams.
[g]Unincorporated areas are covered by fire districts. Those areas with no risk have no aid agreements. The average team in King County is 13 persons.
[h] 5 squads.
[i]19 hospitals
[j]Health department.
[k]Yes and No because of holes in system.
[l] 11 on duty at any time, training new members as openings occur.

Table C6-2. Response Exercises and Training (Region 6).

	Target Capabilities Required	Current Capabilities		
		King County Director, Emergency Management	King County HazMat Program Coordinator, Emergency Management	King County Seattle Fire Department
NIMS Trained	✓	[a]	[b]	Yes
WISHA Level A/B Trained	✓	[a]	[b]	Yes
Chemical Agent Trained	✓	[a]	[b]	Yes
Biological Agent Trained	✓	[a]	[b]	Yes
Radiological Agent Trained	✓	[a]	[b]	Yes
Nuclear Agent Trained	✓	[a]	[b]	Yes
Explosives Trained	✓	[a]	[b]	Yes
Mass Evacuation Trained	✓	[a]	[b]	Yes
CBRNE Crime Scene Trained	✓	[a]	[b]	Yes
Public Communications Trained	✓	[a]	[b]	Yes
Mass Fatality Trained	✓	[a]	[b]	Yes
Antidote Trained	✓	[a]	[b]	Yes
Mass Decontamination Trained	✓	[a]	[b]	Yes
Trained with Industrial Teams	✓	Yes	Yes	Yes
Trained with Other Agencies	✓	Yes	[b]	Yes

[a]Deferred to other interviewee.

[b]The training of the 9 teams varies. Does not know the details of each team, but the capabilities are substantial.

Table C6-3. Trained Response Personnel (Region 6).

	Target Capabilities Required	Current Capabilities		
		King County Director, Emergency Management	King County HazMat Program Coordinator, Emergency Management	King County Seattle Fire Department
First Responder Awareness Level	✓	N/A	9	950
First Responder Operational Level	✓	N/A	1	950
Hazardous Materials Branch Officer	✓	N/A	Don't know	8
Hazardous Materials Branch Safety Officer	✓	N/A	Don't know	12
Hazardous Materials Technician	✓	N/A	1	180
Incident Commander	✓	N/A	Don't know	60
Private Sector Specialist Employees	✓	N/A	Don't know	N/A
Technician with a Cargo Tank Specialty	✓	N/A	24	60
Technician with a Tank Car Specialty	✓	N/A	Don't know	60
Technician with an Intermodal Tank Specialty	✓	N/A	24	60

Trained to the NFPA 472 standard. The numbers in the cell represent the number of trained personnel in that category. Note they do not represent a county-wide assessment, as the respondent was generally knowledgeable only about his/her operating unit. Respondents usually indicated some personnel trained to WAC 296-824-30005.

This page intentionally left blank.

C1.7 Region 7

Okanogan, Chelan, Douglas, Kittitas, Grant

C1.7.1 Current Capabilities

Respondents were from Chelan, Douglas and Grant Counties. They indicated that the response teams are familiar with the emergency response plans, which contain a public communications plan. They have identified terrorist targets, and planned for CBRNE incidents. The respondents gave "2", "3", and "4" on the 1 to 5 scale of county's response effectiveness to CBRNE/HazMat events.

Region 7 does not have HazMat teams, and one respondent could not recall having an incident. They have a general level of response equipment, but do not have Level A personal protective equipment, CWA antidotes, or biological monitoring. Grant County has been attempting to obtain agreements with industrial companies to support a public HazMat team, but the process is ongoing and difficult. Hospital capabilities are minimal, as they do not have large facilities (Table C7-1). They have little CBRNE training (Table C7-2), but desire additional training in general. They have few of the trained personnel in Table C7-3.

Sustainable funding was mentioned as a problem. One respondent noted that they cannot pay volunteers to go to training, and thus it is difficult to get them to go.

C1.7.2 Gaps

Region 7 has a history of very low HazMat incidents. Comparison of the targets to the current capabilities suggests the following regional resource gaps:

- An apparent plan to obtain materials from the NSS if needed;
- Interoperable communications within the region;
- Limited hospital capabilities for mass casualties and isolation/quarantine, although the limited capabilities may be consistent with the regional population; and
- Biomonitoring for potential plant and animal disease agents, particularly in Grant County.

Chelan County appears to provide the target training capabilities in the region, but the coverage is with an informal agreement with the Tri-Cities. Grant County does not believe it has sufficient nearby response resources. Informal mutual aid agreements do not provide adequate coverage. The use of volunteer forces in Grant County may be inadequate for the more

substantial demands of CBRNE/HazMat. Both counties felt that they needed more first responder awareness/operations training to ensure an effective defensive response during the wait for the HazMat team.

Although this analysis does not address specific counties, the responses from the Grant County suggest that small population counties may have greater problems in reaching target resource and training capabilities.

C1.7.3 Region 7 Recommendations

The major recommendation by this region was the development of a statewide HazMat team and/or the funding to support such a team that will provide coverage in their region.

Currently there is no standardized statewide system, so Region 7 doesn't have guaranteed coverage in case of a HazMat incident. They have verbal agreements with some HazMat teams, but the primary responsibility of those teams is to cover their local area. One of the interviewees mentioned that it would not be necessary to have a team solely dedicated to Region 7, but it would be good to have a Central Washington HazMat team. This would also provide a centralized way of reporting incidents to the emergency management; they do not always get called as soon as first responders come across an incident. Also this type of system would allow the standardization of HazMat team types and capabilities. This way they would have a team that they know, the team knows the area, and they know what the team has. The counties would be willing to contribute personnel to train as a part of the state team.

The suggestion from Grant County was to combine the public agency personnel that they have with private industry personnel in their county and train them together to build a HazMat team for the public sector. The companies in the area have expressed an interest in being part of public response team, but they need to work out hurdles, such as: medical information transfers from the company to the public response team, a medical officer that can oversee response, and providing liability protection for the company during a response. Grant County interviewees stated that HazMat should be a local commitment with dedicated funding from the state to support it.

Another recommendation was to increase the training requirements for the WSP, since by statute they are the ones with on-scene incident command responsibility for a lot of jurisdictions in the county. In Chelan County, the local jurisdictions have never accepted the responsibility for on-scene command for HazMat from WSP. There appears to be substantial variability in the capabilities of individual WSP personnel. One interviewee recommended more consistent WSP training and capability. An increase in the minimum training level of the sergeants would also help them implement incident command. In addition, if there were standard HazMat teams and standardized types of response teams, it would be easier for the WSP responder to look at a list and decide what type of team is needed.

Table C7-1. Response Resources (Region 7).

	Target Capabilities Required	Current Capabilities			
		Chelan County Emergency Management	Douglas County Public Health	Grant County Emergency Management	Chelan County Wenatchee Fire Department
Trained HazMat Teams	✓	Via Contract[b]	No	No[m]	No
Bomb Disposal Squad		Yes[c]	Yes[f]	No	No
Level A PPE		Via Contract[b]	No	No	No
Level B PPE	✓	Yes, Via Contract[b]	Yes[g]	Yes[n]	Yes
Mass Decontamination Unit	✓	Yes	Yes[h]	Yes[o]	Yes
Mass Casualty Hospital	✓	Yes	Yes[i]	Yes[p]	Yes
Hospital Isolation	✓	Yes	Yes[j]	Yes	Yes
Pharmaceutical Stockpile	✓[a]	No	No	No	No
Chemical Welfare Agent Antidotes		No[d]	No	No	No
Emergency Response Center	✓	Yes	Yes	No	Yes
Common Responder Communications	✓	Yes	No[k]	Yes	Yes
Chemical Air Monitoring	✓	Via Contract[e] [b]	No	Yes	No
Radioactive Air Monitoring		Yes, Via Contract[b]	No	Don't know	No
Biological Air Monitoring	✓	Via Contract[b]	No[l]	No	No
Search and Rescue	C	No	Don't know	No	No

[a]Need to have a plan for access to NSS.
[b]Informal verbal agreement with Tri-Cities team.
[c]Washington State Patrol Bomb Squad.
[d]Small amounts in the area due to organic phosphate they use in orchards.
[e]Their equipment is not calibrated because it is too expensive to calibrate.
[f]Chelan.
[g]Fire department.
[h]Hospital and each county by end of the year.
[i]Will need to ask for help if over 70 people.
[j]Have 12 hospitals, some extremely small, and one large hospital. They do have the ability to isolate up to about 50-60 people at a time.
[k] Currently it is an issue, but it is being worked on.
[l]Not in region.
[m]May get a HazMat Team through contract.
[n]Limited.
[o]One at each of four hospitals, and one mobile one.
[p]Very limited. Only one or two rooms in county. After that, they must go to Wenatchee.

Table C7-2. Response Exercises and Training (Region 7).

	Target Capabilities Required	Current Capabilities			
		Chelan County Emergency Management	Douglas County Public Health	Grant County Emergency Management	Chelan County Wenatchee Fire Department
NIMS Trained	✓	Yes, Other[a]	Yes [f]	No[i]	Don't Know, N/A
WISHA Level A/B Trained	✓	Yes, No, Other[b]	No	Via Contract	Don't Know, N/A
Chemical Agent Trained	✓	Yes, Other[c]	No	Via Contract	Don't Know, N/A
Biological Agent Trained	✓	Yes, Other[c]	Yes[g]	Don't know	Don't Know, N/A
Radiological Agent Trained		Yes, Other[c]	No	No	Don't Know, N/A
Nuclear Agent Trained		Yes, Other[c]	No	No	Don't Know, N/A
Explosives Trained		Yes, Other[c]	Yes [f]	No	Don't Know, N/A
Mass Evacuation Trained	✓	Yes	Yes [f]	Yes	Don't Know, N/A
CBRNE Crime Scene Trained		Don't know[d]	Yes [f]	No	Don't Know, N/A
Public Communications Trained	✓	Yes	Yes[h]	Yes	Don't Know, N/A
Mass Fatality Trained	✓	Yes [e]	Yes [f]	No	Don't Know, N/A
Antidote Trained		No, Other	No	No	Don't Know, N/A
Mass Decontamination Trained	✓	Yes	Yes, No[g]	Via Contract[j]	Don't Know, N/A
Trained with Industrial Teams		Yes	Yes	No	Yes
Trained with Other Agencies	✓	Yes	Yes	Yes	Yes

[a]Informal agreement.
[b]Level B trained, but Level A by others.
[c]Trained to the operations level, to recognize and take defensive action, or "stay out."
[d]FBI might investigate.
[e]Tabletop exercise two years ago.
[f] 10% of personnel.
[g] 25% of personnel.
[h] 70% of personnel.
[i]Assisting the industrial company in meeting this.
[j]Companies have done this within the plant facilities.

Table C7-3. Trained Response Personnel (Region 7).

	Target Capabilities Required	Current Capabilities			
		Chelan County Emergency Management	Douglas County Public Health	Grant County Emergency Management	Chelan County Wenatchee Fire Department
First Responder Awareness Level	✓	2	N/A	2	33
First Responder Operational Level		2	N/A	2	33
Hazardous Materials Branch Officer		[a]	N/A	0	0
Hazardous Materials Branch Safety Officer		[a]	N/A	0	0
Hazardous Materials Technician		[b]	N/A	2	1
Incident Commander	✓		N/A	2	0
Private Sector Specialist Employees			N/A	0	0
Technician with a Cargo Tank Specialty		[a,b]	N/A	0	0
Technician with a Tank Car Specialty		[a,b]	N/A	0	0
Technician with an Intermodal Tank Specialty		[a]	N/A	0	0

Trained to the NFPA 472 standard. The numbers in the cell represent the number of trained personnel in that category. Note they do not represent a county-wide assessment, as the respondent was generally knowledgeable only about his/her operating unit. Respondents usually indicated some personnel trained to WAC 296-824-30005.

[a]Comes with HazMat Team.

[b]Have some in county.

This page intentionally left blank.

C1.8 Region 8

Yakima, Klickitat, Benton, Franklin, Walla Walla

C1.8.1 Current Capabilities

Respondents were from Benton, Franklin, Walla Walla, and Yakima Counties. They indicated that the response teams are familiar with the emergency response plans, which contain a public communications plan. They have identified terrorist targets, and planned for CBRNE incidents. Their response teams have knowledge of their emergency response plans. The respondents gave either a "3" or "4"on the 1 to 5 scale of county's response effectiveness to CBRNE/HazMat events.

This region generally has the equipment listed in Table C7-1, and rarely mentioned equipment as one of the needs, except for the issue of interoperable communications. Communications between responders remains a problem. Concern for the equipment replacement costs was also mentioned.

Although there is no clear deficiency in the training categories in Table C7-2, all respondents stated the need for additional training. Additional funding needs for backfilling those being trained was also mentioned.

The region has multiple HazMat teams, and they appear to have the trained personnel to support them (Table C7-3). However, the region still has problems with covering the unincorporated areas of the counties and the cities that cannot afford to be part of the HazMat teams.

C1.8.2 Gaps

Resource gaps include:

- Interoperable communications equipment,
- Sustainable funding for replacement equipment, and
- Biomonitoring for potential plant and animal disease agents in Yakima.

There are no major training gaps in the comparison of the targets to the current conditions. All respondents, however, identified the need for additional training, including incident command. Inadequate funding for backfilling of those being trained was also mentioned.

There is a response gap in the unincorporated areas and cities that do not participate in the HazMat teams. There is a funding gap if the resources and personnel move outside their local jurisdiction to assist others. There is no clear reimbursement mechanism.

Benton County should remain a center for response resources and training because of its relative population, and the presence of Hanford, the Columbia Generating Station, and the nearby Umatilla Weapons Depot.

C1.8.3 Region 8 Recommendations

There were three main recommendations from Region 8. (1) Standardizing the regions (fire, DOT, DHS) throughout the state. (2) Having a state agency take on the HazMat response for Washington, so they can become standardized interoperable teams. (3) Standardizing the communications frequencies for use throughout the state.

(1) The goal of the DHS was to create interoperability and regionalization. At a local level this is working well, however, certain legislative tools are needed to implement this concept state wide. Standardizing the regions (fire, DOT, DHS, EMS) throughout the state was recommended as a way to make the state more interoperable. Currently, there are too many subdivisions for an efficient emergency response. The regions could be standardized by adopting just one of the current regional divisions for use by every agency. It was suggested that to help standardization and interoperability the state could mandate that there be only one fire department per a certain number of people. For example, if Seattle has one department for 1 million people than perhaps Walla Walla County does not need eight fire departments for 56,000 people. Another suggestion was to have the WSP and SFM at an equal level within the government organization, since they protect the same number of people. This system would also allow for more interoperability between local agencies, such as law enforcement and HazMat teams.

(2) After standardizing the regions there could be further standardization that takes place by having a lead state agency for HazMat response. This would allow them to have common equipment, training, and SOPs throughout the regions making them more interoperable. In this scenario regional teams could easily work together during a large incident. It was also recommended that other than the SFM, Ecology should play a significant role in statewide HazMat training, coordination, response, since the local jurisdictions and HazMat teams currently work hand-in-hand with Ecology during HazMat spills. It was also recommended that any HazMat system that is put in place have a clear avenue of funding for equipment and training at a regional level.

If there were regional HazMat teams, there was also a concern that a system be built that allows for a quick HazMat response time. Currently, the Tri-county team response time is two hours. Many HazMat incidents are winding down in 2 to 4 hours. It is difficult to have a team based in the Tri-Cities and expect it to be effective in Yakima. Some level of local response capability is necessary, and this needs to be included in any regionalized system. The problem with fast local

response is related to funding. The users of hazardous chemicals are supposed to have response plans for HazMat incidents, but often their plan is to call the fire department. The fire department should receive funding to respond in these situations. All the funding cannot go to a state agency with state HazMat teams located far away and then expect an effective response to a HazMat locally. The local fire departments need to have a dedicated HazMat funding stream (including training and equipment) to enable them to have first-response capabilities for the "routine" 9-1-1 HazMat call.

(3) Another suggestion from this Region was to have emergency frequencies and/or communications standardized. Currently, it is difficult for the locals to communicate with mutual aid partners, state agencies and federal agencies because there are few identified emergency frequencies. When phone lines are down or overloaded during an emergency they have no way of communicating to the other parties which channel to use. A decision regarding common communications needs to be made at the FCC level.

Table C8-1. Response Resources (Region 8). (2 sheets)

	Target Capabilities Required	Current Capabilities						
		Benton County (Alisa Johnson) Emergency Management	Benton County Public Health	Benton County Fire Chief	Benton County HazMat Team Coordinator	Franklin County Emergency Management	Walla Walla County Emergency Management	Yakima County Emergency Management
Trained HazMat Teams	✓	Yes[(b)]	Yes	Yes[(b)]	Yes[(b)]	N/A	Yes[(b)]	Yes, Mutual Aid[(b)] [(x)]
Bomb Disposal Squad	✓	Yes	Yes	Yes	Yes[(m)]	N/A	Yes[(s)]	Yes, Mutual Aid[(s)] [(y)]
Level A PPE	✓	Yes	Yes	Yes	Yes[(n)]	Yes[(o)]	Yes[(n)]	Yes[(n)]
Level B PPE	✓	Yes	Yes	Yes	No	N/A	Yes	Yes
Mass Decontamination Unit	✓	Yes	Yes[(e)]	Yes	Yes	Yes[(p)]	Yes	Yes
Mass Casualty Hospital	✓	Yes	Yes[(f)]	Yes	Yes	Yes	Mutual Aid[(t)]	Yes
Hospital Isolation	✓	Yes	Yes[(g)]	Yes[(j)]	Yes	Yes	Yes	Yes[(z)]
Pharmaceutical Stockpile	✓[(a)]	Yes	Yes[(h)]	Yes	Don't know	Yes	Yes [(u)]	No
Chemical Welfare Agent Antidotes	✓	Yes	Don't know	Yes[(k)]	Yes	Yes	Yes[(v)]	No
Emergency Response Center	✓	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Common Responder Communications	✓	Yes[(c)]	No[(i)]	No[(l)]	No	Yes[(q)]	Yes[(w)]	Yes
Chemical Air Monitoring	✓	Yes	Don't know	Yes	Yes	Yes	Yes	Yes
Radioactive Air Monitoring	✓	Yes	Don't know	Yes	Yes	Yes	No	No
Biological Air Monitoring	✓	Yes	Don't know	Yes	Yes	N/A, Don't know	No	No
Search and Rescue	C	No[(d)]	Yes[(d)]	No[(d)]	Yes[(d)]	Yes[(r)]	No	Yes, No[(aa)]

Table C8-1. Response Resources (Region 8). (2 sheets)

[a] Need to have a plan for access to NSS.

[b] There is a team, and the team is made up of 9-member fire dept. with approx. 45 team members. And team training is an ongoing process.

[c] Inside county and with pagers but not same radios outside the county.

[d] In place; being developed further by emergency management.

[e] All hospitals have them, and there are two with the HazMat teams.

[f] 12 Hospitals have planned for them.

[g] Hospitals can take at least one isolation patient. 99 patients can be in isolation in region. Depends on level of isolation. Some hospitals have portable isolation units.

[h] Principally NSS (new project is to have stockpiles in regions).

[i] Not within region. During an emergency, they have backup plans that will work. Satellite phones. But normally, police/fire/medical can't always communicate. All have ham radio operator equipment, but not operators.

[j] No for biological, yes for radiological.

[k] Limited but better than others.

[l] Can't talk to Washington State Patrol.

[m] Provided by Richland and Washington State Patrol.

[n] First responders do not have access to Level A. That is for the HazMat team and bomb squad only.

[o] DHS funds personal protective equipment for everyone.

[p] Purchased for Lourdes Hospital.

[q] Franklin UHF, Benton 800 MHz (which is expensive).

[r] Franklin is small; Benton is larger.

[s] Washington State Patrol.

[t] 3 hospitals locally, but regional response plan.

[u] NSS, some local capability.

[v] Mark 1 kits because of Umatilla Weapons Depot.

[w] 2 primary frequencies and a common frequency.

[x] City of Yakima part of the Tri-City team. Some fire jurisdictions have agreement with City of Yakima.

[y] Informal mutual aid agreement with US Army.

[z] Working on regional plan for 500 (4 hospitals).

[aa] Technical search and rescue set up in valley - trench rescue, building collapse rescue. All of Yakima Co. via MAA.

Table C8-2. Response Exercises and Training (Region 8). (2 sheets)

	Target Capabilities Required	Current Capabilities						
		Benton County Emergency Management	Benton County Public Health	Benton County Fire Chief	Benton County HazMat Team Coordinator	Franklin County Emergency Management	Walla Walla County Emergency Management	Yakima County Emergency Management
NIMS Trained	✓	Yes	Yes, No[d]	Yes	Yes	Yes	--	Yes
WISHA Level A/B Trained	✓	Yes	Yes, No[e]	Yes	Yes	Yes	--	Don't know
Chemical Agent Trained	✓	Yes	No	Yes	Yes	Yes	--	Yes[n]
Biological Agent Trained	✓	Yes	No[f]	Yes	Yes	Yes	--	Yes[n]
Radiological Agent Trained	✓	Yes	N/A	Yes	Yes	Yes	--	Yes[o]
Nuclear Agent Trained	✓	Yes	N/A	Yes	Yes	Yes	--	Yes
Explosives Trained	✓	Yes	N/A	Yes	Yes	Yes	--	No[p]
Mass Evacuation Trained	✓	Yes	N/A	No[k]	No[k]	Yes	--	Yes
CBRNE Crime Scene Trained	✓	No[a]	N/A	Yes	Yes	Yes[l]	--	No
Public Communications Trained	✓	Yes	Yes[g]	Yes	No	Yes[m]	--	Yes
Mass Fatality Trained	✓	No[b]	No[b]	No[k]	No	Yes	--	Yes
Antidote Trained	✓	No[c]	Yes[h]	Yes	Yes	Yes	--	No
Mass Decontamination Trained	✓	Yes	N/A	Yes	Yes	Yes	--	Yes
Trained with Industrial Teams	✓	Yes	Yes[i]	Yes	Yes	Yes	--	N/A
Trained with Other Agencies	✓	Yes	Yes[j]	Yes	Yes	Yes	--	Yes

Table C8-2. Response Exercises and Training (Region 8). (2 sheets)

[a]In the works for May 2006.

