Center for REGIONAL DISASTER RESILIENCE

Pacific NorthWest Economic Region

BLUE CASCADES VI Regional Tabletop Exercise:
Focus—Pandemic and Severe Flooding Challenges to Health & Safety Community Resilience in the Puget Sound Region

FINAL REPORT

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Seattle, WA

Table of Contents

Executive Summary

Puget Sound Region stakeholders with state and federal agency partners on March 25, 2010 conducted a regional tabletop exercise focused on ways to improve community health and safety for a significant flood during a pandemic. *Blue Cascades VI* was developed as part of a *Pilot Project to develop a Comprehensive Community Bio-Event Resilience Plan (CCBER),* which is being conducted by the Pacific Northwest Economic Region's Center for Regional Disaster Resilience and regional stakeholders with the sponsorship of the Office of Health Affairs, U.S. Department of Homeland Security. The purpose of the exercise was to examine current health-related preparedness and management capabilities with focus on communications; planning and management of resources, including staff; supply chains and logistics; public health/economic impacts; and the executive decision-making process; and to identify areas for improvement that can strengthen Community resilience. The exercise was developed by local and state government and other stakeholders, and covered the greater Seattle area, cross-jurisdiction/state and cross-national border. The results of the CCBER Project activities are being incorporated into a regional needs assessment/gap analysis and roadmap of activities that will build on existing capabilities to make the Puget Sound Region more resilient to health and safety consequences of all-hazards disasters and events.

Significant Findings

1. Public health officials have made major steps in addressing both H1N1 challenges and preparedness needs associated with potential Green River Valley flooding, undertaking planning and other measures and providing training and education for stakeholder organizations and enhancing communication with the private sector. Likewise, infrastructures and businesses with assets in the Green River Valley have made significant investments in continuity of operation improvements, including removal of assets, creating remote operations, acquiring emergency generators, physical protection of structures, establishing memorandums of agreement with moving companies, suppliers and other key services; and other mitigation measures.

2. Evacuations alert and warning processes and procedures, including evacuation trigger points, remain concerns. There is lack of understanding on how the evacuation process will work, be coordinated among jurisdictions, and how timelines will operate; also, how transportation challenges will be handled, including availability of fuel along the evacuation route. Other issues include sheltering for a prolonged period, relocation of nursing home residents, and ensuring that non-English speakers or impoverished individuals have evacuation information.

3. Flooding would cause significant and widespread impacts to critical infrastructure and key resources in the Green River Valley with cascading effects that would have costly and long-term consequences at the local, state, national and in some cases global level.

4. Identification and verification of emergency, service restoration, response, and other types of workers and permitting requirements and processes will be a significant constraint on response and initial recovery.

5. There are cultural and operational challenges in incorporating the private sector into the National Incident Management System (NIMS) and the Incident Command System (ICS) model for emergency response.

6. Recovery and long-term restoration remained largely unexplored in the exercise with participants having difficulty grasping the magnitude of the flood disaster and long-term health and safety-related impacts that included extensive damage and destruction of homes and businesses, major infrastructure assets, need for inspections and certification of food, agriculture, utilities, and other infrastructures; environmental impacts from hazardous materials in the flood waters, economic impacts and human factors.

7. While participants recognized that after a major flood, there would be a "new normal," how this "new normal" would be developed, what mechanism would be set up to make the decisions, which organizations would be involved and how long restoration could take remain have yet to be fully developed.

8. Procedures to address pandemic preparedness and response in the work place are still evolving after the recent H1N1 pandemic.

9. Small businesses needs include becoming more informed about jurisdiction/County evacuation and broader continuity planning and lack of flood insurance, which pose significant challenges.

10. Limited bandwidth for telecommuting and potential "telegridlock" is a major concern. Telecommunications companies can monitor and alter wireless communications to provide additional bandwidth and there is a national Government Emergency Telecommunications Service (GETS) / Wireless Priority System for expediting priority communications. However, these solutions have been deployed or tested in a real or exercise event.

11. Greater private sector information sharing and coordination with local and state public health officials is necessary to facilitate resource access and management and assure health supply chains. Businesses need continuous pandemic information to address continuity of operation requirements and a single focal point for communications and for information to validate planning assumptions, get updates on critical emergency-related information and decisions, and find out what other organizations need. The role of the Washington State Fusion Center in information sharing is unclear.

12. Financial support for pre-event mitigation is a major constraint to increased preparedness, especially for small businesses.

Significant Recommendations

1. H1N1 lessons learned and other findings already catalogued or in the process of documentation by government agencies and other organizations should be shared, integrated and used to upgrade local and state plans and undertake mitigation activities to improve regional and community heath resilience.

2. Potential flood impacts on individuals with special needs and cultural groups, including non-English speakers, need to be reviewed and further assessed to incorporate appropriate improvements into jurisdictions' emergency and response strategies. Localities should consider developing enhanced outreach to leaders of cultural and non-English speaking groups on health and related emergency issues.

3. Local and state officials with regional key stakeholders should develop and exercise a clearly-expressed evacuation and sheltering plan with an associated outreach and public education strategy for a Green River Valley Flood that covers people, livestock, and pets.

4. Best practices to address all-hazard, including health work place-related policy issues should be identified and incorporated into a single information resource that can be shared among regional stakeholders and incorporated in emergency and continuity of operation plans and procedures. Legal issues and policy gaps that impact preparedness should be addressed and avenues for changing them identified where possible.

5. Local government should continue to conduct outreach to area businesses and other organizations, provide forums to share continuity of operation planning best practices and approaches and assist small enterprises and other organizations that lack resources and expertise.

6. A workshop should be held that brings together private sector organizations with other interested organizations and local, state, and FEMA officials to discuss development of an emergency "business support team" modeled on ICS that a broad range of private sector organizations could adopt.

7. Local and state officials with regional key stakeholders should develop a Green River Valley flood recovery management structure that includes procedures and mechanisms for information sharing and decision making, and identifies what organizations and interests should be involved.

8. Local, state and regional stakeholders need to develop a strategy for improved alert and warning, communications and two-way information sharing on health security and resilience that identifies what information needs to be conveyed, how, and to what organizations and individuals, and how it will be coordinated and disseminated, ideally from a central focal point. The role of the Washington State Fusion Center in

information sharing should be clearly defined, along with the roles of other key contributors to any information sharing system.

9. Studies should be done to understand the impacts of increased bandwidth and possibly compromised IT infrastructure on communications during an event and solutions that should be considered, researched and tested with an exercise.

10. Local, state representatives with key regional stakeholders should undertake a Public Information and Training Gap Analysis that creates an inventory of current outreach and exercise activities. It should identify how well these activities are addressing the health resilience challenges mentioned above, and what is not being done. A key element of this strategy will be to identify private sector and other stakeholders, including the media, who should participate in the activities outlined in the strategy.

11. An assessment should be undertaken of the health, safety and economic consequences or impacts to critical infrastructures and key resources in the Green River Valley. It should take interdependencies into account to enable identification of risk mitigation priorities that could be addressed through joint government (grant and programmatic funds), private sector investments and tax dollars.

