

# Navigating Coastal Squeeze: Identifying Needs and Priorities to Scale Up Estuarine Restoration in Puget Sound Workshop

*"For most of us, this isn't a job. It's the way we are. It's who we are."*  
-Will Stelle, Coastal Squeeze Workshop



Figure 1: View from Tulalip Tribes Administration Building

## Workshop Report for Washington Sea Grant



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## Report for Washington Sea Grant: Navigating Coastal Squeeze Workshop

### 1. Objectives & Participants:

The “Navigating Coastal Squeeze: Identifying Needs and Priorities to Scale Up Estuarine Restoration in Puget Sound Workshop”, held on December 12, 2016 brought together nearly 100 restoration practitioners and environmental leaders from the tribes, state and federal agencies, city and county government, as well as the academic and NGO communities. The Workshop was co-organized by the University of Washington School of Marine and Environmental Affairs (UW SMEA) under PI Dr. Patrick Christie (funded by Washington Sea Grant) and the Tulalip Tribes (funded by the Bureau of Indian Affairs).



Figure : From left: PI Dr. Patrick Christie, SMEA Student Dani Ziff, Sea Grant Project RA Haley Kennard at the Workshop

The objective of the workshop was to address the problem of “coastal squeeze” in the Puget Sound and identify priorities and needs to address it. The “coastal squeeze” refers to the fact that urban growth and rising seas are placing unprecedented pressure on coastal wetlands and deltas in the region. These ecosystems are vitally important for salmon and other forage fish as well as prime agricultural land, coveted real estate, and potential sites of future development. Recognizing the critical importance of resilience strategies that enfranchise (rather than alienate) people who depend on healthy lands and waters, the workshop sought to identify and highlight needs and priorities to enable the region to meet this challenge. It integrated Sea Grant-funded human dimensions research with sea level rise modelling and coastal climate change science, as well as lessons from participants’ experience to inform restoration and resilience work in Puget Sound. Due to the expertise of participants, the workshop prioritized small-group discussions, included time for Q&A, and

encouraged networking. Through this workshop, we hoped to convene a diverse group of coastal zone managers and policy-makers who may not otherwise communicate regularly, and to build the partnership between SMEA and the Tulalip Tribes through collaboration on this project.

This report will provide a summary of the different sessions of the workshop and its outputs, as well as the feedback we received. It will then discuss what we view as the key accomplishments of the workshop and ways in which it might have been improved.

### 2. Workshop Summary

#### a. *Workshop Summary: Welcome & Opening Plenary Session: A Call to Action*

We were honored to have Terry Williams, Commissioner of Fisheries and Natural Resources along with Patti Gobin, Environmental Affairs Representative, both from Tulalip Tribes Treaty Rights Office under the Department of Natural Resources welcome participants to the Tulalip Tribes Administration Meeting and to the workshop. Patti performed a traditional song of welcome and blessing. Terry welcomed the group and recounted the

story of the first salmon run (see appendix) and the connection of the Tulalip people to this place. He stressed the importance of restoration and of working collaboratively as well as the magnitude of the challenges that the Coastal Squeeze represents.



Figure 3: Terry Williams opens the Workshop

Paul Cereghino, Restoration Ecologist at the National Ocean and Atmospheric Administration (NOAA) Restoration Center in Seattle followed as the speaker for our opening plenary session. His presentation, focused on three themes: first “estuary seems a verb” highlighting dynamism and richness of coastal and estuary ecosystems, second “irreplaceable, known, unique” highlighting the limited zone within which these key ecosystems can exist and thus the importance of restoration work in an era of coastal squeeze, and finally “cultural challenge” highlighting the importance of recognizing tribal history and role in the Puget Sound environment as well as the roles of stakeholders like the agricultural community. He also stressed the need to act locally and encouraged participants to remember that “science is not a strategy” and to consider needs and priorities outside the realm of a traditional physical/biological science research agenda.

*b. Workshop Summary: Modeling Sea Level Rise and Climate Impacts on Estuarine Habitats: Implications for Restoration Planning*

The objective of this session was to present the biophysical science and modelling work to explain this piece of the coastal squeeze in the Puget Sound. The information about sea level rise and the impacts of climate change on salmon and rivers created a foundation for understanding the fundamental change that the region will experience in the coming years.

