

## Resilient Washington Subcabinet – Gap Analysis Summary

**Directive 2:** Utilize the Cascadia Rising Exercise After-Action Report (AAR) to develop a Mass Care Operational Coordination Plan Annex to address collaboration among response agencies and organizations to be housed under Essential Support Function (ESF) 6.

### **Current Actions:**

- Building on successes of interdisciplinary SEOC Mass Care Task Force tested during the Cascadia Rising Exercise.
- Increased continuity planning, training, and exercise at state agency level and among NGOs.
- DSHS Emergency Coordination Center supports impacted DSHS operations and clients.
- Refined GIS support has increased capability, enable rapid identification of the residential location of clients and mapping in relationship to specific threats and hazards.

### **Gaps and Barriers:**

- Competing priorities between ESF 6/mass care and state agency missions/programs. Includes allocation of available funding sources, and sufficient levels of dedicated staffing.
- State agencies lack experienced strategic catastrophic planning expertise.
- Plan integration and crosswalks (State Catastrophic Plan, National Guard Plan, FEMA plan, previous planning efforts)
- Specific indicators, thresholds, or “triggers” need development to prompt state government action, at the appropriate stage, to respond to mass care issues within larger incidents.
- There are no operational areas (as in geographic subdivisions of Washington State) to address this issue during a disaster.
- Using national resources (such as Type 1 Incident Management Teams) to implement mass care operations following a Cascadia Subduction Zone-type catastrophic incident.
- Limited training and exercise opportunities focused on mass care, especially with the detail necessary to resolve complex policy issues and provide specific (versus general) knowledge to staff.

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**Recommendation 3:** *Improve the resilience of buildings in areas with high seismic hazard to improve life safety and increase the number of people able to shelter in place, by supporting the planning efforts of earthquake and tsunami prone jurisdictions in accommodating community housing needs of residents impacted by earthquakes and tsunamis.*

### Current Actions

- Washington EMD and the Washington Association of Building Officials (WABO) addressed liability concerns regarding organizations that train volunteers for post-disaster damage assessments. SSB 5185 was signed by Governor Inslee on April 17, which achieved this objective.
- The Office of the Insurance Commissioner (OIC) conducted research to demonstrate that Washington has earthquake insurance market needs. Consumers are unaware of companies that offer policies. OIC created a webpage dedicated to earthquake insurance and provided a listing of the top 40 companies authorized to sell earthquake insurance in Washington.
- Commerce is assessing opportunities to leverage existing databases for inventories of vulnerable structures, such as unreinforced masonry (URM) buildings, based on the Governor’s Directive and language in the House Capital Budget. Department of Archeology and Historic Preservation’s database (Washington Information System for Architectural & Archaeological Records Data/WISAARD) is an existing planning tool for cultural/historic resource protection that is being investigated for use.
- Commerce, Washington EMD, DSHS have collaborated with a wide variety of external stakeholders on the development of a draft Housing Recovery Support Function (RSF) as part of the state’s long-term recovery strategy. The Housing RSF is the first to be developed and will serve as a template for future efforts.

### Gaps and Barriers

- Development and implementation of WAsafe Program to train, enroll and dispatch qualified volunteers to support jurisdictions in performing post-disaster building safety assessments as well as integration with Emergency Support Function (ESF) 3 – Public Works and Engineering.
- Lack of local planning framework/template for communities to incorporate resilience concepts, including tools demonstrating how a community can protect its cultural and historic resources in disaster preparedness, response, and recovery.
- Models of local legislation requiring mandatory or voluntary building retrofits accompanied by a lack of a capital program that provides financial and technical assistance or incentives for seismic retrofitting of vulnerable buildings and structures, especially unreinforced masonry (URM).
- Local government comprehensive plan updates require resources to incorporate new resilience or mitigation planning strategies and smaller jurisdictions with a single planner or a contractual arrangement for planning services may have difficulties implementing model code recommendations without additional resources.
- A record of repairs requiring building permits for damage due to geologic hazards is not currently required to be attached to a property deed, which makes it difficult for home/building owners to determine potential risks when purchasing property.
- Currently, there is no coordinated effort or resources to support workshops for building owners and real estate agents in order to explain the performance criteria in the building code, i.e., life safety vs immediate occupancy as well as opportunities and options for retrofitting of existing structures.
- Lack of state-level disaster recovery funding and programs to rapidly support local jurisdiction’s rehousing and recovery needs, especially in small to moderate disasters in which federal individual assistance programs are not available.