12. Ways to expand FEMA, SBA and other government assistance programs should be explored.

Blue Cascades VI Regional Tabletop Exercise:
Focus—Pandemic and Severe Flooding Challenges to Health & Safety Community Resilience in the Puget Sound Region

1. Background

Puget Sound Region stakeholders with state and federal agency partners convened on March 25, 2010 for a tabletop exercise designed to help organizations and the region identify cost-effective ways to improve bio-event resilience — specifically continuity of community health and safety for a significant flood during a pandemic. The tabletop exercise was the sixth in the *Blue Cascades Exercise Series* that began in 2002 to focus on all-hazards threats, vulnerabilities, and impacts associated with critical infrastructure interdependencies and identify cross-sector, multi-jurisdiction security and resilience needs and priorities.

Blue Cascades VI was developed and conducted as an integral element of a year-long *Pilot Project to Develop a Comprehensive Community Bio-Event Resilience Plan (CCBER).* The Pacific Northwest Economic Region's Center for Regional Disaster Resilience and regional stakeholders are working with the Office of Health Affairs, U.S. Department of Homeland Security on the Project. The CCBER Project will assist in the development of a national model for communities and broader regions nation-wide to integrate the private sector, non-profits, and public institutions into preparedness planning for pandemics, bio-attacks, and other major health hazards. ***(See CCBER Fact Sheet at Appendix B)***

For the Project, PNWER with direction from the CCBER Project Stakeholders ***(see Appendix C)*** has to date conducted three workshops, a regional stakeholder survey, industry and government focus group discussions and interviews. The focus of the Project extends from the local to national level and cross-border, based on the understanding that community resilience is dependent on cooperation and collaboration among the broad stakeholder constituency together with state and federal organizations and that bio-events "do not respect jurisdiction boundaries." The results of the CCBER Project activities are being incorporated into a regional needs assessment/gap analysis and roadmap of potential prioritized activities that will build on existing capabilities to make the Puget Sound Region more resilient to health and safety consequences of all-hazards disasters and events.

2. Overview

2.1. Purpose, Goal and Objectives

The purpose of the exercise was to examine current bio-event preparedness and management capabilities with focus on communications; planning and management of resources, including staff; supply chains and logistics; public health/economic impacts; and the executive decision-making process; and to identify areas for improvement that can strengthen Community bio-event resilience.

Exercise Objectives

1. Assess the effectiveness and areas for improvement regarding bio-event-related communications and information collection, coordination, and dissemination:
   - Among federal, state, and local government entities with roles in bio-event preparedness and management;
   - Between relevant government entities and private sector, non-government organizations, and community institutions and groups;
   - Cross U.S.-Canadian border.
2. Examine and identify means to enhance multi-jurisdiction, cross-sector, and cross-border resource planning and decision-making process to assure access to key supplies, staffing and other essential needs.
3. Identify and determine ways to mitigate bio-event-related supply chain and service delivery disruptions that could impact community public health and regional economic resilience.
4. Raise awareness of other potential public health and economic impacts and how these impacts could be cost-effectively managed in future bio-events to assist businesses and the general public.
5. Identify ways to further develop an ongoing stakeholder group to work together to strengthen community bio-event resilience in the Puget Sound Region.

2.2. Exercise Development

The exercise was developed by an Exercise Planning Team of government and other stakeholder organizations through meetings and conference calls over a three-month period. ***(See Appendix A for member organizations of Exercise Planning Team.)***

2.2.1. Focus and Scope

The exercise covered the greater Green River Valley area where key interdependencies extend and/or mutual aid agreements exists that impact public health and safety and the economy. The scenario focused on a dozen issue areas that are being addressed in a Comprehensive Community Bio-Event Resilience roadmap that is the focus on the CCBER Pilot Project: health/hospital issues including available resources; health/healthcare policy; communications, critical IT systems, and health data issues; response challenges; infrastructure and associated interdependencies implications, risk assessment, and mitigation; business continuity, continuity of operations/supply chain management; restoration challenges; human factors, community and family; legal and liability issues; public information, including media; training, exercises, and education; and financial concerns (funding and reimbursement).

2.2.2. Scenario Overview

Scenario H1N1 Resurgence/Pre-Event Phase: The scenario focused on a combined H1N1 resurgence and a major flood event in the Green River Valley set in late 2010 and covering the pre-flood event phase through recovery and restoration. The scenario began with the Puget Sound Region bracing for another winter storm season after being spared the previous year from the "pineapple express" atmospheric river weather system impacting the reservoir above the Howard Hanson dam that sweep out of the West from November through March. The scenario described how local and state emergency managers and federal agencies had been undertaking preparedness measures for potential major flooding of the Green River Valley since late winter of 2009 when the problems associated with the Howard Hanson dam became apparent. The scenario also highlighted how the U.S. Army Corps of Engineers (USACE) had been working to mitigate seepage issues associated with the right abutment of the dam that necessitate restricted capacity in the Flood Storage reservoir and consequently increased the risk of flooding to the Green River Valley below the dam, which would impact parts of Auburn, Kent, Renton, South Seattle, Tukwila, and adjacent unincorporated areas. The scenario also described a mild to moderate rise in disease rates for H1N1 influenza toward the end of September and that local and state health officials undertook public education campaigns and met with area businesses and other key stakeholder organizations to prepare for the apparent third wave of H1N1.

Questions for the pre-event session focused both on flood preparedness and response activities and priorities, as well as public health and private sector H1N1 planning improvements. Topics covered included evacuation and sheltering, warning and notification, how decisions would be made on these issues and other major cross-jurisdiction priorities, and what the government and the private sector could provide to address health and safety impacts and challenges to their organizations' operational or business continuity plans with focus on heath and safety issues.

Scenario Response Phase: The scenario set the beginning of the actual flood event for December 13 after ten hours of sustained rain caused an increased flow of water into the Howard Hanson pool that necessitated the USACE to release stored reservoir water as quickly as possible. This required the evacuation of 20,000 to 30,000 people behind levees in Auburn and Kent over a 24 hour period with an estimated 5,000 people needing sheltering. Damage caused by debris and seepage affecting two levees and subsidence at the top of another led to significant levee over-topping that inundated business and residential areas and disrupted electric power, natural gas and fuel services, water and waste water, telecommunications, transportation routes, medical facilities, and other essential services. By December 18, Seattle and Tacoma area hospitals, medical facilities, and physicians, some of which were already operating at capacity because of H1N1 cases and the beginning of the seasonal flu season, were facing the daunting problem of hundreds of additional patients with various flood-associated injuries or medical conditions, or who were ill with H1N1. There were supply chain disruptions as medical equipment and pharmaceuticals ran short or in some cases were unavailable. Staff shortages — medical, technical, and maintenance personnel — were also a challenge. Major warehouses that supply the region, Washington State, and the U.S. with essential products were impacted. The scenario depicted a substantial number of area healthcare workers, days after the event, still living in shelters, in

hotels, or with relatives outside the region, and many others either ill with the flu or at home caring for sick children. Health officials, as part of the flood response, provided updates to the public on health-related issues regarding the flood and H1N1 cases. There were individuals still in temporary shelters that were requesting medical assistance, many who did not have access to their healthcare providers or medical clinics impacted by the flood or who did not have insurance.

