

# Washington Disaster Resiliency Work Group

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## Final Report

November 30, 2020

**Mike Kreidler**, *Insurance Commissioner*

[www.insurance.wa.gov](http://www.insurance.wa.gov)

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# About the Washington Disaster Resiliency Work Group

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The Washington Disaster Resiliency Work Group was created in 2019 through legislative directive, [SSB 5106 \(2019\)](#), to study and make recommendations on disaster mitigation and resiliency activities, including whether an ongoing disaster resiliency program should be created. The work group recommendations would need to include:

- what activities the program should engage in;
- how the program should coordinate with state agencies and other entities engaged in disaster mitigation and resiliency work;
- where the program should be housed; and
- how the program should be funded.

This report is not a consensus document of resilience for Washington State, but rather a report providing recommendations relating to the creation of an ongoing resilience program and summarizing the efforts of the work group. The work group's intent was to provide a recommendation to the legislature and governor, while recognizing that the legislature and governor will use their discretion to determine if and how an ongoing resiliency program is created and implemented.

## Purpose of work group

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### Chapter 388, Laws of 2019

The legislature finds that it is critical to better prepare this state for disasters and to put in place strategies to mitigate the impacts of disasters. To address this critical need, the legislature created a work group to review disaster mitigation and preparation projects in this state and others. The work group is to make recommendations regarding how to coordinate and expand state efforts to mitigate the impacts of natural disasters, and evaluate whether an ongoing disaster resiliency program should be created.

The recommendation of whether an ongoing disaster resiliency program should be created should include:

- What activities the program should engage in.
- How the program should coordinate with state agencies and other entities engaged in disaster mitigation and resiliency work.
- Where the program should be housed.
- How the program should be funded.

The final report containing recommendations to the Washington State Legislature and Governor and the state insurance commissioner, commissioner of public lands, and superintendent of public instruction, is due by December 1, 2020.

## Work group members

Each entity named in the authorizing legislation identified its representative prior to the initial meeting on September 5, 2019.

Entity	Representative
Office of Insurance Commissioner (OIC)	Insurance Commissioner Mike Kreidler
American Indian Health Commission for Washington State (AIHC)	Lou Schmitz
Shoalwater Bay Tribe	Lee Shipman
House Republican Party	Representative Matt Shea (September 2019 – December 2019) Representative Brad Klippert (May 2020 – August 2020)
House Democratic Party	Representative Cindy Ryu
Senate Republican Party	Senator Lynda Wilson
Senate Democratic Party	Senator Mona Das
Resilient Washington Subcommittee	Stacey McClain
Washington Military Department	Robert Ezelle
Department of Natural Resources (DNR)	Corina Allen (Forson)
Washington Office of Superintendent of Public Instruction (OSPI)	Evan Gaffey
Washington State Department of Transportation (WSDOT)	Keith Metcalf
Department of Ecology	Jason Norberg, David Byers
Department of Commerce	Tristan Allen
Washington State Department of Agriculture (WSDA)	Randy Treadwell
Washington State Conservation Commission (SCC)	Alison Halpern
State Building Code Council (SBCC)	Phillip Lemley
Association of Washington Cities (AWC)	Barb Graff, Laurel Nelson
Washington State Association of Counties (WSAC)	Gene Strong
Washington Association of Building Officials (WABO)	Jon Siu

Entity	Representative
Building Industry Association of Washington (BIAW)	Rick Hjelm
Washington Low Income Housing Alliance	Rachael Myers
Washington Public Utility Districts Association (WPUDA)	Matt Stevie
Washington Association of Sewer & Water Districts (WASWD)	Tom Keown
Commission on Hispanic Affairs (CHA)	María Sigüenza
Commission on Asian Pacific American Affairs (CAPAA)	Toshiko Hasegawa
Commission of African-American Affairs (CAA)	Ed Prince
Governor's Office of Indian Affairs (GOIA)	Craig Bill
Swiss Re	David Burton Perry
Liberty Mutual Insurance	Melanie Thurlow (Smith)

## Recap of work group meetings

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### September 5, 2019 – [view meeting materials](#)

The first work group meeting brought the members together to introduce each other and be updated with natural disaster risks threatening Washington State. Presentations included:

- **Geological risk:** Corina Forson, Washington State Chief Hazards Geologist, Department of Natural Resources.
- **Climate risk and natural disasters:** Amy Snover, PhD., Director, University of Washington Climate Impacts Group.
- **Flood risk:** Brian Lynn, Coastal/Shorelands Section Manager, Department of Ecology.
- **Drought risk:** Jeff Marti, Water Resources Program Management, Department of Ecology and Gary Bahr, Natural Resources Assessment Section, Washington state Department of Agriculture.
- **Wildfire risk:** George Geissler, Washington State Forester and Deputy Supervisor for Wildfire and Forest Health and Resilience.
- **Keynote address:** Lieutenant General Russel Honoré, U.S. Army, (Retired), Commander of Joint Task Force Katrina, closed the meeting with a keynote address urging Washington state to lead the nation in statewide resiliency.

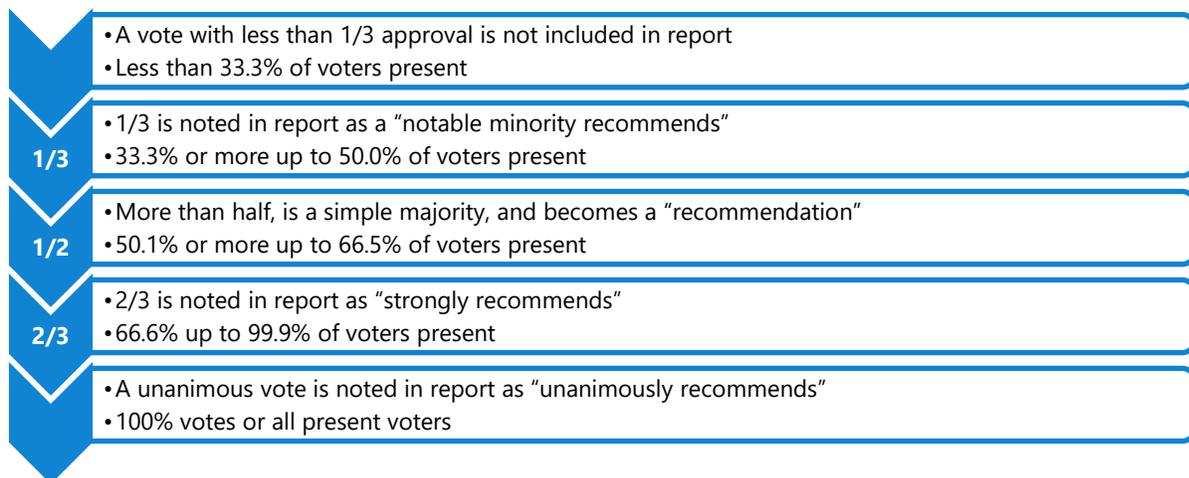
## October 30, 2019 – [view meeting materials](#)

At the second work group meeting, the members determined how the work group would reach its recommendations. The process is outlined in Figure 1 below. Work group members would attend meetings to hear presentations by an expert on an applicable topic, followed by discussions on the ideas and research materials submitted by members between the meetings. After discussing the topic and materials submitted, the members would vote on items to include with a recommendation. This process was repeated throughout the entire tenure of the work group.



**Figure 1:** Washington Disaster Resiliency Work Group meeting process for developing recommendations

The work group members also determined how voting on recommendations would be presented in the report. This chart was unanimously agreed to as how recommendations would be recorded in the legislative report.



**Figure 2:** Determination of how recommendations would be listed based on voting by the work group.

The work group then broke into smaller groups to identify the goals of and barriers to their work to provide recommendations. Below is a summary of the small group discussions.

**Goals for work group:**

- Define resilience.
- How best to draft the report to Legislature and meet legislative intent.
- Don't repeat past efforts but build upon them.
- Examine what we can do versus what we should do.
- Focus on cost-effective and sustainable programs with realistic prioritization of work.
- Engage more with work group members.
- Determine how this program interacts with Emergency Management Council.

