



BLUE CASCADES IV: Critical Infrastructure and Pandemic Preparedness

ACTION PLAN

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- Understanding vulnerabilities, consequences, and interdependencies-related impacts/communications and critical IT reliability, resilience and security;
- Cross-jurisdiction, cross-sector coordination, cooperation and information-sharing/roles and responsibilities;
- Response, recovery and reconstitution challenges/business continuity and supply chain assurance, and
- Public information, the media/education and training.

Each breakout group had a public and private co-moderator who reported the outcome of their respective breakout group deliberations and recommended projects to the collective participants. Participants further revised and finalized them for the Action Plan, noting whether they were short-term activities (less than a year in duration), medium-term (two years), or longer-term. It was determined that lead organizations for each identified activity would be determined after the Action Plan was finalized.

The top priority identified was the development of a regional holistic pandemic resilience strategy for which key stakeholders with local, state, federal agency partners would develop detailed requirements and then implement. Workshop participants also called for creation of various working groups and subgroups within the Puget Sound Partnership to focus on “low hanging fruit” activities and to hold further workshops and targeted exercises to explore pandemic preparedness and management challenges.

BLUE CASCADES IV Prioritized Action Plan

Short-Term (up to 1 year)

1. Creation of a regional key stakeholder Pandemic Resilience Working Group within the Puget Sound Partnership to begin to develop requirements for a regional holistic strategy for pandemic preparedness, response and restoration that builds upon and augments existing state, local, and federal government/private sector and other plans.
2. Establishment of a subgroup within the Pandemic Resilience Working Group to develop requirements for criteria for what critical infrastructures and essential service providers are deemed essential during a pandemic, and within those organizations what personnel are deemed essential.
3. Undertake an assessment of the existing regional capacity for telecommuting and remote access in the event of a pandemic.
4. Develop guidelines on how to create a pandemic resilient “robust” IT system for small businesses.
5. Examine state laws related to social distancing and other preventative measures during a pandemic.

Medium-Term (2 years)

6. Undertake state, local, and private sector coordination of pandemic continuity planning and test in field exercise.
7. With technical assistance from relevant federal agencies and leveraging existing capabilities, undertake an assessment of local and regional interdependencies, effects and consequences associated with impacts of a pandemic on critical infrastructure and essential service providers under difference pandemic scenarios.
8. Develop a system for sharing pandemic-related information and resources that can be used for planning and pandemic management purposes. This system would be incorporated into regional emergency management planning and the Washington Information Fusion Center (WAJAC), and also be part a broader statewide response and restoration disaster resource management system that focused on all-hazards disasters.
9. Develop and conduct a pandemic tabletop exercise for media.
10. Develop and conduct a tabletop exercise focused on vulnerable populations with non-profits and community groups.
11. Create a working group within the Puget Sound partnership to develop a regional pandemic public information and communication plan that includes:

- The types of information provided,
 - Target audiences, including multi-cultural groups
 - Types of media used
 - What messages should be conveyed
 - Key communicators
 - What vulnerabilities exist of communications systems that could impede information dissemination
 - Types of educational tools required.
12. Identify and determine how to access federal services and resources to assist with pandemic response and recovery.
 13. Spread ICS and NIMS training opportunities focusing on pandemics and encourage the private sector to develop protocols based on these standards.
 14. Undertake a study to examine organizations' pandemic business and operational continuity plans and develop plan templates to assist smaller organizations to develop their pandemic plans.

Longer-Term (multi-year)

15. Create and conduct targeted workshops and exercises that focus on communication, information sharing, and on pandemic roles and responsibilities within each level of government, within sectors and on a regional basis.
16. Develop modeling capabilities to better understand the impact of a pandemic and the critical infrastructure interdependencies associated with an outbreak.

APPENDIX

BLUE CASCADES IV EXERCISE REPORT RECOMENDATIONS

Interdependencies Impacts, Risk Assessment and Mitigation

1. The federal government with regional key stakeholders should sponsor research and other studies of potential pandemic health effects and human factors to better gauge the level of the threat to critical infrastructure operations and provision of essential services. Along these same lines, there should be studies of the potential effectiveness of pandemic emergency management and security-related plans and procedures with recommendations for revised or new approaches and solutions.
2. Federal government agencies should work with state/provincial agencies and key stakeholder organizations to undertake a regional risk assessment and mitigation pilot project within the PNWER region to examine the impacts on infrastructure interdependencies of a global pandemic.
3. Regional stakeholder organizations should incorporate infrastructure interdependencies into their pandemic contingency planning.
4. Utilities and other essential service providers should hold workshops and targeted pandemic-focused exercises internally and with other organizations within their respective sectors to examine interdependencies challenges.
5. There should be follow-on cross-sector, regional interactive workshops to examine specific interdependencies factors that will be most problematic in a global pandemic.

Communications and Critical IT Systems Reliability, Resilience and Security

6. Further study should be undertaken of the feasibility of large numbers of personnel working electronically from their homes or via conference call and what system upgrades would be required for expected surges in phone, cell phone and Internet use.
7. Stakeholder organizations should identify backup communications and IT technical personnel that can be mobilized in a pandemic. At the same time, given that many of these backup staff could be unavailable, organizations should identify those minimal critical communications and IT services that are essential to keep running.
8. Stakeholder organizations should cross-train IT technical personnel to develop greater depth of backup support staff to ensure resiliency of critical and essential communications and IT services during times of increased absenteeism.

