

# Initial Phase: Hood Canal Nearshore Assessment and Prioritization Process

## Summary Report



The Hood Canal Coordinating Council partnered with Kitsap County to initiate the nearshore assessment and prioritization process for the Hood Canal nearshore area. This project has been funded wholly by the Hood Canal Coordinating Council.

July 2015

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## Introduction

The Hood Canal Nearshore Assessment and Prioritization process is a collaborative effort to convene experts and interested parties to identify and prioritize nearshore habitat restoration and protection actions in Hood Canal. The Hood Canal Coordinating Council (HCCC) partnered with Kitsap County to develop this approach and coordinate the tasks and activities needed for the initial phase. The HCCC and Kitsap County convened a workgroup comprised of nearshore practitioners and representatives from Counties, Tribes, federal and state agencies, and non-government organizations within Hood Canal. This summary report describes the workgroup process, provides a list of available and relevant data submitted to date, a list of work group members and invited parties, and recommendations for next steps.

Nearshore areas within Hood Canal and the Eastern Strait of Juan de Fuca support multiple species and stocks of salmon. The nearshore and estuaries in particular, have been termed the life support system for juvenile salmon feeding, rearing, and migrating (Healey, 1982). There is a need for a comprehensive strategy that identifies and prioritizes nearshore habitat restoration and protection actions in Hood Canal and the Eastern Strait of Juan de Fuca. This action was also identified as the third top priority for Hood Canal in 2014 Preliminary Results for Hood Canal – Eastern Strait Salmon Restoration-Protection Action Ranking (Hood Canal Coordinating Council, 2014).

### Project Area

The nearshore project area aligns with the Hood Canal and Eastern Strait of Juan de Fuca Summer Chum Salmon Recovery Planning area which encompasses portions of Jefferson, Mason, and Kitsap Counties and the eastern portion of Clallam County. Tribal lands within the project area include the Skokomish, Jamestown S’Klallam, and Port Gamble S’Klallam Tribes.

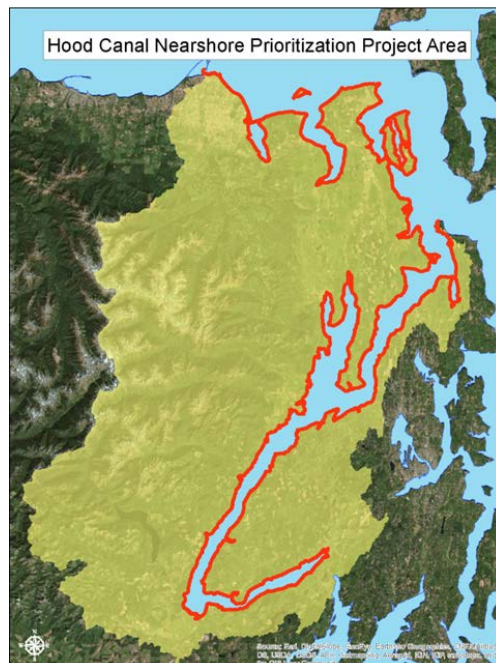


Figure 1 Hood Canal Nearshore Project Area – Highlighted in Red.

## The Workgroup Process

In partnership with the HCCC, Kitsap County convened a workgroup of nearshore practitioners with knowledge and experience in Hood Canal, and other interested parties, to guide the initial phase of this process. Representatives from Counties, Tribes, state and federal agencies, and non-government entities within Hood Canal were invited to the meetings. A WebEx meeting option was available for convenience. Approximately twelve (12) individuals representing eleven (11) different jurisdictions and entities participated in person and on WebEx. Other invitees expressed their interest in the project and requested to remain informed. Detailed meeting notes of the meetings are provided in Appendix A. An overview of the workgroup meetings is provided in Table 1, below.