**Goals for statewide resilience program:**

- Develop concept of holistic resilience to take into account the entire state, from geographical to community differences.
- The program needs to interact with other agencies and develop relationships.
- Push for functional recovery as part of mitigation strategy.
- Strengthen local infrastructure as part of mitigation strategy.
- Create incentives for the resilience activities it promotes.
- The statewide resilience program needs to develop consistent reporting style so historical data is relevant for future examination.
- Develop metrics.
- Develop partnerships with the private sector and local government.
- Over-communicate its messaging to combat push-back until there is a societal change on resiliency mindset.
- Create a sustained conversation about resiliency.
- Educate about potential predatory businesses during recovery phase.
- Communicate in multiple languages.
- Share messaging using outreach, education and social media to reach all audiences.
- Advocate personal and community resiliency.
- Examine building codes to help state build resiliency.
- Conduct gap analysis and categorize.
- Build a statewide resilience portal.
- Advocate resilience curriculum in schools.
- Have data drive decision-making.

**Key messages:**

- Every \$1 spent on mitigation saves \$6 spent on recovery.
- The concept of resilience as increased quality of life is something everyone can get behind.
- This work group, using subgroups, can draw upon external groups to provide information.

**Barriers for work group:**

- Who would lead a statewide resilience program?

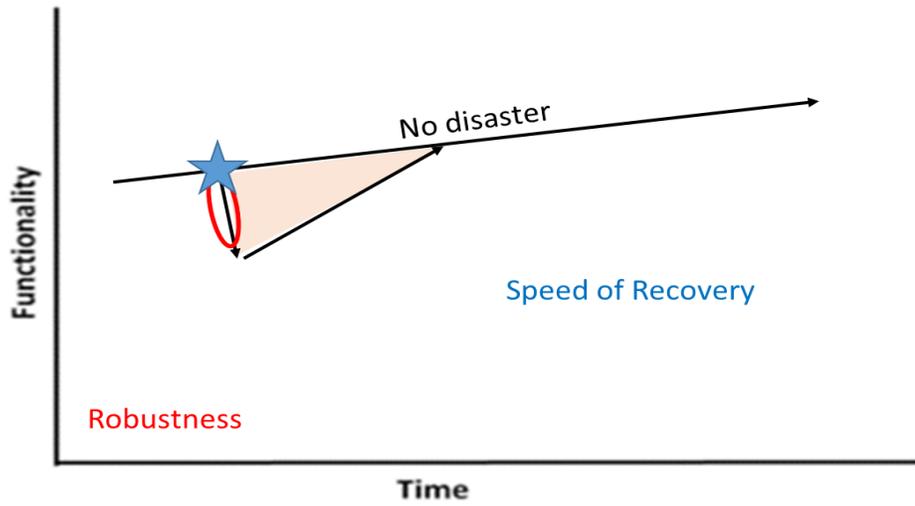
**Barriers for statewide resilience program:**

- Funding availability for a statewide resiliency program.
- Funding options for individual mitigation programs to help create resiliency.
- Resilience is a long-term goal that competes against short-term emergencies. How does this statewide program think beyond the two- and four-year cycles?
- Outdated policies and laws.
- Behavior economics.
- Creating economic incentives.

The Washington State Military Emergency Management Division and OIC staff collaborated in researching other statewide resilience offices and officers across the United States and presented their findings to the work group.

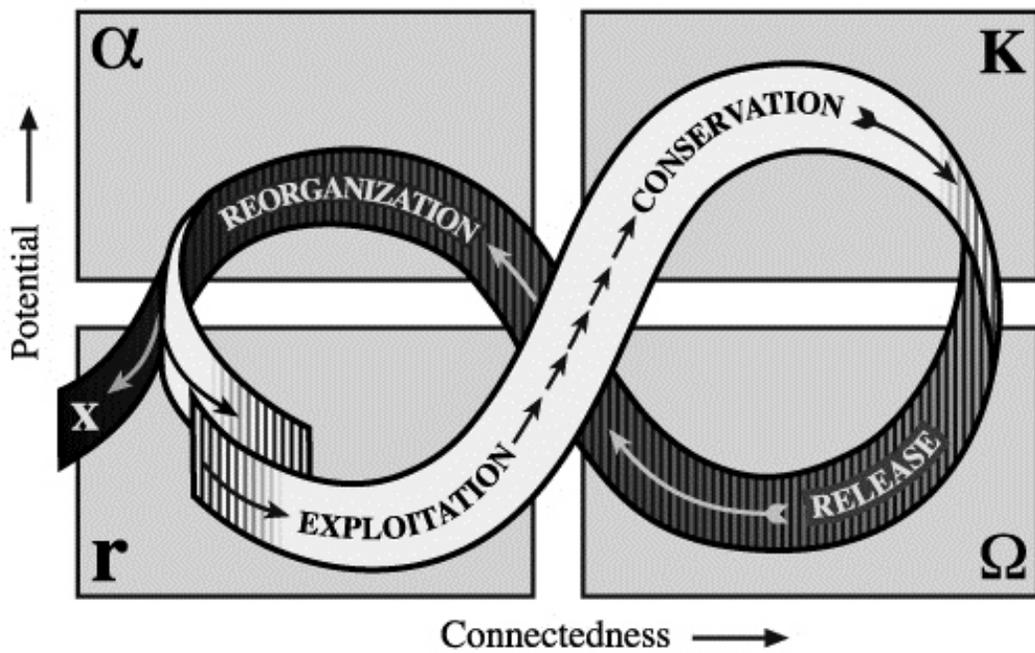
Finally, the work group heard Robert Freitag, Director of University of Washington's Institute for Hazards Mitigation, discuss what makes a community resilient. The presentation included the important concepts of "engineering resilience" and "panarchy" styles of resilience when discussing the capacity to recover and better reorganize after a disastrous event.

**Engineering resilience concept:**



**Figure 2:** The engineering concept of resilience, showing the robustness and speed of recovery for a functioning system.

**Panarchy resilience concept:**



Source: Panarchy, 2002, p. 34.

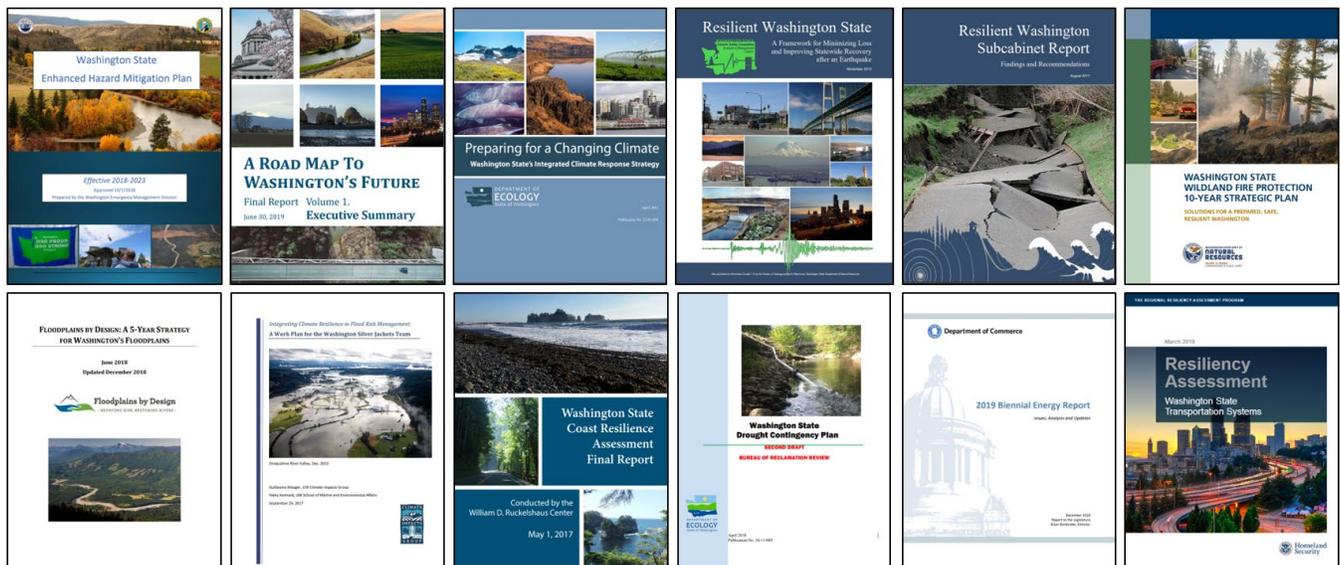
**Figure 3:** The panarchy concept of resilience, showing a repeating cycle of potential and connectedness

## December 16, 2019 – [view meeting materials](#)

The work group welcomed the following list of guests to the meeting to help with discussions and provide their unique perspectives:

- Mike Harryman, Oregon State Chief Resilience Officer
- John Schelling, FEMA
- Travis Ball, U.S. Army Corps of Engineers
- Brian Warren, Microsoft
- Carlene Anders, Mayor of Pateros, Washington
- Cathe Guptill, Red Cross
- Derrick Hiebert, King County

Tristen Allen, Department of Commerce, and Kevin Zerbe, Emergency Management Division, presented their research and review of the 12 foundational resilience documents produced by state agencies over the past decade. Three of these documents were “all-hazard” reviews and the remaining nine focused on a specific hazard or infrastructure.