- I. Sam Georgian of the Marine Conservation Institute (MCI) presented **“Projections of Sea Level Rise and Associated Habitat Changes in the Snohomish Estuary.”** His presentation focused on evaluating sea level rise (SLR) risks and opportunities in the Snohomish Estuary using inundation modeling and Sea Level Rise Affecting Marshes Modelling (SLAMM) to map these habitat changes.
- II. Eric Grossman, of the United States Geological Survey (USGS) then presented **“Navigating the Coastal Squeeze”**, which discussed coastal processes and challenges, focusing on the impact pathways of runoff and sediment, development,

and changing coastal processes (other than sea level rise), as well as information needs. He also discussed the need for coordinated investment programs and integrated decision-making support that includes considerations like flood risk and community health.

- III. Josh Chamberlin of NOAA Fisheries Northwest Fisheries Science Center (NWFSC) presented **“Fish Use and Habitat Conditions in the Snohomish River Estuary.”** Because salmon recovery concerns are often drive restoration projects in the Puget Sound, we thought it important that the impacts of the coastal squeeze on salmon habitat and population be discussed. This presentation focused on the effects of changing habitat, hydrology, and fish use on salmon health.



Figure 4: Eric Grossman, USGS, presents

Overall, presenters expressed the need to better understand the biophysical drivers and effects of the coastal squeeze and think about how we assess them, as well as the need to think carefully about resilience amidst change and to develop a cohesive and coordinated strategy.

*c. Workshop Summary: Lessons Learned from Tribally Lead Collaborative Restoration Projects: Case Studies of Nisqually and Qwuloolt*

The objectives of this session were to communicate to participants about the human dimensions of the coastal squeeze, how the coastal squeeze intensifies the complexity a challenges of restoration in Puget Sound, and provide concrete examples of how social science can inform and improve restoration work.

- I. Haley Kennard, a graduate student in the UW SMEA program presented research conducted through the Washington Sea Grant-funded project in a talk entitled **“Understanding Tribal Involvement in Large-Scale Restoration in Puget Sound: Human Dimensions of Coastal Squeeze.”** The presentation discussed the outcomes of interviews conducted with tribal and state and federal agency

representatives, focusing on policy and process challenges as well as themes like collaboration, leadership and commitment, partnerships, and human dimensions factors involved in selecting restoration sites.

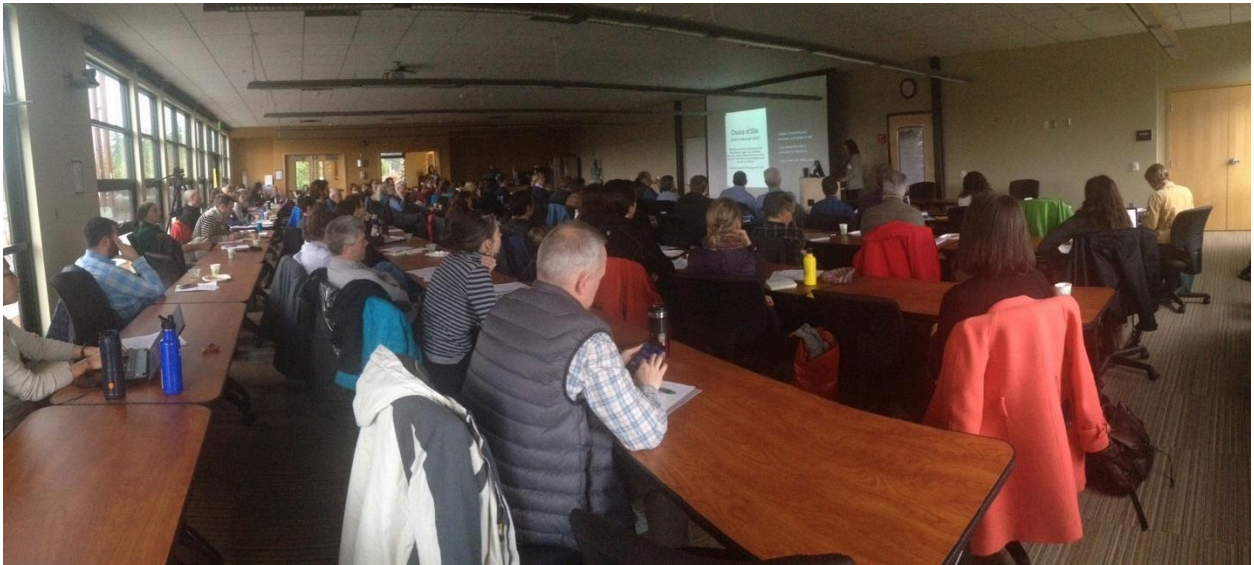


Figure 5: UW SMEA Student Haley Kennard presents results of WA Sea Grant-funded human dimensions research to a full room