[b]Coroners are involved in discussion with plan. Top management has been trained in it, but general staff does not need to know.

[c]Emergency management has not had this training.

[d]Majority are "no", but in progress. All potential responders should be trained by fall of 2007.

[e]N95 masks, nurses that have these. Have some, but the public health community has not been trained to use them. Don't know why they would need them.

[f]They have to pay to train the pub health community. LHJ are the only ones that are trained.

[g]Have public information officer and backup.

[h]Vaccinations - small pox vaccination training. Have emergency medical services (EMS) and fire blended. Health officers can declare an emergency, so EMS can give vaccinations.

[i]Large Gas Companies – Emergency management trains with them but not local public health.

[j]Post office drill, drills with PNNL and Ecology, Public Health has to go through state public health lab. Spokane public health has a Category A lab to cover agents on the A through C list. Cannot ship to Spokane yet, but will be able to soon.

[k]Fire departments do this.

[l]Law enforcement.

[m]With mayors, county commissioner.

[n]Limited capability.

[o]Every 3 years.

[p]Planned.

Table C8-3. Trained Response Personnel (Region 8).

	Target Capabilities Required	Current Capabilities						
		Benton County Emergency Management	Benton County Public Health	Benton County Fire Chief	Benton County HazMat Team Coordinator	Franklin County Emergency Management	Walla Walla County Emergency Management	Yakima County Emergency Management
First Responder Awareness Level	✓	Don't know	N/A	51	12	0	--	--
First Responder Operational Level	✓	Don't know	N/A	40	33	0	--	--
Hazardous Materials Branch Officer		Don't know	N/A	4	15	0	--	--
Hazardous Materials Branch Safety Officer		Don't know	N/A	4	20	0	--	--
Hazardous Materials Technician	✓	Don't know	N/A	28	0	0	--	--
Incident Commander	✓	Don't know	N/A	4	0	0	--	--
Private Sector Specialist Employees		Don't know	N/A	0[(a)]	0	0	--	--
Technician with a Cargo Tank Specialty		Don't know	N/A	Don't know[(b)]	1	0	--	--
Technician with a Tank Car Specialty		Don't know	N/A	16	6	0	--	--
Technician with an Intermodal Tank Specialty		Don't know	N/A	Don't know[(b)]	0	0	--	--

Trained to the NFPA 472 standard. The numbers in the cell represent the number of trained personnel in that category. Note they do not represent a county-wide assessment, as the respondent was generally knowledgeable only about his/her operating unit. Respondents usually indicated some personnel trained to WAC 296-824-30005.

[(a)]No one on the team is in the private sector, but we train with them.

[(b)]Handle them but not sure of standard.

C1.9 Region 9

Spokane and East Side of State

C1.9.1 Current Capabilities

Respondents were from Colville Tribes, and Spokane and Stevens Counties. The two counties indicated that the response teams are familiar with the emergency response plans, which contain a public communications plan. They have identified terrorist targets, and planned for CBRNE incidents. Their response teams have knowledge of their emergency response plans. The respondents gave a "3" or "4" on the 1 to 5 scale of county's response effectiveness to CBRNE/HazMat events, except the Stevens County respondent who gave a "1". This respondent was particularly concerned that 90 percent of the responders, other than law enforcement personnel, were volunteers, and training funds are not available for volunteers. The respondent also felt that there was not enough equipment for a major accident, there was a need for basic personal protective equipment, and a way was needed to reimburse Spokane for their response efforts in Stevens County. Stevens County emergency response is 100 percent reliant on grants.

The Colville Tribes are completing their emergency response plan, which will show that they have decided to have no substantial response capability. Their reservation is located in both Ferry County (Region 9), and Okanogan County (Region 7), but they look to Spokane for assistance when needed.

Spokane has nearly all of the resources in Table C9-1, whereas Stevens County, an example of a rural county in the region, has far fewer resources. Interoperable communications is a problem in the region. Spokane expressed concern about the funding for equipment maintenance.

Tables C9-2 and C9-3 show that Spokane also has nearly all the training categories, and personnel, either directly or with assistance, except for some of the specialty response positions (e.g., cargo and intermodal tank specialists). All respondents seek additional training and exercises, however, to improve their capabilities. The public health respondent felt that funding was adequate for now, but his activities are 100% funded by grants. The Colville respondent felt that only the people associated with the ferries needed first responder training. Overall, the rural areas depend on Spokane, Ecology, and the WSP to meet their needs.

C1.9.2 Gaps

The regional resource gaps include:

- Interoperable communications equipment;

- Sustainable funding for replacement equipment, particularly in Spokane; and
- Reimbursement mechanism for Spokane when it responds to other counties.

Spokane should remain a focus for the response resources and training because of its relative population, manufacturing, and current HazMat incident levels. Spokane training gaps relate to the continued need for training, with both existing and new staff. Rural areas that depend on volunteers also face the difficult task of upgrading their training to CBRNE/HazMat needs, even if only at the awareness level. The rural areas need to attain a defensive ability for the interval waiting for the HazMat team. They cannot depend on the Washington State Patrol, with its low coverage level in the region, and thus should train more local responders.

The Colville Tribe should obtain formal agreements on response capabilities given their decision to have no substantial response capability.

Stevens County stated that it needed a mobile command post.

Sustainable funding is a problem, too, with those personnel and activities currently supported by DHS grants.

C1.9.3 Region 9 Recommendations

Region 9 respondents stated that an all-hazards mobilization plan for the State of Washington similar to the Fire Mobilization plan would be a good way to create regionalized HazMat teams. This all-hazards plan could include a hospital/public health response plan and a law enforcement mobilization plan as well as a HazMat plan. It was recommended to put in place a system to inform county emergency management what to levels the first responders in their counties are trained. Each agency reports to itself and the information does not always come together at the emergency manager's office. The Spokane emergency management interviewee suggested that more HazMat teams and bomb squads are needed in Eastern Washington. The Spokane bomb squad covers not only Spokane but also almost all of Idaho into Montana and all of Eastern Washington.

Table C9-1. Response Resources (Region 9).

	Target Capabilities Required	Current Capabilities			
		Colville Tribe	Spokane County Public Health	Spokane County Emergency Management	Stevens County Emergency Management
Trained HazMat Teams	✓	Via Contract[b]	Via Contract[e]	Yes[h]	No
Bomb Disposal Squad	✓	No	Via Contract[e]	Yes	No
Level A PPE		Via Contract, No[b]	Via Contract[e]	Yes	No
Level B PPE	✓	Via Contract, No[b]	Via Contract[e] [f]	Yes	Yes[j]
Mass Decontamination Unit	✓	No[c]	Via Contract[e]	Yes	Yes
Mass Casualty Hospital	✓	No	Via Contract[e]	Yes	Yes
Hospital Isolation	✓	No	Via Contract[e]	Yes	Yes
Pharmaceutical Stockpile	✓[a]	No	Via Contract[e]	Yes	No
Chemical Welfare Agent Antidotes		No	Via Contract[e]	Yes	No
Emergency Response Center	✓	No	Yes, Via Contract[e]	Yes	Yes
Common Responder Communications	✓	Yes, No[d]	Via Contract[e]	No	Yes[k]
Chemical Air Monitoring	✓	Via Contract, No[b]	Don't know	Yes	Yes
Radioactive Air Monitoring	✓	Via Contract, No[b]	No[g]	Yes	Yes[j]
Biological Air Monitoring		Via Contract, No[b]	No	Yes	No
Search and Rescue	C	No	No	Yes[j]	No

[a]Need to have a plan for access to NSS.

[b]Informal with Ecology.

[c] 10000 decontamination units installed in Grand Coulee Dam.

[d]Tribal police, but don't know how effective it would be during emergency between tribal police, fire and medical.

[e] "Via Contract" indicates emergency management has those resources not public health.

[f]Have the equipment but not the training. They will not send their people into a hot zone. During emergencies public health is a consultant.

[g]EPA monitors these.

[h] 9 personnel, some being trained, some volunteer.

[i]In the development stage for Type II search and rescue.

[j]Limited.

[k]One of first 325 systems including equipment.

Table C9-2. Response Exercises and Training (Region 9).

	Target Capabilities Required	Current Capabilities			
		Colville Tribes	Spokane County Public Health	Spokane County Emergency Management	Stevens County Emergency Management
NIMS Trained	✓	Other	Yes	Yes	Yes[(i)]
WISHA Level A/B Trained	✓	Other	No	Yes	No
Chemical Agent Trained	✓	Other	Yes	Yes	No
Biological Agent Trained		Other	Yes	Yes	No
Radiological Agent Trained		Other	No[(d)]	Yes	No
Nuclear Agent Trained		Other	No	Other, No[(f)]	No
Explosives Trained	✓	Other	No	Yes	Yes
Mass Evacuation Trained	✓	Yes, Other[(a)]	No	Yes	Yes[(e)]
CBRNE Crime Scene Trained		No, Don't know	Yes	No[(g)]	No
Public Communications Trained	✓	No, Other[(b)]	Yes	No[(h)]	No
Mass Fatality Trained	✓	No, Don't know	Yes	Yes	No
Antidote Trained		Yes[(c)]	Yes[(e)]	Yes	No
Mass Decontamination Trained	✓	Don't know	Yes	Yes	Yes[(j)]
Trained with Industrial Teams	✓	No	Yes	N/A	No
Trained with Other Agencies	✓	No	Yes	Yes	No

[(a)]Decision to mass evacuate would be made by tribal first responders, from the comprehensive emergency response plan.
[(b)] 8-hour course.
[(c)]Within emergency management response trained community.
[(d)] 1 expert. Will call local Health Department.
[(e)]Limited.
[(f)]Call state and federal agencies.
[(g)]Law enforcement.
[(h)]Public information officer responsibility.
[(i)]Preliminary within county.
[(j)]Hospitals and ambulance service/ 2 line decontamination unit at a hospital and other hospital in county will get one line this year.

Table C9-3. Trained Response Personnel (Region 9).

	Target Capabilities Required	Current Capabilities			
		Colville Tribes	Spokane County Public Health	Spokane County Emergency Management	Stevens County Emergency Management
First Responder Awareness Level	✓	0	N/A	36	Don't know[a]
First Responder Operational Level	✓	N/A	N/A	36	Don't know
Hazardous Materials Branch Officer	✓	N/A	N/A	36	Don't know
Hazardous Materials Branch Safety Officer	✓	N/A	N/A	36	Don't know
Hazardous Materials Technician	✓	N/A	N/A	36	Don't know
Incident Commander	✓	N/A	N/A	48[b]	Don't know
Private Sector Specialist Employees		N/A	N/A	0	Don't know
Technician with a Cargo Tank Specialty		N/A	N/A	0	Don't know
Technician with a Tank Car Specialty		N/A	N/A	0	Don't know
Technician with an Intermodal Tank Specialty		N/A	N/A	0	Don't know

Trained to the NFPA 472 standard. The numbers in the cell represent the number of trained personnel in that category. Note they do not represent a county-wide assessment, as the respondent was generally knowledgeable only about his/her operating unit. Respondents usually indicated some personnel trained to WAC 296-824-30005.

[a] Respondent is trained. Others have obtained training in weapons of mass destruction.

[b] There are firefighters that are also incident commanders.

This page intentionally left blank.

C1.10 Washington State Departments

Dept. of Health, Dept. of Ecology, WA State Patrol, WA Military Dept.

C1.10.1 Current Capabilities/Needs

Respondents were from the Department of Health, the Department of Ecology, the Washington State Patrol and the Washington Military Department.

The State Bomb Squad system is working well for the areas of the state that do not have a bomb squad in their jurisdiction. Each squad throughout the state has the basic set of equipment it needs and each squad also has its specialty. For example, the Marysville squad has more CBRNE/HazMat equipment than other squads, but the Walla Walla squad has more radiation monitoring equipment.

During the interviews with the state personnel the overarching needs that were communicated were the need to determine a statewide system for HazMat response and funding and the need for additional HazMat training.

There is a need to determine who will pay for HazMat responses and who is ultimately responsible for the response in unincorporated areas of the state. Liability issues for CBRNE/HazMat response and statewide specific funding for HazMat are not currently covered. There is a piecemeal approach to HazMat and it is left up to the locals to have the appropriate mutual aid agreements for response.

There was a need stated for reaching local jurisdictions, especially rural areas, with basic awareness-level HazMat training. Having better prepared and trained local response teams would make the Department of Ecology and the state as a whole more effective. Providing core CBRNE training and sustaining current training requirements in HazMat has proven to be difficult throughout the state. For areas in the north cross-border training is lacking. There is also a great need to train HazMat teams on how to use the equipment they have been given. Currently many HazMat teams are having problems finding the time to train on the new equipment as well as keeping up with their basic training and other (often firefighting) responsibilities.

A few other needs mentioned were as follows: better communications (networking) between local responders, state agencies, industry, etc, better resource management, additional staff/responders, radio interoperability, replacement of expired equipment and sustainability of current equipment caches.

C1.10.2 Interviewee Recommendations

The recommendations from the state-level interviewees included regionalization of HazMat CBRNE response teams. If one agency was coordinating the statewide HazMat response it would be easier to identify gaps. The regions could be set up to coordinate funding and help get equipment, training and cost recovery, and the day to day operations would be left to the state HazMat response units. A stable funding source must be found for the training, maintenance and response these teams. It would also be possible to tap into resources for HazMat expertise, other than police and fire to help support such a system (e.g., industry teams). It was also suggested that a regionalized HazMat team system would help standardize the definitions of a certain level HazMat team.

The two additional areas of recommendations were: methods and ideas for better availability of training and alignment of resources and statutory authority for HazMat events. For training methods it was suggested to have multi-agency training events and to utilize the Fire Protection Bureau for training (DHS training). Educating local responders about the availability of training through the State Fire Marshal's Office and/or hiring a Circuit Writer (a good trainer) that visits individual fire departments throughout the state were also suggested as options to improve the availability and level of HazMat training in the state.

Statutory responsibility of HazMat incident command should be given to agencies that have the abilities and training to respond to the incidents. Currently, during a large HazMat event the Washington State Patrol is incident command agency for about 65% of state. The legal responsibility for HazMat events, if not held at the local level, defaults to the WSP, but they do not have the necessary training or equipment (HazMat teams) to respond. Typically, WSP troopers are trained to an awareness level and sergeants are trained to the operations and "HazMat incident commander" levels, which are insufficient for a response to a serious HazMat incident. When Ecology responds to an incident and is required to play a larger role than just cleanup and waste disposal this creates a problem because Ecology is not always well-positioned to provide quick first response and it does not have statutory responsibility or authority unless the spill is to state waters.

The three main recommendations from the public health arena were:

- The liability of medical volunteers needs to be covered with state legislation;
- An all-hazards mobilization plan was recommended for "surge-type" events in the state; and
- Better coordination between public heath and other agencies involved, or needing, first response.

Liability issues arise when public health responds and they need to staff the clinics that they open in an emergency. Some regions are not successful in having volunteers sign up because there is no guarantee that their medical liability will be covered by the state. It was recommended that this be addressed at a legal level.

There were many different opinions on the exact problem with the liability coverage in the state. One interviewee suggested that during an emergency, volunteers are afforded some additional liability coverage through the Emergency Workers Act. Others disagreed because this Act does not have specific language covering the liability of volunteer workers who have malpractice insurance. Another thought on liability coverage was that emergency management was going to take care of it. It was also suggested that liability issues were only a problem when emergencies are not well-defined. Another concern regarding the liability coverage of medical volunteers was the lack of court caps for malpractice cases.

An intrastate mutual aid agreement for public health workers, similar to the state's fire mobilization plan, was recommended. This type of legislation would allow public health workers to mobilize and activate faster. Currently, with the fire mobilization plan, a jurisdiction can bring in additional fire resources, people and equipment from around the state (when needed) and the state will pay for it. A similar plan for public health would allow them to bring in additional epidemiologists, nurses, environmental health specialists, medical examiners, etc. during a big incident. Having an all-hazard mobilization plan for the state for surge-type events, rather than just limiting it to fire, would be very beneficial.

Enabling public health personnel to be trained as an equal partner with emergency response personnel was emphasized. Often there are hazardous situations where the environmental health side of the department must be directly involved in the response due to potential public health hazards (e.g. contamination of drinking water). There also needs to be a direct connection between the water system Emergency Response Plan (ERP) and public health. Currently public health is responsible for keeping the drinking water supplies safe, but they do not see the ERPs of the water systems.

This page intentionally left blank.

Appendix D

Washington State Resources Questionnaire

This page intentionally left blank

Washington State CBRNE/Hazmat

Response Resources Questionnaire

Interviewer:
Date:

The following series of questions will help the Department of Ecology evaluate the current status of the Washington State emergency response resources dedicated to HazMat operations, including chemical, biological, radiological, nuclear, explosive (CBRNE). This survey does not include emergency response to natural disasters (e.g., earthquakes).

There are four parts to this questionnaire:

I. General information about your jurisdiction.
II. Determination of possible hazards within your jurisdiction.
III. Determination of the response resources available to your jurisdiction.
IV. Level of training and exercises conducted within your jurisdiction.

I. General Information

Interviewee:

Title:

Organization or Department:

County:

Address:

Phone Number:

Email address:

Regional Homeland Security Coordination District:

Your emergency response responsibility:

Your emergency response experience:

Incidents where problems occurred within your jurisdiction within the past five years:

		Not at all effectively				Completely effectively
1.	Overall, how would you rate the effectiveness of your jurisdiction's response to CBRNE/HazMat events?	1	2	3	4	5
2.	How confident are you that you have effective lines of communications with the following:	**Not at all confident**				**Extremely confident**
	a. local responders	1	2	3	4	5
	b. mutual aid partners	1	2	3	4	5
	c. state agencies	1	2	3	4	5
	d. federal agencies	1	2	3	4	5

3. What would help your jurisdiction to improve its emergency response capabilities? How would it (they) affect your capabilities?

4. What equipment or training do you need to improve your emergency response capabilities?

5. Do you have additional comments/suggestions regarding effective and/or ineffective emergency response in your jurisdiction or the State of Washington?

6. Do you have any recommendations for changes in state programs or rules that would improve your emergency response capabilities?

7. If your budget for emergency response increased by 10% to 20% for a single year, how would you use the additional funds?

8. If your budget for emergency response increased by 10% to 20% next year and then increased annually to match inflation, how would you use the additional funds each year?

9. What is your jurisdiction's greatest need?

10. Additional Comments?

Funding and Other Resources

11. What is your total annual emergency response (e.g., HazMat) budget, including grants, for the current fiscal year?

12. What percentage of your emergency response program funding comes from…?

___% General operating funds

___% Grants (e.g., federal, state and local assistance, emergency management program grants)

___% Fees

___% Other:

13. What percentage of the budget is reserved for external emergency response teams, supplies, or equipment?

14. How many full-time equivalent (FTE) staff do you employ?

a. What is your total number of employees?

b. How many of your employees serve as first responders?

c. Is staff available during non-working hours?

d. Is overtime approved?

II. Possible CBRNE/Hazmat Hazards within Jurisdiction

1. What is your level of concern with the following technological hazards in your Jurisdiction?

Hazard	Not at all Concerned				Extremely Concerned
Accidental The following listed hazards are potential accidental incidents that would not be associated with an act of terrorism.					
Accidental: Explosions If concerned, clarify source of concern:	1	2	3	4	5
Accidental: Oil Spills If concerned, clarify source of concern:	1	2	3	4	5
Accidental: Chemical Spill Chemical spill is the release of toxic agents into the atmosphere and environment that can harm population, animals, and food supplies. Hazardous chemicals, such as ammonia, chlorine, propane, and others, are heavily used for various agricultural and manufacturing processes at many locations throughout the state. If concerned, clarify source of concern:	1	2	3	4	5
Accidental: Hazardous Materials Release Hazardous materials are materials, which, because of their chemical, physical, or biological nature, pose a potential risk to life, health, or property when released. A release may occur by spilling, leaking, emitting toxic vapors, or any other process that enables the material to escape its container, enter the environment, and create a potential hazard. The hazard can be explosive, flammable, combustible, corrosive, reactive, poisonous, toxic, biological agent, and radioactive. If concerned, clarify source of concern:	1	2	3	4	5
Accidental: Radiological Release Radiological hazard is the uncontrolled release of radioactive material that can harm people or damage the environment. If concerned, clarify source of concern:	1	2	3	4	5

Hazard	Not at all Concerned				Extremely Concerned
Terrorism The following hazards refer to incidents involving terrorist activities. Terrorism is the unlawful use of force or violence against persons or property to intimidate or coerce a government or civilian population, in furtherance of political or social objectives.					
Terrorism: General If concerned, clarify source of concern:	1	2	3	4	5
Terrorism: Improvised Explosive Device Applied to building, transportation, pipeline, or dam. If concerned, clarify source of concern:	1	2	3	4	5
Terrorism: Radiological Dispersal Device (i.e., dirty bomb) If concerned, clarify source of concern:	1	2	3	4	5
Terrorism: Improvised Nuclear Device If concerned, clarify source of concern:	1	2	3	4	5
Terrorism: Biological Release Human, livestock, crop virus or bacteria If concerned, clarify source of concern:	1	2	3	4	5
Terrorism: Chemical Release If concerned, clarify source of concern:	1	2	3	4	5
Terrorism: Food Contamination If concerned, potential source of concern:	1	2	3	4	5

Hazard	Not at all Concerned				Extremely Concerned
Other Local Hazard(s) (specify)_____ Local hazards that may occur in your jurisdiction but may or may not have a significant impact on large areas of the state. If concerned, clarify source of concern:	1	2	3	4	5

III. Response Resources

1. Within your jurisdiction, do you have an emergency response plan (ERP)? If yes,

   a. Have you identified potential terrorist targets within your jurisdiction?

   b. Have you planned for responses to CBRNE incidents within your jurisdiction?

   c. Do you have a public information plan in your ERP?

   d. Is the emergency response team familiar with the ERP?