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**Recommendation 5:** *Strengthen business continuity planning efforts* by providing education, tools, and training to help businesses develop continuity plans or analyze existing plans, giving particular consideration to their supply chains and issues related to just-in-time inventories.

### Current Actions

- WA Emergency Management Division’s Private Sector Program provides continuity planning resources and education for small-to-medium sized businesses and performs outreach, coordination and information sharing with large businesses.
  - Program’s website provides a foundation for all outreach, education and training relating to business preparedness and response. The site includes links to online resources, steps to address business preparedness and recovery planning, links to partners, online trainings, and news and opportunities.
  - The program works with the Small Business Administration (SBA), Association of Washington Businesses (AWB), WA Chamber of Commerce Executives (WCCE), Cascadia Regional Earthquake Response Workgroup (CREW), and local Economic Development Councils (EDCs) to gain access to business audiences.
  - A Business Re-Entry Registration System has been approved and is currently being constructed to support early re-entry of businesses to access their communities and/or infrastructure following a disaster.
- Department of Commerce has begun an agency wide strategic planning effort that includes a focus on Community Resiliency. Recognizing that economic and business resilience is a crucial part of community resilience, the agency has leveraged its community relationships to conduct workshops:
  - The Community Outreach Program is piloting a Business Resiliency Workshop in Pateros, WA in June bringing together members of local Chambers of Commerce, insurance industry representatives, local business owners, Washington Fire Action Council (WAFAC) and elected officials from around Eastern Washington.
  - Commerce has met with rural communities (Okanagan County, South Bend, Raymond, Long Beach, Sunnyside, Grandview and the Shoalwater Bay Tribe) to discuss business resiliency efforts.
  - Home Improvement Zone (HIZ) training with seven counties about land management strategies for defensible space in wildfire affected communities.
- The Cascadia Regional Earthquake Workgroup (CREW) worked with MIL Department’s EMD to build a Disaster Resistant Business Toolkit ([www.DRBToolkit.org](http://www.DRBToolkit.org)) in 2010. This toolkit is downloadable for free to any WA business. CREW is currently to support conversion of the DRBT from a desktop application to a web based application. This will support greater use of the tool and increase usage.

### Gaps and Barriers

- Many businesses aren’t aware of the hazards in their area or the free continuity planning tools available.
- Small-to-medium sized businesses have limited capacity and resources to undertake business continuity planning efforts without significant technical assistance.
- There is no single regulator of large businesses that operate infrastructure critical to Washington’s communities and economy, nor is there a clear standard for verifying or regulating the continuity plans of these businesses.
- A more extensive Limited English Proficiency (LEP) program is needed to connect with the many diverse Washington businesses and communities.
- Department of Commerce and the Military Department’s Emergency Management Division continue to partner on this issue, however the scale of the outreach and the scope of the material covered is constrained to the current resource allocation and staffing.

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**Recommendation 7:** *Make hospitals resilient – structurally and functionally*, and assess and address the vulnerabilities of hospitals and their supply chains to ensure that they are not only able to withstand the expected earthquake, but also remain operational afterwards; develop a plan for the healthcare needs of the affected jurisdictions including, but not limited to, establishing temporary hospitals and dispensaries.

### Current Actions

- WA has adopted a more recent seismic retrofit standard than the CA standards. Hospitals undergo renovations and those that do are up to compliance with the recent standards.
- Within the Funding Opportunity Announcement for budget year 2017 – 2022, there is requirement to Assess Supply Chain Inventory. This requirement is in-depth and requires Hospital Preparedness Program awardees to conduct a supply chain integrity assessment to evaluate equipment and supply needs that will be in demand during emergencies and develop strategies to address potential shortfalls.
- DOH is participating in efforts to complete the Washington State Restoration Framework, Health and Social Services Recovery Support Function (RSF), as an RSF lead. This helps us align with the US HHS Recovery approach.