Questions for the response phase of the exercise focused on expected health and safety challenges during the evacuation process and water rescue, and the estimated number of injured that would need emergency medical assistance, assuring expeditious emergency services in the event of disruptions to transportation, emergency services, and water and sewer systems. Questions also addressed plans to evacuate individuals who need transportation assistance and/or sheltering, including residents of assisted living and nursing home facilities; what businesses or other key stakeholder organizations could provide to assist, and how the H1N1 resurgence could affect evacuation and sheltering decisions and procedures; what plans area hospitals have made to increase their surge capacity or deal with supply shortages and staff shortages; and how the private sector could help in this regard. Questions also focused on what mutual assistance agreements were available with healthcare providers in other regions or cross-border in Canada to provide temporary staff to alleviate shortages. Last questions focused on what mitigation measures could be undertaken to address the dual impact of flood-related disruptions of critical IT infrastructure, including system damage and power outages, and bandwidth congestion from increasing heavy load due to people accessing the Internet for information or telecommuting.

Scenario Recovery Phase: The response phase in the scenario covered from nearly a month after the flooding of the Green River Valley and described extensive damage to homes and businesses, including utilities, hospitals, and other important facilities and essential service providers. Two thousand people remained in shelters, hospital patient loads decreased but still remained high with H1N1 and seasonal flu cases, state and federal environmental agencies worked with public health officials to address hazardous materials that contaminated the floodwaters or were released into the environment. Local and state health officials addressed challenges of a third wave of H1N1 and post-flood restoration.

Questions focused on types of health and safety-related restoration challenges that participants' organizations would face and how they would use their business continuity plans to deal with these challenges; also, what assistance from outside their organization would be required, what organizations — public, private, and non-profit — would be involved in a post-flood event restoration decision-making structure to address these issues; and lastly, what organization would serve as the lead on health and safety issues. Other questions also addressed how the transition from response to recovery structure would take place, how a long-term restoration strategy could be developed to restore and rebuild homes, businesses, and the level of services and economic vitality to retain and attract population, as well as what organizations would be involved in developing these restoration strategic objectives and how necessary communication/coordination among federal partners, private sector, community organizations and volunteer organizations would be assured. Lastly, there were questions that addressed what federal agencies could contribute to meet typical health

and safety-related recovery requirements, as well as what private sector and non-profit organizations could provide.

The scenario and issues questions were augmented with two Fact Sheets prepared by the Washington State Department of Health that were used during the exercise:

- Washington State Department of Health's Roles and Responsibilities for an influenza pandemic event Fact Sheet ***(See Appendix D)***
- Washington State Department of Health's Role in a Flood Response Fact Sheet ***(Also, Appendix D)***

2.2.3. Exercise Format and Process

The exercise consisted of five sessions covering opening remarks and the exercise overview, the three phases of the scenario noted above, and a "hot wash" briefing identifying initial lessons learned and next steps. During the exercise, participants were provided scenario injects (events) that focused participant discussion on issues and challenges in order to meet the exercise purpose and objectives. Participants were asked to respond to scenario injects in as realistic a manner as possible based upon available information. They were seated a tables with representatives from different sectors and functional areas to facilitate coordination and discussion and to optimize lessons learned. Public health representatives were asked to sit at each table to provide information on the role of public health in community bio-event resilience and on current state and local government preparedness plans and procedures. A team of stakeholder evaluators provided their inputs along with participant observations and discussion.

2.2.4. Exercise Schedule

7:30 a.m. – 9:00 a.m.	Check-in and Networking Continental Breakfast
8:30 a.m. – 8:45 a.m.	Evaluator Team meeting
9:00 a.m. – 9:15 a.m.	Session 1: Welcome/Introductions, Exercise Overview
9:15a.m.	Begin exercise play
9:15 a.m. – 10:30 a.m.	Session 2: H1N1 Resurgence / Pre-Flood Event Phase
10:30 a.m. – 10:45 a.m.	Break
10:45 a.m. – 12:15 p.m.	Session 3: Response Phase
12:15 p.m. – 1:15 p.m.	Lunch
1:15 p.m. – 3:00 p.m.	Session 4: Recovery Phase
3:00 p.m. – 3:15 p.m.	Break
3:15 p.m. – 4:00 p.m.	Session 5: Hot Wash Debriefing and Participant Discussion of Exercise Outcomes and Next Steps

3. Findings and Recommendations

The following findings and recommendations are based on information collected during the exercise proceedings by evaluators and by participants through their formal evaluations, observations and recommendation on the comment cards. *(Recommendations are for*

consideration by participating jurisdictions and stakeholder organizations. Implementation of recommended actions will require support from jurisdictions and stakeholders and be contingent on available resources.)

Evaluation Criteria. The results were grouped in the following general categories to address the exercise objectives: health and safety impacts and resource issues; health and safety and healthcare policy and legal issues; business continuity, continuity of operations and supply chain management; infrastructure and associated health and safety; interdependencies impacts, risk assessment, and mitigation; roles and responsibilities/decision-making process; communications, critical it systems, health data issues; public information, education, exercises including media; and financial issues (funding/reimbursement).

3.1. Health & Safety Impacts and Resource Issues

3.1.1. Findings

1. Public health officials and the Healthcare Coalition have made significant steps in addressing both H1N1 challenges and preparedness needs associated with potential Green River Valley flooding, undertaking planning and other measures and providing training and education for stakeholder organizations.

2. Health care officials increased their ability to communicate with the public and businesses were motivated to adopt innovative approaches, such as Puget Sound Energy, which created an employee absence hotline.

3. Several H1N1 lessons learned were raised during the exercise. Vaccine distribution challenges, which arose during the H1N1 response, remain an issue; also, hospital security.

4. Government and private sector participants emphasized the importance of greater private sector information sharing and coordination with local and state public health officials to facilitate resource access and management, distribute vaccines and anti-virals, and assure health supply chains.

5. In the event of a resurgence of H1N1 this winter and potential flooding, local officials will need to find large shelter locations to limit the spread of flu and take into account social distancing.

6. Public health personnel noted they have held continuity of operations planning sessions with nursing homes in Green River Valley jurisdictions. At the same time, several participants expressed concern over the relocation of nursing home residents and the likelihood that non-English speakers or impoverished individuals may not be prepared or have the information necessary to evacuate in the event of a major flood.

3.1.2. Recommendations

- H1N1 lessons learned and other findings already catalogued or in the process of documentation by government agencies and other organizations should be shared, integrated and used to upgrade local and state plans and undertake mitigation activities to improve regional and community heath resilience.

- Potential flood impacts on individuals with special needs and cultural groups, including non-English speakers, need to be reviewed and further assessed to incorporate appropriate improvements into jurisdictions' emergency and response strategies.

- Localities should consider developing enhanced outreach to leaders of cultural and non-English speaking groups on health and related emergency issues.