**Figure 4:** The work group reviewed these 12 foundational resilience documents, all of which were produced over the last decade.

Their research into these documents revealed a commonality – state agencies report that coordination, data and funding are the primary necessities for improving resilience. Data-related barriers were the largest factor prohibiting better resilience, followed by coordination and funding, respectively.

The work group members then deliberated and conducted preliminary voting on a definition of resilience and the types of activities in which an ongoing resiliency program should engage.

The Emergency Management Division then provided the work group with two detailed disaster scenarios; a firestorm/windstorm event and a Cascadia earthquake event. This presentation led the work

group into discussions about how an ongoing resiliency program should coordinate with public and private entities, and how it is critical for resiliency.

## Legislative session break

The work group took a break due to the 2020 Legislative session and planned to reconvene in April 2020.

## COVID-19 pandemic

The COVID-19 pandemic that shut down the state in March 2020 required the work group to pause, as many of its members were deeply involved in the emergency response. All remaining meetings of the work group would be conducted virtually.

## May 21, 2020 – [view meeting materials](#)

Prior to this meeting, the work group reviewed a presentation by Michael Gaffney of Washington State University (WSU). Mr. Gaffney, Acting Director of WSU Extension and former Director of WSU’s Division of Governmental Studies and Services, shared the message that resilience has to be developed locally and has to be a long-term, renewable effort. He warned that a resiliency office that is not adequately funded or independent of political impulses will be at risk of failure. He urged the work group to consider the concept of an advisory board of a variety of stakeholders. Mr. Gaffney also introduced the concept of the community capitals framework<sup>1</sup>:



**Figure 5:** Community capitals framework concept, showing the different types of capital that can contribute to resilient outcomes.

The work group continued its work to define resilience, deliberating the types of activities an ongoing resiliency program should engage in and how this a program would coordinate with public and private

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<sup>1</sup> Drawn from: Emery, Mary and Cornelia Flora. 2006. "Spiraling Up: Mapping Community Transformation with the Community Capitals Framework." *Journal of the Community Development Society*, Vol. 37, p. 22.

sectors. Mr. Gaffney participated in the meeting and answered many of the work group's questions about his prerecorded presentation.

## **June 12, 2020 – [view meeting materials](#)**

OIC staff presented information about where statewide resilience officers are housed in other states. After hearing this presentation, the work group began its discussions of where an ongoing resiliency program should be housed in Washington and conducted a preliminary vote on the topic.

OIC staff then presented how operating funding works in state government. This presentation included background on appropriated funds, types of accounts in the Washington State Treasury and the central service model.

## **July 30, 2020 – [view meeting materials](#)**

The work group heard from special guest Cindy Zehnder, former Chief of Staff to Governor Christine Gregoire and former Chief Clerk of the Washington State House of Representatives. Ms. Zehnder shared her thoughts on how to create a successful resilience office:

- The need of the office to have a clear mission supported by legislative leaders, the governor, and other elected state officials.
- It must be adequately resourced and have qualified staff.
- Ideas relating to the benefits of an advisory board were discussed and why the governor's office is the best location to house the program.

The work group deliberated the concept of an advisory board and had detailed discussions relating to funding.

## **August 28, 2020 – [view meeting materials](#)**

The work group gathered for its final meeting and OIC staff presented a review of disaster-related insurance coverage.

The work group heard from Dr. Nicole Errett, University of Washington Department of Environmental and Occupational Health Sciences, who share her thoughts on collaborative resilience to COVID-19 and natural hazards. This discussion raised the reality that the COVID-19 pandemic has exposed new vulnerabilities that a resiliency program will need to address, such as staffing and funding challenges, how COVID-19 protocols may conflict with resilience strategies for other hazards, and the reality that public health and emergency management workforces are drained due to the long COVID-19 response. Dr. Errett also discussed the potential to leverage new opportunities caused by the COVID-19 response into better resiliency planning, including the expansion of telemedicine and new investments.

Work group members then cast their final votes for the recommendations.

# Recommendations

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## Definition of resilience

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The work group *unanimously recommends* the following definition of resilience:

“Resilience is the ability to prepare, mitigate and plan for, withstand and recover from, to more successfully adapt to adverse events and changing conditions, and reorganize in an equitable manner that results in a new and better condition.”

## Ongoing resiliency program

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### Should Washington State have an ongoing resiliency program?

The work group *strongly recommends*<sup>2</sup> that Washington State create an ongoing resiliency program.

## Activities of a resiliency program

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### What types of activities should the program engage in and how should it coordinate with state agencies and other entities?

The work group *unanimously recommends* a resiliency program that engages in activities and coordination as follows:

- Develop, administer, track, and communicate progress of the state resiliency strategy.
- Conduct and/or coordinate research, data collection, and analysis.
- Assist in the coordination of funding and research economic tools to address resiliency.
- Conduct policy research and make recommendations.
- Develop, coordinate, and communicate resilience initiatives and/or projects.
- Serve as a public-private resilience resource center.
- Enhance collaboration, education, and outreach programs.

Over the course of several months and meetings, the work group discussed the types of activities and coordination in which an ongoing resiliency office should engage. The work group unanimously voted to include the list of discussion topics that helped in the above recommendation<sup>3</sup>. It is important to note this list is not all-inclusive of the types of activities and coordination the program should engage in.

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<sup>2</sup> The work group agreed that a result greater than two-thirds of attendees present, but not unanimous, would indicate the work group “strongly recommends” the result. For specific voting brackets, please review the chart on page 7. For specific attendees present for voting, please review the work group attendance, starting on page 22 of Appendix C.

<sup>3</sup> The list of work group discussion topics begins on page 16 of Appendix A.

## Housing the program

The work group *strongly recommends*<sup>4</sup> the ongoing resiliency program reside in the governor's office and have an executive director.

Furthermore, the work group *strongly recommends* creating an advisory board to provide the resiliency program additional input and recommendations. The work group recommends an advisory board as follows:

This advisory board should include membership from tribal governments, the state legislature, private entities, state agencies, local authorities, academia, and special-purpose districts. The advisory board should also include community members who represent policymakers, agency leads, subject-matter experts, historically marginalized groups, communities of color, people with disabilities, people who can improve language access, and people from economically and geographically diverse backgrounds.

The advisory board may create focused, ad-hoc working groups that should include relevant expertise and diverse membership.

## Program funding

The work group *strongly recommends* the funding scenario below for an ongoing resiliency program:

The work group recognizes the economic hardships the COVID-19 pandemic has caused and therefore recommends providing minimal funding for a permanent resiliency office that will allow it to begin its work to help Washington State and its residents to become more resilient. Because the work group anticipates the ongoing resiliency program to serve a critical role across multiple jurisdictions and sectors, we recommend initial funding of no less than \$650,000 from the state general fund to support an initial staff size of five employees. If the economic situation improves by fiscal year 2024, it is our recommendation to double the initial staffing size of the ongoing resiliency program and to have an appropriated funding amount of no less than \$1.1 million beginning in fiscal year 2025.