- II. Josh Meidav, Conservation Science Program Manager at the Tulalip Tribes, then presented **“Understanding the Qwuloolt Estuary Project in the Context of the Coastal Squeeze.”** This case study focused on the social and ecological challenges the Qwuloolt Estuary project faced and presented a series of “lessons learned” including the importance of collaborative planning, institutional coordination, leadership, shared understanding and vision, a dedicated team, and long-term funding.
- III. Eric Grossman (USGS) presented a case study of the Nisqually Delta Restoration Project, a project with which he was heavily involved. His presentation **“Restoring Sediment Supply to Sustain Delta Marsh: Nisqually Delta”** discussed the changes in sediment patterns that the restoration process causes and the associated challenges and opportunities for restoration and coastal resilience. [Note: David Troutt of the Nisqually Tribe was initially going to present this case study, but due to a personal emergency was unable to attend. Eric graciously filled in on short notice.]

In summary, the presenters highlighted the importance of considering restoration as a social-ecological process within a complex system. They expressed a need to consider human dimensions elements within restoration work and the need for long-term and collaborative vision and planning. Questions from participants in this section ranged from how specific challenges were overcome to how partner institutions (such as the Army Corps) evolved throughout the course of restoration projects.

*d. Workshop Summary: Federal Perspectives on Navigating the Coastal Squeeze in Puget Sound*

This federal perspectives session was an opportunity for participants to learn about how the federal agencies view their role in addressing the challenges of coastal squeeze, and to get feedback on their concerns about what the new administration means for restoration and resilience work. Will Stelle of NOAA Fisheries (former Northwest Regional Director) and Rich Ferrero, Northwest Regional Director of USGS took questions from participants after speaking briefly. Their panel highlighted the following needs:

- To communicate science broadly (and develop the tools to do so effectively)
- To use the excellent science of this region
- To act locally and not wait for Washington D.C.
- To own the challenges (environmental, political, funding, etc.) and face them head on
- To manage the framing and the “drama” of climate change issues intentionally and choose labels and framing carefully



Figure : Rich Ferrero of USGS (left) and Will Stelle of NOAA (right) provide a federal perspective

Questions included the role of scientists in addressing climate change, the pace with which restoration and resilience work needs to occur, as well as how can institutions change in order to work more effectively on the ground at a local level.

Note: Roylene Rides-at-the-Door, State Conservationist for the Washington Natural Resources Conservation Service was unable to attend due to a personal emergency.

*e. Workshop Summary: Small Group Discussions on Leadership & Trust, Institutional Coordination, and Collaborative Approaches to Planning*

For this portion of the workshop, participants were randomly divided into three groups. Three teams of two workshop organizers each (a facilitator/presenter including Patrick Christie, Haley Kennard and Brad Warren and note-takers including Abby Hook, Morgan Ruff and Josh Meidav) circulated between tables at half-hour increments. Each team presented on a single topic: Leadership and Trust, Institutional Coordination, and Collaborative Approaches to Planning, so that each group of participants had one half-hour session with each topic. The objective of this session was to encourage participants to think about the challenges of and potential solutions to the coastal squeeze from a new and integrated perspective and to identify needs and priorities for addressing obstacles. This portion of the workshop drew heavily on the Sea Grant-funded human dimensions research, which identified these themes as essential to successful restoration projects in an era of intensifying coastal squeeze. A summary of needs and priorities is below:

<b>Small Group Discussion Theme:</b>	<b>Key Priorities Identified:</b>
<b>Leadership &amp; Trust</b>	<ul style="list-style-type: none"> <li>• Need leaders who are passionate advocates, who listen and build relationships, who are courageous and willing to struggle, patient, accountable, and committed to community and place to be successful</li> <li>• Invest in mentorship of next generation of leadership and foster environments of risk-taking and leadership opportunities</li> <li>• Development of shared vision and identity</li> <li>• Develop meaningful long-term interactions with stakeholders that acknowledge past failures and allow for communication and questions - Listen, understand, and integrate needs and priorities of other stakeholder groups</li> <li>• Embrace flexibility and creativity</li> <li>• Tell stories of and celebrate successes – shared meals identified as particularly good tools for relationship building</li> </ul>
<b>Institutional Coordination</b>	<ul style="list-style-type: none"> <li>• Build a shared plan and coordinate with other planning processes</li> <li>• Collaborate and specialize to pool resources and knowledge base using individual agency strengths</li> <li>• Coordinate at larger spatial and governance scales to be more effective at smaller scale</li> <li>• Increase public-private partnerships</li> <li>• Reduce “silo-ing”, break out of your box, reach out to stakeholders that don’t share your views (esp. agriculture)</li> <li>• Develop alliances</li> </ul>
<b>Collaborative Approaches to Planning</b>	<ul style="list-style-type: none"> <li>• Develop human collaborative planning processes that include objectives of all major stakeholders and that encourage collaboration across levels of government</li> <li>• Develop or identify non-government local brokering group to interact with diverse stakeholder groups</li> <li>• Better understand opportunities for investment in collaborative planning in Puget Sound and develop non-competitive funding processes</li> <li>• Need for increased transparency and clarity around existing collaboration</li> <li>• Focus on relationship-building and dialogue before action</li> </ul>