### Gaps and Barriers

- Seismic Building Codes:
  - Hospital facility construction standards are approved when built. Existing facilities are not required to implement seismic retrofits.
  - Many Critical Access hospitals cannot absorb the expense of seismic retrofits.
  - Private hospitals require incentives to apply seismic standards.
  - Local jurisdictions maintain all the authority for seismic building code enforcement.
- Supply Chains:
  - The Just-in-Time business model means that in an event most facilities would run short of medical materials almost immediately.
  - Although most hospitals have an emergency requisition capability, it would be depleted quickly. Washington is therefore reliant on the capabilities of the Strategic National Stockpile cache.
- Volunteers to Support Medical Support Surge:
  - The current Emergency Worker program (RCW 38.52.310) is designed to be used by state and local emergency managers, and not by other state agencies in accordance with WAC 118.04; It does not fit the needs of health care response.
  - There is a critical gap in available medical volunteers across the state due to the geographic location of Medical Reserve Corps (MRCs).
  - Independent of RCW 38.52.310, the Department of Health (DOH) requires authority at the state level to develop an Emergency Health Worker program to recruit, register, train and deploy MRCs after coordination with local jurisdictions as needed across the state. The geographic disparity among MRCs and the ability of MRC volunteers to decline to serve, creates a critical gap in health care delivery and response during a catastrophic event, as identified during the 2016 Cascadia Rising Exercise.

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**Directive 1:** The Department of Enterprise Services to plan for the distribution of bulk fuel using master contracts to support relief efforts, restore essential services, and re-establish commerce.

### Current Actions

- DES is in the initial stages of developing a master contract with refineries to provide fuel to the entire state of Washington.
- The new contract will:
  - enable the distribution of fuel post CSZ
  - have emergency response language within the contract
- A refinery can choose multi-module (air, rail, truck, or barge/vessel) transport of fuel and will not be restricted solely to over-the-road, truck delivery. There will remain a heavy reliance on ESF 1 (Transportation) to clear routes for the distribution of fuel however, the refinery will be contractually obligated to get fuel into the state or off the coast.

### Gaps and Barriers

- Currently Washington State maintains master contracts to distribute fuel at the distributor level. This means that if a disruption in service occurs or the transportation network is compromised fuel delivery does not have to be made by any of the 5 contracted distributors; in short with the current contracts a post Cascadia Subduction Zone Earthquake (CSZ) environment will have no fuel distribution and contracts cannot be utilized to leverage distribution.
- Distributors do not have an obligation to service anyone as a priority; it is first come first serve and any act of “god” can terminate contractual obligations.

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**Recommendation 2:** *Require that utility providers (domestic water supply, wastewater, electricity, natural gas, petroleum, and information and communication technology) identify the vulnerabilities in their systems and mitigate the deficiencies.*

### Current Actions

- Commerce is engaged in funding and leveraging outside investment into the modernization of the electrical grid with resilience in the forefront of project development through Clean Energy Fund 1 and 2. Projects have included development of integrated control systems that maximize the efficiency and situational awareness within the grid, energy storage, micro and campus grids, and islands of refuge.
- The Infrastructure Resilience Sub-Committee (IRSC) of the Emergency Management Council is an active community that facilitates improved coordination, planning, and response among public and private sector lifeline operators.
- The Department of Health’s Office of Drinking Water has substantial regulatory oversight of reliability and emergency operations. DOH is planning to update its 2010 Water Sector Specific Plan which provides a foundation for response to catastrophic events.
- The Water Supply Forum ([www.watersupplyforum.org](http://www.watersupplyforum.org)) is currently undertaking a regional project envisioned to help the water utilities of King, Pierce, and Snohomish counties take proactive steps to evaluate and enhance water supply system resiliency.
- About 10 years ago, The State Building Codes Council (SBCC) looked at requiring earthquake shutoff valves on the customer side of the meter. The SBCC did not adopt the requirement. Since 2009, the US Pipeline and Hazardous Material Safety Administration has begun requiring Excess Flow Valves for new or replaced service lines. The latest rules also requires curb valves for the same construction.

