# Salmon Recovery Funding Board Meeting Agenda

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

**September 22-23, 2021**
Online Meeting

**Protecting the public, our partners, and our staff are of the utmost importance. Due to health concerns with the novel coronavirus this meeting will be held online. The public is encouraged to participate online and will be given opportunities to comment, as noted below.**

## Day 1

**Registration Link:** https://us06web.zoom.us/webinar/register/WN_YzrI6ZTtToGveen_o3vENw

**Phone Option:** (669)900-6833 - **Webinar ID:** 853 1992 2645

## Day 2

**Registration Link:** https://us06web.zoom.us/webinar/register/WN_ud4S42dDTACgQyqu2PUbcQ

**Phone Option:** (669)900-6833 **- Webinar ID:** 861 6506 0608

**Location:** RCO will also have a public meeting location for members of the public to listen via phone as required by the Open Public Meeting Act, unless this requirement is waived by gubernatorial executive order. In order to enter the building, the public must not exhibit symptoms of the COVID-19 and will be required to comply with current state law around personal protective equipment.

**Order of Presentation:** In general, each agenda item will include a short staff presentation and followed by board discussion. The board only makes decisions following the public comment portion of the agenda decision item.

**Public Comment:** General public comment is encouraged to be submitted in advance to the meeting in written form. Public comment on agenda items is also permitted. If you wish to comment, you may e-mail your request or written comments to wyatt.lundquist@rco.wa.gov. You may also use the messenger in the Webinar to message Wyatt before the start of the item you wish to testify on. Comment for these items will be limited to 3 minutes per person.

**Special Accommodations:** People with disabilities needing an accommodation to participate in RCO public meetings are invited to contact Leslie Frank by phone (360) 902-0220 or e-mail Leslie.Frank@rco.wa.gov; accommodation requests should be received by September 8, 2021 to ensure availability.

# Wednesday, September 22 (Day 1)

## OPENING AND MANAGEMENT REPORTS

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| **9:00 a.m.** | **Call to Order**<br>• Roll Call and Determination of Quorum<br>• Review and Approval of Agenda ***(Decision)***<br>• Approval of June Meeting Minutes ***(Decision)***<br>• Approval of 2022 Meeting Calendar ***(Decision)***<br>• Approval of Recognition Resolution in honor of Loraine Loomis ***(Decision)***<br>• Remarks by the chair | *Chair Breckel* |
| **9:30 a.m.** | **1. Director's Report**<br>A. Director's Report<br>• Staff Changes<br>B. Fiscal Update (Written Only)<br>C. Performance Report (Written Only) | *Director Duffy*<br><br>*Mark Jarasitis*<br>*Brent Hedden* |
| **9:45 a.m.** | **2. Salmon Recovery Management Report**<br>A. Governor's Salmon Recovery Office Report<br>- Orca Report<br>B. Salmon Section Report | *Erik Neatherlin*<br>*Tara Galuska*<br>*Marc Duboiski* |
| **10:15 a.m.** | **General Public Comment for items not on the agenda:** *Please limit comments to 3 minutes.* | |
| **10:20 a.m.** | **3. Partner Reports** (10 minutes per Partner)<br>• Council of Regions<br>• WA Salmon Coalition<br>• Regional Fisheries Enhancement Groups | *Alex Conley*<br>*Suzanna Smith*<br>*Lance Winecka* |
| **10:50 a.m.** | **BREAK** | |

## BOARD BUSINESS: DECISIONS

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| **11:05 a.m.** | **4. Manual 18 2022 Calendar**<br>***Public comment** will occur prior to adopting the motion. Please limit comments to three minutes. | *Kat Moore* |
| **11:20 a.m.** | **5. Riparian Guidance for Manual 18 Decision**<br>***Public comment** will occur prior to adopting the motion. Please limit comments to three minutes. | *Erik Neatherlin and Kat Moore* |
| **12:50 a.m.** | **LUNCH** | |
| **1:50 p.m.** | **6. Targeted Investments Manual 18 Updates**<br>***Public comment** will occur prior to adopting the motion. Please limit comments to three minutes. | *Katie Pruit* |

## BOARD BUSINESS: BRIEFING

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| **2:20 p.m.** | **7. Washington Invasive Species Council: Threat of Aquatic Invasive Species to Salmon Recovery** | *Joe Maroney, Allen Pleus, and Justin Bush* |

## BOARD BUSINESS: REQUEST FOR DIRECTION

**2:50 p.m.** **8. Carbon Credits Policy and Discussion** *Ben Donatelle*

## BOARD BUSINESS: BRIEFINGS

**3:20 p.m.** **9. Partner Reports**

- Conservation Commission — *Brian Cochrane*
- Department of Ecology — *Annette Hoffmann*
- Department of Natural Resources — *Stephen Bernath*
- Department of Fish and Wildlife — *Jeff Davis*
- Department of Transportation — *Susan Kanzler*

**4:00 p.m.** **RECESS** *Chair Breckel*

# Thursday, September 23 (Day 2)

## OPENING

**9:00 a.m.** **Call to Order** *Chair Breckel*

- Roll Call and Determination of Quorum
- Review and Approval of Agenda ***(Decision)***
- Retreat Discussion
- Remarks by the chair

## BOARD BUSINESS: BRIEFINGS

**9:30 a.m.** **10. 2021 Grant Round**

A. Overview
- Salmon Recovery Funding Board Projects — *Marc Duboiski*
- Regional Monitoring Projects

B. Slideshow of featured projects — *Grant Managers*

C. Review Panel Comments — *Tom Slocum*
- General Observations
- Noteworthy Projects

D. Project of Concern
- Discussion by Review Panel — *Tom Slocum and*
- Counter Position by Project Sponsor and Region — *Marc Duboiski*