f. *Workshop Summary: Distillation and Next Steps*

We began to wrap up the workshop by asking a select group of participants (Brad Warren – Global Ocean Health, Patrick Christie – UW SMEA, Morgan Ruff – Tulalip Tribes, Erik Stockdale – Snohomish County, Tish Conway-Cranos – NWFSC, and Laura Blackmore – Puget Sound Partnership) to share their key take-aways from the day. Common themes included communicating and story-telling with stakeholders, the public, and institutional partners; improving how we work together and understand each other in the Puget Sound – especially with partners we do not normally work with or have different views from;

aligning processes, planning, and funding opportunities; and continuing to bring passion and enthusiasm to work that is by nature long-term and complex.

The facilitated discussion that followed echoed these priorities and also commented on the need to build capacity to work on the challenges of the coastal squeeze at the local/community level, the importance of inter-agency teams, and the need to accelerate the pace of both learning and action in restoration work. Some participants expressed interest in a peer-to-peer learning network for restoration practitioners.

It was agreed that Brad Warren and a drafting team would put together a statement of key priorities, action items, and research needs in the coming months (publication forthcoming). Patrick Christie also re-iterated that we are writing a paper on spatial conservation and management in the Puget Sound, which this workshop will inform (publication forthcoming).

Finally, Patti Gobin and Terry Williams returned to close the workshop. We were honored that they chose the opportunity of this meeting to present Will Stelle, a long-time partner, collaborator, and environmental advocate, with a Tulalip blanket. This significant gift honors a lifetime of work and wisdom. Will thanked Terry and Patti saying “For most of us, this isn’t a job. It’s the way we are. It’s who we are.” He encouraged everyone to embrace the enduring and rewarding challenges of environmental work and their own individual capacity to contribute.



Figure : The "blanketing" of Will Stelle by Patti Gobin (right) and Terry Williams (left)

### 3. Feedback Received

In order to evaluate the successfulness of our workshop, we sent out a survey to participants. We received 21 responses. When asked to rate the usefulness of the workshop from 1 star (not useful) to 5 star (very useful), 71% of respondents rated the workshop at 4 stars or higher, and none gave the workshop a 1-star (not useful) rating. We also asked respondents to comment on the appropriateness of the mix of session-types. 22% indicated that they would not change anything about the agenda, while 27% and 22% respectively indicated that they would have liked to see more biophysical science and more human

dimensions research presented. This probably reflects the role of participants rather more than needed adjustments to the agenda and perhaps indicates that there should simply be *more* of this type of workshop and information in general. Some respondents indicated that they would have liked to see more time spent on networking and self-organization for future action, which could certainly be a next step for this type of meeting.



*Figure 8: UW note-takers took a detailed record of the workshop*

We also asked respondents to list the three key “take-aways” from this meeting. Some themes included the need for:

- increased engagement and relationship-building with private landowners
- communication and collaboration across silos
- thinking locally for planning, funding, and action
- development of a shared and comprehensive plan for restoration
- creativity and coordination around funding sources
- long-term thinking as well as significantly increasing the speed and scale of restoration.

Respondents also expressed a need for concrete follow-up including continued communication and learning among participants, active engagement with landowners and other stakeholders, more workshops like this one, development of shared strategies and goals, and continued analysis of existing and future restoration projects.