Furthermore, the work group recommends that the ongoing resilience program actively research additional funding through a fee-for-service model and federal grants. Additionally, we recommend the resiliency program be authorized to receive private donations through a creation of a specific account in the Washington State Treasury. Finally, we recommend the governor explore assigning specific positions from other state agencies to be allocated to this resiliency program and allow the executive director of the program control their performance reviews.

The work group unanimously voted to include a cost breakdown in an appendix to provide additional context that led to the funding recommendation.<sup>5</sup>

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<sup>4</sup> For specific voting brackets, please review the chart on page 7. For specific attendees present for voting, please review the work group attendance, starting on page 22 of Appendix C.

<sup>5</sup> The cost breakdown can be found on page 21 in Appendix B.

# Appendix A

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## Summary of discussion topics

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### **Types of activities and coordination an ongoing resiliency program should engage in:**

- Develop, administer, track and communicate progress of the state resiliency strategy.
- Conduct and/or coordinate research, data collection and analysis.
- Assist in the coordination of funding and research economic tools to address resiliency.
- Conduct policy research and recommendations.
- Develop, coordinate and communicate resilience initiatives and/or projects.
- Serve as a public/private resilience resource center.
- Enhance collaboration, education and outreach programs.

## Summary of the submitted ideas that guided discussion<sup>6</sup>

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### **Develop, administer, track, and communicate progress of the state resiliency strategy**

- Produce an annual report to the Legislature and governor.
- Develop a detailed reporting style so historical data is relevant for future examination.
  - Include recommendations to consider implementing for the following legislative session.
  - Create common measurements to track collective progress, success and lessons learned to inform program improvements.
- Provide guidance to jurisdictions on plans, policies, model regulations, codes, etc. intended to assess and bolster resiliency efforts in those jurisdictions.
- Track state and county hazard mitigation plans.

### **Conduct and/or coordinate research, data collection and analysis**

- Actively compile and serve as a repository for disaster resiliency resources that have already been created and maintain a library of such resources.
- Develop an expansive website that can be a resource of information of agencies, businesses, and residents.

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<sup>6</sup> Updated after the August 28, 2020, meeting.

- Gather all federal, private and non-profit funding, program and technical assistance resources that are available for any resiliency type project and create a consolidated platform so agencies, businesses and residents can look for this information in one place.
- Provide resources and guidance related to the emotional stressor and coping component of resiliency in preparation for and in recovering from a disaster (both from a public and responder perspective).
- Identify, provide or refer professionals who are able to conduct resiliency assessments for specific infrastructure types and recommend solutions for gaps identified.
- Create and manage a statewide resilience focused ARCGIS portal.
  - Work with the state GIS coordinator and state agencies to develop a resilience geoportal to examine geospatial relationships of resilience activities.
- Independently model the resiliency of specific infrastructure sectors within the state and provide science-based metrics (estimated cost of impact, cost of recovery, percent of infrastructure resilient to a specific hazard, etc.) to support emergency management entities and state decision makers.
  - Work with private entity risk modelers to examine Washington state.
- Gather and/or conduct ongoing assessments of risk and resiliency.
  - Study potential impacts to those most vulnerable due to displacement, financial means or location.
- Monitor climate science to understand potential changes in risk and study statewide exposure to human health, physical property and economic loss to future climate conditions.
- Conduct gap analysis and coordinate research to address gaps in hazard identification and mitigation needs, as well as implementation gaps (lack of funding, policy, etc.).
- Study of design level standards for engineering; are we designing our facilities and infrastructure to the right design levels and lifetime expectancies?
  - Performance levels (collapse prevention vs. immediate occupancy).
  - Probabilities (flood, earthquake, tsunami, etc.).
- Create an inventory of critical facilities, their modernization history and needs.

## **Assist in the coordination of funding and research economic tools to address resiliency**

- Conduct cost-benefit analysis of resilience options to determine best uses of finite economic resources to determine whether to accept, mitigate or transfer risk.
- Develop a state-approved cost-benefit analysis tool to use for prioritizing funding.
- Ensure that state infrastructure investments do not counteract resiliency efforts or otherwise increase vulnerability.
- Evaluate gaps and opportunities for coordinated and strategic investments, including new partnerships beyond state agencies.

- Invest in technology solutions, data analysis, planning tools and vulnerability analyses.
- Expanded capital funding opportunities for large-scale flood damage reduction projects and actions.
- Hydrologic modeling that provides an understanding of current and future flood risks and potential benefits and impacts of flood damage reduction projects.
- Develop a state-funded grant program to rehabilitate nonfederal dams in poor condition as leverage (match) for FEMA's new dam grant program.
- Develop economic incentives for resiliency activities.
  - Partner with the Insurance Institute for Business & Home Safety to develop a program in Washington to have certified "fortified" dwellings that may qualify for an insurance rate decrease.
- Identify and prioritize investment opportunities, gaps and barriers.

## **Conduct policy research and recommendations**

- Influence future exposures through advocating resiliency in building codes and land use.
- Serve as subject-matter experts to the lawmakers and staff on current laws, regulations, policies and procedures related to statewide disaster resiliency activities.
- Improved drought laws and funding programs to provide greater support of long-term resiliency.
- Research and review current long-term water-right leasing agreements.
- Define interagency leadership, appropriate organizational structure and governance for effective and efficient coordination and collaboration.
- Assess how existing governor-appointed advisory boards could be leveraged to support the state resilience program and the formation of a new advisory board to guide the activities, policy initiatives and legislative actions of the state resilience program.
- Review foundational documents and current efforts to help shape a framework for a comprehensive all-hazard strategy.
- Develop guidelines and rules to notify property owners living at risk below dams (notice in deed, disclosure in sales documents).
- Review current authority for inspecting and ensuring compliance with design standards for above-ground storage tank secondary containment to withstand seismic loads.
- Review jurisdiction for requiring and ensuring compliance with design standards for oil-handling facilities, to include storage tanks, piping, valves and marine terminals to withstand seismic loads.
- Develop policy and building code language that would require modern public schools and essential buildings to meet higher performance-based engineering standards that will permit use of these structures following major earthquakes.

- Develop policy to condemn the very hazardous school buildings and require their retrofit or demolition.
- Sit on relevant boards:
  - Emergency Management Council.
  - Seismic Safety Committee.
  - Transportation Commission.
- Work with Washington State Emergency Management Division and WAsafe coalition (WABO, SEAW, AIA, ASCE) to administer emergency volunteer building safety assessment evaluator registration program. This includes maintaining and updating the WAserve database and adding credentials for volunteers.
- Examine feasibility of state-led insurance programs, similar to the California Earthquake Authority, for Washington State.

## **Develop, coordinate, and communicate resilience projects**

- Work to implement Resilient Washington Subcabinet recommendations.
- Track statewide expenditure of disaster-related funding.
- Develop new mitigation programs.
  - Improve financial tools to help building owners pay for seismic retrofits of vulnerable buildings. For example: develop a Washington grant program for residents similar to California's Brace + Bolt program.
- Develop formal "drought advisories" to alert water users to potential water supply challenges.
- Develop and maintain flood warning and emergency response systems.
- Expand access to water during droughts via the use of water banks and trust water rights dedicated to drought mitigation.
- Identify non-ductile concrete structures and unreinforced masonry buildings throughout the state.
  - Develop a 10 to 20-year plan to retrofit or replace these dangerous structures to meet modern life safety or immediate occupancy standards.
- Engage in cross-collaboration efforts with other preparedness and resiliency programs being maintained across the state, including continuity of government and continuity of operations groups.
- Assist local governments in development and financing for flood-resilient land use.
- Engage broad range of stakeholders on resiliency best practices and lessons learned.
- Provide communication, engagement and ongoing outreach.
  - Engage appropriately with emergency management professionals, government entities, representatives of both small and large industry, utilities, nongovernmental organizations

and the public around appropriate resiliency efforts being undertaken in the state (exempting projects as necessary that may impact security).

