Washington State Coast Resilience Assessment Final Report

Conducted by the
William D. Ruckelshaus Center

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In 2016, coastal entities in Grays Harbor County, in partnership with the office of U.S. Representative Derek Kilmer's Office, and the Washington State Department of Ecology contracted with the William D. Ruckelshaus Center to conduct an assessment that explores long-term resilience opportunities in response to growing concerns about the impact on coastal communities, infrastructure, and the natural environment from erosion, flooding, and landslides; the number and severity of storms; predictions about rising sea levels; and a potentially large earthquake and tsunami.

Through conducting 104 interviews with coastal tribes, coastal residents, elected officials, federal, tribal, state, county, and city government agency staff, researchers, scientists, engineers, NGOs, and other interested parties this assessment examines the dynamics, interests, challenges, and opportunities related to coastal resilience in Washington State. The assessment provides a mechanism for the experiences and viewpoints of the participants to inform the next generation of strategies for enhancing coast-wide resilience. The assessment begins to identify existing efforts so that new efforts build upon what is already established. It also identifies approaches, processes, structures, and resources needed to enhance and support coast-wide resilience efforts.

The Assessment Team is deeply grateful to the many individuals who gave their time and energy to be interviewed, and to otherwise inform this report.

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The Washington coast and coastal communities are at an extraordinary confluence of cultures, unique ecosystems, influences, and potent threats. The coast is home to several tribes, is a gateway to iconic natural treasures, and the people are stewards of distinctive ecosystems that support shellfish growing, fishing, cranberry growing, and timber production. The area, also, is at the epicenter of potentially catastrophic impacts from a Cascadia earthquake and tsunami and is at the frontline of impacts from extreme weather, waves, and ocean changes. These threats are compounded by limited and changing economic opportunities, and emerging issues such as sea level rise and ocean acidification.

All along the coast individuals, groups, communities and tribes are striving to sustain the environment and their option to live in places they love. Many participants in this assessment have attended years of meetings, forums, and discussions with the hope that there will be increased focus and action taken that improves the well-being of the communities, businesses, and the natural environment that provides both sustenance and awe. Increasing coast-wide resilience is not only important to coastal communities and their ability to thrive, but has ramifications for the economic and environmental health of the state and nation as a whole. The stories shared with the Assessment Team about what tribal and non-tribal communities are facing and the economic, cultural, environmental and historical importance of these stories for the rest of the state do not seem fully communicated. In addition, there are innovative and successful efforts to increase resilience along the coast that are important models and lessons for others throughout the coast, state, and nation. It would be beneficial to strengthen these efforts and provide opportunities to expand and deepen their impact.

The well-being of communities and the coastal natural environment are intimately linked; therefore, it is important to consider the intersection of economic prosperity, community health, ecology, infrastructure, and governance when considering how to improve coastal resilience. Addressing and improving the conditions for coastal resilience will require multi-disciplinary approaches, creativity, and nimbleness as new partnerships are formed, regulatory approaches are adapted, joint strategies are developed, and collaboration is increased among governments, researchers, local communities, and others. The regulatory environment often cannot keep pace with changing conditions and uncertainty; therefore, having the flexibility to adapt will be important to the success of local communities and businesses. The relative lack of resources on the coast will require new funding partnerships and opportunities for local revenue generation. While coastal communities have shown grit and self-reliance, increasing uncertainty poses a threat to lives, lands, and future livelihoods. New approaches to the growing challenges will be needed that connect the wisdom and experience of those living on the coast with the expertise of governments, nonprofits, and academics. Work will be required on multiple scales, from the international to the household level.

Addressing coast-wide resilience will also require attention and political will. Participants in this assessment emphasized the importance of working together to address issues especially given capacity constraints and the difficulty generating sufficient local revenue. Participants also emphasized concern that being rural and geographically isolated, the issues facing communities on the coast were either unknown or unlikely to be a high priority for state and federal resources, whether that be for emergency preparedness and response or for mitigation projects. The need for more unified advocacy among the communities was apparent, but there is also need to increase the connection to urban residents who may also love the coast, depend upon the resources that the coast provides, and who have an economic stake in coastal properties and businesses.