3.2. Health & Safety and Healthcare Policy and Legal Issues

3.2.1. Findings

1. Procedures to address pandemic preparedness and response in the work place are still evolving after the recent H1N1 pandemic. It was noted that some companies have become more lenient with leave policies—for example, not requiring a doctor's note before workers return to work because of H1N1.

2. Identification and verification of emergency, service restoration, response, and other types of workers and permitting requirements and processes will be a significant constraint on response and initial recovery.

3. Lack of insurance for small businesses and individuals will pose a significant challenge.

4. Local officials have no legal authority to force someone to evacuate.

5. Local officials are developing contingency plans if H1N1 is a consideration for sheltering individuals who may not be able to return to homes because of flood damage.

3.2.2. Recommendations

- Best practices to address all-hazard, including health work place-related policy issues should be identified and incorporated into a single information resource that can be shared among regional stakeholders and incorporated in emergency and continuity plans and procedures. Legal issues and policy gaps that impact preparedness should be addressed and opportunities for changing them identified where possible.

- Businesses should review their guidelines for health emergency-related issues.

3.3. Business Continuity, Continuity of Operations and Supply Chain Management

3.3.1. Findings

1. Regional infrastructures and businesses with assets in the Green River Valley that could be directly or indirectly impacted by a flood have made significant investments in continuity of operation improvements, including mitigation measures. Examples include Boeing, Puget Sound Energy, BP, Costco and AT&T. For example, AT&T noted that they have made extensive continuity plans for their infrastructure because they cannot afford to be down, with mobile cell sites identified and ready for deployment. WSDOT will utilize the National Guard to enforce road closures if an emergency declaration is made by the Governor. Some hospitals will provide accommodations for staff that are impacted by the flood.

2. Federal and local government assets in the region are relocating resources and supplies out of the projected potential flood area

3. Many utilities and businesses have established MOUs for assuring services, including contracts with moving companies to relocate assets in the event of a flood-related evacuation.

4. There was discussion about the difference between continuity of operations requirements of government and many private sector organizations. Utilities and many other service providers need to remain operational at near 100% capacity, while many government agencies can curtail and reprioritize programs.

3.3.2. Recommendations

- Local government should continue to conduct outreach to area businesses and other organizations, provide forums to share continuity of operation planning best practices and approaches and assist small enterprises and other organizations that lack resources and expertise.

3.4. Infrastructure and Associated Interdependencies Impacts, Risk Assessment and Mitigation

3.4.1. Findings

1. Flooding would cause significant and widespread impacts to critical infrastructure and key resources in the Green River Valley with cascading effects that would

have costly and long-term consequences at the local, state, national and in some cases global level.

2. The U.S. Army Corps of Engineers has been working on short-term and long-term mitigation measures to address the problem with the right abutment of the Howard Hanson Dam.

3. Puget Sound Energy's recovery capabilities will be "extremely taxed", particularly if significant infrastructures are damaged or subject to prolonged disruption. Other organizations have continuity of operation plans to operate from facilities outside the region or bring in emergency power generators and other resources.

4. Hospital supplies operate on a just-in-time supply system that could be impacted by a disaster. Many are updating continuity of operation plans to assure electronic ordering systems are resilient and dispersed enough that they will not be cut off during an emergency.

5. The Green River Valley is the location for 192 food and agriculture-related facilities and a significant number of warehouses and is a major national and international shipping point for grain. These companies are taking steps to protect structures and assets or relocate their operations out of the area.

3.4.2. Recommendations:

- An assessment should be undertaken of the health, safety and economic consequences or impacts to critical infrastructures and key resources in the Green River Valley that takes interdependencies into account to enable identification of risk mitigation priorities that have either been not yet addressed or inadequately addressed.

3.5. Roles and Responsibilities/Decision-making Process

3.5.1. Findings

1. There was significant discussion on the National Incident Management System (NIMS) and the Incident Command System (ICS) and the challenges of incorporating the private sector into NIMS/ICS model for emergency response. Issues raised included the perception by some private sector organizations that ICS does not "fit the business model," particularly for financial institutions and other service industries that, as one participant phrased it, "don't have hierarchical systems with clearly defined roles and missions." Other participants pointed out that ICS training was available for government employees but not accessible to private sector personnel, who must be sponsored by local government. Another participant put it more bluntly, saying "The door is closed to the private sector—there is a lot of lip service and no follow through." Another participant observed

that "many organizations have tried the ICS model but it did not stick." Funding for training was cited as yet another impediment. Several participants from utilities, meanwhile, said their organizations had adopted ICS and sponsored training and ICS-based drills on a regular basis for employees.

2. Evacuations and related decision-making was a major focus of exercise discussion. Participants were unclear on how the evacuation process would work—how it would be coordinated and the timelines. Specific issues raised included how transportation would be scheduled and orchestrated to bring trucks into the area to convey business assets and resources out, and transport people out of the area at the same time; also, how to ensure gasoline and diesel fuel would be available along the evacuation route; availability of mass transit to expedite evaluation, etc. The Washington State Department of Transportation has been working with trucking interests to address evaluations and other transportation-related supply chain and logistics issues.

3. There is a plan to deal with livestock in the potential flood zone.

4. Recovery and long-term restoration remained largely unexplored in the exercise despite a third of the scenario devoted to recovery issues. Participants had difficulty grasping the magnitude of the flood disaster described and the long-term health and safety-related impacts that included extensive damage and destruction of homes and businesses, major infrastructure assets, environmental impacts from hazardous materials in the flood waters, economic impacts and human factors.

5. Participants addressed the need for inspections and certification of food, agriculture, utilities, and other infrastructures before these facilities could return to operation. It was noted that there are guidelines for disposing of hazardous waste.

6. While participants recognized that after a major flood, there would be a "new normal" as the region recovered, how this "new normal" would be developed, what mechanism would be set up to make the decisions, which organizations would be involved and how long restoration could take were not addressed.

7. Participants were told that there is a State plan for restoration management under development that would include private sector involvement along the lines of a Recovery Task Force model. A key concern was how to incentivize businesses to return rather than leave the area, or in the case of small businesses, not to close shop.

8. To what extent utilities would rebuild would depend on the number of customers that would return to the area.

9. There are private sector, non-profit and government organizations that can assist in disaster recovery and which should be part of regional resilience activities. For example, the Pacific Northwest American Industrial Hygiene Association can provide assistance with mold and building contamination. The National Guard has significant capabilities and assets that could be utilized for recovery in the event of a disaster declaration and identified need.

3.5.1. Recommendations

- Hold an "ICS Business Discovery Workshop" that brings together private sector organizations that have adopted or can provide training for staff on the ICS with other interested organizations and local, state, and FEMA officials to share information and discuss development of an emergency "business support team" modeled on ICS that a broad range of private sector organizations could adopt.

- Local and state officials with regional key stakeholders should develop and exercise a clearly-expressed evacuation and sheltering plan with an associated outreach and public education strategy for a Green River Valley Flood that covers people, livestock, and pets.

- Local and state officials with regional key stakeholders should develop a Green River Valley flood recovery management structure that includes procedures and mechanisms for information sharing and decision making, and identifies what organizations and interests should be involved.