- Support community education and engagement efforts.
- Develop memorandums of understanding with nonprofits and charities to establish roles in the event of a disaster.
- Develop education and outreach curricula for children in grades K-12, as well as cities and counties.
- Local adoption or recognition of building occupancy resumption programs such as San Francisco's [Building Occupancy Resumption Program \(BORP\)](#) or [WABO/SEAW Advisory Tag System](#).

# Appendix B

## Funding scenarios for ongoing resiliency program

**Assumptions: The ongoing resilience program is part of the Governor's Office who will control performance review and handle the support service functions relating to mail, HR, etc... Cost of living raises to begin again in FY-25**  
*The additional 25% is to account for benefits and other entitlement program costs*

**STAFFING REQUIREMENTS**

Position Title	(7/21 - 6/22)		(7/22 - 6/23)		(7/23 - 6/24)		(7/24 - 6/25)		(7/25 - 6/26)		(7/26 - 6/27)	
	FY-22		FY-23		FY-24		FY-25		FY-26		FY-27	
	Number	Months	Number	Months	Number	Months	Number	Months	Number	Months	Number	Months
Executive Director	\$120,000.00	12.00	\$120,000.00	12.00	\$120,000.00	12.00	\$126,000.00	12.00	\$132,300.00	12.00	\$138,915.00	12.00
Administrative Assistant 4	\$55,000.00	12.00	\$55,000.00	12.00	\$55,000.00	12.00	\$57,750.00	12.00	\$60,637.50	12.00	\$63,669.38	12.00
Policy Analyst	\$85,000.00	12.00	\$85,000.00	12.00	\$85,000.00	12.00	\$89,250.00	12.00	\$93,712.50	12.00	\$98,398.13	12.00
Community Manager	\$85,000.00	12.00	\$85,000.00	12.00	\$85,000.00	12.00	\$89,250.00	12.00	\$93,712.50	12.00	\$98,398.13	12.00
Data Analyst	\$85,000.00	12.00	\$85,000.00	12.00	\$85,000.00	12.00	\$89,250.00	12.00	\$93,712.50	12.00	\$98,398.13	12.00
Deputy Director							\$105,000.00	12.00	\$110,250.00	12.00	\$115,762.50	12.00
Administrative Assistant 2							\$43,000.00	12.00	\$45,150.00	12.00	\$47,407.50	12.00
Policy Analyst							\$89,250.00	12.00	\$93,712.50	12.00	\$98,398.13	12.00
Community Manager							\$89,250.00	12.00	\$93,712.50	12.00	\$98,398.13	12.00
Data Analyst							\$89,250.00	12.00	\$93,712.50	12.00	\$98,398.13	12.00
staffing subtotal:	\$430,000.00		\$430,000.00		\$430,000.00		\$867,250.00		\$910,612.50		\$956,143.13	
additional 25%	\$107,500.00		\$107,500.00		\$107,500.00		\$216,812.50		\$227,653.13		\$239,035.78	
staffing total:	\$537,500.00		\$537,500.00		\$537,500.00		\$1,084,062.50		\$1,138,265.63		\$1,195,178.91	
<b>OTHER COSTS</b>												
Professional Service Contracts (cost)	\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
Publication Printing (cost)	\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
<b>Staff Training:</b>												
Membership Dues (cost)	\$2,000.00		\$2,000.00		\$2,000.00		\$4,000.00		\$4,000.00		\$4,000.00	
Training (cost)	\$10,000.00		\$10,000.00		\$10,000.00		\$10,000.00		\$10,000.00		\$10,000.00	
<b>Travel:</b>												
Per Diem (cost)	\$12,000.00		\$12,000.00		\$12,000.00		\$24,000.00		\$24,000.00		\$24,000.00	
Mileage (cost)	\$1,000.00		\$1,000.00		\$1,000.00		\$2,000.00		\$2,000.00		\$2,000.00	
Other (cost)	\$500.00		\$500.00		\$500.00		\$500.00		\$500.00		\$500.00	
<b>Equipment:</b>												
Computer/Phone	\$15,000.00		\$10,000.00		\$5,000.00		\$20,000.00		\$15,000.00		\$10,000.00	
Workstation	\$21,000.00		\$7,000.00		\$7,000.00		\$21,000.00		\$7,000.00		\$7,000.00	
Misc.	\$1,000.00		\$1,000.00		\$1,000.00		\$1,000.00		\$1,000.00		\$1,000.00	
<b>Other (Describe items and list cost):</b>												
Advisory Board Support	\$25,000.00		\$25,000.00		\$25,000.00		\$25,000.00		\$25,000.00		\$25,000.00	
Other costs subtotal:	\$87,500.00		\$68,500.00		\$63,500.00		\$107,500.00		\$88,500.00		\$83,500.00	
<b>TOTAL:</b>	<b>\$625,000.00</b>		<b>\$606,000.00</b>		<b>\$601,000.00</b>		<b>\$1,191,562.50</b>		<b>\$1,226,765.63</b>		<b>\$1,278,678.91</b>	

# Appendix C

## Work group attendance

Work group member	Sept. 5, 2019	Oct. 30, 2019	Dec. 16, 2019	May 21, 2020	June 12, 2020	July 30, 2020	Aug. 28, 2020
American Indian Health Commission for Washington State	Present	Absent	Present	Present	Present	Present	Present
Association of Washington Cities	Present	Present	Present	Present	Present	Present	Present
Building Industry Association of Washington	Present	Present	Present	Absent	Absent	Present	Absent
Commission of African-American Affairs	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Commission on Asian Pacific American Affairs	Present	Present	Present	Present	Present	Present	Present
Commission on Hispanic Affairs	Present	Present	Absent	Absent	Present	Present	Present
Department of Commerce	Present	Present	Present	Present	Present	Present	Present
Department of Ecology	Present	Present	Present	Present	Present	Present	Present
Department of Natural Resources	Present	Present	Present	Present	Present	Present	Present
Emergency and Transitional Housing	Present	Absent	Present	Absent	Absent	Present	Present
Governor's Office of Indian Affairs	Absent	Absent	Absent	Absent	Absent	Absent	Absent
House Democratic Party	Present	Present	Absent	Present	Present	Present	Present
House Republican Party	Absent	Absent	Absent	Absent	Present	Present	Present
Liberty Mutual Insurance	Present	Present	Present	Absent	Absent	Present	Present
Office of Insurance Commissioner	Present	Present	Present	Present	Present	Present	Present
Resilient Washington Subcommittee	Present	Present	Present	Present	Present	Present	Present
Senate Democratic Party	Present	Absent	Absent	Absent	Absent	Absent	Absent

Work group member	Sept. 5, 2019	Oct. 30, 2019	Dec. 16, 2019	May 21, 2020	June 12, 2020	July 30, 2020	Aug. 28, 2020
Senate Republican Party	Present	Present	Absent	Absent	Absent	Absent	Present
Shoalwater Bay Tribe	Present	Absent	Absent	Absent	Absent	Absent	Absent
State Building Code Council	Present	Present	Present	Present	Present	Present	Present
Swiss Re	Present	Present	Present	Present	Present	Absent	Absent
Washington Association of Building Officials	Present	Present	Present	Present	Present	Present	Present
Washington Association of Sewer & Water Districts	Absent	Present	Present	Present	Absent	Present	Absent
Washington Military Department	Present	Present	Present	Present	Present	Present	Present
Washington Office of Superintendent of Public Instruction	Present	Present	Present	Present	Present	Present	Present
Washington Public Utility Districts Association	Present	Present	Present	Present	Absent	Absent	Present
Washington State Association of Counties	Present	Absent	Present	Present	Present	Absent	Present
Washington State Conservation Commission	Present	Absent	Absent	Absent	Absent	Absent	Present
Washington State Department of Agriculture	Present	Present	Present	Present	Present	Present	Present
Washington State Department of Transportation	Present	Present	Present	Present	Present	Present	Present

## Attendees – September 5, 2019

Disaster Resiliency Work Group Members	
American Indian Health Commission for Washington State	Lou Schmitz
Association of Washington Cities	Barb Graff
Building Industry Association of Washington	Rick Hjelm
Commission of African-American Affairs	Not in attendance
Commission on Asian Pacific American Affairs	Toshiko Hasegawa
Commission on Hispanic Affairs	María Sigüenza
Department of Commerce	Tristan Allen
Department of Ecology	Jason Norberg
Department of Natural Resources	Corina Allen (Forson)
Emergency and Transitional Housing	Rachael Myers