9. Stakeholders should incorporate alternative communications systems into pandemic response as part of prudent business practices and test their use with other stakeholders as part of a regional system in both sector-specific and cross-sector exercises to assure interoperability, reliability and resilience.
10. Stakeholders should undertake realistic risk assessments of those minimal critical communications and IT services that are essential to keep running. It helps if organizations run through risk management scenarios for a pandemic to enable them to have pre-determined courses of action and choices worked out ahead of time.
11. Sensible, cost-effective cyber security guidelines for a pandemic need to be developed at the federal level with state and local agencies and communications and IT service providers to provide a baseline of shared security practices for regional organizations to incorporate into contingency planning.
12. A pilot project should be undertaken by federal government and regional stakeholders to assess the range of Internet service prioritization challenges at the local, national, and international level and determine optimal policies and procedures that could be utilized.
13. Stakeholders should incorporate into IT/communications continuity activities the following:
 - a. Negotiation of agreements with ISPs that serve large portions of their employee populations to handle access issues;
 - b. Structuring of work products and activities in a way that can be conducted via telecommute;
 - c. Incorporation of enabling technologies and solutions that provide for high productivity in a telecommute environment.
14. Federal and private sector research and development programs should include development of standards and technology solutions that can address the difficult technical problems associated with communications and critical IT resilience, reliability, and security during a global pandemic.

Cooperation, Coordination, and Information-Sharing

15. Local, state/provincial and federal agencies with key stakeholder organizations should identify specific priority issues where regional coordination and cooperation are required and develop collaborative plans and procedures.
16. Avenues need to be explored to facilitate two-way information-sharing within specific sectors and among key stakeholders on a regional basis. Information sharing and analysis could be through a local or state EOC's or through an enhanced all-hazards Regional Information Fusion Center that has public health agencies and key

stakeholders as participants. (Most states and major municipalities now have such information fusion centers. Although most are still chiefly law enforcement and intelligence-focused, others are taking on an all-hazards scope and are moving toward incorporating the broader key stakeholder community, including public health.)

17. Within the Puget Sound/Washington State Partnership, create a Pandemic Preparedness Workgroup to orchestrate further activities of regional stakeholders to move toward regional pandemic resilience. Existing working groups within the Partnership (e.g., the Interdependencies Working Group and the Puget Sound Alliance for Cyber Security) should also incorporate those recommendations for activities in this exercise report that fall within their purview.

Roles and Responsibilities

18. Procedures for cross-sector decision-making should be developed as part of regional pandemic preparedness planning. It is recognized that such procedures will require the development of information sharing protocols and agreed mechanisms, such as regional all-hazard information fusion centers that include public health and healthcare organizations.
19. Targeted workshops and exercises should be held on pandemic roles and responsibilities within each level of government, within sectors, and on a regional basis.
20. Based on the preceding recommendation, where applicable or achievable, procedures should be developed to augment existing plans to better delineate authorities and decision-making processes.

Response and Recovery/Reconstitution Challenges—Public Health and Other Issues

21. Federal government agencies (civilian and defense) should make available to key stakeholders information on those specific actions they could take and services they could provide in an influenza pandemic, the process/procedures on how such assistance could be obtained, and the limits on such federal assistance given the global scope of a pandemic.
22. Procedures should be developed to standup EOC's and to ensure they will have the resources and capabilities necessary to continue operations over a period of months.
23. Efforts at the federal, state/provincial level should be accelerated to develop viable, cost-effective policies, plans, and procedures to address the large number of complex public health and related issues associated with pandemic influenza response, recovery, and reconstitution. At the same time, organizations responsible for disaster preparedness and emergency management should move rapidly to address major challenges that are common to all-hazards scenarios that come into play in a pandemic, including development of a credentialing system, of a collaborative, prioritized regional service restoration system, and a regional resource management system.

24. Local government should identify significant vulnerable populations (e.g., elderly, ethnic groups, disadvantaged individuals and the homeless, and the critical infrastructures, services and supporting institutions associated with these groups, and take steps to determine pandemic preparedness gaps. Procedures and outreach activities should be incorporated into pandemic preparedness plans to address needs of these vulnerable populations.
25. Pandemic exercises should be developed and conducted that include at least one additional significant disaster to test the capabilities of regional stakeholders to handle a major emergency while dealing with staff shortages and disruptions of critical infrastructures and essential services.

Business Continuity, Continuity of Operations, and Supply Chain Management

26. Government in concert with companies that have developed pandemic plans should collaborate to develop a model continuity of business plan for small businesses that could be customized by local enterprises. Such a model plan should also address legal and liability issues.
27. At the local level, county or city government should develop and offer to small and medium-size businesses a training course on pandemic preparedness and develop and conduct exercise to further improve and enable testing of organizational contingency and regional pandemic preparedness plans.
28. The federal government with key stakeholders should undertake an assessment on the regional impact of a global pandemic on provision of one or more essential products and services, e.g., food supplies; transportation; electric power, natural gas and other fuels; communications and critical IT services, and emergency services and healthcare.

29. Public Information and the Media

30. Local public health and emergency management officials should develop a coordinated regional public information pandemic strategy. The strategy should identify the range of questions and issues that would need to be addressed in a pandemic with coordinated answers and background information provided and disseminated to key stakeholders in advance. This information and Q's and A's should be updated as new information emerges and plans are improved and used in targeted exercises.
31. Briefing sessions should be held for local media representatives that include what is known about the regional impacts of a global pandemic; what is not known, including the uncertainties behind assumptions on rates of infection and deaths; and on government and other preparedness plans.

32. Media and community organizations, including representatives of ethnic, religious, and other special interest associations, should be included in regional and sector-focused exercises.

Training and Education

33. A pandemic preparedness training curriculum should be developed that can be customized respectively for infrastructure personnel and the general public and media.
34. Local public health with the academic and other key stakeholders should develop instructional courses on pandemic influenza and preparedness that can be utilized by schools from the K through 12.



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