**11:30 a.m.** **11. 2021 Grant Round Overview by Regions** *(5 Minutes per region)*

- Hood Canal Coordinating Council
- Lower Columbia Fish Recovery Board
- Northeast Washington Salmon Recovery Region
- Puget Sound Partnership
- Snake River Salmon Recovery Board
- Upper Columbia Salmon Recovery Board
- Coast Salmon Partnership
- Yakima Basin Fish and Wildlife Recovery Board

## BOARD BUSINESS: DECISIONS

**12:15 p.m.** **12. 2021 Grant Round, Board Funding Decisions** *Marc Duboiski*

- Yakima Basin Fish and Wildlife Recovery Board
- Coast Salmon Partnership
- Upper Columbia Salmon Recovery Board
- Snake River Salmon Recovery Board
- Puget Sound Partnership
- Northeast Washington Salmon Recovery Region
- Lower Columbia Fish Recovery Board
- Hood Canal Coordinating Council

***Public comment** will occur prior to adopting the motions. Please limit comments to three minutes.

**12:30 p.m.** **ADJOURN**

**Next meeting:** Joint Retreat and Regular Meeting – December 1-2, 2021 – Online Meeting

**Subject to change considering COVID**

WASHINGTON STATE RECREATION AND CONSERVATION OFFICE
Salmon Recovery Funding Board

# Draft Motions for Decisions

**Meeting Date:** September 22-23, 2021

## Day 1

### Call to Order

**Move** to approve the September 2021 Meeting Agenda

**Move** to approve the June 2021 Meeting Minutes

**Move** to approve the 2022 Meeting Calendar

### Item 4: Manual 18 - 2022 Calendar

**Move** to accept the 2022 Grant Round Timeline

### Item 5: Riparian Guidance for Manual 18 Decision

**Move** to adopt the Manual 18 riparian guidance as a pilot program for 3 years

### Item 6: Targeted Investments Manual 18 Updates

**Move** to approve the Targeted Investments Program procedures and criteria.

## DAY 2

### Item 12: 2021 Grant Funding Motions

#### Regional Funding Motions

**Yakima Basin Fish and Wildlife Recovery Board**
Move to approve $1,876,000 for the Middle Columbia Salmon Recovery Board Regions shown in Attachment 6 of the 2021 Funding Report, dated September 2021. This amount includes $562,800 of funding for projects in the Klickitat County Lead Entity.

**Washington Coast Salmon Recovery Region**
Move to approve $1,914,000 for projects and project alternates on the Coastal Region ranked lists, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.

**Upper Columbia River Salmon Recovery Region**

Move to approve $2,062,000 for projects and project alternates on the Upper Columbia Region ranked list, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.

**Snake River Salmon Recovery Region**

Move to approve $1,688,000 for projects and project alternates on the Snake River Region ranked list, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.

**Puget Sound Salmon Recovery Region**

Move to approve $6,824,487 in SRFB funds for projects and project alternates on the Puget Sound Region ranked lists, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.

If the POC, Point No Point (21-1053) on the West Sound ranked list is not funded, then:

Move to approve $6,763,150 in SRFB funds for projects and project alternates on the Puget Sound Region ranked lists, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.

**Northeast Washington Salmon Recovery Region**

Move to approve $380,000 for projects on the Northeast Region ranked list, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.

**Lower Columbia Salmon Recovery Region**

Move to approve $4,000,000 for projects and project alternates on the Lower Columbia Region ranked list, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021. This amount includes $108,000 of funding for projects in the Klickitat County Lead Entity.

**Hood Canal Salmon Recovery Region**

Move to approve $1,255,512 in SRFB funds for projects and project alternates on the Hood Canal Region, ranked list, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.

## SALMON RECOVERY FUNDING BOARD SUMMARIZED MEETING AGENDA AND ACTIONS

**WEDNESDAY, June 2, 2021**

| Item | Formal Action | Follow-up Action |
|---|---|---|
| **OPENING AND MANAGEMENT REPORTS** | | |
| **Call to Order**<br>• Roll Call and Determination of Quorum<br>• Review and Approval of Agenda<br>• Approval of March Meeting Minutes<br>• Introduction of New RCO Director<br>• Introduction of New Orca Recovery Staff<br>• Recognition of Outgoing Member Bugert<br>• Remarks by the chair | **Decisions**<br>Approval of June 2021 Agenda<br>**Moved by:** Member Sullivan<br>**Seconded by:** Member Bugert<br>**Decision:** Approved<br><br>Approval of March 2021 Meeting Minutes<br>**Moved by:** Member Bugert<br>**Seconded by:** Member Endresen-Scott<br>**Decision:** Approved<br><br>Resolution of Recognition for Bob Bugert<br>**Moved by:** Member Endresen Scott<br>**Seconded by:** Member Sullivan<br>**Decision:** Approved<br><br>Approval of Hosting September SRFB Meeting Virtually<br>**Moved by:** Member Endresen-Scott<br>**Seconded by:** Member Sullivan<br>**Decision:** Approved | **TASK:** Send Member Bugert a copy of his resolution.<br><br>**TASK:** Board directed staff to explore hybrid meeting solutions. |