<b>Disaster Resiliency Work Group Members</b>	
Governor's Office of Indian Affairs	Not in attendance
House Democratic Party	Representative Cindy Ryu
House Republican Party	Not in attendance
Liberty Mutual Insurance	Melanie Thurlow (Smith)
Office of Insurance Commissioner	Insurance Commissioner Mike Kreidler
Resilient Washington Subcommittee	Stacey McClain
Senate Democratic Party	Senator Mona Das, telephone
Senate Republican Party	Senator Lynda Wilson
Shoalwater Bay Tribe	Lee Shipman
State Building Code Council	Phillip Lemley
Swiss Re	David BurtonPerry
Washington Association of Building Officials	Jon Siu
Washington Association of Sewer & Water Districts	Not in attendance
Washington Military Department	Robert Ezelle
Washington Office of Superintendent of Public Instruction	Evan Gaffey
Washington Public Utility Districts Association	Matt Stevie
Washington State Association of Counties	Gene Strong
Washington State Conservation Commission	Alison Halpern
Washington State Department of Agriculture	Randy Treadwell
Washington State Department of Transportation	Keith Metcalf

<b>Invited Guest Speaker(s)</b>	
U.S. Army, Retired	Lieutenant General Russel Honoré, USA (Retired)
Washington State Chief Hazards Geologist, Department of Natural Resources	Corina Allen (Forson)
Director, University of Washington Climate Impacts Group	Dr. Amy Snover, Ph.D.
Coastal and Shoreline Section Manager, Department of Ecology	Brian Lynn
Water Resources Program Management, Department of Ecology	Jeff Marti
Natural Resources Assessment Section, Washington State Department of Agriculture	Gary Bahr
Washington State Forester and Deputy Supervisor for Wildfire and Forest Health and Resilience	George Geissler
Executive Policy Advisor, Department of Natural Resources	Dan Stonington

Nonvoting Attendees	
Ray Cockerham	Carol Lee Roalkvam
Josie Cummings	Michael Levkowitz
Matt Doumit	Jason Norberry
Joanna Eide	Dave Pringle
John Himmel	Mitchell Romero
Alex Kaplan	Michael Shaw
Karen Lang	Alyssa Wiedenhelt

## Attendees – October 30, 2019

Disaster Resiliency Work Group Members	
American Indian Health Commission for Washington State	Not in attendance
Association of Washington Cities	Barb Graff
Building Industry Association of Washington	Rick Hjelm
Commission of African-American Affairs	Not in attendance
Commission on Asian Pacific American Affairs	Toshiko Hasegawa
Commission on Hispanic Affairs	María Sigüenza
Department of Commerce	Tristan Allen
Department of Ecology	Jason Norberg
Department of Natural Resources	Corina Allen (Forson)
Emergency and Transitional Housing	Not in attendance
Governor's Office of Indian Affairs	Not in attendance
House Democratic Party	Representative Cindy Ryu
House Republican Party	Not in attendance
Liberty Mutual Insurance	Melanie Thurlow (Smith); represented by Michael Shaw
Office of Insurance Commissioner	Insurance Commissioner Mike Kreidler; represented by Chief Deputy AnnaLisa Gellermann
Resilient Washington Subcommittee	Stacey McClain; represented by Kevin Zerbe
Senate Democratic Party	Not in attendance
Senate Republican Party	Senator Lynda Wilson; represented by Matt Tremble
Shoalwater Bay Tribe	Not in attendance
State Building Code Council	Phillip Lemley
Swiss Re	David BurtonPerry
Washington Association of Building Officials	Jon Siu
Washington Association of Sewer & Water Districts	Tom Keown
Washington Military Department	Robert Ezelle; represented by Stacey McClain
Washington Office of Superintendent of Public Instruction	Evan Gaffey
Washington Public Utility Districts Association	Matt Stevie

<b>Disaster Resiliency Work Group Members</b>	
Washington State Association of Counties	Not in attendance
Washington State Conservation Commission	Not in attendance
Washington State Department of Agriculture	Randy Treadwell
Washington State Department of Transportation	Keith Metcalf

<b>Invited Guest Speaker(s)</b>	
Director of University of Washington's Institute for Hazards Mitigation	Robert Freitag

<b>Nonvoting Attendees</b>	
Mike Doumit	Shouben Liam
Joanna Eide	Travis Linares-Hengen
George Geissler	Brian Terbush
Karen Lang	Veronica Vanslyke
Carol Lee Roalkvam	Alyssa Wiedenheft

## **Attendees – December 16, 2019**

<b>Disaster Resiliency Work Group Members</b>	
American Indian Health Commission for Washington State	Lou Schmitz
Association of Washington Cities	Barb Graff
Building Industry Association of Washington	Rick Hjelm
Commission of African-American Affairs	Not in attendance
Commission on Asian Pacific American Affairs	Toshiko Hasegawa; represented by Nam Nguyen
Commission on Hispanic Affairs	Not in attendance
Department of Commerce	Tristan Allen
Department of Ecology	Jason Norberg
Department of Natural Resources	Corina Allen (Forson)
Emergency and Transitional Housing	Rachael Myers
Governor's Office of Indian Affairs	Not in attendance
House Democratic Party	Not in attendance
House Republican Party	Not in attendance
Liberty Mutual Insurance	Melanie Thurlow (Smith)
Office of Insurance Commissioner	Insurance Commissioner Mike Kreidler; represented by Chief Deputy AnnaLisa Gellermann
Resilient Washington Subcommittee	Stacey McClain
Senate Democratic Party	Not in attendance
Senate Republican Party	Not in attendance
Shoalwater Bay Tribe	Not in attendance

<b>Disaster Resiliency Work Group Members</b>	
State Building Code Council	Phillip Lemley
Swiss Re	David BurtonPerry
Washington Association of Building Officials	Jon Siu
Washington Association of Sewer & Water Districts	Tom Keown
Washington Military Department	Robert Ezelle
Washington Office of Superintendent of Public Instruction	Evan Gaffey
Washington Public Utility Districts Association	Matt Stevie
Washington State Association of Counties	Gene Strong
Washington State Conservation Commission	Not in attendance
Washington State Department of Agriculture	Randy Treadwell
Washington State Department of Transportation	Keith Metcalf

<b>Invited Guest Speaker(s)</b>	
Department of Commerce	Tristan Allen
Emergency Management Division	Kevin Zerbe
Emergency Management Division	Travis Linares-Hengen

<b>Special Participants</b>	
FEMA	John Schelling
King County	Derrick Hiebert
Mayor of Pateros, Wash.	Carlene Anders
Microsoft	Brian Warren
Oregon State Chief Resilience Officer	Mike Harryman
Red Cross	Cathe Guptill
U.S. Army Corps of Engineers	Travis Ball

<b>Nonvoting Attendees</b>	
Erin Coyle	Kellee Gunn
Josie Cummings	Taylor Hennessee
Ashlee Delaney	John Himmel
Matt Doumit	Jameson Morrell
Joanna Eide	Bobbak Talebi
Greg Griffith	Loren Torgerson