2. Within your jurisdiction, do you have:	Yes	No	Via Contract	Mutual Aid	Don't Know	N/A
a. Trained HazMat response team(s)? If yes, on average how large are the teams? Are new personnel being trained?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
b. Bomb disposal squad	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
c. Level A personal protective equipment (PPE) for first responders	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
d. Level B personal protective equipment (PPE) for first responders	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
e. Mass decontamination unit	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
f. Hospital that could accept mass casualties for CBRNE items	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
g. Hospital that can provide isolation, quarantine,	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

2. Within your jurisdiction, do you have: and treatment	Yes	No	Via Contract	Mutual Aid	Don't Know	N/A
h. Pharmaceutical stockpiles for biological exposure	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
i. Antidotes for Chemical Warfare Agents	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
j. Emergency Response Center	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
k. Common communication equipment across first responders (police, fire, medical)	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
l. Air monitoring equipment - chemical	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
m. Air monitoring equipment - radioactivity	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
n. Air monitoring equipment - biological	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
o. Urban search and rescue unit	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

3. What is the size of your HazMat team response vehicle (supply trailer)?

	Yes	No	Don't Know
a. Is your inventory of emergency response supplies adequate for the types of incidents usually encountered in your jurisdiction?	[ ]	[ ]	[ ]
b. Is your inventory adequate when including mutual aid/contracts you may have?	[ ]	[ ]	[ ]

c. If no, what is still missing?

d. How often is inventory checked on the HazMat trailer?

e. How frequently is the monitoring equipment calibrated?

4. What percent of your external emergency response needs (service, supplies and equipment) for CBRNE/HazMat are filled by?

___mutual aid with other jurisdictions
___informal aid agreements
___contract services
___expedited procurements
___agreements with industrial companies

___other (Please specify.)

IV. Exercises and Training Resources

1. How often do your HazMat teams perform exercises?

2. Do your HazMat teams have current formal training in the following? Or do you have access to HazMat teams that are trained in the following? (Please specify.)	Yes	No	Via Contract	MAA	Via Other (specify)	Don't Know	N/A
a. National Incident Management System	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
b. WISHA Level A/B protection for personal protective equipment	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
c. Response to chemical agents	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
d. Response to biological agents	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
e. Response to radiological agents	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
f. Response to a nuclear materials	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
g. Response to an conventional explosion	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
h. Mass evacuation	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
i. CBRNE crime scene investigations	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
j. Public communications	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
k. Mass fatality handling	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
l. Antidote training	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
m. Decontamination (including mass decontamination)	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
3. (If applicable) Have your HazMat teams trained with industrial response teams at facilities in your jurisdiction?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
4. (If applicable) Have your HazMat teams	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

trained with other governmental agencies in your jurisdiction?

(MAA – Mutual aid agreement)

5. Of your total number of first responders from Part I #14b, how many are trained to the Washington State Regulations (WAC 296-824-30005)? ____

   a. Of these first responders, how many are:
   Awareness Level Trained ____ Operations Level Trained ____

   b. How many of your Operations Level are trained in the following Hazard Materials categories:

      i. Technicians ___ Specialists ___

      ii. HazMat Incident Commanders ____

6. Of your total number of first responders from Part I #14b, how many are trained in the following areas to the NFPA 472 standard?	Number	Don't Know	N/A
a. First Responder Awareness Level	___	[ ]	[ ]
b. First Responder Operational Level	___	[ ]	[ ]
c. Hazardous Materials Technician	___	[ ]	[ ]
d. Incident Commander	___	[ ]	[ ]
e. Private Sector Specialist Employees	___	[ ]	[ ]
f. Hazardous Materials Branch Officer	___	[ ]	[ ]
g. Hazardous Materials Branch Safety Officer	___	[ ]	[ ]
h. Technician with a Tank Car Specialty	___	[ ]	[ ]
i. Technician with a Cargo Tank Specialty	___	[ ]	[ ]
j. Technician with an Intermodal Tank Specialty	___	[ ]	[ ]

This page intentionally left blank.

Appendix E

Development of Target Capabilities

This page intentionally left blank.

Successful response depends on sufficient capabilities. Response target capabilities provide the means for responding to incidents in the emergency planning scenarios. For this study, the scenarios are accidental or intentional HazMat and CBRNE incidents, similar to National Planning Scenarios 1 through 8 and 11 through 14 (DHS 2005a). The capabilities evaluated in this study are listed in the questionnaire in Appendix D, and are based on the Target Capability List (DHS 2005b). Some of these capabilities are also useful for responding to natural disasters, but these incidents are not the focus of this study.

The decision as to what organizational unit (state, region, county, city, or private company) should attain specific response target capabilities depends on the risks, needs, and consequences to that unit. No organization necessarily needs all the target capabilities, or necessarily in quantities to meet all potential incidents. Depending on the size of the incident, additional resources may be available from other nearby organizations, the state, or the federal governments. Regional collaboration should provide the means for smaller counties, for example, to maintain limited resources because they have small incidents, but still call upon other nearby counties for additional resources if and when needed.

Some response target capabilities are universal. For example, all counties and regions should have response plans in place, even if the major response action is to call upon outside resources. Counties and regions should maintain response capabilities based on performance requirements. If a capability is needed frequently, then it should probably be available locally. If a capability must be applied quickly, then it will need to be local. Capabilities that are used infrequently or have less time sensitivity could be managed regionally, or at a statewide level. Some capabilities require specialized training and exercises, such as bomb squads, and should be located in organizations with sufficient demand and resources to maintain them at a level of high proficiency, and to serve a regional need.

Several regional population, economic, and infrastructure characteristics were used as indicators of exposure to potential negative consequences from HazMat and CBRNE incidents in Washington:

- Population, population density, and urban areas, which serve as inputs to the determination of the target capability tiers in the methodology developed by DHS (2005b).
- TCL tier, which is used as an indicator in allocating target capabilities to different government levels (DHS 2005b). In general, higher tiers need fewer resources.
- Current HazMat incidence rate, which demonstrates the current level of hazardous material spills.
- Intermodal transportation (air, water, rail, road, mass transit), which is a critical infrastructure (DHS 2003).

- Industrial manufacturing, which includes the defense industrial base, a critical infrastructure, and commercial key assets (DHS 2003).

- Government facilities (civilian and military). Government facilities are key assets (DHS 2003).

- Agriculture. Agriculture is one element of critical infrastructure (DHS 2003).

- Special characteristics. Other infrastructures at risk include hydroelectric facilities, nuclear power plants, airports, ports, ferries, major airports, and hazardous waste facilities.

The level and types of these indicators for the 9 regions and 39 counties in Washington are summarized in Table E-1.[1] The far right column of this table contains the summary conclusion on the overall capability needs for each region based on a qualitative evaluation of the regional characteristics. In general, regions with characteristic values toward the high ends of the characteristic scales are recommended for a high level of response capabilities, and similarly low levels of response capabilities are recommended for low levels of the characteristics. In some cases, a region might seem to have generally a low or medium set of levels of the characteristics, but they also have some special characteristics, or a local geographical need for response. These cases are noted briefly in the same column.

Tables E-2, E-3, and E-4 contain the summary conclusions on the regional target capabilities for resources, training and exercises, and trained personnel, respectively, based on the characteristics in Table E-2. A "✓" in the table cell means that the region should have that capability. In general, similar target capabilities were given to all regions designated as having "high" needs, and so on for the medium and low needs. In some cases, additional target capabilities were added in consideration of the special characteristics noted in Table E-1. For example, several target capabilities were added to the otherwise "low" set for Region 8 because of the presence of Hanford, the Columbia Generating Station, the nearby presence of the Umatilla Weapons Depot, and the magnitude of agriculture. The phrase "Focus Area" means that one of the counties in that region (e.g., Spokane in Region 9) has greater needs than in the other counties of the region, and should receive the bulk of the identified resources, training, and personnel.

Broadly, if a region is not designated for a specific target capability, it should have awareness training capability, and aid agreements for obtaining such capability from nearby regions if the need arises.

[1] Note that only data from publicly available references were used. Confidential reports on infrastructure vulnerabilities and risks were not reviewed for this public document. Such studies might lead to different conclusions on the appropriate target capabilities.

Table E-1. Regional and County Characteristics. (3 sheets)

Regions and Counties	Population 2005 (est.)[a]	Population Density (people per square mile)	Urban Area[b]	TCL Tier[c]	Current HazMat Incident Rate[d]	Intermodal Transport-ation[e]	Industrial Manufac-turing[f]	Government Facilities (civilian and military)[g]	Agriculture[h]	Special Character-istics	Overall Capability Need
Region 1	**1,039,000**	**164**	**--**	**3**	**--**	**--**	**--**	**--**	**--**	**--**	
Island	76,000	365	Oak Harbor	4	Low	Low	Low	Low/1 base	Low	Ferry	
San Juan	15,500	89	--	6	Low	Low	Low	Low	Low	Intl. Border, Ferry	**Medium, Border**
Skagit	110,900	64	Mt. Vernon, Anacortes	5	Medium	Medium	Low	Low	Medium	Ferry	
Snohomish	655,800	314	--	5	Medium	Medium	Medium	Low/1 base	Medium	Ferry, Port	
Whatcom	180,800	85	Bellingham	5	Medium	Medium	Low	Low	Medium	Intl. Border, Port, Dam	
Region 2	**334,800**	**85**	**--**	**4**	**--**	**--**	**--**	**--**	**--**	**--**	
Clallam	66,800	38	Port Angeles	5	Low	Low	Low	Low	Low	Intl. Border, Ferry	**Medium, Border**
Jefferson	27,600	15	--	6	Low	Low	Low	Low	Low	Ferry	
Kitsap	240,400	607	Bremerton, Silverdale	3	Medium	Medium	Low	Medium/ 3 bases	Low	Ferry	
Region 3	**438,700**	**63**	**--**	**4**	**--**	**--**	**--**	**--**	**--**	**--**	
Grays Harbor	69,800	36	Aberdeen	5	Low	Low	Low	Low	Low	Port	
Lewis	71,600	30	Centralia	5	Low	Low	Low	Low	Low	--	**Medium, Focus Area**
Mason	51,900	54	Shelton	5	Low	Low	Low	Low	Low	--	
Pacific	21,300	23	--	6	Low	Low	Low	Low	Low	--	
Thurston	224,100	308	Olympia	4	Medium	Medium	Low	Medium	Low	Port	
Region 4	**501,600**	**136**	**--**	**4**	**--**	**--**	**--**	**--**	**--**	**--**	
Clark	391,500	623	Vancouver	3	Medium	High	Medium	Low	Low	Port	
Cowlitz	95,900	84	Longview	5	Medium	Medium	Low	Low	Low	Port, Dam	**Medium**
Skamania	10,300	6	--	6	Low	Low	Low	Low	Low	Dam	
Wahkiakum	3,900	15	--	6	Low	Low	Low	Low	Low	--	

Table E-1. Regional and County Characteristics. (3 sheets)

Regions and Counties	Population 2005 (est.)[a]	Population Density (people per square mile)	Urban Area[b]	TCL Tier[c]	Current HazMat Incident Rate[d]	Intermodal Transport-ation[e]	Industrial Manufac-turing[f]	Government Facilities (civilian and military)[g]	Agriculture[h]	Special Character-istics	Overall Capability Need
Region 5	**755,900**	**450**	**--**	**3**	**--**	**--**	**--**	**--**	**--**	**--**	**High**
Pierce	755,900	450	Tacoma	3	High	High	Medium	Medium/ 2 bases	Medium	Port	
Region 6	**1,808,300**	**851**	**--**	**2**	**--**	**--**	**--**	**--**	**--**	**--**	**High**
King	1,808,300	851	Seattle, Bellevue	2	High	High	Very High	High	Medium	Major Airport, Ferry, Port, Rail	
Region 7	**259,200**	**17**	**--**	**5**	**--**	**--**	**--**	**--**	**--**	**--**	**Low, Agriculture**
Chelan	69,200	24	Wenatchee	5	Low	Low	Low	Low	Medium	Dam	
Douglas	34,700	19	--	6	Low	Low	Low	Low	Medium	Dam	
Grant	79,100	30	Moses Lake	5	Low	Low	Low	Low	High	Dam	
Kittitas	36,600	16	Ellensburg	5	Low	Low	Low	Low	Low	Dam	
Okanogan	39,600	8	--	6	Low	Low	Low	Low	Medium	Intl. Border, Dam	
Region 8	**524,900**	**51**	**--**	**4**	**--**	**--**	**--**	**--**	**--**	**--**	**Low, Agriculture, Special**
Benton	158,100	93	Kennewick, Pasco, Richland	5	Low	Medium	Low	Low	Medium	Hanford, Columbia Generating Station, Umatilla Weapons Depot, Dam	
Franklin	60,500	49	--	6	Low	Low	Low	Low	Medium	Port, Dam	
Klickitat	19,500	10	--	6	Low	Low	Low	Low	Low	Dam	
Walla Walla	57,500	45	Walla Walla	5	Low	Low	Low	Low	Medium	Dam	
Yakima	229,300	53	Yakima	5	Low	Low	Medium	Low/1 base	Very High	--	

Table E-1. Regional and County Characteristics. (3 sheets)

Regions and Counties	Population 2005 (est.)[a]	Population Density (people per square mile)	Urban Area[b]	TCL Tier[c]	Current HazMat Incident Rate[d]	Intermodal Transport-ation[e]	Industrial Manufac-turing[f]	Government Facilities (civilian and military)[g]	Agriculture[h]	Special Character-istics	Overall Capability Need
Region 9	**594,000**	**36**	**--**	**4**	**--**	**--**	**--**	**--**	**--**	**--**	
Adams	17,000	9	--	6	Low	Low	Low	Low	Low	--	
Asotin	20,900	33	--	6	Low	Low	Low	Low	Low	--	
Columbia	4,100	5	--	6	Low	Low	Low	Low	Low	Dam	
Ferry	7,400	3	--	6	Low	Low	Low	Low	Low	Int. Border	
Garfield	2,400	3	--	6	Low	Low	Low	Low	Low	Dam	**Medium, Focus Area**
Lincoln	10,100	4	--	6	Low	Low	Low	Low	Low	Dam	
Pend Oreille	12,200	9	--	6	Low	Low	Low	Low	Low	Int. Border, Dam	
Spokane	436,300	247	Spokane	3	Medium	Medium	Medium	Low/1 base	Medium	Airport	
Stevens	41,200	17	--	6	Low	Low	Low	Low	Low	Intl. Border, Dam	
Whitman	42,400	20	Pullman	5	Low	Low	Low	Low	Low	Port, Dam	

[a] Population data are from Office of Financial Management, State of Washington (released June 28, 2005).

[b] "Urban area" is from OMB Bulletin No. 05-02 Appendix (November 2004).

[c] "TCL tier" was determined using the methodology in DHS, *Target Capabilities List, version 2.0* (2005).

[d] "Current HazMat incident rate" based on mean number of incidents per year (2000-2004): Low is <50, Medium is between 50 and 200, and High is greater than 200. Some incidents may have been reported in more than one county. Data were obtained from the Emergency Management Division, Washington Military Department.

[e] "Intermodal transportation" included a qualitative consideration of the presence and type of highways, mass transit, airport, ferry, and port.

[f] "Industrial manufacturing" was based on 2002 number of manufacturing jobs (Bureau of Economic Analysis, US Department of Commerce): Low is <10,000, Medium is between 10,000 and 40,000, High is between 40,000 and 100,000, and Very High is >100,000.

[g] "Government facilities" was based on the 2002 number of government employees (Bureau of Economic Analysis, US Department of Commerce): Low is <5000, Medium is between 5 and 15,000, and High is >15,000.

[h] Agriculture was based on the 2002 number of farming jobs (Bureau of Economic Analysis, US Department of Commerce): Low is <2000, Medium is between 2,000 and 5,000, High is between 5,000 and 10,000, and Very High is >10,000.

Table E-2. Target Resource Capabilities for Each Region.

	Region								
	1	2	3	4	5	6	7	8	9
Trained HazMat Teams[a]	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bomb Disposal Squad			✓	✓	✓	✓		✓	✓
Level A Personal Protective Equipment (PPE)					✓	✓		✓	
Level B PPE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mass Decontamination Unit[a]	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mass Casualty Hospital[a]	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hospital Isolation[a]	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pharmaceutical Stockpile	✓ [b]	✓ [b]	✓ [b]	✓ [b]	✓ [b]	✓ [b]	✓ [b]	✓ [b]	✓ [b]
Chemical Warfare Agent Antidotes					✓	✓		✓	
Emergency Response Center	✓	✓	✓	✓	✓	✓	✓	✓	✓
Common Responder Communications	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chemical Air Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓
Radioactivity Air Monitoring			✓	✓	✓	✓		✓	✓
Biological Air Monitoring					✓[c]	✓[c]	✓[d]	✓[d]	
Search and Rescue C: Collapse U: Urban	C	C	C	C	U	U	C	C	C
Comments	Medium, Border	Medium, Border	Medium, Focus Area (Thurston)	Medium	High	High	Low, Agriculture	Low, Agriculture, Special	Medium, Special, Focus Area (Spokane)

[a]Level consistent with the population base and economy of the region.

[b]Local distribution plan for materials from the NSS.

[c]Animal, plant, and human disease agents.

[d]Animal and plant disease agents.

Table E-3. Target Training and Exercises for Each Region.

	Region(*)								
	1	2	3	4	5	6	7	8	9
NIMS Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
WISHA Level A/B Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chemical Agent Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
Biological Agent Trained					✓	✓	✓	✓	
Radiological Agent Trained			✓	✓	✓	✓		✓	
Nuclear Agent Trained					✓	✓		✓	
Explosives Trained	✓	✓	✓	✓	✓	✓		✓	✓
Mass Evacuation Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
CBRNE Crime Scene Trained					✓	✓		✓	
Public Communications Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mass Fatality Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
Antidote Trained					✓	✓		✓	
Mass Decontamination Trained	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trained with Industrial Teams	✓	✓	✓	✓	✓	✓		✓	✓
Trained with Other Agencies	✓	✓	✓	✓	✓	✓	✓	✓	✓
Comments	Medium, Border	Medium, Border	Medium, Focus Area (Thurston)	Medium	High	High	Low, Agriculture	Low, Agriculture, Special	Medium, Focus Area (Spokane)

(*)Regions should be trained to the awareness level if there is no check mark.

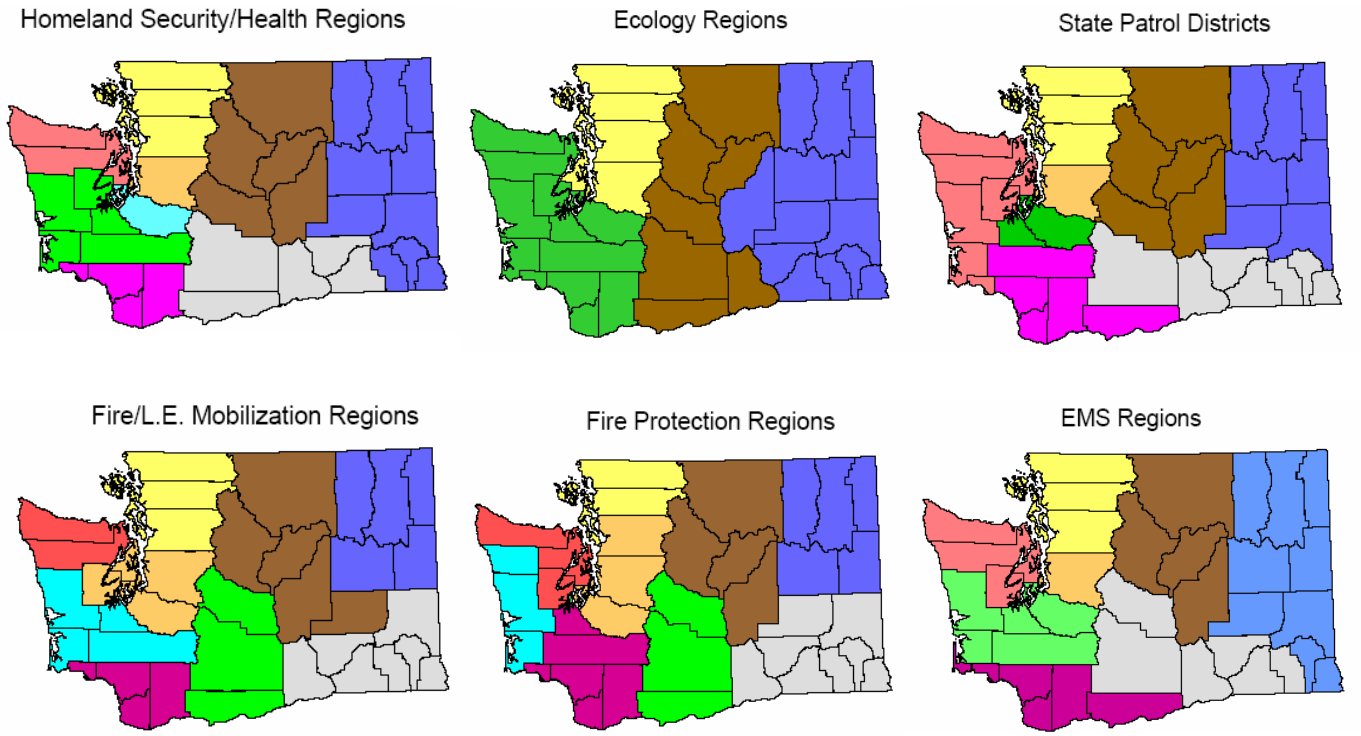
Table E-4. Target Trained Response Personnel for Each Region.