**Table 1 Workgroup Meeting Summary**

Meeting Date	Main Topics	Key Outcomes
June 2, 2015	<p>Values and preferred outcomes of this project</p> <p>Nearshore prioritization work in Hood Canal</p> <p>Ongoing West Sound Nearshore Integration and Synthesis Project</p> <p>Available nearshore datasets in Hood Canal</p> <p>Review list of workgroup members and identify missing representatives</p>	<p>Workgroup provided specific outcomes expected from this project. Members expressed the value of this effort to their jurisdictions and entities.</p> <p>There is a need for a comprehensive strategy that identifies and prioritizes nearshore habitat restoration and protection actions in Hood Canal.</p> <p>The West Sound Lead Entity has an ongoing nearshore project. Workgroup members expressed how the Hood Canal project can build off the synergy of the West Sound project.</p> <p>Call for data: members provided a list of known and desired nearshore datasets valuable for this project.</p> <p>Workgroup identified key nearshore practitioners valuable to this project.</p>
June 23, 2015	<p>Review list of workgroup members</p> <p>Demonstrate the Puget Sound Partnership's (PSP) Integrated Nearshore Platform</p> <p>Suggestions to refine list of available nearshore datasets</p> <p>Recommendations for next steps</p>	<p>Workgroup identified representatives missing from the list.</p> <p>An interactive mapping platform is an important tool for planners and may be an output of this project. Selecting and refining datasets used to build the platform needs to be done first.</p> <p>Strong suggestions to create a subgroup to screen the datasets, identify data gaps, and refine the list of datasets.</p> <p>Workgroup provided recommendations for the next phase of this project. (Specific recommendations are provided in the next section.)</p>

## Workgroup Recommendations

The workgroup provided recommendations in relation to the refinement and storage of available datasets, frequency of workgroup meetings, and next steps for this project. The recommended actions are listed below.

- Propose that this project become a Near Term Action for the Hood Canal Local Integrating Organization.
- Convene a one-day workshop to share information/presentations on Best Available Science (BAS).
- Create a workplan identifying project tasks, milestones, and timeline clearly defining the next steps for this project.
- Integrate climate change into nearshore planning.
- Find a “user friendly” storage site for all datasets and resources.
- Work closely with Hood Canal Habitat Work Schedule administrators to effectively utilize the project database to produce a Four Year Workplan (a Lead Entity project list provided to the Puget Sound Partnership) that incorporates nearshore actions identified in this effort.
- Create a subgroup to screen datasets, identify data gaps, and refine list of available datasets.
- Propose that the workgroup convenes on a monthly basis.

## Works Cited

Healey, M. (1982). *Juvenile Pacific salmon in estuaries: the life support system*. . New York: Academic Press.

Hood Canal Coordinating Council. (2014). *Hood Canal-Eastern Strait Salmon Restoration-Protection Action Ranking*.

## Appendix A – Workgroup Meeting Notes

### First Workgroup Meeting Summary

June 02, 2015  
 9:30 am – 12:00 pm  
 Hood Canal Coordinating Council Office  
 17791 Fjord DR NE, Suite 124  
 Poulsbo, WA 98370

Name	Affiliation
Luke Cherney	Hood Canal Coordinating Council
Kathy Peters	Kitsap County
Alicia Olivas	Hood Canal Coordinating Council
Paul McCollum	Port Gamble S'Klallam Tribe
Micah Wait*	Wild Fish Conservancy
Tami Pokorny*	Jefferson County
Dave Nash*	Kitsap County
Kathlene Barnhart*	Kitsap County
Cheryl Baumann*	North Olympic Peninsula Lead Entity
Peter Bahls	Northwest Watershed Institute
Thom Johnson*	Point No Point Treaty Council
Scott Pascoe	Great Peninsula Conservancy
Kirvie Mesebeluu-Yobech	Kitsap County

\*Attended the meeting via WebEx.

The Hood Canal Coordinating Council is embarking on a process designed to develop a comprehensive strategy that identifies and prioritizes nearshore habitat restoration and protection actions in Hood Canal and the Eastern Strait of Juan de Fuca. HCCC is seeking participants to identify local needs, values and knowledge that need to be addressed in the inventory and prioritization process.

HCCC has partnered with Kitsap County, to develop this approach and coordinate the tasks and activities needed. Kitsap County convened this meeting and prepared this meeting summary. Kitsap County and the HCCC is initiating this work and want to hear the needs of the salmon recovery practitioners in Hood Canal to make this a comprehensive effort. The list of suggested participants and nearshore data for Hood Canal nearshore is attached to this summary.

#### **Introductions – what outcomes would you and your organization like to get out of this project?**

Round table introductions of all meeting attendees, in person and on WebEx

- **Paul McCollum:** Port Gamble S'Klallam Tribe would use this effort to initiate access to the nearshore data collected by the Navy in the Bangor area; the Tribe has conducted acoustic studies in Hood Canal to monitor out-migrating juvenile salmonids and would like to work with

Biosonics in Seattle to set up fixed acoustic arrays to expand this effort; they would also want to coordinate with the Salish Sea Marine Survival project. Other ideas include: Salmonid prey information could be gathered by acquiring and analyzing stomach contents (taken voluntarily from anglers); initiate insect sampling in nearshore riparian areas; study outmigration of salmonids by tracking them along the shoreline from kayaks with polarized glasses.