### Gaps and Barriers

- There are significant regulatory gaps between multiple agencies. The UTC has authority over IOU’s but not PUD’s. Commerce’s authority over PUD’s and CO-OP’s is limited. DOH has significant authority over public water systems while the UTC has authority over private but only from the perspective of setting rates not operations. The Federal government has preemptive authority over interstate natural gas and petroleum lines. The Department of Ecology, UTC, and Commerce all have authority over intrastate hazardous liquid pipelines. The UTC regulates wireline telephone service, the Federal Communications Commission cellular and Voice Over Internet Protocol.
- Data that is necessary is to make informed planning and investment decisions toward resiliency is either scattered, non-existent, or doesn’t exist at the state level. For instance, the UTC’s pipeline GIS data contains only lines operating above 250 PSIG. This excludes nearly all distribution facilities.
- Restoration prioritization needs to be based on the identification of infrastructure dependencies. Identifying network interdependencies needs to be data driven and is currently limited.
- Tools looking at economic losses due to an earthquake exist, but are limited. These tools are also highly sensitive to their starting assumptions and inputs.
- Expertise needed to carry out recommendations does not currently reside in position descriptions. Most of those individuals are tasked with other agency projects and other areas of focus. Earthquake preparedness would be additional work and requires additional funding.
- Challenges to public- private coordination. The private sector may not wish to jeopardize confidential network information by sharing it. There are legal concerns over how state and federal funding and resources can be dispersed to the privately-owned entities such as utilities to facilitate restoration.

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**Recommendation 6:** *Strengthen regional transportation networks* by defining critical state routes, identifying priority routes for retrofitting, hardening, and facilitating collaboration between state and local jurisdictions, developing interagency agreements, and supporting the State Legislature to explore requirements for transit agencies to develop robust continuity of operations plans.

### Current Actions

- WSDOT has coordinated efforts with the following programs, agencies and jurisdictions:
  - **WA State Emergency Management Department – planning efforts:**
    - Development of a Catastrophic Incident Plan
    - Statewide Catastrophic Incident Planning Team
    - Infrastructure Resilience Sub-Committee
  - **Seismic Safety Committee** – WSDOT is a participant of the multi-jurisdictional committee under the guidance of the Emergency Management Council.
  - **Washington CSZ Transportation Systems Regional Resiliency Assessment Program** which includes Dept. of Homeland Security Region X Infrastructure Protection, WA EMD, FEMA Region X, US Coast Guard District 13, and USDOT Region X.
  - **Local emergency planners** – coordinating with King County, City of Seattle, Snohomish County, and Pierce County on seismic retrofit and identification of local lifeline corridors.
- Planning and Preparedness:
  - WSDOT’s Continuity of Operations Plan and Emergency Operations Plan both identify seismic response and recovery. WSDOT has regional support to devolve during a seismic incident, with 10 available Emergency Operations Centers (EOCs) located statewide.

### Gaps and Barriers

- Research for specific impacts from a CSZ event (2,500-year event) is limited and not incorporated into the seismic retrofit plan (1,000-year event – current standard) for bridges; to initiate this research, the first steps would be to develop a research plan and to commit resources.
- We have established the basic Puget Sound corridor lifeline, but we consider that the trunk, additional work to establish branch lifeline corridors off the trunk is necessary. Statewide, an additional 592 bridges are identified needing at least some seismic retrofit. These bridges are outside of the current Seismic Lifeline.
- Planning and coordination is necessary to expand lifeline routes to additional corridors to address the massive impact of a CSZ event; additional coordination needed with local jurisdictions to gain understanding and agreement on how local roads could be impacted by an event and/or utilized for a “lifeline route.”
- Recognize other jurisdictions’ roadways will likely be utilized for response in a seismic event. Identification of specific roadways is difficult given the unknown nature (location, magnitude, duration) of the event.
- Current construction and retrofit is designed to prevent structure collapse; bridges may be too damaged for traffic for several weeks to months, depending on the level of damage. If significant seismic event occurs, assume emergency repairs will be needed for structures to be utilized.
- Retrofit work and estimates do not include subsurface work to mitigate liquefaction, this work is accomplished on new construction. Liquefaction will affect roadway and bridge stability in identified zones.
- Need to expand on identification of Tsunami threats and impacts to transportation facilities.