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|---|---|---|
| **1. Director's Report**<br>A. Director's Report<br>B. Legislative and Policy Update<br>C. Budget Overview<br>D. Communications Annual Update<br>E. Fiscal Annual Update<br>F. Performance Report (Written only) | | |
| **2. Salmon Recovery Management Report**<br>A. Governor's Salmon Recovery Office Report<br>B. Salmon Section Report | **Decision**<br>Approval of Salmon Recovery Conference Location and Planning Service<br>**Moved by:** Member Bugert<br>**Seconded by:** Member Sullivan<br>**Decision:** Approved | **TASK:** Add Puget Sound Acquisition and Restoration (PSAR) funds topic to retreat discussion.<br><br>**TASK:** Send overview of previous years Pacific Coast Salmon Recovery Fund (PCSRF) to board.<br><br>**TASK:** Send National Oceanic and Atmospheric Administration (NOAA) graphs and reports to board. |
| **BOARD BUSINESS: BRIEFING** | | |
| **3. Preparation for the 23-25 Budget Request to the Legislature**<br>• Building Planned Forecast List<br>• Building a Targeted Investment List | | |

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|---|---|---|
| **4. Monitoring Updates and Reports** | | |
| **5. Allocate Funding for:**<br>• 2021 Grant Round<br>• 2021-22 Capacity Funding<br>• 2022 Targeted Investment Funding Allocation<br>• 2021 Monitoring Funding Allocation | **Decisions**<br><u>Approval of 2021 and 2022 Grant Round and Targeted Investment Project Funding</u><br>**Moved by:** Member Endresen-Scott<br>**Seconded by:** Member Bugert<br>**Decision:** Approved<br><br><u>Approval of Funding for the Technical Review Panel and Cost Increase Reservation</u><br>**Moved by:** Member Bugert<br>**Seconded by:** Member Endresen-Scott<br>**Decision:** Approved<br><br><u>Delegation of Authority to Director to Contract with Lead Entities for Capacity Funding</u><br>**Moved by:** Member Endresen-Scott<br>**Seconded by:** Member Bugert<br>**Decision:** Approved<br><br><u>Delegation of Authority to Director to Contract with the Regional Organization</u><br>**Moved by:** Member Bugert<br>**Seconded by:** Member Endresen-Scott<br>**Decision:** Approved | |

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|---|---|---|
| | Delegation of Authority for Director to Contract with Monitoring Projects for FY 2021<br>**Moved by:** Member Bugert<br>**Seconded by:** Member Endresen-Scott<br>**Decision:** Approved | |
| **BOARD BUSINESS: DECISIONS** | | |
| **6. Targeted Investments Implementation and Priority Setting for 2021-23** | **Decision**<br>Approval of Targeted Investment Evaluation Process and Criterion and Direction to Staff to Update Manual 18<br>**Moved by:** Member Bugert<br>**Seconded by:** Member Endresen-Scott<br>**Decision:** Approved<br><br>Approval of Southern Resident Orca Whale Recovery as the Targeted Investment Priority<br>**Moved by:** Member Bugert<br>**Seconded by:** Member Endresen-Scott<br>**Decision:** Approved | |
| **7. Requests for Unobligated Federal Fiscal Year 2020 Funds** | **Decision**<br>Approval of Funding for Additional Requests to come from FY 2020 Unobligated Funds<br>**Moved by:** Member Endresen-Scott<br>**Seconded by:** Member Bugert<br>**Decision:** Approved | |
| **BOARD BUSINESS: BRIEFINGS** | | |

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| **8. Climate Subcommittee Update and Recommendations** | | **Task:** Bring Climate Change topic to Board Retreat. |
| **9. Featured Projects** | | |
| **10. Partner Reports**<br>• Council of Regions<br>• WA Salmon Coalition<br>• Regional Fisheries Enhancement Groups<br>• Conservation Commission<br>• Department of Ecology<br>• Department of Natural Resources<br>• Department of Fish and Wildlife<br>• Department of Transportation | | |
| **ADJOURN** | | |

*Next Meeting: September 22-23, 2021Virtual*

## SALMON RECOVERY FUNDING BOARD SUMMARY MINUTES

**Date:** June 2, 2021

**Place:** Online

**Salmon Recovery Funding Board Members:**

| | | | |
|---|---|---|---|
| **Jeff Breckel, Chair** | Stevenson | **Annette Hoffman** | Designee, Washington Department of Ecology |
| **Jeromy Sullivan** | Kingston | **Stephen Bernath** | Designee, Department of Natural Resources |
| **Bob Bugert** | Wenatchee | **Brian Cochrane** | Designee, Washington State Conservation Commission |
| **Chris Endresen-Scott** | Conconully | **Jeff Davis** | Designee, Department of Fish and Wildlife |
| **VACANT** | VACANT | **Susan Kanzler** | Designee, Washington Department of Transportation |

**This summary is to be used with the materials provided in advance of the meeting. The Recreation and Conservation Office (RCO) retains a recording as the formal record of the meeting.**

### Call to Order

**Chair Jeff Breckel** opened the meeting at 9:04 AM, welcoming all members. **Julia McNamara**, Recreation and Conservation Office (RCO) Administrative Assistant, called role determining quorum. **Member Jeff Davis** was not at the meeting when it began but joined later.

Following Ms. McNamara, **Wyatt Lundquist**, RCO Board Liaison, spoke to webinar rules and etiquette.

Chair Breckel requested a motion to approve the March 2021 Salmon Recovery Funding Board (SRFB/board) meeting minutes and the June meeting agenda.