- **Scott Pascoe:** Great Peninsula Conservancy (GPC) is interested in a landscape analysis to identify ecological integrities of critical contributing basins and drift cells (similar to the Squaxin Island nearshore tool); identify areas of high conversion risk to recognize critical protection areas at a drift cell or management unit scale; a synthesis of studies and assessments in Hood Canal (such as Kitsap Nearshore and North Belfair assessments) to inform how projects may be prioritized in Hood Canal; use Steve Todd's historical analysis (PNPTC).
- **Micah Wait:** the Wild Fish Conservancy (WFC) completed a pilot project to investigate juvenile chum and fish use of nearshore areas in Hood Canal. WFC has applied for funding through the HCCC Lead Entity to expand that work. If they are funded, they look forward to open communication with practitioners and partners applying this information when implementing nearshore prioritization actions.
- **Luke Cherney:** in 2011, HCCC funded a project to investigate fish use in the nearshore area of Hood Canal. Keeping an open communication with scientists collecting fish use data in the nearshore and practitioners tasked to synthesize these data is important. Synthesizing the various scientific studies and research of the nearshore is an important next step to know where we are and what we know about summer chum and its use of the nearshore in Hood Canal.
- **Tami Pokorny:** interested in what others have to say and keep up to date with the process.
- **Cheryl Baumann:** nearshore work has been completed in the Eastern Strait of Juan de Fuca and the Jamestown S'Klallam Tribe is conducting nearshore and drift cell assessments in Sequim Bay. Both efforts would produce important data for the Hood Canal nearshore project.
- **Kathlene Barnhart:** to be able to identify nearshore priorities in Hood Canal so that the Lead Entity can put forward priority projects that align with a strategy and having a tool that recognizes where projects fit in priority wise.
- **Dave Nash:** hope to see a list of feasible projects that we can start working on.
- **Peter Bahls:** here to learn what is going on with nearshore prioritization. Primary interest is in Dabob Bay, which has never been a priority for SRFB; however, from a landscape perspective, should be a priority for nearshore. The Northwest Watershed Institute has funding to conduct nearshore assessment in Dabob Bay.
- **Thom Johnson:** joined the WebEx at end of the meeting. Reminded the group about the Puget Sound Partnership's Integrated Nearshore Priorities proof of concept report. Would like to see an interim project prioritization method. Stressed the point that climate change should be addressed in this project.

### **Nearshore prioritization work in Hood Canal**

- There is a need for a comprehensive strategy that identifies and prioritizes nearshore habitat restoration and protection actions in Hood Canal.
- The Puget Sound Chinook Recovery Plan written in 2005 and approved by NOAA in 2007 has a Nearshore Chapter that Puget Sound Partnership chose not to include in the Monitoring and Adaptive Management (M&AM) Framework. The Hood Canal lead entity also includes the Mid-Hood Canal Chapter and the Skokomish Chapter. The M&AM work done in Hood Canal for the two chapters recognized the need for alignment of nearshore indicators and priority geographic areas. Development and Prioritization of nearshore strategies and actions was also identified as a highly ranked regional action for funding in 2014 by the HCCC Board.
- Where is Hood Canal with prioritizing nearshore projects?
  - This meeting and products from this short term project will jump start the process for HCCC to assess and prioritize nearshore actions. There are numerous studies and assessments about the nearshore habitat and its importance; however, these data are not synthesized and integrated into a useful tool.
- What is Kitsap County's role in the Hood Canal nearshore prioritization project?
  - Hood Canal Coordinating Council approached member counties and Tribes to initiate the nearshore prioritization process in Hood Canal. Kitsap agreed to take on and build off the synergy of a similar ongoing project in the West Sound Watersheds, the West Sound Nearshore Integration and Synthesis, which aims to identify and prioritize nearshore actions.
  - Kitsap is initiating the Hood Canal nearshore prioritization process by inviting representatives from member jurisdictions, Tribes, and partners to identify local needs, values, and knowledge that need to be addressed in the nearshore inventory and prioritization process. Kitsap County will begin compilation of available data and produce a report with recommendations, vetted by the group, for the HCCC regarding next steps in the nearshore assessment and prioritization process.