3.6. Communications, Critical IT Systems, Health Data Issues

3.6.1 Findings

1. King County and jurisdictions that could be potentially impacted by flooding have established alert systems that are outlined on their respective websites. The National Weather Service uses its own emergency alert system. The King County Office of Emergency Management through its website will operate as the clearinghouse for alert messages. The County has a Flood Warning Center that uses a four-phase warning system based on river gages which measure the flow and depth that is monitored on a 24 hour basis. Residents and businesses are advised on King County's flood information website to check multiple sources for information, including radio, television, the Internet, text and email. Jurisdictions recognize that it is important to "push out" information.

2. According to local officials, flood evacuation alerts and recommendations to activate will be coordinated among jurisdictions. The goal is to evacuate potential flood-impacted areas before rising water levels impede transportation.

3. Several private sector participants expressed concern over what would trigger an evacuation and difficulty in understanding when to put contingency plans into effect to

pack up and move equipment, products, supplies, and staff. Also of concern is the amount of time to get the messages to businesses and other entities that need to put into effect evacuation plans.

4. Small businesses need a way to become more informed about jurisdiction/County evacuation and broader continuity of operation planning.

5. The issue of limited bandwidth for telecommuting was raised, with concerns expressed by various participants about "telegridlock" that could impact response and constrain access to web communications. AT&T can address the issue through monitoring and has the ability to alter wireless communications providing additional bandwidth as needed. Also, there is a national Government Emergency Telecommunications Service (GETS) / Wireless Priority System for expediting priority communications. However, neither of these solutions have been deployed or tested in a real or exercise event. Some participants suggested that other solutions should be explored to enable employees to work remotely.

6. There was limited discussion on H1N1-related communications and information sharing issues during the exercise. Washington Department of Health provided a Fact Sheet on its responsibilities that pointed out health officials will need to provide accurate and timely coordinated messages to the public and partners leading up to, during and after a pandemic, and that DOH provides statewide messaging and support to local health with communications during a public health emergency.

7. It was noted that King County Public Health had made significant steps during the H1N1 pandemic on outreach to the private sector with conference calls and meetings, but that there was a need to find ways to further facilitate information sharing with the business community. A private sector participant emphasized that businesses needed continuous pandemic information to address continuity requirements, while another participant stressed the need for a single focal point for communications and for information that was "easy to use and straightforward with better updates."

8. Other communications issues raised included the issue of coordination of information, and that this topic was not really addressed at the exercise; also, limited communication among government agencies; and lack of private sector access to information and communications with other service providers to validate planning assumptions and recalibrate response. Both a federal official and private sector representative underscored the importance of addressing how the media could be appropriately involved in providing emergency-related information.

9. Other participants raised the need for a mechanism to get updates on critical emergency-related information and decisions, and to find out what other organizations needed. A healthcare representative wanted to know what information businesses might want from healthcare providers. Other participants pointed out that special needs population may not have access to cell phones or the Internet.

10. Discussion on the role of the Washington State Fusion Center revealed that for flood and pandemics, as well as other health security and resilience-related challenges; information sharing and communications have yet to be defined.

3.6.2. Recommendations

- Local, State and regional stakeholders need to develop a strategy for improved alert and warning, communications and two-way information sharing on health security and resilience that identifies what information needs to be conveyed, how, and to what organizations and individuals, and how it will be coordinated and disseminated, ideally from a central focal point.

- The role of the Washington State Fusion Center in information sharing should be clearly defined, along with the roles of other key contributors to any information sharing system. A concept of operations for cross-sector information-sharing and analysis, already developed by Puget Sound stakeholders with PNWER and the WSFC and other existing mechanisms can be utilized, and additional capabilities developed (e.g., tools and expertise to virtually integrate and analyze a wide variety of necessary data).

- Studies should be done to understand the impacts of increased bandwidth and possibly compromised IT infrastructure on communications during an event. Solutions, such as AT&T's monitoring and altering of wireless communications and the "DATA GETS" program need to be better understood, disseminated and tested. A first step could be to develop a GETS type of service on DATA systems for both responders and agencies. Other solutions also should be considered, researched and tested.

- Critical responders and stakeholders needs to be proactive in getting the GETS/WPS services added to their communications processes/procedures. WPS services are tied to individual cell phones/devices and cannot be shared or "moved" at will.

3.7. Public Information, Education, Exercises including Media

3.7.1. Findings

1. There are a number of local and state initiatives including a prospective U.S. Army Corps of Engineers-lead regional mitigation project for outreach and education to the business community or broader public, as well as special needs groups.

2. Various tabletops and drills have been held and are scheduled to address pandemic preparedness and a Green River Valley major flood event.

3. FEMA offers free courses in ICS Training.

3.7.2. Recommendations

- Local, state representatives with key regional stakeholders should undertake a Public Information and Training Gap Analysis that creates an inventory of current outreach and exercise activities and identifies how well these activities are addressing the health resilience challenges mentioned above, and what is not being done. A key element of this strategy will be to identify private sector and other stakeholders, including the media, who should participate in the activities outlined in the strategy.

3.8. Financial Issues (Funding/Reimbursement)

3.8.1 Findings

1. Financial support for pre-event mitigation is a major constraint to increased preparedness; especially for small businesses.

2. Support for private sector organizations post-disaster is largely unavailable with the exception of Small Business Administration funding. Federal government assistance will only be available to public organizations on a cost-shared basis with state and local agencies.

3.1.1. Recommendations

- Regional risk assessment methodologies need to be developed/utilized to identify and prioritize mitigation needs that could be addressed through joint government (grant and programmatic funds), private sector investments and tax dollars.

- Ways in which to expand FEMA and other government assistance programs should be explored.

4. Exercise Utility

Participants overall found the exercise of significant utility, with more than 90 percent rating the organization and quality of discussion as very good or excellent. Comments on participant feedback forms included:

- *The discussion was very helpful.* (financial institution representative)

- *Made me think more about health issues with regard to human resources.* (federal official)

- *Well-organized—focused on moving forward instead of reviewing an existing plan.* (IT organization representative)

- *It was good to see so many government agencies and private sector entities engaged in a combined flood and flu situation.* (local government official)

- *Good discussions, scenario, presentations and Q and A.* (federal official)

A few participants felt the final phase of the exercise focusing on recovery was not focused enough. As one participant expressed, "There was good discussion and ideas presented but it seemed 'scattered'." Another noted that the recovery session was off-topic on occasion. A federal agency participant suggested that there should be a tabletop focusing only on recovery to help zero in on key recovery/restoration operational issues.

PATH FORWARD

The *Blue Cascades VI* findings and recommendations will be incorporated into the CCBER Project gap analysis and roadmap along with other information collected over the duration of the Project, including a US-Canadian Workshop on Cross-Border Health Collaboration that will also address the outcomes of the exercise. The roadmap will be coordinated with the CCBER stakeholders and broader regional stakeholder community, finalized, and made available to assist Puget Sound organizations to collectively and individually improve their bio-event resilience, as well as to serve as an approach for other regions to use for this purpose.