**Motion:** Approval of Minutes

**Moved by**: Member Bugert

**Seconded by:** Member Endresen-Scott

**Decision:** Approved

**Motion:** Approval of Agenda

**Moved by:** Member Sullivan

**Seconded by:** Member Bugert

**Decision:** Approved

Following the two decisions, Chair Breckel explained that the board is being asked to meet virtually the rest of 2021. While the board would like to return in-person for meetings, they recognized that it may be too soon and agreed that holding the September meeting virtually would be the most appropriate.

Before more decisions were made, **Member Jeff Davis** joined the meeting and the board read a resolution dedicated to **Member Bob Bugert**, who is retiring from his position on the SRFB.

**Motion:** Recognition resolution dedicated to Bob Bugert

**Moved by:** Member Endresen Scott

**Seconded by:** Member Sullivan

**Decision:** Approved

**Motion:** Hold the September 22-23, 2021, SRFB Meeting Virtually

**Moved by:** Member Endresen-Scott

**Seconded by:** Member Sullivan

**Decision:** Approved

### Item 1: Director's Report

**Director's Report**

**Megan Duffy**, RCO Director, thanked all the members of the board and provided an update on RCO activities.

In the past quarter, RCO had internal staff changes. **Tara Galuska**, Salmon Section Manager, was hired to fill the Governor Salmon Recovery Office's (GSRO) Orca Recovery Coordinator position; **Michelle Burbidge**, RCO Outdoor Grant Manger, has left her position; **Brent Hedden** has been hired as the PRISM manager, as **Scott Chapman** has retired from that position. RCO is seeking for the following positions to be filled: Salmon Section Manger, Outdoor Grant Manger, and an archeologist. Soon, there will also be a job posting to fulfill a policy position.

Director Duffy stated that she has been engaging in internal and external meetings. Internally, Director Duffy has reached out to staff to set up one-on-one thirty-minute meetings. Externally, Director Duffy has met with the Council of Regions (COR), the Northwest Indian

Fisheries Commission (NWIFC), the Governor's Office, and several other state partners. She intends to continue with these meetings as requested for the next two months.

Next Director Duffy addressed her meeting with the Office of Equity. This meeting was in response to the governor's efforts on diversity, equity, and inclusion. Director Duffy met with Dr. Karen Johnson and intends to continue engagement with the Office of Equity. To continue diversity, equity and inclusion efforts, a survey will also be sent out to RCO staff and agency partners. Responses from the survey will be used by the Office of Equity in their development of a five-year strategic plan for Washington.

Closing, Director Duffy reviewed the Zo8 Wellness Award that RCO was awarded for their wellness program, which is run by **Allison Dellwo**, RCO Outdoor Grant Manager.

**Legislative and Policy Update**

**Wendy Brown**, RCO Policy Director, provided a high-level summary of the Legislature's virtual 2021 session.

Notably, during the early months of the pandemic, there was a $9 billion shortfall predicted in the general fund, but that deficit no longer exists. In addition to state general funds, there was also just over $3 billion in federal funding added to the budget for COVID relief and other funding gaps.

After providing an overview of the state budget landscape, Ms. Brown then addressed the operating budget, capital budget, and bills related to RCO.

Referencing the operating budget, Ms. Brown noted the following allocations:

- GSRO and the lead entities were fully funded
- $3.62 million in funding for the Hood Canal Bridge Fish Passage
- $30,000 for public access to the Beach Lake Conservation Area
- $418,000 for implementation of the Nisqually Watershed Stewardship Plan
- $250,000 for the Spokane Tribe of Indians pilot study of salmon migratory behavior and survival upstream of the Chief Joseph and Grand Coulee Dams
- $280,000 for the orca recovery position in the GSRO

Referencing the capital budget, the following was allocated:

- Salmon Recovery (SRFB-State): $30 million
- Puget Sound Acquisition and Restoration: $52 million
- Estuary and Salmon Restoration Program: $15.7 million
- Family Forest and Fish Passage Program: $5.76 million
- Fish Barrier Removal Board Grants: $26.8 million
- WA Costal Restoration Initiative: $10.3 million
- Upper Quinault River program (WCRRI): $1 million

- Salmon Recovery (Federal): $50 million

The bills that RCO tracked included:

- (SB 5063) Washington Invasive Species Council extension bill to extend the council until June 30, 2032
- (HB 1382) Salmon Recovery Streamlining, which creates a four-year pilot project for streamlined permitting for certain salmon restoration projects.
- (SB 5220) Taxation of Salmon Recovery Grants, which created a sales and use tax exemption for salmon recovery grant proceeds received by recipient of these grants
- (HB 1117) Net Ecological Gain, which is a budget proviso to study how to incorporate a net ecological gain standard into the Growth Management Act
- (SB 5126) Climate Commitment Act, which is a cap and investment program to reduce carbon emissions
- (SB 5273) Replacement of Shoreline Armoring, which required use of soft armoring options if feasible.

Following the report, **Member Chris Endresen-Scott** asked who sponsored the shoreline armoring bill and Ms. Brown replied that the prime sponsor was Senator Jessie Salomon.

**Communications Annual Update**

**Susan Zemek**, RCO Communications Manager, provided a briefing on implementation of the agency's 6-year communications plan.

The goals of this plan are to build support for RCO's mission, strengthen agency partnerships, and promote RCO's leadership, innovation, and continual improvement.