	Region								
	1	2	3	4	5	6	7	8	9
First Responder Awareness Level	✓	✓	✓	✓	✓	✓	✓	✓	✓
First Responder Operational Level	✓	✓	✓	✓	✓	✓		✓	✓
Hazardous Materials Branch Officer				✓	✓	✓			✓
Hazardous Materials Branch Safety Officer				✓	✓	✓			✓
Hazardous Materials Technician	✓	✓	✓	✓	✓	✓		✓	✓
Incident Commander	✓	✓	✓	✓	✓	✓	✓	✓	✓
Private Sector Specialist Employees					✓	✓			
Technician with a Cargo Tank Specialty				✓	✓	✓			
Technician with a Tank Car Specialty				✓	✓	✓			
Technician with an Intermodal Tank Specialty					✓	✓			
Comments	Medium, Border	Medium, Border	Medium, Focus Area (Thurston)	Medium	High	High	Low, Agriculture	Low, Agriculture, Special	Medium, Focus Area (Spokane)

Appendix F

Region Boundaries by Various Functions

This page intentionally left blank.



Region Diagrams from "Regionalization of Homeland Security and Emergency Management Presentation", Partners in Preparedness Conference, April 20, 2005, Presenters: Tom Griffith, Judy Harmon, TJ Harmon, Kathryn Howard, and Tom Mattern
(www.capps.wsu.edu/presentations/ emergencyprep/presentations_23.pdf)

This page intentionally left blank.

Appendix G

Emergency Management Program of Other States Questionnaire

This page intentionally left blank.

STATE EMERGENCY RESPONSE PROGRAM QUESTIONNAIRE

Interviewer:
Date:

We are contracted with the Washington State Department of Ecology to assess the status of the state's response program dedicated to HazMat operations, including chemical, biological, radiological, nuclear, and explosive (CBRNE) incidents. We have been asked to examine other state response programs to discover what is working well, and why.

CONTACT INFORMATION

Interviewee:
Title:
Organization or Department:
Address:
Phone Number:
Email address:

Your emergency response responsibility:

Your emergency response experience:

STATE PROGRAM

1. Where does emergency response fit into the organization of your state government?

2. What are the top 3 or 4 vulnerabilities of greatest concern in your state?

   If all listed are natural, what is your level of concern for technology or CBRNE incidents?

	Very unsatisfied				Very satisfied
3. How satisfied are you with the current status of the following elements of HazMat and CBRNE response? Please describe any differences between HazMat and CBRNE incidents.					
a. Planning	1	2	3	4	5

Where can we obtain a copy of your all-hazards emergency management plan?

b. Equipment 1 2 3 4 5

Anything missing for CBRNE incidents?

c. Personnel 1 2 3 4 5

State emergency staff FTEs?

Are state emergency response personnel located in regions or centralized?

d. Training and exercises 1 2 3 4 5

Has this included specific training and exercises for CBRNE incidents?

e. Mutual aid agreements 1 2 3 4 5

Is there statewide formal (i.e., written agreements) coverage?

What are the top 3 things that are working well for your state?

What changes, if any, would you like to make?

What has created the current quality of your program (examples: legislation, rules, leadership, funding)?

What, if any, are unusual features of your response program compared to other states?

4. What is the role of federal agencies (EPA, CDC, ATSDR) in emergency response and in what circumstances are they the major responder? Is that interaction working effectively?

5. What are the sources of funding for your state response program?
   _____ % General operating revenue
   _____ % Grants
   Sources if other than the US Department of Homeland Security _____
   _____ % Fees or taxes
   What is the fee or tax schedule, and who pays?
   _____ % Other. Describe _____

Are the funds sufficient?

Have you had problems obtaining/maintaining that funding level? If yes, what has been effective in obtaining/maintaining the funding level?

What would you do if you had 10% more funds on an annual basis?

6. If local (not state) responders were mobilized, under what circumstances, if any, would their labor and equipment costs be reimbursed by the state?

7. What, if any, recommendations do you have for other states on how to organize their emergency response programs?

8. What are the legislative and rule citations for your emergency management program?

9. Do you have target response capabilities that you use to measure the quality of county or city programs?

This page intentionally left blank.

Appendix H

Summaries Other State Programs Data

This page intentionally left blank.

H1.0 Arizona

The Arizona State interviewee was the Deputy Director of the Arizona Division of Emergency Management in the Department of Emergency and Military Affairs.

H1.1 Program Features

The Arizona Division of Emergency Management resides within the Department of Emergency & Military Affairs led by the State Adjutant General. Arizona has a centralized system for state emergency staff. The top three things that are working well for this state are:

- Cooperation and integration of local and state governments and agencies;
- Aggressive and significant participation in Planning, Training and Exercise activities; and
- A mutual aid program.

The state provides substantial funding to local jurisdictions for the supporting the local emergency management programs. Arizona fully integrates its federal partners into their planning, training and exercise activities. Arizona expects federal agencies will have significant roles in responding to a significant event. Accordingly, Arizona wants to be thoroughly familiar with the federal agency's capabilities and wants to integrate their capabilities into the total response.

If the local jurisdiction declares an emergency and requests state assistance, the state would make emergency funds available by also declaring a state of emergency. The state would then reimburse the effected jurisdiction 75 percent of their costs. The state would pay 100 percent of the expenses for jurisdictions responding with mutual aid support. The philosophy in Arizona is that emergencies and disasters are "local." State governments should develop local response capacity to the maximum extent possible, yet provide an extensive centralized source for preparedness assistance. Typically, local governments do not have the resources to provide robust emergency management programs, so state assistance should be afforded at every opportunity. If changes could be made, the State of Arizona would like to provide more dedicated emergency management staff at the local level.

Finally, the quality of the state's program is most affected by the following:

- Executive leadership and support of "emergency management";
- Legislation enacted to support emergency management at state and local level; and

- Rules promulgated to establish procedures and document policy precedents.

H1.2 Funding Mechanisms

Approximately 26 percent of the program's funding comes from general operating funds and 65 percent from grants. Funding has been zero growth for about 10 years. The net result is a decrease in effective funding due to rising costs.

H2.0 California

The California State interviewee was the Manager of the Hazardous Materials Unit for the Governor's Office of Emergency Services.

H2.1 Program Features

The Governor's Office of Emergency Services (OES) is the state's emergency management organization. OES coordinates fire, law enforcement, coroner, the emergency management mutual aid system and oversees the State's Standardized Emergency Management System (SEMS.)

Three unusual features of California's emergency response program are:

- Bottom-up structure the locals are in charge,
- Well developed mutual aid system, and
- Well-trained and equipped response teams.

OES coordinates the state response to major emergencies in support of local government. The primary responsibility for emergency management resides with local government. Local jurisdictions first use their own resources and, as they are exhausted, obtain more from neighboring cities and special districts, the county in which they are located, and other counties throughout the state through the SEMS.

In California, SEMS provides the mechanism by which local government requests assistance. SEMS is a uniform method for managing emergencies based on the Incident Command System (ICS). SEMS standardizes the organizational structure and terminology used by every response agency. SEMS is used to: establish response operations, staff emergency operations centers, coordinate the emergency response, request assistance, and communicate between levels of government. In state-declared emergencies and depending on program specifics and type of work performed, certain labor and equipment costs of local agencies are reimbursed by the state.

OES serves as the lead agency for mobilizing the state's resources and obtaining federal resources. Federal agencies are expected to integrate with the Unified Command structure in California to support the local and state government's response to a major incident. Federal agencies are a major responder if the incident demands exceed local and state resources or if the incident impacts federal jurisdiction.

H2.2 Funding Mechanisms

Funding mechanisms very depending on program and percents were not available.

H3.0 Florida

The Florida State interviewee was the Emergency Response Manager of the Florida Department of Environmental Protection.

H3.1 Program Features

The Florida Bureau of Emergency Response (Bureau) is located in the Department of Environmental Protection in the Division of Law Enforcement. Within the Division of Law Enforcement, they have the Bureau of Park Patrol, Bureau of Environmental Investigations, Bureau of Emergency Response, and an Administrative & Training Bureau. The Florida emergency response staff is located throughout the districts in the seven different regions of the state. The emergency response staff (about 22 FTEs) is under one central command, i.e. each region reports to the same supervisor.

The interviewee feels that the Mutual Aid program in Florida is a very thorough program. The Bureau has agreements with the local fire departments through the Fire Chief's Association, other state agencies, EPA, US coast guard, and Emergency Management Assistance Compact (EMAC) for sharing resources with other states.

The top three things that are working well for this state are:

- State and Federal Relationships – The state can call in virtually unlimited resources when needed, including the Federal government;
- Funding Ability/Availability; and
- Support of Leadership up to the governor.

Florida State's program focuses both on inland and coastal incidents. The interviewee strongly recommended having these two elements in any emergency response program.

The Bureau is a state asset that helps local HazMat teams when an incident is beyond their control. Local jurisdictions in Florida have their own HazMat teams and are responsible for the response. The local fire departments all have an agreement (MAA) through the Florida Fire Chief's Association to help each other during major incidents. If a local jurisdiction needs a specialized HazMat team, they request assistance from the Florida Fire Chief's Association. The association finds an available team with the requested capabilities and deploys it to the incident. The team that is deployed outside of their jurisdiction would be eligible for reimbursement by the state. The Florida Bureau of Emergency Response has an agreement with this association, which allows them access to the resources of various fire departments in the state through this MAA.

If there is a HazMat incident in a rural area with a small fire department that did not have a HazMat team they would have two options. Option 1: The State of Florida can come in and take over the incident. The state could go to Fire Chief's Agreement or go to Federal government if they need more resources. Option 2: The state is set up with seven different DHS regions, which are different from the Bureau's regions. Within these regions the local fire departments have each identified at least two other fire departments within their region that have assets that can be used to assist in a CBRNE or HazMat response. These are called Regional Domestic Security Task Forces. During an emergency, the requesting partner on the task force is responsible for paying for the response of the responding fire department.

The Regional Domestic Security Task Forces evaluate county and city programs. The Department of Law Enforcement and the Department of Community Affairs and Emergency Management oversee these task forces. The latter department has the state's warning point and the state emergency response center, and is essentially responsible for hazard coordination in the state. The Florida Department of Law Enforcement is the lead for terrorist events. The Department is comprised mainly of law enforcement officers who are not trained to mitigate CBRNE/HazMat incidents.

When an incident is beyond the state's capabilities, they request assistance from their federal partners. They typically ask for federal assistance less than six times a year, usually for large incidents with a response cost of over $250,000.

H3.2 Funding Mechanisms

Approximately 2 percent of Florida's program funding comes from grants and 98 percent from trust funds set up by the state. These funds have been sufficient, but there has been a concern about trust fund depletion over the past few years. Florida is one of the few states in EPA Region 4 that has a funded program. The legislature sets up the trust funds, which are funded through various taxes, and appropriates money from them. The Bureau tries to ensure that the legislature takes notice of its work so stable funding will continue.

The Florida Emergency Management Trust Fund is funded by a $2/policy/year surcharge for home, rental, and condo insurance policies, and $4/policy/year surcharge on commercial insurance policies. The money can be used for state and local emergency management, but not for emergencies.

H4.0 Massachusetts

The Massachusetts State interviewee was the Preparedness Branch Chief of the Massachusetts Emergency Management Agency (MEMA). This interviewee oversees three departments: the Nuclear Preparedness Department, the Training Department and the Planning Department.

H4.1 Program Features

MEMA is one of the twenty-two public safety secretariats. Its role is emergency preparedness and management. MEMA coordinates state, federal, and private assets that are required to respond to an emergency. MEMA also coordinates the Local Emergency Planning Committees (LEPC). The Department of Fire Services, a sister agency under the Secretary, is charged with coordinating regional HazMat teams. The local governments have the primary responsibility for first response in Massachusetts.

The MEMA staff is both centralized at their headquarters and spread out throughout the MEMA regions. They are currently working at the state level to draft intrastate Mutual Aid Agreement (MAA) legislation. They are participating in Emergency Management Assistance Compact for this, but local MAAs vary dependent upon the communities. The Department of Fire Services is much further along in the MAA process, and they have MAAs both between fire departments and between regions.

The top two things working well for Massachusetts are:

- Leadership and support for emergency management from the Secretary's and Governor's level, and
- They work on an all-hazards philosophy. They have a Massachusetts Emergency Management Team (MEMT) on the state level and they meet monthly.

The Comprehensive Emergency Management Plan is broken down into eighteen emergency response functions. Each function has a primary agency that is responsible for that function and each of those agencies is represented in the MEMT. This team helps to develop and sustain emergency management and incident management relationships. The MEMT is lead by the Director of MEMA, and occasionally the Secretary may come to the meetings and give comments. MEMT was created by an executive order (EO144) after the blizzard of 1978.

Currently, local emergency response planning assistance is on a four-year cycle, so it takes MEMA one year to get through a quarter of the LEPC plans in the state. MEMA does not organize funding for the LEPCs. The state Emergency Response Commission (SERC) receives the funding and distributes it out to the LEPCs. They have a ranking process in place for LEPCs to determine their funding levels. Similar agencies serve in both the SERC and the MEMT. However, the SERC is a decision making body focused on LEPCs and the MEMT is focused on all-hazards emergency preparedness issues.

The labor and equipment costs of a local mobilization would not be reimbursed by the state. They do not have a state disaster relief fund. Unless the situation was elevated to a Presidential emergency declaration the state would be unable to help with a local mobilization. The responsible party usually pays for HazMat spill responses.

In an emergency all disasters are local so the Federal government is never the main responder. If local resources are overwhelmed than they request state assistance and if the state does not have enough resources available, then they tap into federal resources. This sequence of events depends upon the type of incident as well. For example, during an issue of national significance, the Federal government will generally not take over but they may go into a unified command mode with the state in charge.

H4.2 Funding Mechanisms

MEMA currently receives 15 percent of their funding from general operating funds from the state and the remaining 85 percent of their funding is from grants. They have the federal DHS grants, a DOT grant and a grant agreement with the three nuclear power plants from their state that is renegotiated every year. These funding levels do not appear to be sufficient. However, they have seen a slight increase in state funding over the past few years due to the change in leadership. Previously they had no funding increases for thirteen years.

H5.0 Michigan

The Michigan State interviewee was a Lieutenant with the Michigan State Police Department under the Emergency Management Division. He is the Assistant Commander of the Homeland Security Section of the Emergency Management Division. The interviewee coordinates the Emergency Management Assistance Compact (MEMAC) desk, works as the operations group chief and coordinates regional emergency response teams.

H5.1 Program Features

The Michigan State Police is under the Governor's office. The Emergency Management Division is under the Michigan State Police. The Director of the State Police is also the Director of Emergency Management and Homeland Security for Michigan.

All the state agencies are centralized, except for the district coordinators. The state has 7 state police districts. Each district has a State Police lieutenant who oversees the districts emergency management and works with local and county emergency managers in that area. The lieutenant acts as a liaison between the districts and the state. The medical community has also adopted these districts.

Michigan does not have state-funded HazMat teams. However, the state would provide reimbursements up to $30,000 if a state declaration of emergency was called. The local fire departments and private entities have HazMat teams (around 25 teams across the state) with different capabilities. The Emergency Management Division coordinates these HazMat teams. The Division ensures that they have similar equipment and push funding to them for training and exercises. The State of Michigan provides dive teams, bomb squads, aviation, emergency support, SWAT Team, and canine units. The Division also has a HazMat training center. All troopers in the field are trained at operations level.

The top things that are working well for this state are:

- Michigan has the needed structure in place for effective emergency response due to the mutual aid agreements. If local agencies can't handle the emergency, then the county gets involved. If the emergency is larger than the county level, then the state gets involved. If the state can't handle the emergency then they look to the Emergency Management Assistance Compact (EMAC).

- Communication within state agencies and local jurisdictions. The district coordinates aid with this communication.

- A lot of state emergency management agencies are run out of the governor's office. Michigan State police is the lead agency for emergency management authority in the state. Therefore, first responders who have field experience run their program and it tends not to be as political.

- The State of Michigan has a statewide communication system (Michigan Public Safety Communication System). This system is their attempt to standardize communication equipment. They also use ETEAM, which connects all of the EOCs in the state - enabling computerized local level to state-level interaction.

The interviewee recommended regionalization as to how other states should organize their emergency response programs. He stated the need to get input from local entities during this regionalization process and give them leadership within the program.

H5.2 Funding Mechanisms

Approximately 20 percent of the funding for the state's response program comes from general operating funds, 75 percent from grants and five percent from privately dedicated funds (e.g., from Nuclear Power Plants). The interviewee felt that the state needs more funds to pay for more local and state emergency management personnel and to make enhancements to the state EOC.

H6.0 New Jersey

The New Jersey State interviewee was the Emergency Response Specialist with the New Jersey State Police Hazardous Materials Response Unit. The interviewee is a member of the HazMat Response Unit under the Homeland Security Branch of the New Jersey State Police. The Unit responds to any criminal elements of HazMat or CBRNE events and supports State Police operations, including decontamination, site surveys, and infrastructure protection surveys. The HazMat Response Unit is a composition unit of troopers, sworn personnel and civilians.

H6.1 Program Features

Emergency response is covered by a multitude of state agencies, but it usually falls under the Law and Public Safety Division. The HazMat program in New Jersey is a joint operation of three agencies: Department of Law and Public Safety, Department of Environmental Protection, and the Department of Health.

There are currently 54 HazMat teams listed in the state. Individual counties run these teams, but some are contracted teams. Because of the large number of independent HazMat teams, there is difficulty in getting coordination, consistency in training and equipment purchases. The state is currently trying to develop a process where they can develop and share information.

New Jersey has hired a team made up of individuals from the Department of Health, Department of Environment Protection, and State Police to conduct audits on the 54 HazMat teams to ensure that they are on target. This team is funded by a grant through the National Institute of Environmental Health. Even though the audit team has no enforcement authority, they can make recommendations to the teams.

The top things that are working well for this state are:

- The development of the Domestic Security Task Force. The Task Force is developing a working plan to address issues and prioritize. They have also completed a vulnerability assessment across the state. The Task Force has set up DHS regions (five regions).
- New Jersey has a law that states that each emergency response group is required to provide mutual aid, whether it is law enforcement, paramedics, HazMat, etc.

The following things have enabled the current quality of New Jersey's emergency response program:

- Funding from DHS, state and federal;
- Domestic Security Task Force analyzing problems;
- Some legislation changes; and
- Strong leadership.

The interviewee recommended that other states develop a centralized command of control or a coordinated central response. New Jersey has been leaning toward this, but they would have to fight the current culture.

H6.2 Funding Mechanisms

Approximately 15 percent of the New Jersey's HazMat team funds are provided by the state. The other 85 percent is funded by grants and the Federal government.

H7.0 North Carolina

The North Carolina State interviewee was the Regional Response Team Program Coordinator for North Carolina Emergency Management.

H7.1 Program Features

The Department of Crime Control and Public Safety, Division of Emergency Management coordinates the North Carolina Hazardous Materials Regional Response Program. The North Carolina Hazardous Materials Regional Response program is a system of seven teams strategically located in the state to provide hazardous materials response services. These teams

respond to events that exceed the response capabilities of the local jurisdictions by providing technical support, manpower, specialized equipment and/or supplies.

The top three things that are working well for this state are:

- Constant review of plans,
- Constant conduction of exercises, and
- Good working relations built with all levels of government.

North Carolina has a statewide Mutual Aid Agreement (MAA), which is a voluntary agreement among state municipalities. Under this MAA, the requesting city is responsible for reimbursing the providing city for all documented costs and expenses, including personnel equipment and materials.

Local responders would not be reimbursed by the state for any labor or equipment costs if they were mobilized. If the incident involved a Presidential Declaration, their expenses would be reimbursed by the Federal government. The Division of Emergency Management would be responsible for requesting the reimbursement from FEMA.

H7.2 Funding Mechanisms

All of the North Carolina Emergency Management Program funding comes from general operating funds. North Carolina has not had problems maintaining their current funding level.

H8.0 Ohio

The Ohio State interviewee was the Hazardous Materials Planner for the Ohio Emergency Management Agency (EMA). The interviewee coordinates planning efforts for the state Emergency Operations Plan's ESF #10 and Hazardous Materials Incident Annex. In this position, the interviewee works in the state's Emergency Operations Center (EOC) during an emergency with other state agencies in implementing the plan to provide support to local jurisdictions.

H8.1 Program Features

Ohio EMA is the coordinating agency for major events involving all types of hazards, and as such, will open the EOC and deploy liaisons to the field as needed. Other state agencies provide responders, both in a support capacity and in a regulatory capacity. These agencies provide responders for not only major emergencies, but also for relatively "routine" events. For

example, the Ohio EPA is notified and responds to all chemical releases; the Ohio Department of Health (ODH) is notified and responds to all radiological incidents (Ohio is an NRC agreement state with ODH as the regulatory agency for radiological materials); the State Fire Marshal (SFM) will respond in support of incidents that involve explosives or highly flammable materials; and the Public Utilities Commission of Ohio (PUCO) will respond to all transportation incidents involving hazardous materials, because they are the regulatory agency for HazMat transportation. The Ohio EMA & the Ohio EPA co-chair the Ohio State Emergency Response Commission (SERC).

The state emergency response staff location depends on the state agency. Ohio EPA, SFM, and PUCO have regional responders. Ohio EMA and ODH rely primarily on the Columbus (central Ohio) offices.

The state does not normally reimburse the local responders. Through the intrastate mutual aid compact (IMAC), the local agency requesting the aid from another local agency will provide the reimbursement. The state would reimburse a local agency if the state requested local resources through IMAC for response to a state-owned facility, such as a prison or a state park. Normally for a hazardous materials incident, local agencies are reimbursed for costs by the responsible party.

The top three things that are working well for this state are:

- The SERC's coordination with the county EMAs and LEPCs of which there are 88 in the required planning and exercise programs;
- The SERC's ability to bring stakeholders (state agencies, local agencies, and industry associations) together to formulate policy and rules; and
- The wide use of the EPA's and NOAA's CAMEO suite of programs, which provides a common platform for processing and storing chemical inventory information, as well as a common response tool throughout the state.