APPENDIX A. EXERCISE PLANNING TEAM MEMBERS

Siri-Elizabeth McLean – University of Washington
Kathy Gleaves – Port of Seattle
Sabine Meuse – Washington Department of Health
Roger Ditto – Liberty Mutual
Cynthia Dold – Seattle/King County Public Health
John Erickson – Washington Department of Health
Heidi McCombs – Microsoft
Sharon Norris – The Boeing Company
Mary Robinson – Puget Sound Energy
Rick Buell – U.S. Health and Human Services - ASPR
Allen Alston – King County Wastewater Treatment Division
Shad Burcham – King County Office of Emergency Management
Glenn Coil – NorthWest Tribal Emergency Management Council
Ed Cunningham – AT&T
Wayne Dauphinee – British Columbia Health Ministry
Joe Donovan – Beacon Capital Partners
Shelby Edwards – PEMCO Insurance
Robin Friedman – King County Office of Emergency Management
Alison Fujii – The Boeing Company
Michael Loehr – Seattle/King County Public Health
David Matthews – City of Seattle
Hillman Mitchell – City of Tukwila
Jason Moulton – Safeway Inc.
Anne Newcombe – Harborview Medical Center
Fred Savaglio – Virginia Mason Medical Center
Annie Searle – ASA
Gennie Thompson – NWWARN
Rebecca Clark – City of Bellevue
Danica Mann – Overlake Hospital
Kathy McVay – Pierce County Office of Emergency Management
Jeff Stiefel – DHS Office of Health Affairs

APPENDIX B. COMPREHENSIVE COMMUNITY BIO-EVENT RESILIENCE PLAN PROJECT

Center for REGIONAL DISASTER RESILIENCE

Pacific NorthWest Economic Region

Pilot Project to Develop a Comprehensive Community Bio-Event Resilience Plan

The Pacific Northwest Economic Region's Center for Regional Disaster Resilience and regional stakeholders are working with the Office of Health Affairs, U.S. Department of Homeland Security, to develop a Comprehensive Community Bio-Event Resilience Plan. The Pilot Project will assist in the development of national bio-defense architecture and provide a model for communities and broader regions to integrate the private sector, non-profits, and public institutions into preparedness planning for pandemics, bio-attacks and other major health hazards.

Background

The anthrax attacks of October 2001, followed by the 2003 SARS epidemic and the H1N1 pandemic highlight the critical need for a Comprehensive Community Bio-Event Resilience Plan—a roadmap that can provide a holistic approach to cover all aspects of preparedness, medical and other response, recovery and longer-term restoration needs.

A significant bio-event would challenge healthcare organizations with dramatic increases in patient load and reductions in available health and medical capacity while at the same time disrupting critical infrastructures and essential service providers on which healthcare organizations depend. In addition, public health agencies must rapidly educate and inform the general population regarding health threats and appropriate protective measures, while maintaining a comprehensive surveillance system and directing medical countermeasure response. As communities recover from disasters, they will experience further impacts if the continuity of critical services and systems, both public and private, is jeopardized due to key staff being absent.

Recognizing that private industry, businesses, and other non-government organizations constitute integral and essential components of every region, such a Comprehensive Community Bio-Event Resilience Plan needs to be developed by the healthcare sector and other organizations with roles in emergency management in partnership with the private sector and other key regional stakeholders.

Pilot Project Objectives

1. Bring together to focus on community bio-event resilience public health and other experts with key state and local agencies, infrastructures, industry, business, academic, and community organizations and interest groups (e.g., churches, ethnics associations, environmental groups) and commercial businesses (grocery stores, malls, other retail businesses) essential for sustaining the regional economy and way-of-life for citizens.

2. Enable government agencies at all levels with regional stakeholders to:

   - Gain greater knowledge of all hazards bio-event impacts and associated infrastructure linkages and longer-term consequences, including human factors, and discuss expectations, challenges, and limitations;

   - Identify needs associated with interrelated public health/healthcare, critical infrastructure, and economic interdependencies, existing work and capabilities, preparedness gaps and cost-effective solution options for incorporation into the Plan;

   - Coordinate existing government and private sector plans across jurisdictional boundaries, U.S.-Canadian border and all sectors;

   - Examine and delineate changing roles and responsibilities from pre-event through post-event activities;

   - Build an organized approach to integrating the private sector into regional health/medical recovery plans;

   - Identify common goals, gaps and barriers between private sector organizations and public health, healthcare partners and local emergency management on improving information sharing and communications during health and medical emergencies.

   - Identify opportunities to incorporate private industry and government into:
     - Emergency response and recovery plans and activities;
     - Joint training and exercises to test recovery capabilities and coordination.

   - Leverage current capabilities to build a better notification process for cross-sector stakeholders on bio-event issues and a resource management system that includes the private sector.

3. Develop a holistic roadmap for community bio-event resilience that will encompass all aspects of preparedness and disaster management, including prevention, protection, response, recovery/longer term restoration, and risk-based mitigation to address communications, business and operational continuity, logistics, supply chains, and resource issues, public education/training, and exercises.

4. Provide a process to revise, augment, and validate the initial Comprehensive Community Bio-Event Resilience Plan through the development and conduct of a targeted tabletop exercise with a scenario developed by the key stakeholders themselves.

5. Develop a detailed time-table and milestones for Plan implementation that includes projected funding requirements and potential sources of technical and other assistance.

Pilot Project Benefits

- Complement, support, and enhance state and local pandemic and bio-terrorism planning and provide guide for planning and implementation activities of local private sector, non-profit, and community organizations;

- Leverage significant private sector capabilities on response and recovery, particularly large employers and those with numerous outlets across a community that can play a critical role in communication. Many large private sector organizations are ideally positioned to assist with implementation of resource management plans. In addition, recovery must include restoring all critical infrastructure and community functions. Direct involvement by private sector organizations and other key stakeholders in health and medical planning will directly enhance their ability to remain functional during disasters.

- Meet the stated objectives of the U.S-Canadian Pacific Northwest Border Health Alliance to strengthen the level and effectiveness of cross-border collaboration and coordination to address potential public health threats;

- Incorporate lessons learned from the *Blue Cascades IV* regional exercise (January, 2007) that focused on pandemic preparedness and critical infrastructure-related issues, including regional interdependencies, vulnerabilities, consequences, and associated readiness gaps. The Pilot Project will also serve to meet several of the recommended activities for addressing preparedness shortfalls outlined in the stakeholder-validated and prioritized *Blue Cascades Exercise Series* regional Action Plan;

- Build upon work done by federal agencies, the National Governors Association, and other national and regional organizations on pandemic and bio-terrorism preparedness;

- Utilize and contribute to activities and outcomes from the Interagency Biological Restoration Demonstration (IBRD), sponsored by DHS/S&T and the U.S. Department of Defense, Defense Threat Reduction Agency, which focuses on longer-term remediation capabilities and needs involving a regional anthrax attack scenario;

- Provide a major tool to assist the Nation to protect and improve the resilience of communities at the grass-roots level a broader regional level to lessen the impacts and to effectively rebound from a significant non-deliberate or deliberate bio-event with limited consequences to public health and safety and the economy; and

- Demonstrate how federal agencies, states, localities, the private sector and other key stakeholders can partner to develop a holistic plan to enhance community bio-event resiliency.