To accomplish these goals, communications staff has distributed 15 news releases, posted 618 social media stories, reached just under 300,000 people on Facebook, and engaged 45,822 users through RCO's website. Many videos, social media posts, new releases, and conferences are often in partnership with other agencies. Communications staff also uses the director's blog and various publications to promote the agency's missions.

Ms. Zemek explained how the communications team measures success through media coverage, number of social media followers, the number of website visits from social media, event participation, and newsletter engagement.

Looking forward, the communications team intends to complete the following:

- Targeted outreach to underserved communities.
- Enhanced two-way social media.
- Redesign the director's newsletter.
- Implement graphics standards in more publications.
- Distribute an internal communications survey.

- Create a writing style guidelines document.

Following Ms. Zemek's presentation, **Member Stephan Bernath** asked for examples of targeted outreach toward underserved communities. Ms. Zemek explained RCO has started translating some information on its website into other languages. Ms. Zemek also noted that there is an equity study that will be done on the recreation side of RCO that should help the communications team understand how to bridge other outreach gaps.

**Chair Breckel** said that there is often a difference in response to certain messages in cities versus more rural areas and he wondered how the communications team targets them differently. Ms. Zemek explained that by paying for ads through Facebook, certain audiences can be targeted, but RCO has not paid for this service. For further outreach, Chair Breckel suggested that the communications team work with the regions, lead entities, and Regional Fisheries Enhancement Groups. Ms. Zemek replied that the communications team will reach out to them.

### Item 2: Salmon Recovery Management Report

#### GSRO

**Erik Neatherlin**, (GSRO) Executive Coordinator, provided a briefing on the activities of the GSRO. Mr. Neatherlin noted that more information could be found in Item 2.

Mr. Neatherlin explained that RCO, GSRO, and other Washington state natural resource agencies assisted the Governor's Office in preparing federal funding requests; GSRO has worked with Governor Inslee's Washington DC Office to coordinate a five-state Governor's letter of support for a $70 million Pacific Coastal Salmon Recovery Fund (PCSRF) appropriation for fiscal year 2022; and the Salmon Strategy Update is currently being reviewed by agencies, tribes, and salmon recovery board.

**Jeannie Abbott**, GSRO Program Coordinator, provided the rest of the report, including details on the 2021 Salmon Recovery Conference, which was held April 28-30 and had over 1,319 attendees from varying municipalities.

Addressing the 2023 conference, Ms. Abbott informed the board that it could be held April 17-19, 2023, in Vancouver, Washington with the assistance of Western Washington University Conference Services, pending board approval.

**Motion:** Approval of hosting the Salmon Recovery Conference in Vancouver, Washington in 2023 and hiring Western Washington Conference Service to assist in planning.

**Moved by:** Member Bugert

**Seconded by:** Member Sullivan

**Decision:** Approved

Closing the GSRO report, Ms. Abbott notified the board that the Pacific Coast Salmon Recovery Fund (PCSRF) awarded Washington with $18.4 million.

**Salmon Section Report**

**Tara Galuska**, Salmon Section Manager, provided an update on the Salmon Section.

Ms. Galuska reported that the 2021 grant round was underway and that all virtual site visits were complete. Out of the 143 applicants, 25 percent of projects have been cleared or conditioned. Applicants will receive comments from the review panel soon, which will assist those who have not been cleared.

Ms. Galuska explained that Attachment A of Item 2 has a list of closed projects and Attachment B has a list of approved amendments to projects.

Following the presentation, **Chair Breckel** asked how the number of this year's applicants differs from last year. Ms. Galuska replied that because this grant round does not have applications for the Puget Sound Acquisition and Restoration Fund (PSAR), the number of applicants is lower.

*General Public Comment:*

No comment at this time.

**BREAK: 10:33 a.m.-10:45 a.m.**

### Item 3: Preparation for the 23-25 Budget Request to the Legislature

**Wendy Brown,** RCO Policy Director, presented an alternative process for requesting funding from legislature for the 2023-2025 biennium. **Tara Galuska** and **Chantell Krider**, Data Specialist, were available for questions.

For context, Ms. Brown reminded the board that the Planned Project Forecast List (PPFL) within the Salmon Recovery Portal is assembled before each legislative session and it represents the highest priority projects. The database itself provides greater detail.

Because SRFB funding receives the least amount of funding in comparison to other salmon and recreation grant programs, such as Washington Wildlife and Recreation Program (WWRP), the Chehalis Basin, Puget Sound Acquisition and Restoration (PSAR), and Floodplains by Design, Ms. Brown suggested building upon the PPFL by creating a ranked list that is modeled after PSAR's requesting method. In their method, they set a baseline funding level of $30 million and then request funding for ranked projects.

**Member Bernath** asked if there had been discussion with the Office of Financial Management (OFM) on how to increase SRFB funding. Ms. Brown recognized the importance of that starting point. Chair Breckel suggested that a budget-ask-approach discussion be held at the SRFB retreat. **Member Bugert** noticed that PSAR displayed "big ticket" items and asked if it was the approach that SRFB should take. Ms. Brown agreed that this would be a good approach and that having high ranked projects is important.

*Public Comment:*

**Alex Conley**, Council of Regions (COR), explained that COR creates lists to identify critical needs for recovery. However, he noted that it is important to discuss how to utilize the lists that have already been created by COR, as the regions have limited capacity.

Following comment, Chair Breckel asked how to move forward with this idea. Ms. Brown said she would have to give it some thought.