The quality of the EMA programs has been primarily shaped by the legislation and rules created by the stakeholders, which sustain the program over the years. An unusual feature of this program is that Ohio requires the LEPCs and state agencies to have an annual HazMat exercise that is evaluated using the Ohio Exercise and Evaluation Manual (EEM).

The federal agencies' roles in Ohio's emergency response program are to provide a support function both in major incidents and sometimes in relatively "routine" ones when special expertise may be required. Federal agencies are not normally major responders unless the incident involves a federal reservation, such as Ohio's DOE facilities, nuclear power plants or a major shipment, such as a high-level nuclear fuel shipment.

H8.2 Funding Mechanisms

The Ohio SERC funding comes from the filing fees of chemical companies reporting their chemical inventories to the SERC. The SERC, in turn, funds the LEPCs from this funding pool. Maintaining an adequate funding level for the LEPCs has been difficult. There is a political balance that must be maintained between the interests of industry in its payment of fees, the interest of taxpayers in contributing taxes to the LEPCs and EMAs, and the needs of the LEPC and EMA personnel to have the resources to adequately get the job done. There is a great deal of concern, especially among county personnel, that the balance is not equal concerning their duties and position. The DHS funding for CBRNE/HazMat is helping to fill the void in the LEPC funding levels.

H9.0 Oregon

The Oregon State interviewee was the Hazardous Materials Services Manager in the Office of the State Fire Marshal (OSFM). The interviewee provides administrative oversight for the State of Oregon's regional HazMat team system and for the Community Right to Know Program. The interviewee is also responsible for the administrative oversight of the state Emergency Response Commission (SERC).

H9.1 Program Features

The OSFM resides in the DHS office, which is within the Department of State Police. The Oregon regional HazMat team and the Community Right to Know Program are both run out of the OSFM. The Community Right to Know Program is a HazMat information collection, distribution, and validation program.

The OSFM provides the funds for specialized training and medical certification for team members, emergency response vehicles and standardized equipment, cost recovery, and program administration. Local governments provide the trained personnel, housing and maintenance for state-owned equipment, and outreach training for local responders and industry in their response regions.

There are a total of 280 HazMat Team members trained to a technician level distributed in 15 teams located throughout the state. Most teams consist of 18 members who are career or volunteer firefighters, law enforcement, or public works employees. The regional HazMat teams have no additional equipment needs. The OSFM has one FTE dedicated to resource coordination for the HazMat teams.

Typically, the local fire department is notified first when a HazMat incident occurs. If the incident exceeds their resources, they contact their regional HazMat response team.

There are many Mutual Aid Agreements between local fire departments. Additionally, there is statewide formal coverage for HazMat with the regional HazMat teams. For mutual aid between regions, the regional HazMat teams come under the direction of OSFM. The HazMat team criteria includes the ability to respond to HazMat incidents anywhere in the state within 30 minutes for urban areas, one hour for suburban areas, one and a half hours for rural communities, and two hours for the frontier.

The three things that are working well in Oregon are:

- Regionalized HazMat team system;
- HazMat information system (i.e, they collect information from 50,000 companies); and
- Overhead team system for responding to local incidents or as mutual aid. This is primarily for fire if locals tap out their resources the SFM can mobilize resources from all over the state. It is similar to a fire mobilization plan, which creates an overhead team with an incident command structure. Since they have the overhead team structure in place, they can use it for HazMat incidents as well.

The rules that have helped create the current quality of Oregon's program include the regionalized HazMat teams having one set of Standard Operating Procedures. Additionally, the teams themselves are very standardized. The state is currently in the process of developing standards of coverage for the HazMat teams. There are three standing committees with the HazMat teams that meet on a quarterly basis: the training committee, the resources committee, and the administrative committee. Reporting requirements are also committed to rule. Finally, the interviewee felt that Oregon has had great leadership within the HazMat teams and the state government.

The unusual features of the Oregon State program are as follows:

- The hazardous substances information system is centralized. Instead of sending out Tier 2 reports and having the companies fill them out, companies receive a listing of what they previously submitted and are asked to verify/update the information. They have a website that lists all of the hazardous chemicals in the State of Oregon and includes a link to the MSDS sheets for each listed chemical.
- Regional HazMat team system.

The current quality of the program was created by legislation, rules, leadership, and funding.

H9.2 Funding Mechanisms

Funds recovered from responsible parties, and petroleum load fees from the Bulk Petroleum Product Withdrawal Regulation (ORS 465) support the regional HazMat program. The petroleum load fee is charged when a bulk tanker truck (tanks over 100 gallons) fills up at a tank farm. Petroleum imports into the state pay a fee as well. By law, up to $10 can be charged for a bulk withdrawal delivery fee inside the state or as an import. The money is used to carry out the state's oil, hazardous material and substance emergency response program as it relates to the maintenance, operation, and use of public highways, roads, streets, and roadside rest areas in Oregon. The fee is currently set at $4.75/withdrawal, but went to $2.50/withdrawal temporarily on October 1st to cut the cash buildup in the program. Diesel fuel is excluded from these fees. The fee is scheduled to increase to $4/withdrawal on July 1, 2006, and $6/withdrawal on July 1, 2009. The load fee is expected to generate $2.5 million in the 2005-7 biennium. Up to $1 million may go to the state's Orphan Site Account, which is used to clean-up sites where money is unavailable from a responsible party. The HazMat response program is structured to be fully functional using only the load fees. Cost recovery pays for expenses associated with non-road related HazMat incidents. They also receive grants for the purchase of specialized equipment.

The Community Right to Know Program uses a "hazardous substance possession fee" for funding. Oregon has been having some problems with this fee structure. The state is trying to change it to a processing fee. Under the processing fee rules, a company that has a non-exempt substance pays a fee, based on the single highest quantity on the site. For example, if a company has Oxygen at 10,000 units the company pays $1000, but if another company has many different hazardous chemicals at 10,000 units each, that company pays the same amount, because its highest quantity of a single chemical is 10,000 units. There are approximately 50,000 companies that report to the OSFM and 65 percent of these have reportable chemicals. However, only 6,000 companies have quantities that exceed the fee threshold. There are currently 270 different potential fees based on quantity and hazardous chemical ranking.

A processing fee would work as follows: A company would submit a report and the fee would be assessed based on the number of pages of the report (hardcopy) or based on the number of elements being reported (electronic). The processing fee would be charged for the cost of collecting and distributing the information and would be based on the amount of information each company provides.

H10.0 Pennsylvania

The Pennsylvania State interviewee was the Director of the Bureau of Plans.

H10.1 Program Features

Emergency management is an agency at sub-cabinet level inn Pennsylvania. The Pennsylvania program strengths appear to be geared toward the categories of equipment, planning and training.

The top three things working well for Pennsylvania are:

- Regional approach to planning, training and exercises;
- Governor's office support; and
- Good relationship with the Pennsylvania DHS office.

An unusual feature of the Pennsylvania State program is that they have had nine regional counter-terrorism task forces since 1999. The federal agencies' role in emergency response in the State of Pennsylvania is as reflected in the National Response Plan.

A recommendation provided by Pennsylvania was to legislate first and then regionalize emergency response programs.

Legislation has had an important part in creating the current quality of the state's program; however, federal funding and mid-level/regional manager experience have played more significant roles in forming the current quality of the program.

H10.2 Funding Mechanisms

Approximately 40 percent of the Pennsylvania State's program funding is from general operating funds and 60 percent of the funding is from grants. This funding is not sufficient to sustain the program, especially if federal funding continues to decrease. They have had problems obtaining and maintaining the funding because they have not had increases in state funds, and they do not have control over federal funds.

The Commonwealth of Pennsylvania provides 22 percent of the 25 percent non-federal match for the Public Assistance Program (the entire 25 percent was provided after Tropical Depression Ivan) and 22 percent of the 25 percent non-federal match for the Hazard Mitigation Grant Program.

H11.0 South Carolina

The South Carolina interviewee was the Acting Assistant Director in the Division of Waste Assessment and Emergency Response within the South Carolina Department of Health and Environmental Control (DHEC).

H11.1 Program Features

The Office of Environmental Quality Control is the environmental regulatory arm of the South Carolina DHEC. This office is comprised of four program areas, each concerned with a specific aspect of environmental protection. The Bureau of Land and Waste Management is one of these program areas and the Division of Waste Assessment and Emergency Response resides within this Bureau.

South Carolina has a regionalized system for DHEC chemical and radiological emergency response staff. The top three things that are working well for this state are:

- Equipment procurement,
- Collaboration with other state agencies, and
- Training.

The state is looking for additional personnel to run its programs more efficiently. The state has a separate Emergency Management Division that has a three-year Weapons of Mass Destruction exercise schedule, which DHEC follows as well.

South Carolina has three levels of coverage for CBRNE/HazMat events, as described below: environmental cleanup from DHEC, HazMat teams through the Firefighter Mobilization Act (FMA) and equipment bought with state money used for the entire state through the Memorandums of Understanding (MOUs) requested by the Emergency Management Division.

The environmental cleanup of chemical and radiological events is done by 35 individuals on the radiological and chemical DHEC teams. Their initial mission is to protect public health, but they oversee cleanup at release sites and respond as the public health agency. All their equipment and time is funded by the state.

The state's FMA is used to move resources such as firefighting/HazMat to locations throughout the state, as necessary. The State Fire Marshal (SFM) does not have jurisdiction over HazMat teams, however, when the FMA is invoked, the SFM is responsible for locating the resources and sending them to the requesting jurisdiction. The local jurisdictions have the responsibility to establish, maintain and support their HazMat teams. The state's FMA requires that the requester pay the cost of the response. The state will pay if the state is the requester, otherwise the requesting local jurisdiction must pay the expenses of the responding jurisdiction/team. The interviewee did not know of South Carolina has a mechanism where the state would reimburse local responders for their labor and equipment costs.

South Carolina has MOUs for conducting operations during an event. The South Carolina Emergency Management Division requires that any jurisdiction must sign a statewide mutual aid agreement in order to receive funding for equipment. The mutual aid agreement states that

equipment purchased with those funds must be made available to any jurisdiction in the state, upon request.

An unusual feature of the South Carolina DHEC is that it maintains an inventory of Level A equipment, field deployable hand-held instrumentation and other types of high-tech equipment. They maintain a high capability of entering hot zones and taking samples during response.

DHEC has a good working relationship with the EPA and the Coast Guard and recognizes both as the federal on-scene coordinators during a CBRNE/HazMat response.

Finally, the interviewee felt that having a regional office system has worked well for South Carolina. South Carolina has resources stationed in each of the state's eight regional offices. Geographically, South Carolina is not that large, so emergency response can be achieved within a very reasonable amount of time. South Carolina recommended that any state evaluate this type of regionalized system.

H11.2 Funding Mechanisms

Approximately 75 percent of the program's funding comes from general operating funds and 25 percent from grants. DHEC receives grants through the Department of Energy as well as DHS. South Carolina also has nuclear facilities that give grant funding for the radiological emergency response capability of the DHEC program. It has not been a problem to maintain this funding level, which has been in place for many years.

H12.0 Tennessee

The Tennessee State interviewee was the Hazardous Materials Program Manager for the Tennessee Emergency Management Agency (TEMA). The interviewee is responsible for HazMat training and response.

H12.1 Program Features

TEMA is the primary state agency for HazMat notification, response, and training. The state's emergency response staff is regionalized and a statewide formal regional mutual aid agreement is used.

The current quality of Tennessee's program was created by the participation of state and local government officials.

The top three things that are working well for this state are:

- Regional HazMat team concept,
- Local government participation in training and exercises, and
- State agency interface and participation.

Under certain conditions local responders may be reimbursed for their equipment and labor costs. This usually falls under state and federal laws. However, in Tennessee, state law provides that TEMA is the lead response agency for HazMat incidents, and must be notified when incidents or accidents occur.

H12.2 Funding Mechanisms

Approximately 5 percent of Tennessee's program funding comes from general operating funds, 80 percent from grants, and 15 percent from other sources. There have not been any problems in obtaining/maintaining these funding sources.

This page intentionally left blank.

Appendix B – Model Legislation

The following is a model of the type of legislation that is required to implement the Statewide CBRNE Response Program. This model legislation was drafted to establish the Program described in this report. The legislation creates the Statewide CBRNE Response Program under the authority of the OSFM and sets forth standards for the creation, administration, and operation of regional response teams. It creates the technical advisory committee. Finally, it establishes the funding mechanism that is discussed under Section 4.2 of this report.

This model legislation is for informational purposes and is not intended to constitute legal advice.

B1.0 Model Legislation

AN ACT Relating to establishing the Statewide CBRNE Response Program; amending RCW 43.43.938; adding a new chapter to title 43 RCW; and creating new sections.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON

NEW SECTION. **Sec. 1. Findings and legislative intent.** (1) The legislature finds that the threat of an incident caused by a chemical, biological, radioactive, nuclear, or explosive (CBRNE) agent occurring in the state poses a severe threat to the health, safety, and welfare of the citizens of the State of Washington. In order to mitigate any damage that may be caused by CBRNE incidents, it is necessary that the state have a coordinated and comprehensive plan to respond to these dangerous and deadly incidents.

(2) The legislature further finds that the current system of relying almost exclusively on local jurisdictions to respond to CBRNE incidents is inadequate because it stretches the capabilities of local jurisdictions, it lacks uniformity in training, equipment, and response standards, and it hinders the ability of jurisdictions to cooperate in the event of a catastrophic incident. Major portions of the state lack protection from CBRNE incidents because many local jurisdictions simply do not have the capabilities to respond to these incidents.

(3) The purpose of this legislation is to establish a statewide CBRNE response program that relies on a network of regional response teams that operate with standardized training and equipment.

NEW SECTION. **Sec. 2. Definitions.** For the purposes of this act, the following definitions apply:

"CBRNE agent" means a chemical, biological, radioactive, nuclear, or explosive agent.

"CBRNE incident" means an incident creating a danger or the possibility of a danger to persons, property, or the environment as a result of spillage, seepage, fire, explosion, or release of a CBRNE agent.

"Director" means the director of fire protection in the Washington state patrol.

NEW SECTION. **Sec. 3. Program created.** (1) The director shall establish and maintain a statewide CBRNE response program. This program must include, without limitation:

(A) the division of the state into CBRNE response regions;

(B) a network of regional teams to respond to CBRNE incidents within their respective regions and to operate outside their respective regions to assist other regional teams;

(C) standards for training, equipment, and procedures for regional teams and other responders concerning responses to CBRNE incidents;

(D) procedures for reimbursing regional teams for costs incurred by approved responses; and

(E) procedures for recovering response costs from parties responsible for causing a CBRNE incident.

(2) The director shall adopt any rules necessary to implement and administer the provisions of this chapter.

(3) The requirement of the program under this chapter is subject to appropriation by the legislature.

NEW SECTION. **Sec. 4. Creation of response regions.** (1) The director shall divide the state into CBRNE response regions. In making this division, the director must consider (i) the history of any CBRNE or hazardous materials incident locations throughout the state and the factors that contribute to those incidents, (ii) the current geographical distribution of CBRNE or hazardous-materials responders, and (iii) any existing regional divisions in the state.

(2) After consultation with the technical advisory committee established under section 6 of this chapter, the director may with good cause modify boundaries of the established regions.

NEW SECTION. **Sec. 5. Creation of regional teams.** (1) For each region, the director shall determine the number of response teams, the number of technicians, and the level of training required of the response teams for that region. These determinations must be made based upon the risk that each region faces from a CBRNE incident.

(2) The director shall contract with one or more regional response teams from each of the regions, as determined under subsection (1). The director may contract only with a unit of local government with respect to a regional response team. Units of local government that are located in the same region may enter into intergovernmental agreements for the formation of a regional response team.

(3) After consultation with the technical advisory committee established under section 6 of this chapter, the director may modify the number of response teams, the number of technicians, or the level of training required for regional response teams.

NEW SECTION. **Sec. 6. Technical advisory committee.** (1) The technical advisory committee is created to assist the director in his or her implementation and management of the program, to help formulate administrative rules, and to render advice on training and equipment standards, planning, operational protocols, and policy issues. The technical advisory committee has a strictly advisory role to the director in all matters.

(2) The technical advisory committee consists of ex officio members and appointed members.

(A) The ex officio members include the executives or administrative heads, or their designees, of the following state organizations:

(i) the State Emergency Response Commission;

(ii) the Department of Health; and

(iii) the Department of Ecology.

Additionally, the executive or administrative head of any other state organization may, with the consent of the director,

appoint him or herself or a designee to be a member of the committee.

(B) The appointed members consist of the following:

(i) one member from each CBRNE response region appointed by and representing the contracting units of local government under subsection (2) of section 5 of this chapter; and

(ii) any additional member appointed by the director as the director deems appropriate.

(C) All appointed members serve at the discretion of the appointing authority.

NEW SECTION. **Sec. 7. Duties of regional teams.** (1) The primary duty of a regional response team is to stabilize a CBRNE incident. Regional response teams are limited to emergency responses and the evaluation and documentation functions arising from CBRNE incidents that threaten life, property, or the environment. A regional response team must respond to the best of its ability, subject to the limitations of available equipment and personnel. Regional teams must work with known local hazard industries, first response agencies, and local emergency planning agencies to ensure an appropriate integration of plans and operational response.

(2) A regional response team may sample, test, analyze, treat, remove, recover, package, monitor, or track the involvement of CBRNE agent only if it is incidentally necessary to identify a CBRNE agent, prevent the release or threat of a release of a CBRNE agent, or stabilize a CBRNE incident.

(3) The activities of a regional response team are limited to those that can be accomplished safely to stabilize a CBRNE incident and, except as may be incidentally necessary, do not include the transport, storage, disposal, or remedial clean-up of CBRNE agents.

(4) A regional response team is not required to maintain general security or safety perimeters, locate underground utilities, insure appropriate traffic control services, conduct hydrological investigations and analysis, or provide testing, removal, or disposal of underground storage tank contamination at or near the CBRNE incident to which the team is dispatched.

NEW SECTION. **Sec. 8. Dispatch procedures.** The director must establish procedures for the dispatch of a regional response team to a CBRNE incident. These procedures must include

standards for the evaluation of a CBRNE incident by a state or local agency and, if the incident cannot be controlled with local resources, a process for the state or local agency to request the assistance of a regional response team.

NEW SECTION. **Sec. 9. Duties of local jurisdictions.** (1) If a unit of local government requests the assistance of a regional response team under the dispatch procedures set forth under section 8 of this chapter, then, upon the team's arrival, the unit of local government must provide the team with site-specific and geographical and topological information sufficient to support the tactical decisions required by the situation.

(2) A unit of local government, upon request by the appropriate regional response team, must provide any preplanning information that the team reasonably requests. This information may include, without limitation:

(a) facility site-specific floor plans and occupancy information;

(b) local maps; and

(c) an inventory of the types and levels of emergency operational support and resources available locally.

NEW SECTION. **Sec. 10. CBRNE Account created.** (1) The statewide CBRNE response account is created in the custody of the state treasurer.

(2) The account shall contain all of the following:

(a) all moneys recovered from cost reimbursements under section 11 of this chapter;

(b) all grant proceeds not otherwise required to be maintained in a separate account;

(c) all moneys transferred under sections 13 and 14 of this chapter; and

(d) any other moneys appropriated or transferred to the account by the legislature.

(3) Expenditures from the account may be used only as provided in this act. Only the director or his or her designee may authorize expenditures from the account. The account is subject to allotment procedures under chapter 43.88 RCW, but an appropriation is not required for expenditures.

NEW SECTION. **Sec. 11. Cost reimbursement.** (1) If a specific person is responsible for the necessary expenses incurred by the director or a CBRNE regional response team pertaining to its response to a CBRNE incident, then the director shall notify the responsible party by appropriate order. The director may not issue an order pertaining to a project or activity that was completed more than five years prior to the date of the proposed issuance of the order. The order must state the findings of the director concerning liability, the amount of necessary expenses incurred in conducting the response, and a notice that the amount is due and payable immediately upon receipt of the order.

(2) The director may, upon application from the recipient of an order received within thirty days after the receipt of the order, reduce or set aside, in its entirety, the amount due and payable if it appears from the application, and from any further investigation the director may desire to undertake, that a reduction or setting aside is just and fair under all the circumstances.

(3) If the responsible party fails to pay the amount specified in the order issued by the director or, if an application has been made within thirty days as herein provided and the amount provided in the order issued by the department subsequent to such application is not paid within fifteen days after receipt thereof, the attorney general, upon request of the director, shall bring an action on behalf of the state in the superior court of Thurston county or any county in which the person to which the order is directed does business, or in any other court of competent jurisdiction, to recover the amount specified in the final order of the director.

(4) No order issued under this section may be construed as an order within the meaning of RCW 43.21B.310 and is not appealable to the hearings board.

(5) All moneys recovered under this section must be deposited into the statewide CBRNE response account established under section 10 of this chapter.

(6) For the purposes of this section, "necessary expenses" means the expenses incurred by the director and assisting state or local agencies for (a) investigating the source of the incident; (b) conducting actions to stabilize the CBRNE incident; and (c) enforcing the provisions of this chapter and collecting for damages caused by a CBRNE incident.

NEW SECTION. **Sec. 12. Grant funding.** (1) The director shall establish procedures to actively seek grants from public or

private sources for the operation and administration of the statewide CBRNE response program. The director shall work in cooperation with state military department and local jurisdictions to obtain grant funding for the Program.

(2) Grant proceeds must be deposited into the statewide CBRNE response account, or if required as a condition of the grant, into a dedicated grant fund.

NEW SECTION. **Sec. 13. Transfers from general fund to CBRNE account.** (1) On July 1, 2008 and on each July 1 thereafter, the director shall notify the state treasurer if the combined total amount in the statewide CBRNE response account and any dedicated grant accounts is less than $17,000,000.

(2) Within 30 days after receiving this notification, the state treasurer shall transfer, into the statewide CBRNE response account, the amount needed to bring the moneys for the Program to $17,000,000. The state treasurer shall transfer this amount from the general fund.