Project Scope, Organization and Activities

The Pilot Project will focus on the broad Puget Sound Region, extending cross-border into Canada to British Columbia and to other states and provinces where public health/healthcare and other critical infrastructures interdependencies and/or mutual assistance and cross-jurisdiction considerations are factors.

The Pilot Project focuses on eight specific activities beginning in June, 2009 and ending September, 2010 that will provide information and develop requirements for the Comprehensive Community Bio-Event Resilience Plan. Work will be conducted through a series of stakeholder and experts meetings, conference calls, interviews/surveys, and development and conduct of an educational/training workshop and a targeted tabletop exercise to produce the Comprehensive Community Bio-Event Resilience Plan. These activities entail:

Activity 1. Identifying and convening core experts, public health and other government agencies and public-private, non-profit stakeholders to be part of the Pilot Project Work Group that will, through conference calls, meetings and a survey, identify, share, collect and coordinate information on existing capabilities.

Activity 2. Development and execution of an educational/training workshop for Puget Sound Region stakeholders to explore significant issues and provide guidance and insights from experts for incorporation into the Plan. The workshop will also identify goals shared between private industry and healthcare partners on disaster recovery; examine current plans, roles and responsibilities, desired recovery outcomes; and expectations, interests and barriers affecting private sector and other organizations. Lessons learned form the Workshop will be summarized in a report, coordinated with stakeholders and incorporated into the initial draft Plan framework

Activity 3. Conduct of a gap analysis assessing health and medical recovery needs vs. current healthcare system capabilities. The gap analysis will identify resource, staffing and logistical support shortfalls in current recovery plans; match capabilities and interests of private industries to identified gaps; identify options for enhancing information exchange and emergency notification of the business community during disasters; and identify solutions options that address barriers to private industry participation.

Activity 4. Development of initial draft roadmap from results of Project activities

Activity 5. Development and conduct of a tabletop exercise with a scenario designed by Work Group members to illuminate gaps or areas for enhancement in the draft Plan.

Activity 6. Holding a post-exercise Plan Development Workshop to examine and incorporation into the Plan of the findings and recommendations in the exercise report, information from other relevant activities (e.g., IBRD), and a Plan implementation strategy that includes milestones, projected funding requirements and potential sources of technical and other assistance.

Activity 7. Coordination with stakeholders/finalization of Comprehensive Community Bio-Event Resilience Plan.

Activity 8. Planning and conduct of a U.S.-Canadian workshop to advance the development of bio-event/pandemic resilient communities through bi-national collaboration and to lay the groundwork for a longer-term initiative to develop and eventually implement a cross-border holistic prevention and risk mitigation strategy to improve preparedness for all-hazards bio-events that covers the local to international levels.

Project Schedule

Month	Activity 1	Activity 2	Activity 3	Activity 4	Activity 5	Activity 6	Activity 7	Activity 8
July	Convene Workgroup; **kick-off meeting**	Educational workshop development begins	Begin Gap Analysis	Identification of initial topics/outline for Plan				
August	Continue activities	Continue to develop workshop	Continue Gap Analysis	Begin to draft Plan Framework				
Sept.	Continue activities	Continue to develop workshop	Continue Gap Analysis	Continue to build Plan Framework				
Oct.	Continue Work Group activities	**Hold workshop**	Continue Gap Analysis	Continue to incorporate data into Framework				
Nov.	Continue Work Group activities	Produce Workshop Summary	Continue Gap Analysis	Continue to incorporate data into Framework	Begin development of tabletop exercise			
Dec.	Continue Work Group activities	Incorporate Summary results into Framework	Continue Gap Analysis	Continue to incorporate data into Framework	Continue to develop exercise			US-Can. workshop development begins
Jan.	Continue activities		Produce initial draft	Continue to incorporate data	Continue to develop exercise			Continue to develop workshop
Feb.	Continue activities		Augment draft Gap Analysis	Continue to incorporate data	Continue to develop exercise	Devel. post exercise Workshop		Continue to develop workshop
March	Continue activities			Continue to incorporate data	**Conduct exercise**	Develop Workshop		Continue to develop workshop

April	Continue activities		Incorporate exercise results	Continue to incorporate data	Produce/ coordinate report			Continue to develop workshop
May	Continue activities		Incl. results of US-Can. Workshop	Produce initial draft roadmap	Finalize Exercise Report	**Post-exercise Workshop**	Undertake Initial draft coordination	**Hold US-Canadian workshop**
June	Continue activities		Conduct coordination			Produce workshop Summary	Incorporate additional data	Produce Workshop Summary
July	Continue activities		Finalize				Produce second draft	
Aug	Wrap-up activities		Incorporate into Project Report				**Finalize Plan (roadmap)**	
Sept	Project end						Project end	

APPENDIX C. CCBER PROJECT STAKEHOLDERS

- University of Washington
- Port of Seattle
- Washington Department of Health
- Liberty Mutual
- Microsoft
- Puget Sound Energy
- U.S. Health and Human Services – ASPR
- King County Wastewater Treatment Division
- NorthWest Tribal Emergency Management Council
- AT&T
- British Columbia Health Ministry
- Pierce County Office of Emergency Management
- DHS Office of Health Affairs
- Carnation-Duvall Medical Reserve Corps
- CDC Seattle Quarantine Station
- City of Kent Emergency Management
- Costco Wholesale
- Beacon Capital Partners
- PEMCO Insurance
- King County Office of Emergency Management
- The Boeing Company
- Seattle/King County Public Health
- City of Seattle
- City of Tukwila
- Safeway Inc.
- Harborview Medical Center
- Virginia Mason Medical Center
- NWWARN
- City of Bellevue
- Overlake Hospital
- Seattle Office of Emergency Management
- Seattle Police Operations Center
- SMART Association
- Able Engineering
- Amgen
- CAC Real Estate Management
- City of Lynnwood
- Columbia Bank
- Dept of Information Services
- FEMA Region X
- Evergreen Hospital Medical Center
- JVR Health Readiness, Inc.
- MITRE Corp
- Northrop Grumman Corporation
- Pacific NorthWest Border Health Alliance
- U.S. Customs and Border Protection
- Frontier Bank / WashingtonFIRST Coalition
- North Seattle Community College
- Pacific Northwest National Laboratory
- Port of Tacoma
- Qwest Field and Event Center
- Seattle City Light
- Setracon Inc.
- Sprint Nextel
- Symetra Financial
- The Tauri Group
- Tribune Television Northwest – KCPQ/KMYQ-TV
- U.S. Coast Guard
- Washington State Housing Finance Commission
- Washington Trucking Associations
- Water Environment Federation
- Wright Runstad & Company
- Snohomish PUD
- Sound Transit
- U.S. Postal Inspection Service
- U.S. Army Corps of Engineers

APPENDIX D. EXERCISE SUPPORT MATERIALS

March 2009

Washington State Department of Health

ESF8 Health and Medical

DOH Roles and Responsibilities for an influenza pandemic event

1. Surveillance – how it works and what systems we use

   Washington's influenza surveillance system, which monitors influenza activity in the state, will provide the surveillance data needed to guide response efforts during a pandemic. There are several different systems for influenza surveillance used to collect data from around the state. Once a pandemic is recognized, surveillance activities are enhanced and additional activities may take place. These systems provide a snapshot of what is going on across all parts of the state.