### Item 4: Monitoring Updates and Reports

**Erik Neatherlin**, GSRO Executive Coordinator, provided background and context for the monitoring program. He was joined by **Keith Dublanica**, GSRO Science Coordinator; **Pete Bisson**, Monitoring Panel Co-Chair; **Jeannette Smith**, Monitoring Panel Co-Chair; and **Bob Bilby**, Monitoring Panel Member

Mr. Neatherlin explained that the board's monitoring program is rooted in guidance from the Washington State Comprehensive Monitoring Strategy and National Oceanic and Atmospheric Administration (NOAA) Monitoring Guidance. A framework for the Monitoring program has been put together by the Monitoring Panel. A few fields within the framework include key information gaps, key policy or management questions, alignment with currently monitoring programs, and guidance for future monitoring programs.

Next, Mr. Bisson provided information on the monitoring annual review, which is done on the Intensively Monitored Watersheds (IMW) and Fish-in/Fish-out Sites and Species projects.

Ms. Smith followed with details on the Floodplain Restoration Monitoring Pilot. There is one project in Eastern Washington in the Entiat and intent for pilot projects in Western Washington. She explained that these projects will use remote sensing techniques versus on-the-ground techniques, which are failing to meet the standard of a project at this scale. For the Western Washington projects, there are four proposed locations: Larson's Reach, the Countyline Levee Setback, the Lower Quillayute River, and Barnaby Slough. Three of these locations will be chosen, with only one project being fully funded. No more than $153,350 of funding from PCSRF will be used.

Closing the briefing, Mr. Bilby provided an overview of the lessons learned from the Western Washington IMWs. Mr. Bilby remarked that IMW's are important as they produce information valuable for improving the process for prioritizing restoration projects.

When the board entered discussion, **Chair Breckel** expressed his excitement for the results of IMWs, but stated there needs to be clearer expectations for the projects. He suggested partnering with the Washington Department of Ecology and other natural resources agencies to utilize more resources. This idea was reiterated by **Member Bernath**.

**Member Davis** was concerned that human population increase (Growth Management Act), and climate change may not be included within the IMWs projects enough. Mr. Bisson explained that the new monitoring framework would tackle issues such as invasive species, natural resources consumption, increase population, and climate change.

*Public Comment:*

**Alex Conley**, COR, suggested the board read the COR update concerning agenda items 4 and 7. He expressed his thanks towards the regional monitoring program, supplemental programs, and SRFB and RCO's salmon program.

**BREAK:** 12:20p.m.-1:00p.m.

### Item 5: Allocate Funding for:

Before the start of the agenda item, **Chair Breckel** noted that **Member Kanzler** was excused for the afternoon.

**Tara Galuska**, RCO Salmon Section Manager, opened the agenda item, noting that she would be joined by **Jeannie Abbott**, GSRO Program Coordinator, and **Keith Dublanica**, GSRO Science Coordinator. This item includes funding the grant round for year one and year two of the 2021-2023 biennium, capacity funding, and monitoring funding.

**2021 Grant Round**

Ms. Galuska explained that the funding available for State General Fund, State Bond funds, PCSRF, and Return Funds would total in $68,270,000. It was notable that the PCSRF funds are projected but not yet allocated for FY 2022.

For projects, there would be a total of $22,356,815 available in 2021 and $22,412,000 for 2022. However, this funding could be divided up in several different ways, as seen below.

| Alternative | 2021 Grant Round | 2022 Grant Round | Targeted Investment |
|---|---|---|---|
| 1 | $18 million | $22 million | $3.7 million |
| 2 | $19 million | $20 million | $4.7 million |
| 3 | $20 million | $20 million | $3.7 million |
| 4 | $20 million | $21 million | $2.7 million |
| 5 | $21 million | $22.7 million | none |

After Ms. Galuska presented the table, board members asked questions. **Member Bugert** asked if the board had to make a solid commitment to both years and the targeted investment, or if the decision could be delayed. Ms. Galuska asked that the 2021 grant round funding be committed, but the 2022 grant round and targeted investment decision could be put on hold until December 2021. However, that would put pressure on the lead entities and grant managers who need to submit applications beginning in January of 2022. **Member Bernath** asked if there was a targeted investment list available now, to which Ms. Galuska clarified that there was not a list yet, but each region would submit one project.

*Public Comment:*

**Dawn Spilsbury**, Island County Lead Entity Coordinator, encouraged the board to select Alternative 5 and put even more funding into the 2021 grant round. She believed that waiting to use the funding for projects that have not been added to a list would not send out the best message.

**Jason Wilkeson**, Lake Washington Sammamish Water Lead Entity, noted that the plan project forecast list demonstrates that lead entities have many projects ready to move forward. He encouraged placing more funding in the 2021 grant round versus a targeted investment.

**Cheryl Baumann**, North Olympia Peninsula Lead Entity Coordinator, encouraged SRFB to approve Alternative 3 and 4. She noted that funding had been stagnant for years and there are submissions of projects nearing one million dollars. These larger projects need to be done.

**Alex Conley**, COR, had no specific recommendations and noted that COR is ready to engage with the Targeted Investment process.

**Richard Brocksmith**, Skagit Watershed Council, thanked everyone for the time put into this process. He noted that there are many good projects ready to be funded in the 2021 fiscal year and said that approving more funding in the 2021 fiscal year would be valuable. He suggested the board adopt Alternative 4 or 5. He also said that there are many unknowns about the Targeted Investment Policy implementation.

**Suzanna Smith**, Washington Salmon Coalition, believed that the increased SRFB funding came from the PPFL. She stated that lead entities would like to see projects funded that are ready to go now.