NEW SECTION. **Sec. 14. Transfers from CBRNE account.** (1) On July 1, 2008 and on each July 1 thereafter, the director shall notify the state treasurer if the combined total amount in the statewide CBRNE response account and any dedicated grant accounts exceeds $25,000,000.

(2) Within 30 calendar days after receiving this notification, the state treasurer shall transfer the amount exceeding $25,000,000 from the statewide CBRNE response account to the general fund or to any other fund from which moneys were transferred into statewide CBRNE response account.

Sec. 15. RCW 43.43.938 is amended to read as follows: (1) Wherever the term state fire marshal appears in the Revised Code of Washington or the Washington Administrative Code it shall mean the director of fire protection.

(2) The chief of the Washington state patrol shall appoint an officer who shall be known as the director of fire protection. The board, after consulting with the chief of the Washington state patrol, shall prescribe qualifications for the position of director of fire protection. The board shall submit to the chief of the Washington state patrol a list containing the names of three persons whom the board believes meet its qualifications. If requested by the chief of the Washington state patrol, the board shall submit one additional list of

three persons whom the board believes meet its qualifications. The appointment shall be from one of the lists of persons submitted by the board.

(3) The director of fire protection may designate one or more deputies and may delegate to those deputies his or her duties and authorities as deemed appropriate.

(4) The director of fire protection, in accordance with the policies, objectives, and priorities of the fire protection policy board, shall prepare a biennial budget pertaining to fire protection services. Such biennial budget shall be submitted as part of the Washington state patrol's budget request.

(5) The director of fire protection, shall implement and administer, within constraints established by budgeted resources, the policies, objectives, and priorities of the board and all duties of the chief of the Washington state patrol that are to be carried out through the director of fire protection. Such administration shall include negotiation of agreements with the state board for community and technical colleges, the higher education coordinating board, and the state colleges and universities as provided in RCW 43.63A.320. Programs covered by such agreements shall include, but not be limited to, planning curricula, developing and delivering instructional programs and materials, and using existing instructional personnel and facilities. Where appropriate, such contracts shall also include planning and conducting instructional programs at the state fire service training center.

(5.5) The director of fire protection shall establish and maintain the statewide CBRNE response program required under this act.

(6) The chief of the Washington state patrol, through the director of fire protection, shall seek the advice of the board in carrying out his or her duties under law.

Sec. 16. Sections 1 through 15 of this act constitute a new chapter in Title 43 RCW.

This page intentionally left blank.

Appendix C – Workshop Meeting Minutes

Washington State Emergency Response Commission
TECHNICAL COMMITTEE WORKSHOP
June 14, 2006

Minutes

Attendance:
Homeland Security Region Representatives:

- Brad Reading, Region 1
- Dan McKeen, Region 2
- Dan Bracey, Region 3
- Dan Monaghan, Region 4
- Tom Henderson, Region 5
- Charlie Cordova, Region 6
- Bruce Merighi, Region 7
- Grant Baynes, Region 8
- Dave Leavenworth, Region 9

State Agency Representatives:

- Ron Bowen, FMO
- Travis Matheson, WSP
- Ron Wilson, EMD
- Mark Layman, Ecology
- Doug Stolz, Ecology (workshop recorder)

Call to order at 0800: Dan Monaghan, Technical Committee Co-Chair, brought the workshop to order. After a brief introduction from all participants Monaghan reviewed project history, timeline, objectives, and proposed rules of order.

Motion by Brad Reading to adopt proposed Rules of Order: Discussion regarding second to last sentence in "Decision Making Process" which adds confusion and should be deleted. Otherwise, rules will be adopted and followed. None opposed. Motion carried.

Workshop Objective #1: Determine CBRNE/HazMat response capability standards.

Review *Target Capability for WMD/Hazardous Materials Response and Decontamination* standard. Discussion regarding definition of "First Responder" and clarification as to what this means. It was agreed that the State Homeland Security Strategic Plan definition of first responder would be used. Discussion of Universal Tasks List (UTL) for this target capability and which discipline/agency should have responsibility for each task. It was agreed that responsibilities need to be determined down to the task level but these can vary by region. Consequently, this needs to be accomplished within each region and included in the Region's Emergency Response Plan.

Motion by Tom Henderson to adopt the *Target Capability for WMD/Hazardous Materials Response and Decontamination* as a minimum standard for designing a statewide regional CBRNE/Hazmat response capability and that the UTL be analyzed by each region and tasks

assigned by discipline/agency. Section regarding "performance measures" will be reserved for discussion later in this meeting. None opposed. Motion carried.

Review *FEMA Resource Typing Standards for Hazmat Entry Team and Bomb Squad/Explosives Team*. Discussion regarding the need for a detailed standardized equipment list, training and staffing levels for state teams. Agreed that state funding is needed to attain and sustain these standards. Agreed that a type I team based in each region may not be practical or necessary.

Motion by Grant Baynes to adopt *FEMA Resource Typing Standards* for *Hazmat Entry Team and Bomb Squad/Explosives Team* as a minimum standard for designing state CBRNE/hazmat and bomb teams. None opposed. Motion carried.

Review *WAC 296-824 Emergency Response to a Hazardous Substance Release and WAC 139-05-915 Bomb/K-9 Standard.* Discussion regarding WACs are legal requirements and therefore supercede other standards if and when conflicts arise.

Motion by Ron Bowen to adopt WAC 296-824 and WAC 139-05-915 as compliance standards for hazmat and bomb response. None opposed. Motion carried.

Review *NFPA Standard 471 Recommended Practice for Responding to Hazardous Materials Incidents; 472 Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents; and 473 Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents.* Discussion regarding current 2002 standards should be used but be aware that a 2007 revised 472 standard is pending, which will include WMD aspects, and should be adopted upon final approval. Agreed that NFPA standards are a desired goal but may not be achievable in every regard. A special emphasis will be put on achieving the training standards and using the training level definitions - awareness, operations, technician, etc.

Motion by Ron Bowen to adopt NFPA 471, 472, 473 standards. None opposed. Motion carried.

Review *National Incident Management System (NIMS); National Response Plan (NRP); State Comprehensive Emergency Management Plan; Northwest Area Contingency Plan; and the State Homeland Security Strategic Plan.*

Motion by Brad Reading to adopt National Incident Management System (NIMS); National Response Plan (NRP); State Comprehensive Emergency Management Plan; Northwest Area Contingency Plan; and the State Homeland Security Strategic Plan. None opposed. Motion carried.

Workshop Objective #2: Determine performance measures and objectives.

Review two proposed documents:

- *Regional Hazmat Response Team Performance Measures – Pre-Event*
- *Regional Hazmat Response Team Performance Measures – Event*

Washington State Emergency Response Commission
TECHNICAL COMMITTEE WORKSHOP
June 14, 2006

Discussion regarding Pre-Event Risk Analysis & Planning performance measure #4, participation in an annual exercise would be one way to evaluate both the regional hazmat team as well as the regional hazmat response plan.

Discussion regarding training and which standards (WAC and/or NFPA) apply. Agreed that WAC supersedes NFPA and the employer will certify.

Under "Training" discussed clarifying wording from "First Responder" to "HazMat First Responder" and the training each would have. Not saying that ALL First Responders will be trained to the Operations Level, but that funding will be used to provide such training to local responders when requested and/or needed. Training level will be determined by responder's employer and guided by adopted standards.

PSAP = Public Safety Answering Point (911).

Response Level numbering system needs to be reversed to conform to NIMS.

Response times need to be based on time regional team is notified rather than time of incident.

Agreed that approximately 10% of the state is unpopulated with very low risk and need of a two-hour response capability.

Discussion regarding minimum staffing for a hazmat technician level "hot zone" entry (level 2 response). It was agreed that some incidents may require more than the agreed "minimum" staffing level of 5. It was clarified that this performance measure is not meant to limit the staffing level of a team.

Mobilize = time to assemble personnel and equipment. Does not include travel time from assembly point to incident scene.

Concern expressed regarding mutual aid agreements, up to and including Oregon as having the closest units. Also, mutual aid agreements need to limit themselves to level 3 and 4 responses to prevent State Fire Mobilization (State Mobe) conflict. Dan Monaghan explained that mutual aid agreements are the responsibility of the Administrative Committee. Suggested that State Mobe could be supplemented by any program that comes from this effort.

State agency overseeing this program should have cost recovery responsibilities.

Motion by Grant Baynes to adopt proposed documents *Regional Hazmat Response Team Performance Measures – Pre-Event; and Regional Hazmat Response Team Performance Measures – Event* (to include agreed changes as noted on Dan Monaghan's draft). None opposed. Motion carried.

Washington State Emergency Response Commission
TECHNICAL COMMITTEE WORKSHOP
June 14, 2006

Workshop Objective #3: Determine CBRNE/Hazmat response "capacity" requirements for each region.

Each region reviewed current capacity and ability to meet target capability standards and performance measures.

Region 1: One Type I hazmat team based in Snohomish Co and one Type II hazmat team based in Whatcom Co. Islands are an issue. Island and San Juan Counties have access issues. State Ferries are highest risk but are meeting Maritime Transportation Security Act requirements.

Region 2: No hazmat team other than limited response from military. Last year, some research done. Personnel may be available to staff a state funded team. Funding issue was primary in lack of ability to organize and implement. Black Ball private ferry is international and high risk.

Region 3: No hazmat team. Most first responders only trained to awareness level. Many jurisdictions are relying on WSP. Type III team may suit Region well. Region needs resources. Thurston & Grays Harbor Counties have mass-decon trailers.

Region 4: One type I hazmat team based in Vancouver. Mass decon units in Longview, Camas and Skamania Co. Working on regional mutual aid agreement and response plan. Clark Co. also participates in Portland UASI response system. Three more Type I teams based in Oregon. One type III incident management team. Working on interoperable equipment and communications. Coordinating with LEPC and Tier II facilities. Recently completed commodity flow study for Clark Co.

Region 5: One Type I hazmat team based in Tacoma. Puyallup, Graham, Central Pierce have smaller teams which could consolidate to form one multi-jurisdictional team. How many "team members" will state support?

Region 6: Nine Type I hazmat teams. South King Co. may consolidate it's six teams into one. Region has 3 hazmat response zones. Communications interoperability exists. Working on equipment interoperability. Joint quarterly training by all teams. Mutual aid is already in place. Coordinating with industry. Teams have technology for Type 1 capability but South King Co. may have staffing issues. Mercer Island is covered by Seattle Fire.

Region 7: No public safety based hazmat team. Private sector teams are available but limited capability and response zone. First responder training needs are most important to region. Risk factors include: lots of anhydrous ammonia, 8 dams, border crossing, rail line. Current capability includes 11 mass-decon units. One type III hazmat team is under development. Hoping for two type III teams plus and a sprinkling of technicians.

Region 8: One type II hazmat team (Tri-County/Yakima). Would be willing to upgrade to type I if funded. Looking to replace Chemical Stockpile Emergency Preparedness Program (CSEPP) funding which will run out in several years. Walla Walla FD has a 17 person hazmat team that meets most elements of a type II team. Hanford FD has a full hazmat team and specializes in radiological and nuclear.

Washington State Emergency Response Commission
TECHNICAL COMMITTEE WORKSHOP
June 14, 2006

Region 9: One Type I hazmat team based in Spokane. 4 mass decon units located in Spokane area. Pullman and District 11 have a joint type II hazmat team which has traditionally wanted to stay within the boarders of Whitman County. Other counties may have no interest in hazmat.

Further discussion regarding appropriate number of Type 1 teams and the correct "capability/capacity package" to request for each region, with proper regard for growth, and the possibility that there may be a limited number of opportunities to modify or expand the statewide system in the future. Legislature will want lots of details to support the proposed investment.

Note: Volunteer firefighters do not incur "overtime" costs. Compensation should be considered for their training and response.

Consultant's Briefing: David Lincoln clarified that the State Emergency Management Council has endorsed the recommended "Program Option #4: State Supported" from last year's study.

Next Steps and Action items for HS Region Representatives:

1. Communicate results of this workshop with regional technical committee members and other stakeholders.

2. Analyze UTL for *WMD/Hazardous Materials Response and Decontamination Target Capability.* Identify responsibility for tasks by discipline/agency for your region. Each region should be prepared to report their findings at the next workshop.

3. Perform a more detailed analysis of *Objective #3 Determine CBRNE/Hazmat response "capacity" requirements for each region.* Focus on identifying "capacity requirements" for your region rather than costs for now. Each region should be prepared to report their findings at the next workshop.

4. Begin working on *Objectives #4 and #5: Determine initial startup cost to achieve desired response capability and capacity. Determine annual cost to sustain desired response capability and capacity.* Dan Monaghan and Charlie Cordova will provide equipment lists that can be used as a starting point for developing a standardized equipment list. This will help to identify costs and facilitate interoperability. We don't expect to begin analyzing costs until after the contractor comes on board July 1st. More on this later.

5. Begin working on *Objective #6: Determine interoperability requirements.* State and DHS will oversee/direct interoperability at several levels. Communications may be the most challenging issue. Each region should be prepared to report at the next workshop on any existing or planned for interoperability efforts within their region. Particular attention should be paid to communications, equipment, response plans, training, exercising and mutual aid agreements.

6. *Objective #7: Recommend risk-based funding allocation formula.* We will have an opportunity (as a committee) to have input. More on this later.

Washington State Emergency Response Commission
TECHNICAL COMMITTEE WORKSHOP
June 14, 2006

7. Tribes should be contacted and invited to participate in this project by each region that contains a tribal nation. Traditionally, the tribes do not speak with one voice. However, the Northwest Tribal Emergency Management Council is represented by Kurt Russell. Ron Wilson may be able to help with this issue. Sadie Whitener (Ecology) is an excellent contact for tribal involvement issues.

8. Make contact with LEPC and discuss proposed Risk Analysis and Planning objectives. Each region should be prepared to report at the next workshop on any obstacles that may be present within their region.

9. Private sector and federal/military hazmat response assets should be identified within each region and included in the regional response plan.

10. Committee Co-Chairs will meet with State FMO and contractor to begin assessing training program design options that will support each region's ability to meet proposed training objectives. A report will be given at the next workshop.

11. **Next Workshop:** July 20 and 21, 2006, location TBD.

Meeting Adjourned at 1615

Washington State Emergency Response Commission

Regional CBRNE/Hazmat Response Capability Project

Technical Committee

Rules of Order

Regional Technical Committees:
Each state homeland security region may select as many qualified personnel as deemed necessary to serve on a Regional Technical Committee. Committee members shall possess appropriate technical knowledge and demonstrate the ability to work collaboratively with others.

Technical Committee POCs:
Each state homeland security region will select one Technical Committee member to represent their region and to act as a point of contact. The state DOE, EMD, FMO and WSP will each select one Technical Committee member to represent their agency and act as a point of contact. POCs will represent their region/agency at statewide meetings and workshops and report back to their members. POCs may send an approved alternate if they are unable to attend.

Technical Committee Co-Chairs:
The SERC will appoint two Technical Committee co-chairs. The co-chairs will coordinate statewide Technical Committee activities, including but not limited to: approve, schedule and facilitate statewide meetings and workshops; draft agendas and timelines; ensure committee objectives are met on time; communicate with regional and agency POCs; liaison with contractors; report regularly to the SERC chair.

Decision Making Process:
Parliamentary-based procedures will be followed when making important decisions. Motions will be made, seconded and voted on. A simple majority will rule. Only Technical Committee members in attendance may make a motion or cast a vote. Statewide decisions require a quorum of no less than 7 regional POCs and one committee co-chair. Each participating region and state agency will be entitled to one vote.

Documentation:
Minutes will be taken of each statewide meeting or workshop. Minutes will be approved by a vote of all participants and distributed to all Technical Committee members and the SERC chair.

Regional Hazmat Response Team

Performance Measures – Pre-Event

RISK ANALYSIS & PLANNING

Performance Measure/Objective:

1. Is an active member and takes a leadership role on the Local Emergency Planning Committee (LEPC).
2. Assists the LEPC with maintaining a current hazmat risk analysis of the region, including Tier II facilities and a transportation commodity flow study.
3. Assists the LEPC with maintaining a current and effective Hazardous Materials Emergency Response Plan (HMERP) for the region.
4. Participates in at least one annual exercise that evaluates the regional HMERP and provides a report to the LEPC with recommendations for improvements.

TRAINING

Performance Measure/Objective:

1. All team members are trained to a minimum "Hazmat Technician Level" certification. Competency must be demonstrated and reported to the State Fire Marshal's Office annually.
2. In coordination with the State Fire Marshal's Office, assists in providing hazmat training to local first responders.
3. All training to be done in accordance with WAC 296-824 and NFPA 471,472,473.

READINESS STATUS

Performance Measure/Objective:

1. Each team properly maintains a minimum equipment inventory as specified in the document titled "Regional Hazmat Response Team Equipment Cache".
2. Each team maintains appropriate apparatus to transport personnel and equipment to an incident anywhere in the state if called.
3. Each team maintains an appropriate number of properly training and certified personnel in order to meet the minimum staffing levels for a Level 1, 2, 3 or 4 response.
4. Each team successfully passes an annual readiness status audit.

Regional Hazmat Response Team

Performance Measures – Event

Emergency Activation & Tiered Response

Level 4 Response

The reporting party uses the local PSAP to activate local first responders who manage the emergency to the limits of their training, equipment and expertise. At anytime during the incident the on-scene incident commander (OSIC) may request the Regional Hazmat Response Team (RHRT) for an off-site advisory consultation via telephone or radio. The OSIC uses the local PSAP to make the request.

Performance Measure/Objective:
Off-site advisory voice contact will be made by RHRT with OSIC within 15 minutes from time of notification 90% of the time

Level 3 Response

At anytime during a Level 4 response, the OSIC may request an on-site hazard and risk assessment of the incident. The RHRT Leader must approve the request and determine the appropriate equipment and number of personnel (typically 1 or 2) to respond to the scene and assess the incident. The local PSAP is used to activate the response.

Performance Measure/Objective:
Appropriate RHRT personnel and equipment will arrive at the incident scene within 2 hours from time of notification 90% of the time capable of performing an on-site hazard and risk assessment.

Level 2 Response

At anytime during a Level 4 or Level 3 response, the RHRT Leader may determine that a technician level entry into the "Hot Zone" is required. The RHRT Leader, in coordination with the OSIC, determines the appropriate equipment and RHRT personnel needed (minimum 5 personnel). The local PSAP is used to activate the response.

Performance Measure/Objective:
Appropriate RHRT personnel and equipment will mobilize within 2 hours from time of notification 90% of the time. RHRT is capable of performing 3 technician level "Hot Zone" entries within the first 24 hour operational period.

Level 1 Response

A major incident beyond the capacity of local first responders and the RHRT to mitigate. Multiple State RHRT's are needed to perform repeated Hot Zone entries during several operational periods. The RHRT Leader, in coordination with the OSIC, determines the appropriate personnel and equipment needed. The local PSAP is used to activate the needed resources via State EOC.

Performance Measure/Objective:
Five RHRT's arrive at the incident scene within 12 hours 90% of the time. Each RHRT is capable of performing 3 technician level "Hot Zone" entries within a 24 hour operational period.

Washington State Emergency Response Commission
TECHNICAL COMMITTEE WORKSHOP 2
July 20-21, 2006

MINUTES

Attendance:

Homeland Security Region Representatives:
- Brad Reading, Region 1
- Paul Stewart, Region 2
- Pat Dale, Region 3
- Dan Monaghan, Region 4
- Tom Henderson, Region 5
- Charlie Cordova, Region 6
- Bruce Merighi, Region 7
- Grant Baynes, Region 8
- Dave Leavenworth, Region 9

State Agency Representatives:
- Ron Bowen, FMO - Training
- Al Conklin, DOH – Radiation Protection
- Mark Soper, WSP - Bomb Squads
- Mark Layman, Ecology – East side
- David Byers, Ecology – West side

Steering Committee Representatives:
- John Butler, Contract Committee
- David Byers, Strategic/Legislative Committee
- Mark Arris, Administration Committee

Patriot Technical Consultants:
- Paul Day
- Dr. David Lincoln
- Michelle LeClair

Day One (July 20th) - Call to order at 1247: Michelle LeClair, workshop facilitator, called the workshop to order and reviewed the agenda and scope of work. Brief introductions were made by all participants.

Overview of project history and other SERC committee work:
Dan Monaghan, Technical Committee Co-Chair, gave a recap of project history, Technical Committee objectives and the June 14th Technical Committee Workshop. He then requested reports from the other three SERC committees.

Contract Committee Report by John Butler, Chair: Discussed contract negotiations and current status. Patriot Technical Consultants, Inc. was selected to fulfill current contract. Final report is due September 15. John helps coordinate the contractor's scope of work and interaction

with the four SERC committees by hosting weekly conference calls. The ultimate goal is to have the state legislature fund a statewide hazmat response system. John explained that the funding for last year's project (a Gap Analysis Study) was funded by a Department of Homeland Security grant and that this years activities are being funded out of the state "Local Toxics" account. Dan Monaghan commended Ecology for supporting this project, and acknowledged that none of this would be happening without those efforts.

Strategic/Legislative Committee Report by Dave Byers on behalf of Don Bivins, Chair: Don Bivins (Chief, Vancouver Fire Dept) and Dale Jensen (Ecology Spills Program Manager) are looking at strategic issues - timeline, funding mechanisms and presentation to the legislature. Funding sources are main topic now. Amerisorb model reviewed. Oil spill prevention account option covered. Concerns with prevention account: long-term deficit, net variance negative by 2009. New uses/users would bring that closer. Model Toxics Control Act (MTCA) is another option. Funding split between state and local toxics, .7%. High gas price is making this account quite solvent. Drawback is stakeholders counting on that money for other things. Final option is new fees to industry which will always create resistance. Florida funding model explained ($2 homeowner-insurance policy fee) as was Oregon's petroleum load fee.