2. Laboratory – what is tested, why and when

   The capability of identifying pandemic influenza viruses depends not only on rapid detection and characterization but also on strong partnerships between clinical and public health laboratories. Specimens from patients with influenza-like illness are collected at various healthcare institutions and sent to the Public Health Lab for testing. When activity increases or a new virus is detected, additional samples are collected and tested. Once a pandemic is declared and confirmed in the area, fewer samples from the general population are tested at the PHL – diagnostics tests continue to be run at commercial labs. Samples from high risk patients around the state continue to be run at the PHL to keep track of the extent and severity of the outbreak.

3. Medical Countermeasures – vaccine, antivirals, other medical supplies

   During a pandemic, vaccines and antivirals may or not be effective or available, will likely be in short supply, and will have to be allocated on a priority basis. Antivirals are used to lessen the effects of the flu and are typically used only on the most severe cases or those at highest risk for complications due to the chance of antiviral resistance developing with a new virus. Vaccines take 5-6 months to develop once the strain of flu has been identified.

Often, there will prioritization for use of the initial supplies of the vaccine depending on the severity of the disease and the populations that the disease is affecting the most.

4. Community Mitigation – doing things ahead of time to prevent or lessen affects of the event

   Public health interventions, such as quarantine and social distancing, will be necessary during a pandemic to slow the transmission of disease in the community. Things like staying home when sick, covering your cough and frequent hand washing are the best way to stop the spread of the flu. Depending on the severity of the disease, school closures, limits on large gatherings, etc. may need to be implemented. These measures are necessary especially prior to a vaccine being available.

5. Healthcare Systems – bed and supply tracking, surge, alternate care facilities, patient movement

   The health care systems in Washington will experience significant strains on its resources during a pandemic; preparedness includes surge capacity and mortuary issues. DOH supports the healthcare systems to plan for increased ICU, personal protective equipment like respirators and ventilator use as well as possibly canceling elective procedures. In a severe pandemic, additional morgue considerations may be an issue. Additionally, DOH can assist with moving patients if needed and logistics for establishing alternate care facilities.

6. Communications – with partners, healthcare system, public using various mediums

   Response officials will need to provide accurate and timely coordinated messages to the public and partners leading up to, during and after a pandemic; an informed public is an asset to the overall response. DOH provides statewide messaging and support to local health with communications during a public health emergency.

7. Technical Assistance/Guidance/Decision-making

   Public health officials at the state and local level provide technical assistance on public health matters during any public health emergency. The state Department of Health works to coordinate statewide guidance and decision-making amongst state and local health jurisdictions to

provide a consistent and coordinated response. Local health jurisdictions are autonomous entities however and may choose to make independent decisions during any event.

8. Resource Acquisition

One of the overall roles of the Department of Health as lead for ESF8 is acquiring necessary resources in support of the local response to any emergency situation involving health and medical assets. This typically involves working through the state emergency operation center to access assets from other parts of the state or from the federal government. The federal Strategic National Stockpile is an immediate resource for health and medical supplies and drugs for many situations.

Department of Health's Role in a Flood Response

Winter 2010

The Washington State Department of Health (DOH) is the lead for Emergency Support Function (ESF) 8 at the state government level. To help DOH fulfill these responsibilities, several agencies are support agencies. These agencies include: the Department of Agriculture, General Administration, Labor and Industries, Licensing, Social and Health Services, Military Department, and the Washington State Patrol. If additional help is needed, the other agencies will be tasked through the State Emergency Operations Center (EOC) at Camp Murray.

State EOC ESF 8 Desk

DOH staffs this desk to coordinate all health and medical resources request and gather information on the state of the Health and Medical response. DOH does not direct the response, but acts as the state level support lead for Health and Medical issues. DOH also provides senior staff for the State Policy Room at Camp Murray. The function of this body is to provide advice to the Governor on how the state can best support local incident commanders and to provide overarching guidance to the State EOC. Through this position and through the Washington State Cabinet, the Secretary of Health acts as the Governor's advisor on Health and Medical issues.

Requesting Help

All requests for help must come through the approved emergency management system. When a local incident commander has exhausted the resources available to them, they will turn to their local Emergency Operations Center and ask for those "things" that they require. If they cannot get them from their local sources or mutual aid, they will then turn to the state EOC for help. If it is a Health or Medical request, the logistics desk at the State EOC will task that assignment to the ESF8 desk. ESF8 will then use the resources available to fulfill that request.

Internal EOC

To support ESF8, DOH will activate its internal EOC. This is located at the DOH facilities in Tumwater. Along with supporting the ESF8 Desk at the State EOC, this EOC also supports the Secretary of Health to manage DOH resources and the mitigation of any direct consequences of the incident on DOH staff and facilities.

Providing Direct Support

Although DOH's primary works to provide support through the EOC process, there are several areas that we can provide direct support, these include:

- **Drinking Water** – The DOH Office of Drinking operates to support drinking water utilities and local health jurisdictions in the event of natural or human caused emergencies. Generally, the ODW provides information and technical assistance to assess public health threats to water supplies, assist with timely and appropriate public notification, and to help utilities recover and restore delivery of safe and reliable drinking water to their customers
- **WIC or Special Supplemental Nutritional Program for Women, Infants, and Children** – DOH directly supports the customer service organizations that cuts the checks for those enrolled in the program. During incident response and recovery, if the local service provider is unable to provide the required level of service, the DOH WIC office is prepared to deploy staff, or equipment to supplement as required.
- **Immunizations Program** – This program make sure that needed immunizations are available to local providers. During a flood event they will work with the local health authorities to make sure that any immunization requirements are fulfilled. They accomplish this by assisting in the ordering process, making sure all immunization and supplies are provided to the local healthcare sector.
- **Animal Carcass Disposal** – DOH is the lead for any incident that results in the death of a large number of animals, not from a disease process. For example: if chickens were to die from Avian Influenza, DOH would not be the lead agency, Agriculture would. If during a flood event if a large number of livestock, or other animal carcasses this were to become an issue, DOH would work with the Departments of Agriculture, and Ecology, to devise a disposal plan for them. Working together we would arrange for carcass collection sites and then proper disposal of the carcasses as part of the plan.
- **Epidemiology and Surveillance** - The Communicable Disease Epidemiology Section is responsible for statewide surveillance and investigation of 51of the 65 notifiable communicable diseases in Washington State. The program provides support for local health jurisdictions in the investigation of individual cases and outbreaks of communicable diseases. The program also conducts planning and response for public health emergencies involving communicable diseases.
- **Laboratory Testing** – The Washington State Public Health Laboratory in Shoreline has comprehensive public health testing capability. This testing is available to local health authorities and providers on request. During a response, as the need arises, they can shift their capabilities to meet the requirements of the incident.