### **Discuss on-going West Sound Nearshore and Integration and Synthesis Project and how it can inform similar work in Hood Canal**

- **Project overview:** The West Sound Nearshore Integration and Synthesis project began as a Near Term Action for the West Central Local Integrating Organization (LIO). The project was proposed in the 2013 Salmon Recovery Funding Board (SRFB) grant round and vetted and cleared by the Technical Review Panel as an early action project for the 2014 grant round. Total project cost is approximately \$180K. Project objectives include the following:
  - (1) Identify and inventory potential restoration and protection actions in the nearshore and integrate these actions into one database using existing data and information and
  - (2) Examine all the identified nearshore actions and to prioritize these actions using a consistent, geo-referenced and transparent science-based framework.



An advisory group comprised of representatives and project partners within the geographical scope of the project area was formed to ensure that the prioritization method developed is the most suitable approach for the region. The advisory group concluded that a consultant should be contracted to do the technical piece of the prioritization framework.

- How is data identified and gathered for the West Sound Nearshore Integration and Synthesis project?
  - Began with projects identified in the Shoreline Master Programs (SMP) Environmental Restoration Chapters of cities and counties within the project area
  - Pull together actions identified in other nearshore assessments and studies completed within the project area
  - Looked at difference sources of prioritization methodologies around Puget Sound
- Recommendation to differentiate the phases of the Hood Canal nearshore assessment and prioritization process.
  - Phase I: Integration and Synthesis of available data
  - Phase II: Prioritization framework
- Output of Kitsap County's scope of work for this initial step in the project:
  - Form an Advisory Group with representatives from all counties, Tribes, cities, and project partners
  - Begin compilation of available nearshore data in Hood Canal
  - Produce a report with recommended actions for HCCC

#### **What are known and/or desired nearshore datasets in Hood Canal?**

List of available nearshore data is attached

- Comments/Recommendations for available data:
  - Have a one day symposium where available nearshore data and information is presented
  - Synthesize available scientific literature about nearshore areas with nearshore data and research

#### **Who is missing on the list?**

Updated participant list is attached to the meeting summary below

#### **Next Steps**

- 1) Begin compilation of available and/or desired nearshore datasets in Hood Canal.
- 2) Produce recommendations for HCCC to be reviewed by participating jurisdictions and entities at next meeting, June 23, 2015.

## Second Workgroup Meeting Summary

June 23, 2015

9:30 am – 12:00 pm

Hood Canal Coordinating Council Office

17791 Fjord DR NE, Suite 124

Poulsbo, WA 98370

Name	Affiliation
Luke Cherney	Hood Canal Coordinating Council
Lynn Wall	Naval Base Kitsap
Scott Pascoe	Great Peninsula Conservancy
Kathlene Barnhart	Kitsap County
Thom H. Johnson	Point No Point Treaty Council
Scott Brewer	Hood Canal Coordinating Council
Alicia Olivas	Hood Canal Coordinating Council
Paul McCollum	Port Gamble S'Klallam Tribe
Matt Kowalski	Skokomish Tribe
Kathy Peters	Kitsap County
Kirvie Mesebeluu-Yobech	Kitsap County
Aaron Brooks *	Jamestown S'Klallam
Cheryl Baumann*	North Olympic Peninsula Lead Entity for Salmon
Micah Wait*	Wild Fish Conservancy
Tami Pokorny*	Jefferson County

\*Attended meeting via WebEx.

The Hood Canal Coordinating Council (HCCC) is embarking on a process designed to develop a comprehensive strategy that identifies and prioritizes nearshore habitat restoration and protection actions in Hood Canal and the Eastern Strait of Juan de Fuca. The HCCC is seeking participants to identify local needs, values and knowledge that need to be addressed in the inventory and prioritization process.

The HCCC has partnered with Kitsap County, to develop this approach and coordinate the tasks and activities needed. Kitsap County convened this second meeting of the initial phase of the nearshore assessment and prioritization process to gather recommendations regarding the next steps of this project. During this meeting, participants reviewed the list of available datasets as well as the list of nearshore practitioners invited to the group and provided suggestions captured in the meeting summary.