Administration Committee Report by Mark Arras, Chair: Charged with mutual aid, cost recovery, regional alignment, and legal issues. The committee was briefed on July 9 by the Oregon Fire Marshall's Office, who administers their hazmat program. Oregon's program is managed with 3 FTEs at the state level, and is funded by a "bulk load fee," and enjoys 80% cost recovery success. They are currently running on a surplus. No subcontracting with private sector teams. Provides $40,000 per team per year for training and outreach. The Administration Committee's current assumptions are that the Washington State Fire Marshall's office will be the lead state agency, and that the current Homeland Security Regions will be used.

Presentations by New Committee Members:
Dan Monaghan introduced two new committee members - Trooper Mark Soper, who is representing bomb squads statewide (Mark is alternate to LT. Travis Mathison) and Al Conklin, who is representing the State DOH, Office of Radiation Protection.

Mark Soper distributed and reviewed a handout "Bomb Squad Survey and Capabilities List." Soper advised that there were no formal, written mutual-aid agreements between squads. Squads (including Portland, Oregon) meet at least quarterly. Paul Day asked if mutual-aid agreements would be helpful. Mark seemed to think that things are going well as is, but formal agreements have been considered. Reviewed FEMA " Resource Typing" document for defining Bomb Teams. Dan Monaghan asked if squads want to be a Type I team. Mark agreed that some do. Also discussed military EOD units and the military's recent decision to place them under one command. EOD units do not collect evidence or testify. Eastern Washington presents a large coverage area, which can lead to a lengthy response. We may have only one bomb tech able to respond and he would be limited to evaluating the device from a distance. There will never be less than two bomb techs when performing rendering safe procedures. Statewide, there are 450-500 bomb calls per year. WSP will handle 250-300 of these. 90% of the calls can be handled by a 2-person bomb team. Soper stated we need to differentiate between bomb technicians and

hazmat technicians in terms of capabilities, and that there is a need for partnerships between bomb squads and hazmat teams. Noted that if more funding became available, existing teams could use upgrades, and Yakima may be a place for another team. Also noted that Ecology is often requested for disposal options, and to coordinate on decisions to minimize potential impacts, as detonation may not always be the best response.

Al Conklin is lead trainer for the State Department of Health Radiation Protection Division (RPD). Conklin gave an overview of the training his office can provide. RCW 70.98 gives them sole authority. Dan Monaghan advised that the RPD has recommended appropriate RAD equipment and operating protocols for hazmat teams. Conklin agreed to help ensure the teams are properly trained for RAD incidents. A formal partnership needs to be agreed to. One concern is avoiding duplication of effort/capacity. Conklin said his office can probably have someone on site within about 2 hours just about anywhere in the state. Monaghan stated that his experience has been that the RPD duty officer can usually respond via phone within 10 to 15 minutes when accessed though the state EOC.

Review June 14 Workshop Action Items:

Region 1: by Brad Reading. Met with all counties. Region 1 has two existing hazmat teams. Snohomish Co has a Type I team and Whatcom Co has a Type II team. Whatcom Co would like their team to become a Type I team. NAS Whidbey is hit or miss for incident support. Need more technicians in other counties to handle level-three responses, and they could possibly train with current teams. All-volunteer departments showed least interest. San Juan County, which is mostly volunteer, was in that class. In general, however, there was good acceptance of the concepts we're discussing. Contacts were with fire departments and emergency management divisions, not with law enforcement.

Region 2: by Paul Stewart. Paul is new to this project. Region 2 focus has been on interoperable communication. Also, getting "everyone" up to Operations Level for hazmat. Kitsap County DEM is apparent "lead agency." Believes there is a need for Type I team in the region. Jefferson County has a lot of "rural area" and has no sustainable funding for hazmat.

Region 3: by Pat Dale. Not prepared to speak for the whole region. Interest in a Type III for sure, but not much interest in hosting a Type I. Not just a funding issue. Risk analysis information has been lacking from DEM for Thurston County. Type III IMT starting up, and good/abundant communications equipment in region utilizing Homeland Security money. Olympia FD will have to consider "sharing" administrative responsibilities with anothor department such as Lacey FD.

Region 4: by Dan Monaghan. Local folks are ready for state funded program to start ASAP. Regional hazmat team is looking forward to funding support. Communications are good in the region with cross-discipline Homeland Security committees meeting once per month. LEPC has been notified and is supportive.

Region 5: by Tom Henderson. Fire jurisdictions are interested. Wants to take more information from this forum to share with Pierce County Fire Chiefs.

Region 6: by Charlie Cordova. Not a lot of feedback so far but has passed along all of the information. Region is hoping to combine into a three-team zoned response system. Any funds would be accepted with enthusiasm. Law enforcement within King County has had at least Awareness-level training, and the plan is to provide them all with PPE. Private industry connection is going slowly, due to training, equipment, liability issues. Recognizes need for interoperability, and have been working in that direction for past 7 years. A major concern is lack of sustainability of Homeland Security grant funds.

Region 7: by Bruce Merighi. Spoke with most fire chiefs. Emailed everyone with minutes, etc. Met with two of three regional WSP representatives. Has private sector ammonia team but no public-safety-based team. Would like to locate Type III teams near Ellensburg, Wenatchee and Moses Lake. Okanogan has no interest. Colville Tribal contact wants to "put together a team," but no action back.

Region 8: by Grant Baynes. Project has been well received. Walla Walla FD is considering issues presented.

Region 9: by Dave Leavenworth. Message was that everyone wants more training. Few want more equipment besides the basics like PPE. Tribal folks want PPE. Fairchild AFB has been short staffed, and has limited availability of Technicians. Pullman Fire is on the edge of a Type II or Type III team. City Council is hesitant about letting them respond outside Pullman, but now willing to go county-wide. He has not contacted Grant County.

Determine Initial Start-up Cost to Achieve Desired Response Capability (Objective #4): Determine Annual Cost to Sustain Desired Response Capability (Objective #5):
A "Strawman" budget spreadsheet was distributed electronically to each member. David Lincoln and Dan Monaghan led a discussion explaining how the committee will use the Strawman as a tool to determine both the start-up costs (objective #4) and the annual costs (objective #5) of building and sustaining regional hazmat teams. Initial Strawman cost estimates for a Type I hazmat team were reviewed item by item. Modifications were made as members thought appropriate. It should be pointed out that when cost estimates were in doubt, they were slanted toward the high side. Monaghan and Merighi worked with Patriot to develop cost estimates for a Type III team.

Lincoln advised that the spreadsheet is capable of incorporating a risk-based formula to determine total number of technicians per region. Monaghan stated that several risk formula options would be reviewed and one selected by committee members later in the workshop.

First issue was to determine the "base" number of technicians for a Type I hazmat team. It was noted that it takes 4.1-4.5 FTEs to fill a single 24-hour position (on a paid department).

Washington State Emergency Response Commission
TECHNICAL COMMITTEE WORKSHOP 2
July 20-21, 2006

Motion by Grant Baynes, second by Brad Reading, to set base number of technicians on a Type I hazmat team at 24. None opposed. Motion carried.

Motion by Grant Baynes, second by Brad Reading, to set backfill cost factor at 150% and compensation set at $45.00 per hour. None opposed. Motion carried.

All agreed that modifications of the equipment inventory would be done without a motion and vote. Minor changes were made to Type I equipment inventory Strawman as follows (Note: Equipment makes and models are being used for illustration purposes only).

- Immunoassay technology for identifying biological agents was dropped
- Mass decontamination system was added
- ALS medical equipment was dropped as it is already a statewide function, but some specialized hazmat medications/treatments and medical monitoring equipment will be included.
- Rehabilitation—sustenance: food and water will not be included
- $400,000 maximum will be allowed per team for apparatus, each team will be allowed to identify number of vehicles and specifications as long as total amount does not exceed cap.
- Annual equipment maintenance and operating costs will be calculated at 3.5% of capital cost.
- Depreciation will be calculated as follows: Apparatus over 15 years; all other equipment over 5 years.

Note: No equipment is being considered for first responders at this time.

> ***Recommendation to Administration Committee -*** *It was agreed that a state-level equipment- procurement coordinator will be needed and an equippment subcommittee should be formed with one representative from each region. This group will review any new equipment items that are proposed for addition to the state inventory and ensure they conform to adopted standards before approving funding. They will review and approve the removal of any equipment items from the state inventory. This group will also be responsible for auditing team's equipment-maintenance practices, records and evaluating each team's readiness status.*

Adjourned at 1730

Day 2 (July 21st) - Call to order at 0800: Michelle LeClair, workshop facilitator, called the workshop to order and reviewed the day's agenda and scope of work.

Update and Closure of July 20th Session:
Dan Monaghan recapped yesterdays objectives 4 and 5. Region 7 still has concerns about training requirements, especially the number of hours involved, for a Type III team. Requesting more information and the basis behind the hours of training was suggested for the different type teams. Region 3 is not ready to say how many teams or which types would be needed. Finding a

department to "host" a Type I team is an issue. It was decided that for our "costing" purposes, we'll assume one Type I team for Region 3, and three Type III teams for Region 7. Region 5 still undecided if they will field one or two Type I teams. Region 6 anticipates they will consolidate their existing teams into three Type I teams. Region 1 wants two Type I teams. All other regions are planning to have one Type I team.

Bomb Teams will use the same Strawman format as hazmat teams but staffing, training, equipment, etc. will vary. The number of bomb teams will be listed separately from hazmat teams.

David Lincoln distributed a revised/updated Strawman budget spreadsheet and went over the changes made as a result of yesterday's work and the instructions for an "action item assignment" that each region is being asked to complete by July 28th.

- Instructions can be found on first worksheet titled "Instructions"
- Only add data to the green cells on Reg4 Type I worksheet
- Do not make changes to the other worksheets
- For 24-person base team the annual attrition rate will be 2/year.
- It was agreed that exisiting teams can "donate" the equipment they already have to "the cause" with the understanding that the state will pay M&O and replacement costs for approved items.
- A $25K per year cost was added for non-technician first responder training in each region.
- An annual administration cost ($500 per team member) was added for each region.

  Recommendation to Administration Committee - *All regions agreed that their administration costs should be included with the budget estimates. The Admin Committee needs to be made aware of this decision and our planned concept of operations. There is some concern that the Admin Committee may be too focused on the "Oregon Model". It should be noted that there are substantial differences between that program and what we are trying to achieve.*

Determine Interoperability Requirements (Objective #6):
A discussion was led by Paul Day on interoperable response plans, mutual aid agreements, communications, equipment, training and exercises.

Communications is being addressed by a separate state level committee in coordination with new DHS guidelines. A solution is not expected for several years. In the interim, it was agreed that each team will strive for an interoperable voice communications capability with all emergency response agencies within it's region. A variety of voice communication tools (radio, cell phone, SAT phone, etc.) have been budgeted for each team that should facilitate this effort.

Equipment has more to do with defining capabilities and continuity of service rather than true interoperability. The Technical Committee is using national resource typing and target capability standards to develop standardized equipment lists for hazmat and bomb teams.

Washington State Emergency Response Commission
TECHNICAL COMMITTEE WORKSHOP 2
July 20-21, 2006

Mutual aid agreements are the charge of the Administration Committee and outside the scope of the Technical Committee.

> ***Recommendation to Administration Committee*** *- the Washington State Fire Mobilization Program should be revised if necessary to include level 1 and 2 hazmat responses.*

Training and exercise standards have been adopted by this committee. An IFSAC accredited certification process is preferred for new technicians. Grant Baynes and Ron Bowen discussed the possibility of certification "equivalency" for existing technicians. Ron Bowen advised that "historical" certification is a difficult and time-consuming process.

> ***Recommendation to Administration Committee -*** *It was agreed that a state-level training coordinator will be needed and a training subcommittee should be formed with one representative from each region. This group will review potential training courses and ensure they conform to adopted standards before approving funding. This group will also be responsible for planning and executing exercises. This group will provide an annual peer review and exercise based evaluation process to ensure each team is meeting the adopted training and performance measures.*

Establishing local **emergency-response planning** standards will be a challenge because there is no standardized template to work from. Region 4 uses the LEPC developed Hazardous Materials Emergency Response Plan (ESF 10). Region 6 uses IFSTA planning docs. NIMS has been adopted by all regions and will address emergency-scene command and control issues. Each region must ensure that existing hazmat plans include inter-regional involvement in exercises and other integrating efforts. State hazmat teams must be included in all local and regional hazmat response plans.

> ***Recommendation to the SERC*** *- Identify one hazmat emergency response planning template for use by state homeland security regions instead of individual county plans.*

Recommend Risk-Based Funding Allocation Formula (Objective #7):
Dr. Lincoln reviewed several risk-based funding allocation formulas. A discussion followed regarding which formula should be recommended as a mechanism for determining funding allocations for each region. All agreed that common sense suggests risk will be higher in the more densely populated urban regions than in the less dense rural regions. It follows that once a standard of cover has been achieved (see performance measures), additional resources and technicians should be focused within the urban regions, commensurate with risk. The most obvious risk factor to use then is population density. Other risk factors were also included, such as proximity to an international port of entry, an interstate highway or major maritime port.

Each formula was reviewed and discussed in depth. Risk factor weights were adjusted to better reflect real world threats and help pass a "gut check". Dr. Linclon pointed out that none of the risk formulas were based on scientific research or study.

Washington State Emergency Response Commission
TECHNICAL COMMITTEE WORKSHOP 2
July 20-21, 2006

Motion by Brad Reading, second by Charlie Cordova, that we adopt the "Factor Method" risk formula with 24 technicians as the "base" variable for a type I team. Motion amended to include population density factor of 0.1. None opposed. Motion carried.

Motion by Brad Reading, second by Dan Monaghan, that for the purpose of a budget estimate, we will calculate costs for a statewide total of twelve Type I hazmat teams and three Type III hazmat teams. None opposed. Motion carried.

Workshop Recap and Closeout:

There is no plan for the Technical Committee to meet again as a group before Patriot's final report is completed on Sept. 15th.

Motion by Charlie Cordova, second by Grant Baynes, that future issues may be voted on by email. None opposed, motion carried.

Action Item Assignments:

1. **Dan Monaghan (with assistance from Patriot)** will share admin recommendations with the Admin Committee ASAP. These recommendations will also be included in Patriot's final report.
2. **Patriot** will obtain tribal information by region from Ron Wilson at EMD.
3. **Ron Bowen** will identify WADOT Incident Response program representative by July 25.
4. **Dan Monaghan** will contact WADOT and ask them to participate on Technical Committee by July 28.
5. **Dan Monaghan** will get state hazmat teams list from EMD and forward to committee members for update by Aug. 1st.
6. **Each region** will complete an electronic Strawman budget spreadsheet for their region and report back to Patriot via paul.day@patriot-technical.com by July 28th
7. **Regions 3, 5 and 6** will confirm what type and number of teams they will support and report back to Patriot via paul.day@patriot-technical.com by Aug. 1st
8. **Each region** will determine how best to plug private sector teams into their regional response plan, which should address the following: role, responsibilities, liability concerns, interoperability issues, cost-recovery and compensation issues, legal concerns.

Adjourned at 1153

Page 8 of 8

This page intentionally left blank.

Appendix D – Regional CBRNE Technician Models

The development of the number and type of technicians is presented in this appendix.

D1.0 Response Technicians

The SERC Technical Committee examined three models that provide a risk-based (i.e., considering the probability and magnitude of CBRNE events) approach to allocating the technicians to the regions at its July 20-21, 2006 workshop:

- HazMat Incidents. The number of technicians is allocated to each region proportional to the regional number of HazMat incidents reported to the Washington State Emergency Management Division (EMD) during the period of 2000-2004. Table D-1 shows the proportion of incidents in each region.

Table D-1. Proportion of HazMat Incidents (2000-4).

RHSCD Region	Proportion of Incidents
1	0.195
2	0.073
3	0.104
4	0.073
5	0.150
6	0.282
7	0.025
8	0.046
9	0.052

- Population/Density. The number of technicians is allocated to each region based on its share of the state's population, and magnitude of population density. The points given to each region were: 30 base, 20 for relative population, and 50 for relative population density. This is similar to the allocation formula currently used by the EMD in allocating grants.
- Risk Factor Method. The number of technician is allocated to each region based on its characteristics, including population, density, size, transportation network, and infrastructure (e.g., airports, marine terminals, ferry terminals, public transit, dams, and other special areas). The general formula is:

  Allocated number of technicians per region = Base + Σ(Factor i * Factor weight i)

These three methods provided approximately the same distribution of technicians across the state when the statewide total number of technicians was held constant across the methods. After discussion, the Technical Committee voted unanimously to base the number of technicians to be

supported by the Program on the Risk Factor Method using the weights shown in Table D-2 because the allocation was consistent with its experience and view of Program needs. The resulting regional allocation of technicians is shown in Table D-3. A region may decide to designate fewer technicians to the Program than allocated. A region may also decide to maintain a number greater than allocated, but at its own expense.

Table D-2. Risk Factor Method Weights.

Factor (regional data)	Factor Weight
Population (2005 est.)[a]	0.000005
Density (people/sq mi)	0.1
Area (sq mi)	0.0004
Major roads (interstate and major arterial) (mi)	0.002
Gas/liquid pipelines (mi)[b]	0.002
Number of manufacturing jobs (2002)[c]	0.0003
Scheduled airports (yes/no)	0.5
Marine terminals (yes/no)	0.5
Ferry terminals (yes/no)	0.5
Rail stations (yes/no)	0.5
Public transit (yes/no)	0.5
Major dams (yes/no)	0.5
Special areas (yes/no) (international border, Centralia Coal Plant, Hanford, nearby Umatilla Weapons Depot)	0.5

Base equals 24.

[a]Office of Financial Management, State of Washington, released June 28, 2005.

[b]Roundtable Associates. Land Use Planning in Proximity to Natural Gas and Hazardous Liquid Transmission Lines. Sponsored by Washington Utilities and Transportation Commission; Association of Washington Cities; Washington State Association of Counties; Pipeline Safety Trust; and Municipal Research and Services Center. June 2006.

[c]2002 Data. Bureau of Economic Analysis, U.S. Department of Commerce.

Table D-3. Number and Types of Allocated Response Teams and their Technicians.

Region	Number and Type of Teams	Total Allocated Number of Technicians	Key Considerations
1	2 Type I	73	Moderate population, medium transportation network, medium industry, gas/petroleum pipelines, international border
2	1 Type I	40	International border, ferry
3	1 Type I	43	State Capitol, ports, power plant
4	1 Type I	51	Moderate density, moderate transportation network, dams, port
5	2 Type I	82	High population density, medium industry, port
6	3 Type I	160	High population density, large infrastructure, high industry, major transportation network
7	3 Type III	39	Large area, low population, dams, international border
8	1 Type I	47	Hanford, gas/petroleum pipelines, power plants, dams, port, nearby weapons depot
9	1 Type I	50	Large area, metropolitan area, gas/petroleum pipelines, international border, dams, port
Total	**15**	**585**	

1. Type I teams have response capabilities for unknown hazardous materials, including warfare agents.
2. Type II teams have the response capabilities for unknown hazardous materials.
3. Type III teams have the response capabilities for known hazardous materials (e.g., manufacturing facility that handles known chemicals).

D2.0 Bomb Squad Technicians

The Washington State Patrol (WSP) considered several risk factors in allocating bomb squads to the regions:

- Past incident locations, frequency, and duration.
- Critical infrastructure and key asset vulnerabilities.
- Threat assessments.
- Population and population density.

Planning guidelines from several agencies were reviewed: Federal Bureau of Investigation; the Bureau of Alcohol, Tobacco, Firearms and Explosives; National Bomb Squad Commanders Advisory Board; and the U.S. Department of Homeland Security's "Target Capability Planning Assumptions."

The WSP in consultation with its regional counterparts decided not to change the statewide number and distribution of bomb squad technicians, but to upgrade their capabilities to meet the state's needs. Table D-4 presents the allocated squads and technicians, including those in the WSP and local jurisdictions.

Table D-4. Allocation of Bomb Squads.

Region	Type	Technicians
1	1 Type II 1 Type III	9
2	1 Type II	5
3	1 Type I	5
4	1 Type III	2
5	1 Type I 1 Type II	9
6	1 Type I 3 Type II 1 Type III	27
7	-	0
8	2 Type II	8
9	1 Type I	10
Total	**15**	**75**

1. Type I squad is capable of handling multiple/simultaneous incidents in a CBRNE environment, and has robot capable of handling vehicle explosive devices, and a bomb transport vessel. Minimum of six technicians.
2. Type II squad is capable of handling multiple incidents in a CBRNE environment, and has robot capable of handling non-vehicle improvised explosive devices, and bomb transport vessel. Minimum of four technicians.
3. Type III squad is capable of handling a single incident, but has no CBRNE capability, robotic capability, or bomb transport vessel. Minimum of two technicians.

Appendix E – Regional Cost Model

A Microsoft Excel™ workbook was created to model the major cost components associated with the regional CBRNE teams: administration/planning, training, equipment, medical surveillance, and unreimbursed costs. Major cost factors are described in Section E1.0.

Equipment requirements for the Type I (Table E-2) and III (Table E-3) response teams and the bomb squads (Table E-4) were developed by the SERC Technical Committee and used as a basis for determining the regional equipment needs by a comparison with current inventory.

E1.0 Cost Factors

1. Regional administration and planning: $1,000/year per number of allocated response technicians. Rate goes up 2%/year.
2. Regional training for operations, awareness and command level personnel: $500/year per number of allocated response technicians. Rate goes up 2%/year.
3. Training
    a. Response Technicians
        i. Initial Training – to upgrade current technicians, new hires and replacements.
            (a) Type I: 150 hours/technician. Maximum amount is $12,000/technician, including labor and expenses.
            (b) Type III: 75 hours/technician. Maximum amount is $6,000/technician, including labor and expenses.
        ii. Annual Refresher Training/exercises.
            (a) Type I: 48 hours/technician/year. Maximum is $2,500/technician/year, including labor and expenses.
            (b) Type III: 24 hours/technician/year. Maximum is $1,250/technician/year, including labor and expenses.
    b. Bomb Squad Technicians
        i. Initial Training - to upgrade current technicians, new hires and replacements. 240 hours/technician. Expenses are $6,500.
        ii. Annual Refresher Training/exercises. 232 hours/technician/year. No allowance for expenses.