Following public comment, Chair Breckel asked for the board thoughts. Chair Breckel and Members Bugert, **Davis**, and Bernath were favorable to Alternatives 3 or 4.

Referencing Targeted Investment, **Member Hoffman** asked if there would be longer lead time needed to get those projects on the ground? Ms. Galuska explained that a larger project could need more time, but this would be a project specific question. Member Bernath asked if $2.7 million would be enough to fund a project. Ms. Galuska clarified that $2.7 million could fund an entire project. However, there are some projects that have an estimated cost of $10 million.

**Motion:** Move to approve alternative three to allocate $20 million for both 2021 and 2022 grant round, and allocate $3.7 million toward a targeted investment project (s).

**Moved by:** Member Endresen-Scott

**Seconded by:** Member Bugert

**Decision:** Approved

**Motion:** Move to approve $200 thousand for the technical review panel and to reserve $500 thousand for cost increase.

**Moved by:** Member Bugert

**Seconded by:** Member Endresen-Scott

**Decision:** Approved

**2021-22 Capacity Funding**

**Jeannie Abbott**, GSRO Program Coordinator, provided the breakdown of the capacity funding for Lead Entities (LE) and Regional Organizations. This funding would total $4,592,185 for each year in the 2021-2023 biennium. This funding included the lead entity operating funds, lead entity bond funds, return capacity bond funds, and regional organization funds.

**Motion:** Move to delegate authority to the Director to enter into contracts with LE to fund capacity for the 2021-2023 biennium at $3,379,000 including up to $48,000 in return capacity funds for the biennium for Washington Salmon Coalition facilitation, if swapped for general fund.

**Moved by:** Member Endresen-Scott

**Seconded by:** Member Bugert

**Decision:** Approved

**Motion:** Move to delegate authority to the Director to enter into contracts with the Regional Organizations for fiscal year 2022 plus any return funds from previous PCSRF award.

**Moved by:** Member Bugert

**Seconded by:** Member Sullivan

**Decision:** Approved

**2021 Monitoring Funding Allocation**

**Keith Dublanica**, GSRO Science Coordinator, said there would be a $2 million award for monitoring funding from the board. This funding would be allocated toward the Status and Trends Monitoring, Intensively Monitored Watersheds, the Monitoring Panel, and the Western Washington Floodplain Pilot Project.

Following the presentation, **Chair Breckel** asked for a clarification on the Western Washington Floodplain funding, which is allocated in the memo closer to $146 thousand, versus the presented $153 thousand. Mr. Dublanica explained that the presented information was correct, and the funding listed in the memo online was incorrect.

The Chair also suggested making some of the funding available for the Pacific Northwest Aquatic Monitoring Partnership (PNAMP), which would be taken from the Western Washington Floodplain.

**Motion:** Move to delegate authority to the RCO director to enter contracts for the following monitoring projects in a total of $2 million for federal fiscal year 2021: $208,000 for status and trends monitoring; $1,538,350 for IMWs; $100,00 for the monitoring panel; $145,000 for the Western Washington Floodplain proof of concept; and $8,350 for IMW panel to integrate with the PNAMP process.

**Moved by:** Member Bugert

**Seconded by:** Member Endresen Scott

**Decision:** Approved

**LUNCH: 12:20PM-1:00PM**

### Item 6: Targeted Investments Implementation and Priority Setting for 2021-23

**Katie Pruit**, RCO Planning and Policy Specialist, provided an overview of the Targeted Investment policy implementation. The policy was adopted at the September 2020 board

meeting. Implementing the policy would require the board to make two decisions: the first is to approve the evaluation process and criteria, and the second is to establish a 2021-23 targeted investment priority. Details can be found in memorandum 6.

When the board entered discussion, **Chair Breckel** suggested that additional points could be assigned to projects that address more than one priority, even if it was not the priority selected. Chair Breckel and **Member Endresen-Scott** also expressed concern with removing the priority criteria point if more than one priority is selected by the board. Ms. Pruit explained that some criteria need to be removed because the scores would be measuring two different concepts. Member Endresen-Scott also expressed concern with the technical committee ranking the top project, if there was a tie, as she believed that the board should break the tie. The number one project should be the one that used less state funds. **Member Bugert** believed that the points assignment in the evaluation and criteria was a good approach.

Chair Breckel suggested the board only examine one priority per year.

*Public Comment:*

**Alex Conely**, COR, noted that there is still a lot to be worked out with the implementation of the Targeted Investments Policy at a board level and how the regions can respond. He encouraged the continuance of discussion and a timeline for the grant round to evaluate when and how the regions can participate. Mr. Conley believed that the project criteria would limit the regions in what they could submit and the type of project that could be submitted.

**Cheryl Baumann**, North Olympia Peninsula Lead Entity, believed it was fundamentally unfair to only allow each region to submit one project, as the Puget Sound region has 15 lead entities. She believed this may have been done as a response to the Puget Sound Acquisition and Restoration (PSAR) funding received by the Puget Sound and that, if so, a comprehensive report on the funding received by each region should be created. She also believed the geographic size of the region should be examined. She suggested that each region be able to submit multiple projects if there are many lead entities.

**Amber Moore**, Puget Sound Partnership, found concerns with the number of lead entities in their region. Each LE is different and has different priorities. It is a concern of equity and they look forward to working the board.

Following comment, **Member Endresen-Scott** asked for clarification on project types that can be submitted. Ms. Pruit clarified the project types are not limited as Mr. Conley understood; acquisition projects are eligible. The board discussed the evaluation criteria and which priority should be selected.