### **Introductions**

- Round table introductions of all meeting attendees, in person and on WebEx
- Review agenda; no changes
- Review of June 02 meeting summary; additional comments/edits to be sent to Kirvie

**Review participants and interested parties list. Who is missing from the participants list?**

- Curtis Tanner, US Fish and Wildlife Service
- Steve Todd, Suquamish Tribe (Advisory Group member for West Sound Nearshore Integration and Synthesis Project)
  
- Navy nearshore assessment tool
  - Interagency input
  - High level scientific panel
  - Look into literature cited in the nearshore tool guidance manual for datasets
  - Review advisory group meetings notes

**Demonstration of the Puget Sound Partnership's Integrated Nearshore Platform**

Kirvie Mesebeluu-Yobech gave a brief overview of the Integrated Nearshore Priorities web map tool.

The Integrated Nearshore Priorities project is an effort led by Puget Sound Partnership (PSP) to bring together results and outputs from existing assessments and data to inform ecosystem recovery and management priorities. With this project, a web map GIS tool was developed primarily for planners to use. The primary dataset for the platform is the Puget Sound Nearshore Ecosystem Restoration Project (PSNERP) Beach Strategies for Protect, Protect High, Restore, and Restore High. The data are organized by shoreline process units (SPUs). There are a total of 458 SPUs in the platform. Enhance and Enhance High Beach Strategies are not included in this platform. This nearshore tool has six (6) filters available: 1) Sand Lance spawning verified, 2) Surf Smelt spawning verified, 3) Armoring, 4) Conservation value of watershed characterization, marine segments, 5) Parcel density, and 6) Land coverage change.

**Discussion**

1. Could other datasets (i.e. specific nearshore projects) be added to the nearshore web tool?
  - Yes. Other datasets could be added to the tool; however, it is recommended from a Geographic Information System (GIS) perspective to retrieve the raw data used to create this tool and develop a platform specific to the geographic area of interest and include specific project data into the tool.
2. PSNERP data may be outdated. Is it a risk to use PSNERP data?
3. Need to focus on position of armoring on shoreline in regards to ordinary high water level.
4. Sound IQ (Island County web based interactive map) has armoring data for Hood Canal. Armoring data includes the type of armor and position on shoreline. This information may have been taken from the PSNERP report, which includes the entire Hood Canal nearshore area.

**Review list of nearshore datasets submitted to date, take suggestions for refining the list**

- This project is an assessment of the assessments. The workgroup is looking at all available datasets; more work will be done to refine datasets to be used.
- How does the PSNERP data compare to the data collected by Wild Fish Conservancy (WFC) during its pilot study of salmonid utilization of Hood Canal nearshore?

- WFC: Have not received funding to move forward with second assessment. Will start collecting data in December but will focus on salmonids.
- There is good feeder bluff information in Department of Ecology's Coastal Atlas mapping tool. (Add DOE Coastal Atlas to datasets)
- There is enough information today about salmonids in the nearshore area.
- Suggestion to consider data that has been field tested and verified, look critically at data and modeling robustness.
- Use bibliography of the Navy nearshore tool report for more information about available literature.
- University of Washington
- The datasets should be hosted in one server that is easily accessed by all practitioners. Who should house or host all the data? Online drives that host a variety of datasets available to the public include:
  - Northwest Indian Fisheries Commission (NWIFC) – Nearshore Data Exchange Interactive Map
  - University of Washington's Encyclopedia of Puget Sound
  - Salish Sea Wiki
- Suggestions to hire a graduate student to screen the datasets (cost may be too high)

**Recommendation:** Create a subgroup to screen the datasets, identify data gaps, and refine list of available datasets

### **Report to the Hood Canal Coordinating Council**

Recommendations and next steps for this project

- Propose this project become a Near Term Action for the Hood Canal Local Integrating Organization.
- Convene a one-day workshop to share information/presentations on Best Available Science (BAS).
- Create a workplan identifying project tasks, milestones, and timeline clearly defining the next steps for this project.
- Integrate climate change into nearshore planning.
- Find a "user friendly" storage site for all datasets and resources.
- Work closely with Hood Canal Habitat Work Schedule administrators to effectively utilize the project database to produce a Four Year Workplan that incorporates nearshore actions identified in this effort.
- The workgroup is recommended to convene on a monthly basis.

## **Appendix B – Available Datasets and Resources Collected To Date**

Note: This list of information has not been screened for content. Titles are in alphabetical order.  
Appendix B begins on the next page.