4. Medical surveillance
   a. Response technicians: annual exam at $350 per exam in 2007-8.
   b. Bomb squad technicians: exam every 3 years at $350 per exam in 2007-8. Model assumes an annualized charge of $350/3 per technician per year.
   c. Exam costs go up 10% per year.
   d. Response technicians are paid for 3 hours for time associated with the exam and travel. Model assumes bomb squad technicians are paid an annualized amount of 1 hour per year because their exams are every 3 years.
5. Technician labor rate = $45/hour (statewide average overtime rate fully-burdened) for training, and 70% of this value for time for the medical exam. Rate goes up 2%/year.
6. Lose 5% of the technicians per year to attrition.
7. Unreimbursed response costs for response teams and bomb squads: $250,000/year and $500,000/year, respectively.
8. Equipment: response teams and bomb squads have separate equipment lists (Tables E-2 through E-4). Each team or squad is expected to have the listed equipment. If a team or squad is short on equipment, equipment is assumed to be purchased in 2007-8.
9. Vehicles: Type I response teams are given an initial allowance of $400,000 maximum to buy vehicles. Type III response teams have $250,000 maximum to buy vehicles. Bomb squads are given an initial allowance of $305,000 for Types I and II, and $135,000 for Type III.
10. Within a biennium, new technicians are assumed to get the initial training in year 1, and refresher training in year 2.
11. Within a biennium, new equipment is assumed to be purchased in year 1, and has the "first year installation" charge in year 1 and the "operations and maintenance charge" in year 2.
12. Recertification (40 hours) for bomb squad technicians is annualized (i.e., divided by 3 for a yearly estimate) because they get recertified every 3 years.
13. Additional CBRNE equipment expense factors are listed in Table E-1.

Table E-1. Equipment Expense Factors.

Equipment	% Capital Cost
Tax	8.8%
Shipping	0.5%
First Year Installation Cost	1%
Annual Operations & Maintenance	3%
Annual Replacement - Vehicles	5%
Annual Replacement - Other	16%
Annual Equipment Cost Increase	2.6%[(a)]

[(a)] Average compounded annual increase in the Consumer Price Index for past 10 years.

Table E-2. Equipment for Type I Response Team. (3 sheets)

Equipment	Unit Capital Cost	Units Per Team
Equipment - Personal Protection		
Level A ensemble -Trelleborg VP-1 Universal, includes boots & gloves	$2,500	12
Level B ensemble - Dupont Tychem CPF 3, includes boots, gloves, tape	$350	1 per member
Level D ensemble - includes coverall, hardhat, boots, SDK, gear bag	$650	1 per member
Self-Contained Breathing Apparatus (SCBA)- make and model determined by team but must be high pressure, includes 2 one hour bottles & PAL	$4,200	12
Rapid Intervention Team (RIT) Kit, includes one hour SCBA bottle, regulator & associated equipment	$3,500	1
Cooling Vest w/ cold packs	$150	12
Level A suit inflation test kit - Trelleborg	$1,200	2
Equipment - Detection		
Protein Test Kit - GeneSystems 20/20	$30	5
Fluorescent Detection - Scott Prime Alert Microbe & Toxin Test Kit	$8,000	1
Colorimetric Chip Measurement System (CMS) - Drager w/ assorted toxic industrial gas chips	$3,500	2
Photo Ionization Detector (PID) - Industrial Scientific VX500	$2,000	2
Industrial Scientific ITX Multi (5) Gas Detector w/charger, battery pack, tubing, stainless steel probe, nylon case w/neck strap, dry carry case	$2,500	2
Industrial Scientific M-40 Multi (4) Gas Detector w/charger, battery pack, nylon case w/neck strap, cal adaptor, dry carry case	$800	2
FTIR Spectroscopy - Travel IR or Hazmat ID	$62,000	1
Raman Spectroscopy - Ahura First Defender	$35,000	1
Wet Chemistry Kit - TBD	$3,000	1
Ionizing Mobility Spectrometry - Smiths APD 2000 or Sabre 4000	$10,000	1
Radiological Response Kit - Ludlum 2241-3	$2,500	6
Dosimeter - Siemens EPD Mk2	$480	24
Environmental Sampling Kit	$2,500	1
Equipment - Operational		
Weather station	$12,000	1
Infrared thermometer w/ laser sighting	$350	1
Thermal Imaging Camera w/ charger - MSA 5200	$9,800	1
Photography equipment	$3,000	1
Ultrasound Detection Kit - EFI	$1,500	1
Victim evacuation system	$3,500	1

Table E-2. Equipment for Type I Response Team. (3 sheets)

Equipment	Unit Capital Cost	Units Per Team
Hand tools - TBD	$2,500	1
Light set, portable	$900	4
Lock out tag out kit	$300	1
Grounding kit	$1,200	1
Hand Carts	$500	4
Hand Truck for drums	$350	1
Hand Lights	$100	6
Binoculars or Spotting Scope	$600	1
Ventilation Fan	$1,500	1
Scene control kit - tape, cones, etc.	$1,000	1
Plugging & patching supplies - TBD	$3,000	1
Chlorine A, B & C kits	$12,000	1
Spill boom, diking, sorbents - TBD	$3,000	1
Overpacks - TBD	$1,500	1
Equipment - Communications		
Portable radio & charger - make, model & frequency determined by team, must have secure independent radio to radio & mayday capability	$3,500	12
Push to talk radio interface	$900	12
Mobile radio - make, model & frequency determined by team, must have secure independent radio to radio capability	$1,500	1 per apparatus
Cellular phone, hands free & charger	$400	1 per apparatus
Portable satellite phone & charger	$1,500	1 per apparatus
Equipment - Decontamination		
TVI 1 line Technical Decontamination System - for entry team use, capable of providing 2 ambulatory lines simultaneously	$5,000	1
Technical Decontamination System - for mass decon use, capable of providing 4 ambulatory lines and 2 non-ambulatory lines simultaneously	$70,000	1
Equipment - Information Technology		
Mobile data computer & software	$10,000	1 per apparatus
Handheld computer & software w/ scanning, GPS, Wi-Fi capability	$2,000	6
Toughbook laptop computer & software w/ Wi-Fi capability	$4,500	1
Digital Projector w/ screen, case, etc.	$2,000	1
Personnel & Equipment Tracking System - Electronic	$3,500	1
Mobile satellite dish w/ broadband internet access, video, VoIP & Wi-Fi networking capability	$15,000	1
Equipment - Medical		
Hazmat meds & medical monitoring	$5,000	1

Table E-2. Equipment for Type I Response Team. (3 sheets)

Equipment	Unit Capital Cost	Units Per Team
Equipment - Power		
Cord real	$150	1
Portable generator	$500	1
Equipment - Reference Material		
Hardcopy & electronic - TBD	$3,500	1
Equipment - Logistical Support		
Containers - assorted sizes	$1,500	1
Refrigerator	$300	1
Megaphone	$150	1
Equipment - Response Vehicles		
Teams have a maximum allowance of $400,000 for vehicles, if needed.		

Table E-3. Equipment for Type III Response Team*. (3 sheets)

Equipment	Unit Capital Cost	Units per Team
Equipment - Personal Protection		
Level A ensemble -Trelleborg VP-1 Universal, includes boots & gloves	$2,500	6
Level B ensemble - Dupont Tychem CPF 3, includes boots, gloves, tape	$350	1 per member
Level D ensemble - includes coverall, hardhat, boots, SDK, gear bag	$650	1 per member
Self Contained Breathing Apparatus - make and model determined by team but must be high pressure, includes 2 one hour bottles & PAL	$4,200	6
Rapid Intervention Team (RIT) Kit, includes one hour SCBA bottle, regulator & associated equipment	$3,500	1
Cooling vest w/ cold packs	$150	6
Level A suit inflation test kit - Trelleborg	$1,200	1
Equipment - Detection		
Colormetric Chip Measurement System (CMS) - Drager w/ appropriate toxic industrial gas chips	$3,500	1
Photo Ionization Detector (PID) - Industrial Scientific VX500	$2,000	1
Industrial Scientific ITX Multi (5) Gas Detector w/charger, battery pack, tubing, stainless steel probe, nylon case w/neck strap, dry carry case	$2,500	2
Industrial Scientific M-40 Multi (4)Gas Detector w/charger, battery pack, nylon case w/neck strap, cal adaptor, dry carry case	$800	2
Wet Chemistry Kit - TBD	$1,000	1
Environmental Sampling Kit	$2,500	1

Table E-3. Equipment for Type III Response Team*. (3 sheets)

Equipment	Unit Capital Cost	Units per Team
Equipment - Operational		
Weather station	$12,000	1
Infrared thermometer w/ laser sighting	$350	1
Thermal Imaging Camera w/ charger - MSA 5200	$9,800	1
Photography equipment	$3,000	1
Ultrasound Detection Kit - EFI	$1,500	1
Victim evacuation system	$3,500	1
Hand tools - TBD	$2,500	1
Light set, portable	$900	2
Lock out tag out kit	$300	1
Grounding kit	$1,200	1
Hand Carts	$500	2
Hand truck for drums	$350	1
Hand lights	$100	4
Binoculars or spotting scope	$600	1
Ventilation fan	$1,500	1
Scene control kit - tape, cones, etc.	$1,000	1
Plugging & patching supplies - TBD	$2,000	1
Chlorine A, B & C kits	$12,000	1
Spill boom, diking, sorbents - TBD	$3,000	1
Overpacks - TBD	$1,500	1
Equipment - Communications		
Portable radio & charger - make, model & frequency determined by team, must have independent radio to radio & mayday capability	$3,500	6
Push to talk radio interface	$900	6
Mobile radio - make, model & frequency determined by team, must have independent radio to radio capability	$1,500	1 per apparatus
Cellular phone, hands free & charger	$400	1 per apparatus
Portable satellite phone & charger	$1,500	1 per apparatus
Equipment - Decontamination		
Technical Decontamination System - for entry team use, capable of providing 2 ambulatory lines simultaneously	$5,000	1
Technical Decontamination System - for mass decon use, capable of providing 4 ambulatory lines and 2 non-ambulatory lines simultaneously	$70,000	1
Equipment - Information Technology		
Mobile data computer & software	$10,000	1 per apparatus
Handheld computer & software w/ scanning, GPS, Wi-Fi capability	$2,000	3

Table E-3. Equipment for Type III Response Team*. (3 sheets)

Equipment	Unit Capital Cost	Units per Team
Toughbook laptop computer & software w/ Wi-Fi capability	$4,500	1
Digital Projector w/ screen, case, etc.	$2,000	1
Personnel & Equipment Tracking System	$3,500	1
Mobile satellite dish w/ broadband internet access, video, VoIP & Wi-Fi networking capability	$15,000	1
Equipment - Medical		
Hazmat meds & medical monitoring	$2,500	1
Equipment - Power		
Cord real	$150	1
Portable generator	$500	1
Equipment - Reference Material		
Hardcopy & electronic - TBD	$1,000	1
Equipment - Logistical Support		
Containers - assorted sizes	$1,500	1
Refrigerator	$300	1
Megaphone	$150	1
Equipment - Response Vehicles		
Teams have a maximum allowance of $250,000 for vehicles, if needed.		

*Team equipped for ammonia, chlorine, propane, natural gas, gasoline, diesel, carbon monoxide, hydrogen sulfide, oxygen deficiency, ethanol, methanol.

Table E-4. Bomb Squad Equipment.

Item	Cost	Units per Squad		
		Type I	Type II	Type III
Robot	$ 170,000	1	1	0
Bomb suits	$ 25,000	2	2	1
X-ray device	$ 22,000	2	2	1
Disruptor	$ 5,500	2	2	1
Hook and Line kit	$ 7,500	2	2	1
Bunker/magazine	$ 16,000	2	2	2
CBRNE protection – SCBA, CPC	$ 4,200	4	4	0
Hand Tool kit	$ 5,000	2	2	1
Blaster	$ 6,500	2	2	1
Portable Radio	$ 3,500	6	4	2
Vehicle Radio	$ 4,000	2	2	1
Data transmission - COBRA	$ 12,000	2	0	0
CBRNE monitor - IMS	$ 10,000	2	2	0
Portable Generator and Lighting	$ 2,200	2	2	1
Radiation Dosimeter	$ 480	6	4	2
Safety equipment – uniform, etc.	$ 1,000	1 per team member		
Cell phone and pager	$ 150	1 per team member		

Squads have a maximum allowance for new vehicles, if needed: $305,000 for Types I and II, and $135,000 for Type III.

Appendix F – Funding Options

The following options were evaluated as potential funding alternatives to support the Statewide CBRNE Response Program.

With the exception of the first three options, each option is discussed with no predisposition as to whether it would be the appropriate source of funds. The first three options, however, are designed to be supplemental sources of funding, and it is assumed that each of these options will be incorporated as a component into any funding mechanism that is ultimately selected.

F1.0 Option 1 – Grants

The majority of funding for emergency preparedness currently comes in the form of grants from the federal government—particularly through the Department of Homeland Security (DHS). The amount of DHS grant funding to Washington State has totaled approximately $150 million to date.

The amount of these grants increased dramatically after the terrorist attacks on September 11, 2001. These amounts, however, have been decreasing since that time. Grants to the state from the federal DHS have ranged from a high of $60 million in 2003 to a low of $30 million this year. This downward trend is expected to continue.

Federal regulations require that all homeland security grants to states be managed through a single state organization. The Washington State Emergency Management Division (EMD) (a division of the Washington State Military Department) is the State Administrative Agency for DHS grants. Other state agencies, however, may apply without EMD involvement for any CBRNE-related grants that are awarded outside of DHS. The activities and purchases of the Statewide CBRNE Response Program may compete with other local and regional priorities identified in the grant application process. It is reasonable to assume that some amount of DHS grant money could be used to support eligible activities or purchases for the Program. The Office of the State Fire Marshall (OSFM) would be required to work in cooperation with EMD and local jurisdictions concerning the budgeting and application procedures for grants. EMD and any other relevant agency would be required by legislation to cooperate with the Fire Marshall to apply for and receive grant funds.

F2.0 Option 2 – Cost Recovery

The OSFM will administer an aggressive cost recovery program similar to the model employed by the Washington State Department of Ecology to recover costs associated with oil spills (RCW 90.56.400). The Program will serve as a deterrent to future responsible parties and will help keep unreimbursed responses to a minimum. All proceeds collected from the cost recovery will be placed in the CBRNE Program Account.

The OSFM will initiate an investigation for each CBRNE incident to identify a responsible party. If a responsible party is identified, the OSFM will issue an Order for Reimbursement of Expenses. If the responsible party fails to render payment in a timely manner, the order will be

referred to a collection agency or submitted to the Attorney General's Office for a collection action in Superior Court. The benefit to this approach is that litigation is not required to instigate the initial reimbursement procedure. This will be more cost-effective for the State and will encourage the timely payment by responsible parties who wish to avoid the expense of litigation.

The Oregon HazMat Response Program, which has been operational since 1989, recovers 80 percent of the response costs when a responsible party is identified. It is reasonable to assume that the Washington Statewide CBRNE Response Program will achieve a similar rate.

F3.0 Option 3 – General Fund Transfers

Transfers from the state's general fund should serve as a source of funding only if insufficient funds are available from the other sources. The OSFM shall notify the State Treasurer if on July 1 of any year, beginning in July 2008, the combined total amount in the CBRNE Program Account and the unrestricted portion of dedicated grant accounts is less than $17 million.

Within 30 days after receiving this notification, the State Treasurer shall transfer, into the CBRNE Program Account, the amount needed to bring the moneys for the Program to $17 million. The Treasurer shall transfer this amount from the general fund.

F4.0 Option 4 – A Surcharge on Insurance Policies

The state, under this option, would collect a surcharge for home, rental, condominium, and commercial insurance policies. This approach is used by the State of Florida to fund its emergency response program.

A similar approach was recently attempted in the Washington State Legislature.

Senate Bill 6433 was introduced during the 2005-2006 Legislative session. That bill included a new $2 surcharge on insurance policies of single-family homeowners, mobile homeowners, condominium owners, and renters. There was also a $4 surcharge on insurance policies for commercial fire, commercial multiple peril, and business owner's property insurance. The proceeds would have been used for various emergency management activities conducted by EMD.

Supporting information for SB 6433 suggested that the new surcharge would generate revenue between $5.3 million and $5.5 million annually for the next five fiscal years beginning in Fiscal Year 2007.

The Department of Revenue would incur costs of approximately $20,700 during the first fiscal year to implement that legislation. These costs would be programming costs to set up a system to assess and collect the tax and costs for sending a special notice. The time and effort spent would equate to 0.2 full-time employees. The costs for the succeeding fiscal year would be approximately $10,000 to amend an administrative rule. The bill was amended in the Senate to delete the provisions containing the insurance surcharge, based on opposition from the insurance industry. The amended bill failed to pass before the end of the legislative session.

This funding option imposes duties on insurers. The insurer must collect, account for, and remit the surcharge. The increased costs could lead to increased administrative costs. This problem could be alleviated by allowing the insurer to retain a portion of the surcharge to defray any additional costs that it incurs by complying with the surcharge. This feature was absent from the similar bill that failed to pass.

F5.0 Option 5 – The Use of Proceeds from the Hazardous Substance Tax

A percentage of the proceeds collected from the hazardous substance tax at its current rate of 0.7% (discussed in Section F6.0) would be deposited directly into the CBRNE Program Account.

The hazardous substance tax is currently disbursed in a proportion of 47% to the State Toxics Control Account and 53% to the Local Toxics Control Account. The disbursement of that tax under this option would be proportioned along the lines of 47% to the State Toxics Control Account, 40% to the Local Toxics Control Account, and 13%, or a sufficient percentage, to the CBRNE Program Account.

A potential benefit to this option instead of Option 7 is that the Program will enjoy a more secure source of funding with this funding option. The Local Toxics Control Account currently contains a large fund balance and will attract an increasing number of people seeking funding for various programs. The Program will avoid facing that increased competition for funding from that account if it avoids reliance on that account.

F6.0 Option 6 – An Increase in the Hazardous Substance Tax

Under this option, the rate of the hazardous substance tax would be increased, and the amount of revenue generated by that increased rate would be deposited into the CBRNE Program Account.

Washington relies, primarily, on the hazardous substance tax to pay for state-level hazardous waste programs. The Hazardous Substance Tax (RCW 82.21) imposes a tax on petroleum products, pesticides, and about 8,000 different hazardous substances at a rate of 0.7% of their wholesale value to the first possessor in the state. About 47% of the total receipts are allocated to the state toxics control account for cleanup of hazardous waste sites and related planning and regulation activities. The remaining 53% goes to toxics control accounts of local governments for hazardous waste programs. The accounts are restricted to specific uses, which include hazardous materials emergency response training (RCW 70.105D.070).

In 2004, about $69 million were collected, with about 90% coming from gasoline possession. The revenue, therefore, is very dependent on the price of gasoline.

The price of gasoline has increased dramatically in recent years. The average retail price of gasoline in Washington (for all grades and formulations) on August 9, 2004 was approximately $1.98 per gallon. That price had increased to approximately $3.12 per gallon by August 14, 2006.

One of the effects of these increased fuel prices is that even a small increase in the Hazardous Substance Tax can potentially generate a large amount of revenue. For example, an increase from 0.7% to 0.78% would likely generate about $8 million per year.

There is, however, a down-side to increasing the hazardous substance tax. An increase in the tax will likely increase the price of gasoline. This price increase may make this option politically undesirable for legislators.

One potential solution to this problem is to create two separate rates for the hazardous substance tax. Under this approach, the possession of petroleum products would continue to be taxed at a rate of 0.7%, and the possession of all of the other hazardous substances would be taxed at a higher rate. This higher rate, however, would have to be substantially higher. For example, the rate for hazardous substances other than gasoline would have to be increased from 0.7% to approximately 1.6% to generate about $8 million per year.

F7.0 Option 7 – Transfers from the Local Toxics Control Account

Under this option, money would be transferred directly out of the Local Toxics Control Account and into the CBRNE Program Account. The Model Toxics Control Act authorizes the creation of two accounts: (i) the State Toxics Control Account; and (ii) the Local Toxics Control Account.

The hazardous substance tax, as discussed in Section F6.0 is the primary source of money into these accounts. The State Toxics Control Account receives 47% of the proceeds collected under that tax, and it also receives various fees, fines, and penalties. The Local Toxics Control Account receives 53% of the proceeds collected under that tax.

The moneys in the Local Toxics Control Account must be used by the Washington State Department of Ecology to make grants and loans to local governments for the following purposes (in descending order of priority):

(i) remedial actions;

(ii) hazardous waste plans and programs under the Hazardous Waste Management Act;

(iii) solid waste plans and programs under various statutes;

(iv) funds to assist in the assessment and cleanup of sites of methamphetamine production; and

(v) cleanup and disposal of hazardous substances from abandoned or derelict vessels that pose a threat to human health or the environment.

The account typically receives more money than it disburses. Nearly $31 million was deposited into the account in the 2004 fiscal year. The total expenditures in that same year were less than $2.4 million. The Legislature has recently looked to the account as a source of moneys for purposes other than emergency management. The Legislature, for the 2005-2007 fiscal year budgets, transferred moneys from the Local Toxics Control Account for specific purposes set forth in the omnibus capital budget bill, for grants to local governments to retrofit public sector diesel equipment, and for storm-water planning and implementation activities (see RCW 70.105D.070(3)(a)). .

F8.0 Option 8 – Direct Appropriations

Appropriations from the Legislature could be used as a supplemental funding source. The OSFM would be able to request appropriations from the Legislature in the Biennial Appropriations Request Report.

While this option allows for flexibility for funding the Program with respect to the entire state budget, it is neither a sustainable nor dedicated funding source. It may place the Program in direct competition with other state programs that use state revenues, and an appropriation request must be made by the OSFM to the Legislature each biennium as part of the budget process.

This page intentionally left blank.