The issues that impact community and ecosystem resilience are complex and wide ranging. Participants in this assessment confirmed that place-based initiatives that can utilize local knowledge and experience and respond to specific local conditions are needed and have the best chance to address the social and environmental issues. At the same time, participants called for a coast-wide initiative and integration of efforts that can help to increase success through shared strategies and lessons, and increase capacity for technical assistance, grant writing, planning, research, and project development and implementation.

Defining Resilience

Depending on what kind of system resilience is applied to, it may be defined in different ways. One can think about resilience from an individual, community, organizational, and/or ecological perspective. Scientists are analyzing and continuing to evolve their knowledge of the attributes that make a species or entire ecosystem resilient. They are identifying ways resilience can be measured and achieved at different scales. This information can be applied to the preservation, management or restoration of nature and can assist with community resilience strategies that enhance environmental stewardship.

Community resilience has often been thought of in the context of emergency response and recovery from a major disaster, for example, an earthquake, flood, or extreme storm. Based on this context resilience has often been defined as bouncing back from adversity to the original state of being. As communities face significant social and environmental impacts and change, how community resilience is defined has expanded. Definitions of community resilience are increasingly focused on the capacity of a community to increase social bonds, learn from collective action, and to adapt to new conditions while improving and providing for their well-being. This includes the capacity of a community to evolve without losing its core function. While there are numerous definitions of resilience found in written materials, for the practical purpose of this assessment, the Assessment Team is generally defining community resilience as: "A resilient community is able to thrive in the present, adapt to challenges, and even transform as necessary to meet future threats or opportunities".

Recommendations and Key Leveraging Actions

The recommendations in this section are based on analysis of what was heard and learned from interviews, exploration of and experience with similar resilience efforts, and the Assessment Team's expertise in effective collaborative governance and organizational systems and structures.

Improving resilience is an ongoing process and will require adaptation to conditions that continually evolve over time. Participants in the assessment identified a wide range of needs, ideas, and suggestions for ways to strengthen coastal resilience. The Assessment Team looked for patterns and themes within their responses and considered what might be useful for helping to increase resilience. While this assessment was limited in scope, it does provide insight for next steps.

As part of the recommendations, the Assessment Team identified Key Leveraging Actions. These leveraging actions have the potential to meet multiple objectives, lead to significant and enduring improvements, and leverage greater impact for the relative amount of effort. Some of these leveraging actions were chosen because they begin to address core issues, such as life safety and the availability of habitable land. For example, rebuilding coastal schools that also provide evacuation facilities for tsunamis could protect generations of children and community members; or intensifying efforts to address erosion, wind and wave impacts on communities could contribute to creating the essential foundation for livability. The recommendations and key leveraging actions in this report are intended to improve the conditions for resilience on the coast and to stimulate the next generation of resilience work and discussion among entities involved in these efforts.

1. Establish A Coast-Wide Resilience Initiative To Enhance And Integrate Efforts

Key Leveraging Action: Create an integrated coast-wide effort to strengthen coastal resilience that is staffed by Washington Sea Grant, Washington State University Extension, Washington State Department of Ecology, and Washington State Emergency Management Division.

2. Support And Enhance Local Efforts To Strengthen Resilience

Key Leveraging Action: Through State funding, provide at least $50,000 each in additional funding to coastal tribes, Marine Resource Committees, and Conservation Districts to stimulate additional locally driven resilience efforts. As part of the funding mechanism, provide parameters and guidance so that the funding is utilized for resilience-related projects.

3. Enhance Well-Being And Consider New Approaches To Economic Development

Key Leveraging Action: Consider integrating approaches to economic development that are based on regenerative planning and development and informed by local cultural, social, ecological and political dynamics.

Key Leveraging Action: Undertake community food security assessments and develop food and health-related action plans and initiatives to address food security and access needs.

Key Leveraging Action: Convene a diverse group of interests to focus on insurance issues facing coastal property owners and to develop recommendations.

4. Support Improved Understanding And Application Of Resilience For Planning, Policy, And Strategy Development

Key Leveraging Action: Invest in activities that deepen understanding of resilience and create practical tools that allow for a consistent application of resilience principles.