Title	Agency/Sponsor	Date	Notes
2003 Kitsap Salmonid Refugia Report	Kitsap County	October 2003	Landscape Assessment and Conservation Prioritization of Freshwater and Nearshore Salmonid Habitat in Kitsap County
2014/2015 Action Agenda for Puget Sound Strategies and Actions B: Marine and Nearshore	Puget Sound Partnership	2014-2015	Marine and nearshore strategies identified in the PSP Action Agenda; incorporates vital signs
A Geomorphic Classification of Puget Sound Nearshore Landforms, Technical Report 2008-01	US Army Corps of Engineers WDFW	2008	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Assessment of Intertidal Eelgrass Habitat Landscapes for Threatened Salmon in the Hood Canal and Eastern Strait of Juan de Fuca, Washington State	Point No Point Treaty Council	March 2008	<a href="http://www.pnptc.org/Reports.html">http://www.pnptc.org/Reports.html</a> ; <a href="http://www.pnptc.org/PNPTC_Web_data/Publications/habitat/Hood_Canal_Eelgrass_Study.pdf">http://www.pnptc.org/PNPTC_Web_data/Publications/habitat/Hood_Canal_Eelgrass_Study.pdf</a>
Beaches and Bluffs of Puget Sound and the Northern Straits, Technical Report 2007-04	US Army Corps of Engineers WDFW	2007	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Channel Migration Zone Study Jefferson County, Washington	Jefferson County	September 2004	Channel migration zone study for Duckabush, Dosewallips, Big Quilcene and Little Quilcene River
Clallam County Shoreline Master Program (draft)	Clallam County	New draft 2014	<a href="http://www.clallam.net/LandUse/smp.html">http://www.clallam.net/LandUse/smp.html</a>
Coastal Habitats in Puget Sound: A Research Plan in Support of the Puget Sound Nearshore Partnership, Technical Report 2006-01	US Army Corps of Engineers WDFW	2006	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Conceptual Model for Assessing Restoration of Puget Sound Nearshore Ecosystems, Technical Report 2006-03	US Army Corps of Engineers WDFW	October 2006	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Encyclopedia of Puget Sound	University of Washington		This website houses various studies and research reports about Puget Sound. <a href="http://www.eopugetsound.org/">http://www.eopugetsound.org/</a>
Fish Distribution and Abundance in Shallow Intertidal Habitats of Tarboo and North Dabob	Jefferson County Marine Resources Committee	February 2004	Provide by the Northwest Watershed Institute

Bays			
Guidance for Prioritizing Salmonid Stocks, Issues, and Actions for the Hood Canal Coordinating Council	Hood Canal Coordinating Council	March 2015	Provides guidance about priorities for salmonid recovery actions for HCCC and salmon recovery partners.
Guidance for Protection and Restoration of the Nearshore Ecosystems of Puget Sound, Technical Report 2004-02	US Army Corps of Engineers	2004	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Guiding Restoration Principles, Technical Report 2004-03	US Army Corps of Engineers	2004	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Habitat Conditions and Water Quality for Selected Watersheds of Hood Canal and the Eastern Strait of Juan de Fuca	Point No Point Treaty Council	January 2001	<a href="http://www.pnptc.org/PNPTC_Web_data/Publications/habitat/body_TR_01.PDF">http://www.pnptc.org/PNPTC_Web_data/Publications/habitat/body_TR_01.PDF</a> and <a href="http://www.pnptc.org/PNPTC_Web_data/Publications/habitat/Appendix_TR_01.PDF">http://www.pnptc.org/PNPTC_Web_data/Publications/habitat/Appendix_TR_01.PDF</a>
HCCC Implementation GeoDatabase	Hood Canal Coordinating Council		GIS layers/files available
Historical Change and Impairment of Puget Sound Shorelines, Technical Report 2011-01	US Army Corps of Engineers WDFW	2011	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Historical Changes to Estuaries, Spits, and Associated Tidal Wetland Habitats in the Hood Canal and Strait of Juan de Fuca Regions of Washington State	Point No Point Treaty Council	December 2006	<a href="http://www.pnptc.org/Historical_Nearshore.html">http://www.pnptc.org/Historical_Nearshore.html</a> Report and data available for download
Hood Canal Dissolved Oxygen Program	Washington Sea Grant	2004	This website presents background information about low dissolved oxygen issue in Hood Canal. The numerous reports and studies associated with this program are available in the website. <a href="http://www.hoodcanal.washington.edu/">http://www.hoodcanal.washington.edu/</a>
Hood Canal Nearshore Fish Use Assessment: Pilot Year Results and Study Plan	Wild Fish Conservancy	September 2013	Project funded in 2011, study conducted in 2012-2013 Raw data available upon request
Implications of Observed Anthropogenic	US Army Corps of	2011	PSNERP