When asked to rate how likely they were to attend another workshop like this one on a scale of 1-5 (5 being very likely), a full 76% of respondents answered with a 4 or higher. There is clearly high demand for this type of integrated and multi-disciplinary workshop. We asked what themes or topics another such workshop should cover. Responses included:

- Discussion of impacts on private landowners and infrastructure
- Best practices for restoration project selection, design, and streamlined implementation
- A focus on organization for action and implementing change

- An in-depth extension of this workshop focused on planning for coastal squeeze and empowering local communities
- Economics and funding of restoration
- Communicating about climate change and restoration to communities and stakeholders

#### **4. Accomplishments**

Our objective in this workshop was to bring together a dynamic group of people to identify needs and priorities to improve restoration and resilience work in Puget Sound. We were hoping to engage participants in an integrated discussion of the social-ecological challenges that restoration faces in an era of coastal squeeze. As evidenced by the preliminary needs and priorities identified in our small group discussions, as well as via the post-workshop survey, we have succeeded in providing a forum for collaborative and integrated thinking about this set of challenges. We look forward to making these priorities and recommendations publicly available via the statement that Co-PI Brad Warren is drafting along with a team of workshop participants. Our success in this workshop is validated by the large amount of positive feedback we received and in the enthusiasm for more similar workshops in the future.



*Figure 9: Qwuloolt Estuary, from a site visit while conducting WA Sea Grant-funded research*

We also feel that this workshop succeeded in convening diverse group of coastal restoration and resilience practitioners and decision-makers. Participants indicated that one of the important successes of this workshop was that it gave them the opportunity to connect with people outside of their customary network of colleagues. Similarly, we succeeded in building a relationship between the Tulalip Tribes and the University of Washington. Namely, Patrick Christie and Francesca Hillery (of Tulalip) are collaborating on teaching a class during Winter Quarter, 2017. The class focuses on communicating about the tribe's

environmental and restoration activities – a priority identified both by workshop participants and Francesca.

## **5. Improvements & Lessons Learned**

The research team was highly satisfied with the workshop and improvements over the process and execution are mainly administrative. Close to the workshop date we hired Facilitator Abby Hook. Abby was an excellent addition to the team and helped us sort through some last-minute differences in opinion around workshop details in addition to providing event and agenda coordination work. The workshop organizers all agreed that hiring a workshop facilitator earlier would have allowed the planning process to unfold more smoothly. Along those lines, due to a variety of reasons, the workshop date was set later than we initially intended and therefore the planning process was highly condensed before the workshop. The organizing team would have benefitted from a longer timeline overall. Communication with workshop attendees was largely successful, however we discovered late in the planning process that, due to email blockers in a number of state agencies (particularly the Puget Sound Partnership) for gmail accounts, our invitations had not reached all of their intended recipients. If we were to hold a similar workshop again, we would either create and use a shared UW email address or, even better, send agency invitations from known contacts. Luckily, we realized this issue in time and were able to reach out individually to contacts in these agencies and ensure that they were represented.

In terms of day-of improvements, we had some trouble re-organizing the room adequately for small-group discussions. Some additional time to practice or more direction for participants would have been helpful. While a larger or multi-room space might have solved this issue, we were fortunate to have the beautiful space at the Tulalip Administration Building through our partnership with the Tribe. Additionally, we had initially planned on having more time for plenary discussion of next steps towards the end of the workshop. Our facilitator decided to cut a portion of this based on low energy towards the end of the day. Some comments we received indicated that additional discussion here would have been welcome. Perhaps starting a little later or incorporating additional breaks into the agenda would have solved both the low-energy and desire for additional discussion.

## **6. Conclusions & Additional Resources**

Overall the reaction from participants to this meeting was positive in that it brought together people who do not regularly interact and addressed the challenges of the coastal squeeze in an interesting and holistic way. The research team was also overall very satisfied. A paper on the coastal squeeze, based on the entirety of the research of this grant (from MPA research through Coastal Squeeze Workshop) was submitted for publication at the journal of Ocean and Coastal Management. Co-PI Brad Warren is drafting a white paper on the needs, priorities, and outcomes of the meeting. The collaborative workshop team has continued to discuss future research and partnership opportunities based on the findings of the workshop.

## **7. Acknowledgements:**

We would like to specifically and gratefully acknowledge our partners at the Tulalip Tribes, Morgan Ruff, Josh Meidav, and Terry Williams, who were instrumental in the planning and execution of this workshop. We are also extremely grateful to Washington Sea Grant and to the Bureau of Indian Affairs for the generous funding which made this important gathering possible. Finally, we would like to thank our workshop presenters and those individuals who were interviewed for the Coastal Squeeze Project.

## **8. Attachments:**

Please find the following additional materials attached:

1. Workshop Invitation & Description
2. Workshop Agenda
3. Link to Speaker Presentations
4. Handouts used for Small Group Discussion Sessions