5. Develop An Advocacy Strategy For The Coast

Key Leveraging Action: Develop narratives and design a campaign through video, print, social, and professional media outlets that communicate the compelling stories of coastal communities.

6. Increase Support For And Learn From Coastal Tribes' Resilience Efforts

Key Leveraging Action: Identify what is needed to support the implementation of relocation efforts, climate action plans, and hazard mitigation plans, and prioritize meeting those needs.

7. Increase Capacity For Emergency Preparedness, Planning, And Recovery Efforts

Key Leveraging Action: Increase funding for State and Local Emergency Management and increase state focus on coastal preparedness, mitigation, recovery, and resilience.

Key Leveraging Action: Utilize the work of Clallam County Emergency Management as a model for emergency preparedness planning for coastal counties and provide support for the enhancement and implementation of plans.

8. Improve And Invest In The Life Safety, Reliability, And Redundancy Of Critical Infrastructure

Key Leveraging Action: Expedite efforts to get coast-wide broadband, improved cell phone coverage, and satellite communications for emergency response. Convene the relevant public and private entities, including those who are currently working on this issue, to identify strategies and solutions to barriers.

Key Leveraging Action: Prioritize the development and implementation of funding mechanisms and plans to rebuild or retrofit coastal schools or buildings near schools as multi-use earthquake ready facilities that include tsunami evacuation safe havens.

Key Leveraging Action: Expedite the development of priorities and actions to address coastal erosion, and identify funding options and support existing collaborative efforts.

9. Increase Opportunities For Collaboration, Coordination, And Partnerships

Key Leveraging Action: Convene a coastal resilience funding task force. The task force could include tribal, federal, and state representatives, nonprofits, businesses, and philanthropic entities to explore creative options and partnerships for funding and coordinating investments.

Key Leveraging Action: Secure adequate funding for technical experts and programs to gather and analyze data. Develop multi-disciplinary technical assistance "advisory teams" that can be configured based on need to work directly with communities on specific issues.

Key Leveraging Action: Increase interdisciplinary and cross-sector collaboration and utilize existing efforts to share information about the work communities and researchers are undertaking.

10. Advance Coastal Protection And Restoration

Key Leveraging Action: Explore opportunities to increase flexibility of regulatory approaches and support voluntary and collaborative efforts.

Guiding Principles

During this assessment, the Assessment Team identified key principles that emerged from the interviews that could be used by decision-makers at all levels to help guide the development of coastal resilience efforts. The Assessment Team used these guiding principles to inform the recommendations provided in this report:

- Start with place: understand, honor, and support the unique ecology, culture, social dynamics, and history of each place, acknowledging that the coast is not homogenous.

- Supplement needs-based approaches with focus on community assets.

- Acknowledge, map, and leverage assets whenever possible.

- Support the agency and self-efficacy of coastal communities by building on locally-driven efforts, encouraging local innovation and connectivity, and maximizing the potential for local people to carry out and sustain resilience efforts.

- Recognize the time and resource constraints of small communities, local governments, and tribes.

- Prioritize actions that improve life safety and address basic needs.

- Use a systems approach when identifying, planning, designing, and evaluating efforts. This includes:

  - Using longer-term planning horizons;
  - Identifying interconnections;
  - Considering patterns, trends and changing conditions;
  - Challenging individual and group assumptions;
  - Not being bound by how things were approached in the past;
  - Breaking down silos and working across disciplinary and sectorial boundaries;
  - Addressing multiple objectives whenever possible; and
  - Taking into account the ripple effects of an effort.

- Design and, in some cases, require infrastructure projects to provide multiple benefits.

- Incorporate the support and diversification of local coastal economies as a key element in planning and project design.

- Increase opportunities for coordination of effort, learning, cross-fertilization, and trust building among all involved parties.

- Support and expand the work of existing groups instead of only creating new groups.

- Identify and implement modest "wins" to create momentum and build a sense of collective self-efficacy.

- Minimize bureaucracy and unnecessary hoops.

- Broaden engagement to include low-income and minority residents.

- Look for opportunities to address gaps in communication and coordination among tribal, federal, state, and local entities.