Changes to the Nearshore Ecosystems in Puget Sound, Technical Report 2011-03	Engineers WDFW		<a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Integrated Nearshore Priorities Project Summary Report	Puget Sound Partnership	August 2014	Interactive GIS platform is available online <a href="http://www.psp.wa.gov/gis/IntegratedNearshorePlatform/">http://www.psp.wa.gov/gis/IntegratedNearshorePlatform/</a>
Intertidal Forage Fish Spawning Site Investigation for East Jefferson, Northwestern Kitsap, and North Mason Counties 2001-2005	North Olympic Salmon Coalition	June 30, 2005	Files include report, figures, and appendices
Jefferson County Final Shoreline Inventory & Characterization Report 2008	Jefferson County	2008	<a href="http://www.co.jefferson.wa.us/commdevelopment/ShorelineInventory.htm#InventoryAnalysis">http://www.co.jefferson.wa.us/commdevelopment/ShorelineInventory.htm#InventoryAnalysis</a>
Jefferson County Marine Shoreline Restoration Prioritization: Summary of Methods	Jefferson County	November 2006	
Jefferson County Shoreline Master Program Update: Shoreline Inventory and Analysis	Jefferson County	August 2005 (revised)	Baseline conditions of Jefferson County shoreline
Juvenile Pacific Salmon and the Nearshore Ecosystem of Puget Sound, Technical Report 2006-06	US Army Corps of Engineers WDFW	2006	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Kelp and Eelgrass in Puget Sound, Technical Report 2007-05	US Army Corps of Engineers WDFW	2007	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Kitsap County Shoreline Master Program Inventory and Characterization	Kitsap County	2010	Restoration plans, management options, shoreline use analysis
Kitsap County Surface and Stormwater Capital Facilities Plan	Kitsap County	2013-2018	
Kitsap County Surface and Stormwater Management (SSWM) Conveyance	Kitsap County		Culvert mapping
Kitsap County Six Year Transportation Improvement Plan	Kitsap County	2015-2020	
Management Measures for Protecting and Restoring the Puget Sound Nearshore, Technical Report 2009-01	US Army Corps of Engineers WDFW	2009	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Marine and Floodplain Riparian Vegetation	Point No Point Treaty	2014	<a href="http://maps.nwifc.org/PNPTC_Riparian/">http://maps.nwifc.org/PNPTC_Riparian/</a>



Data Viewer	Council		<a href="http://www.pnptc.org/GIS.html">http://www.pnptc.org/GIS.html</a>
Marine Forage Fishes in Puget Sound, Technical Report 2007-03	US Army Corps of Engineers WDFW	2007	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Marine Riparian Vegetation Communities of Puget Sound, Technical Report 2007-02	US Army Corps of Engineers WDFW	2007	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Marine Riparian: An Assessment of Riparian Functions In Marine Ecosystems	Washington Sea Grant	2004	
Native Shellfish in Nearshore Ecosystems of Puget Sound, Technical Report 2006-04	US Army Corps of Engineers WDFW	2006	PSNERP; <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Nearshore Data Exchange Interactive Map	Northwest Indian Fisheries Commission	2014	Informational map depicting tribal, state and federal nearshore data. <a href="http://maps.nwifc.org/nearshore/">http://maps.nwifc.org/nearshore/</a>
Nearshore Data Site	Washington Department of Fish and Wildlife		Web accessible database with project tracking and mapping features used to support ESRP and PSNERP; <a href="http://www.psnerp.ekosystem.us/">http://www.psnerp.ekosystem.us/</a>
Nearshore Functional Assessment Tool User's Manual	Naval Facilities Engineering Command	April 2014	Field Draft (Revised) Look into literature cited.
North Olympic Monitoring Database	North Olympic Peninsula Lead Entity		List of monitoring projects including geographic scope, data location, and collection frequency. Relevant studies should be identified within this list.
Preliminary 2014-2015 Hood Canal Steelhead Harvest Management Plan	Jamestown S'Klallam Tribe Port Gamble S'Klallam Tribe Skokomish Tribe Lower Elwha Klallam Tribe WDFW	December 2014	<a href="http://www.pnptc.org/Reports.html">http://www.pnptc.org/Reports.html</a>
Principles for Strategic Conservation and Restoration, , Technical Report 2010-01	US Army Corps of Engineers WDFW	2010	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>