## Attendees – May 21, 2020

<b>Disaster Resiliency Work Group Members</b>	
American Indian Health Commission for Washington State	Lou Schmitz
Association of Washington Cities	Laurel Nelson
Building Industry Association of Washington	Not in attendance
Commission of African-American Affairs	Not in attendance
Commission on Asian Pacific American Affairs	Toshiko Hasegawa; represented by Nam Nguyen
Commission on Hispanic Affairs	Not in attendance
Department of Commerce	Tristan Allen
Department of Ecology	Jason Norberg, represented by Bobbak Talebi
Department of Natural Resources	Corina Allen (Forson)
Emergency and Transitional Housing	Not in attendance
Governor's Office of Indian Affairs	Not in attendance
House Democratic Party	Representative Cindy Ryu
House Republican Party	Not in attendance
Liberty Mutual Insurance	Not in attendance
Office of Insurance Commissioner	Insurance Commissioner Mike Kreidler
Resilient Washington Subcommittee	Stacey McClain; represented by Maximilian Dixon
Senate Democratic Party	Not in attendance
Senate Republican Party	Not in attendance
Shoalwater Bay Tribe	Not in attendance
State Building Code Council	Phillip Lemley
Swiss Re	David Burton Perry; represented by Serena Sowers
Washington Association of Building Officials	Jon Siu
Washington Association of Sewer & Water Districts	Tom Keown
Washington Military Department	Robert Ezelle; represented by Stacey McClain
Washington Office of Superintendent of Public Instruction	Evan Gaffey
Washington Public Utility Districts Association	Matt Stevie
Washington State Association of Counties	Gene Strong
Washington State Conservation Commission	Not in attendance
Washington State Department of Agriculture	Randy Treadwell
Washington State Department of Transportation	Keith Metcalf; represented by Marshall Elizer
<b>Invited Guest Speaker(s)</b>	
Acting Director of WSU Extension	Michael Gaffney

Nonvoting Attendees	
Allyson Brooks	Matthew Kamenz
David Forte	John Pestinger

## Attendees – June 12, 2020

Disaster Resiliency Work Group Members	
American Indian Health Commission for Washington State	Lou Schmitz
Association of Washington Cities	Laurel Nelson
Building Industry Association of Washington	Not in attendance
Commission of African-American Affairs	Not in attendance
Commission on Asian Pacific American Affairs	Toshiko Hasegawa
Commission on Hispanic Affairs	María Sigüenza
Department of Commerce	Tristan Allen
Department of Ecology	David Byers
Department of Natural Resources	Corina Allen (Forson)
Emergency and Transitional Housing	Not in attendance
Governor’s Office of Indian Affairs	Not in attendance
House Democratic Party	Representative Cindy Ryu
House Republican Party	Representative Brad Klippert
Liberty Mutual Insurance	Not in attendance
Office of Insurance Commissioner	Insurance Commissioner Mike Kreidler
Resilient Washington Subcommittee	Stacey McClain; represented by Maximilian Dixon
Senate Democratic Party	Not in attendance
Senate Republican Party	Not in attendance
Shoalwater Bay Tribe	Not in attendance
State Building Code Council	Phillip Lemley
Swiss Re	David BurtonPerry
Washington Association of Building Officials	Jon Siu
Washington Association of Sewer & Water Districts	Not in attendance
Washington Military Department	Robert Ezelle; represented by Stacey McClain
Washington Office of Superintendent of Public Instruction	Evan Gaffey
Washington Public Utility Districts Association	Not in attendance
Washington State Association of Counties	Gene Strong
Washington State Conservation Commission	Not in attendance
Washington State Department of Agriculture	Randy Treadwell
Washington State Department of Transportation	Keith Metcalf

<b>Nonvoting Attendees</b>	
Carlene Anders	Carol Lee Roalkvam
Jim Baumgart	Candice Myrum
Allyson Brooks	John Pestinger
Ali Butler	David Shannon
Sarah Edwards	Dan Siemann
Jacob Ewing	Bobbak Talebi
Collin Ford	Brian Terbush
David Forte	Loren Torgerson
Michael Gaffney	Melissa Van Gorkom
Kellee Gunn	Veronica Vanslyke
John Himmel	Brian Warren
Lonnie John-Brown	Bryon Welch
Matthew Kamenz	Kevin Zerbe
Karen Lang	

## **Attendees – July 20, 2020**

<b>Disaster Resiliency Work Group Members</b>	
American Indian Health Commission for Washington State	Lou Schmitz
Association of Washington Cities	Laurel Nelson
Building Industry Association of Washington	Rick Hjelm
Commission of African-American Affairs	Not in attendance
Commission on Asian Pacific American Affairs	Toshiko Hasegawa
Commission on Hispanic Affairs	María Sigüenza
Department of Commerce	Tristan Allen
Department of Ecology	David Byers
Department of Natural Resources	Corina Allen (Forson)
Emergency and Transitional Housing	Rachael Myers
Governor's Office of Indian Affairs	Not in attendance
House Democratic Party	Representative Cindy Ryu
House Republican Party	Representative Brad Klippert
Liberty Mutual Insurance	Melanie Thurlow (Smith)
Office of Insurance Commissioner	Insurance Commissioner Mike Kreidler
Resilient Washington Subcommittee	Stacey McClain
Senate Democratic Party	Not in attendance
Senate Republican Party	Not in attendance
Shoalwater Bay Tribe	Not in attendance
State Building Code Council	Phillip Lemley
Swiss Re	Not in attendance
Washington Association of Building Officials	Jon Siu

<b>Disaster Resiliency Work Group Members</b>	
Washington Association of Sewer & Water Districts	Tom Keown
Washington Military Department	Robert Ezelle
Washington Office of Superintendent of Public Instruction	Evan Gaffey
Washington Public Utility Districts Association	Not in attendance
Washington State Association of Counties	Not in attendance
Washington State Conservation Commission	Not in attendance
Washington State Department of Agriculture	Randy Treadwell
Washington State Department of Transportation	Keith Metcalf

<b>Invited Guest Speaker(s)</b>	
Vice President, Gordon Thomas Honeywell Governmental Affairs	Cindy Zehnder

<b>Nonvoting Attendees</b>	
Carlene Anders	Derrick Hiebert
Jim Baumgart	Matthew Kamenz
David Forte	John Pestinger
Robert Freitag	Janice Rahman
Michael Godfried	Bobbak Talebi
Greg Griffith	Kevin Zerbe

## **Attendees – August 28, 2020**

<b>Disaster Resiliency Work Group Members</b>	
American Indian Health Commission for Washington State	Lou Schmitz
Association of Washington Cities	Laurel Nelson
Building Industry Association of Washington	Not in attendance
Commission of African-American Affairs	Not in attendance
Commission on Asian Pacific American Affairs	Toshiko Hasegawa
Commission on Hispanic Affairs	María Sigüenza
Department of Commerce	Tristan Allen
Department of Ecology	David Byers
Department of Natural Resources	Corina Allen (Forson)
Emergency and Transitional Housing	Rachael Myers
Governor's Office of Indian Affairs	Not in attendance
House Democratic Party	Representative Cindy Ryu

<b>Disaster Resiliency Work Group Members</b>	
House Republican Party	Representative Brad Klippert
Liberty Mutual Insurance	Melanie Thurlow (Smith)
Office of Insurance Commissioner	Insurance Commissioner Mike Kreidler
Resilient Washington Subcommittee	Stacey McClain; represented by Maximilian Dixon
Senate Democratic Party	Not in attendance
Senate Republican Party	Senator Lynda Wilson
Shoalwater Bay Tribe	Not in attendance
State Building Code Council	Phillip Lemley
Swiss Re	Not in attendance
Washington Association of Building Officials	Jon Siu
Washington Association of Sewer & Water Districts	Not in attendance
Washington Military Department	Robert Ezelle
Washington Office of Superintendent of Public Instruction	Evan Gaffey
Washington Public Utility Districts Association	Matt Stevie
Washington State Association of Counties	Gene Strong
Washington State Conservation Commission	Alison Halpern
Washington State Department of Agriculture	Randy Treadwell
Washington State Department of Transportation	Keith Metcalf

<b>Invited Guest Speaker(s)</b>	
University of Washington, Department of Environmental and Occupational Health Sciences	Dr. Nicole Errett

<b>Nonvoting Attendees</b>	
Carlene Anders	Mari Leavitt
Allyson Brooks	Carol Lee Roalkvam
Ali Butler	John Lovick
Marissa Chavez	Candice Myrum
Sarah Edwards	John Pestinger
Colin Foard	Dan Siemann
Robert Freitag	Amy Snover
Michael Godfried	Steve Taylor
Greg Griffith	Brian Terbush
Kellee Gunn	Veronica Vanslyke
Hailey Hamilton	Sharon Wallace
Matthew Kamenz	Brian Warren
Kara Klotz	Bryon Welch

Nonvoting Attendees	
Katie Kolan	Kevin Zerbe
Karen Lang	Mari Leavitt

# Appendix D

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## Information reviewed by the work group for its assignments

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In order for the work group to provide recommendations, the OIC set up an online portal for each member and for interested parties to submit information for the work group's review. Approximately 3,500 pages of information were submitted to the work group. All of this information can be found on the [OIC website](#). The list of documents and the entities that submitted them include:

- **Alliance for National and Community Resilience (ANCR)**
  - Foundations of ANCR community resilience benchmarks.
  - Building community resilience through modern model building codes.
  - The community resilience benchmarks.
  