Puget Sound Submerged Vegetation Monitoring Program 2010-2013 Report	Washington Department of Natural Resources	February 2015	Puget Sound eelgrass monitoring program
Restoration Feasibility and Prioritization Analysis of Sediment Sources in Kitsap County	Kitsap County	December 2012	Kitsap Regional Shoreline Restoration Feasibility and Prioritization Study Demonstration Project
Salish Sea Wiki	Paul Cereghino (NOAA??)		This website provides a free storage and sharing of documents and images of various Salish Sea research reports, studies, and resources. <a href="https://salishsearestoration.org/wiki/Welcome_to_Salish_Sea_Restoration">https://salishsearestoration.org/wiki/Welcome_to_Salish_Sea_Restoration</a>
Shoreline Alterations in Hood Canal and the Eastern Strait of Juan de Fuca	Point No Point Treaty Council	March 2003	<a href="http://www.pnptc.org/PNPTC_Web_data/Publications/habitat/PNPTC_Shoreline_Alterations_Report.pdf">http://www.pnptc.org/PNPTC_Web_data/Publications/habitat/PNPTC_Shoreline_Alterations_Report.pdf</a>
Sound IQ Data System	Island County	2011	Interactive online GIS platform that integrates available nearshore data for Island County <a href="http://www.iqmap.org/gc/Html5Viewer/?viewer=soundiq">http://www.iqmap.org/gc/Html5Viewer/?viewer=soundiq</a>
Strategic Needs Assessment: Analysis of Nearshore Ecosystem Process Degradation in Puget Sound, Technical Report 2011-02	US Army Corps of Engineers WDFW	2011	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Strategies for Nearshore Protection and Restoration in Puget Sound, Technical Report 2012-01	US Army Corps of Engineers WDFW	March 2012	Puget Sound Nearshore Ecosystem Restoration Project (PSNERP) <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Summer Chum Salmon Conservation Initiative (SCSCI) and SCSCI Supplemental Reports	Point No Point Treaty Tribes WDFW	September 2000 through 2014	An Implementation Plan to Recover Summer Chum Salmon in the Hood Canal and Strait of Juan de Fuca Region; <a href="http://wdfw.wa.gov/conservation/fisheries/chum/">http://wdfw.wa.gov/conservation/fisheries/chum/</a>
The Geomorphology of Puget Sound Beaches,	US Army Corps of	October 2006	PSNERP

Technical Report 2006-02	Engineers WDFW		<a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
The impact of urban patterns on aquatic ecosystems: An empirical analysis in Puget lowland sub-basins	Published in Science Direct (journal)	October 2006	Marina Alberti
Updating Impervious Surface Estimations in the Summer Chum ESU	Hood Canal Coordinating Council	2011 Report	Report of methods and statistical analyses used in HCCC's fourth Buildout analysis report. Parcel data for Mason, Jefferson, Kitsap, and Clallam Counties collected in October 2010.
Valuing Puget Sound's Valued Ecosystem Components, Technical Report 2007-07	US Army Corps of Engineers WDFW	2007	PSNERP <a href="http://www.pugetsoundnearshore.org/technical_reports.html">http://www.pugetsoundnearshore.org/technical_reports.html</a>
Washington State Coastal Atlas	Washington Department of Ecology		Provides coastal information (maps, shoreline pictures, beach access and closure information) for resource planning and management; <a href="https://fortress.wa.gov/ecy/coastalatlus/">https://fortress.wa.gov/ecy/coastalatlus/</a>
Washington State ShoreZone Inventory	Washington Department of Natural Resources		Describes physical and biological characteristics of intertidal and shallow subtidal areas along Washington State 's saltwater shorelines; <a href="http://www.dnr.wa.gov/researchscience/topics/aquatichabitats/pages/aqr_nrsh_inventory_projects.aspx">http://www.dnr.wa.gov/researchscience/topics/aquatichabitats/pages/aqr_nrsh_inventory_projects.aspx</a>
West Kitsap County Nearshore Habitat Assessment and Restoration Framework	Kitsap County	October 2010	West Kitsap Addendum to East Kitsap County Nearshore Habitat Assessment and Restoration Framework

## Appendix C – List of Workgroup Members and Invited Nearshore Practitioners

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Note: Highlighted names represent workgroup members that participated in one or both meetings in person or on WebEx.