- **Association of Washington Cities**
  - Link to Seattle's emergency management webpage.
  - Resilient Washington Subcabinet report.
  
- **Commission of African-American Affairs, Commission on Asian Pacific American Affairs and Commission on Hispanic Affairs**
  - Joint disaster resiliency work plan.
  
- **Department of Agriculture**
  - Disaster assistance fact sheet.
  - Coping with disaster brochure in the agricultural community.
  - Hurricane Michael loan options from the Small Business Administration.
  - Six steps for agriculture recovery poster.
  - Emergency support function #11: Agriculture and natural resources.
  - Washington state food emergency response plan.
  - Examples of roles, responsibilities, and activities related to disaster resiliency.
  - Summary of the types of activities an ongoing state resiliency program should engage in.
  - Smart growth America, building resilient states: A framework for agencies.
  - Summary of where an ongoing resiliency program should be housed.
  
- **Department of Commerce**

- Summary of statewide resilience activities.
- Summary of roles and responsibilities in disaster mitigation and recovery.
- States of resilience: A comparison of resilience efforts in the U.S. states and territories.
- Recommendation: Location of state resilience program.
  
- **Department of Ecology**
  - Summary of disaster resilience activities Department of Ecology is doing in Washington State.
  - Summary of Department of Ecology's roles and responsibilities in a disaster scenario.
  - Summary of the types of activities an ongoing state resiliency program should engage in.
  
- **Department of Natural Resources (DNR)**
  - Summary of the disaster resilience activities DNR is currently doing in Washington State.
  - Summary of DNR's roles and responsibilities in disaster mitigation and recovery activities.
  - Summary of disaster resiliency activities in other states.
  - Summary of the types of activities an ongoing state resiliency program should engage in.
  - Summary of types of coordination an ongoing state resiliency program should engage in with state agencies and other entities.
  - Summary of where an ongoing resilience program should reside.
  - Summary of how an ongoing resilience program should be funded.
  
- **Washington state Department of Transportation (WSDOT)**
  - Summary of disaster resilience activities WSDOT is currently doing in Washington State.
  - Creating a resilient multimodal transportation system the WSDOT way.
  - RISE attendee posters.
  - Summary of where WSDOT thinks the new resiliency program should be housed.
  
- **Jameson Morrel**
  - Jacobs Engineering Group's climate risk: Capability statement.
  - Jacobs Engineering Group's climate risk: Health check tool.
  - Commercial/Industrial Climate Change Services.
  - Compliance with IAA Climate Change Legislation.

- **King County**
  - Summary of specific disaster resiliency activities King County is doing in Washington State.
- **Milliman, Inc.**
  - Correspondence to work group members regarding catastrophe resiliency.
- **National Insurance Crime Bureau**
  - NICB disaster resiliency work group public submission.
- **Office of Superintendent of Public Instruction**
  - Link to Shake Alert webpage.
- **Office of the Insurance Commissioner (OIC)**
  - Summary of the disaster resilience activities OIC is currently doing.
  - Summary of OIC's roles and responsibilities in disaster mitigation and recovery activities.
  - Summary of disaster resiliency efforts in other states.
  - Summary of types of activities an ongoing resilience program should engage in.
  - Summary of types of coordination an ongoing state resiliency programs should engage in with state agencies and other entities.
  - Summary of where an ongoing resiliency program should be housed.
  - Summary of the types of funding an ongoing resiliency program should have.
- **Resilient Washington Subcabinet**
  - Link to Resilient Washington Subcabinet.
  - Summary of Resilient Washington Subcabinet's roles and responsibilities.
  - Resilient Washington Subcabinet report.
- **Seattle Public Utilities**
  - Seattle Public Utilities' risk and resiliency assessment and framework 2019 final report.
- **The Pew Charitable Trusts**
  - How states pay for natural disasters in an era rising costs sources and methodology.
  - How states pay for natural disasters in an era of rising costs.
  - With costs on the rise, how does my state pay for natural disasters?

- Articles:
  - What we don't know about state spending on natural disasters could cost us.
  - Natural disaster mitigation spending not comprehensively tracked.
  - How Ohio designed its system to track disaster spending.
  - Data highlight state-by-state benefits of Federal natural disaster mitigation grants.
  - As disaster costs grow, understanding state spending is key.
- Mitigation matters: Policy solutions to reduce local flood risk.
- **Washington State Association of Counties**
  - Wahkiakum County hazard mitigation plan.
- **The William D. Ruckelshaus Center**
  - A road map to Washington's future: Final report, Volume 1.
  - A road map to Washington's future: Final report, Volume 2.
  - A road map to Washington's future: Final report, Volume 3.
  - A road map to Washington's future: Final report, Volume 4.
  - A road map to Washington's future: Final report, executive summary.
  - Washington state coast resilience assessment final report.
- **University of Washington, Department of Urban Design and Planning**
  - Thoughts concerning the possible Washington State Office of Resilience.
  - Thoughts funding a Washington State Office of Resilience.
- **U.S. Government Accountability Office**
  - Disaster resilience framework.
  - Climate change: Potential economic costs and opportunities to reduce federal fiscal exposure.
- **Verisk - AIR Worldwide**
  - Link to Verisk Analytics' website.
  - Link to Verisk's Insurance Services Office's (ISO) webpage.
  - Link to AIR Worldwide's website.
  - Link to AIR's Global Resilience Practice webpage.

- Modeling extreme event risk.
  - AIR wildfire model for the United States.
  - AIR earthquake model for the United States.
  - AIR inland flood model for the United States.
  - AIR winter storm model.
  - AIR severe thunderstorm model for the United States.
  - AIR probabilistic cyber risk.
  - Link to Verisk’s wildfire risk insight webpage.
  - Link to CRS Resources’ website.
  - AIR climate change impacts on extreme weather.
  - Link to ISO Mitigation’s website.
  - National building code assessment report.
  - Link to the National Institute of Standards and Technology’s (NIST) community resilience data workshop.
  - Link to Washington State Rating Bureau’s (WSRB) website.
- **Washington Association of Building Officials (WABO)**
    - Summary of disaster resiliency activities occurring in other states.
    - Summary of the types of activities an ongoing state resiliency program should engage in.
    - Summary of where an ongoing resilience program should be housed.
    - Summary of resiliency activities WABO is doing in Washington State.
    - Link to WABO’s website.
    - Link to San Francisco Department of Building Inspection’s Building Occupancy Resumption Program’s (BORP) guidelines for engineers.
- **Washington Association of Sewer and Water**
    - Link to US Senate Bill 2800, America’s Water Infrastructure Act of 2018.
- **Washington State Conservation Commission (WSCC)**
    - Natural resources recovery support function.
    - Responsibilities for Washington State Comprehensive Emergency Management Plan (CEMP) basic plan, June 2016; page 38-39.
    - WSCC fact sheet.

- **Washington State Military Department, Emergency Management Division (EMD)**
  - Summary of where an ongoing resiliency program should be housed.
  - Washington State enhanced hazard mitigation plan risk and vulnerability assessment.
  - Washington State enhanced hazard mitigation plan.
  - Summary of resiliency activities EMD is doing in Washington State.
  
- **Washington State Public Utility Districts**
  - Summary of disaster resilience activities Washington State Public Utility Districts is currently doing in Washington State.
  
- **Washington State Interagency Climate Adaption Network (ICAN)**
  - Consideration of climate change in the Disaster Resiliency work group recommendations.
  
- **Washington State Seismic Safety Committee**
  - Summary of the resilience activities a resiliency program should focus on.