**Motion:** Move to approve the evaluation process and scoring criteria for targeted investments and direct staff to update Manual 18: Salmon Recovery Grants.

**Moved by:** Member Bugert

**Seconded by:** Member Endresen-Scott

**Decision:** Approved

Following approval, **Member Endresen-Scott** expressed her concern with the number of projects that the Puget Sound region can submit and suggested that RCO staff hold a discussion with the regions to come to an agreement. Ms. Pruit explained that the board had already adopted the policy that determined each region would only be able to submit one project. To make any changes, the policy would need to be amended.

Next, the board discussed which priority to choose. Board members look at targeting populations at risk, approaching recovery, emergency response, and Southern resident orca whale recovery. **Member Hoffman** suggested that they always choose the emergency response priority as a secondary priority as emergencies are difficult to predict. There was also discussion that the level of funding available would not be sufficient to prioritize approaching recovery. Member Bugert suggested Southern resident orca whale recovery should be the priority.

**Motion:** Move to make the priority Southern resident orca whale recovery

**Moved by:** Member Bugert

**Seconded by:** Member Endresen-Scott

**Decision:** Approved

Following the motion, Ms. Pruit noted this topic would return to the board at the next meeting.

### Item 7: Requests for Unobligated Federal Fiscal Year 2020 Funds

**Keith Dublanica**, GSRO Science Coordinator, explained that there was a total of $19,827 of unobligated funds from fiscal year 2020 that could be put toward the six 2021 regional project proposals to fully support them. There was also a request to provide $25,000 to Pacific Northwest Aquatic Monitoring Partnership (PNAMP). PNAMP would provide that funding as match for the Pacific States Marine Fisheries Commission (PSMFC) to support IMWs.

**Motion:** Move to approve funding for additional requests to come from fiscal year 2020 unobligated funds; $19,827 from allocated but unobligated monitoring funds to supplement the total regional monitoring request as shown in Attachment A of Memo Item #7 and $25,000 to support the

| | |
|---|---|
| | Pacific Northwest Aquatic Monitoring Partnership (PNAMP) in its planning and implementation of a series of in-depth and comprehensive IMW workshops and follow-ups specific to broad-scale management implications throughout the Pacific North West. |
| **Moved by:** | Member Endresen-Scott |
| **Seconded by:** | Member Bugert |
| **Decision:** | Approved |

### Item 8: Climate Subcommittee Update and Recommendations

**Ben Donatelle**, RCO Policy Specialist, provided a briefing on the work and recommendations of the climate change subcommittee. This subcommittee was formed in November of 2020 by the board and included **Members Davis, Bernath, and Bugert**. Recommendations were categorized as near term, mid-term and long term, and included:

1. Climate change position statement
2. Carbon credits and payment for ecosystem service policy
3. Invite future learning opportunities
4. Continue interagency coordination
5. Metric and indicators to aid communication
6. Resource Toolkit
7. Technical Guidance
8. Potential climate change criteria development
9. Increase support to regions, lead entities, and project sponsors
10. Focus Targeted Investments on climate resiliency
11. Capitalize on carbon credits and other ecosystem service credits

Members Bernath and Bugert agreed that the work done by this group was great. **Chair Breckel** was hopeful that climate change and carbon credits would be addressed at the retreat. Member Bernath suggested that the Climate Impacts Group (CIG) give a presentation at the retreat.

### Item 9: Featured Projects

**Dave Caudill**, **Alice Rubin**, and **Kat Moore**, RCO Outdoor Grants Managers, presented three different projects.

The projects presented included the Middle Boise Creek Restoration (16-1552), the Hungry Harbor Fish Passage (18-1200), and the Mud Bay Salt Marsh Restoration Sucia Island (17-1143).

## Item 10: Partner Reports

### Council of Regions

**Alex Conley** referred the board members to the written report he provided.

### WA Salmon Coalition

**Suzanna Smith** provided comments for the board's consideration. She asked if the partner reports could be moved to the beginning of the agenda.

Moving into an update on WSC, she explained that WSC members have been working through the grant season by creating project lists and making site visits. Other updates include: a foundation setting meeting with the Headwaters People held on May 4; in June and July there will be training on diversity, equity, and inclusion; and in October, they plan to host a hybrid meeting.

She asked that RCO provide the board meeting memos earlier, so that WSC has more time to respond, and she highlighted the inequity of the Targeted Investment Policy.

### Regional Fisheries Enhancement Groups

**Lance Winecka** said he was excited to continue with the salmon recovery process and that he would like to have the RFEGs meeting with Megan.

### Conservation Commission

**Brian Cochrane** provided a legislative update for the Conservation Commission.

He relayed that there was an increased funding for conservation technical assistance to work with landowner, wildlife recovery, soil health efforts, and volunteer stewardship.

Concerning the capital budget, there was a decline in funding for irrigation efficiencies, shellfish, and Conservation Reserve Enhancement Program (CREP). These funding decreases led to staff decrease.

Finally, Mr. Cochrane explained that there was a farms and fields bill passed that would assist with carbon sequestration. RCO could work with Allison Halper on this subject.

### Department of Ecology

**Annette Hoffman** provided a brief overview of the past legislative session, explaining that there were three major climate bills passed to meet the greenhouse gas emission requirements, address ocean acidification, and climate change.

### Department of Natural Resources

**Stephan Bernath** noted that the Department of Natural Resources (DNR) had success this session. There was an Urban and Community forest bill passed that gives capacity for DNR to

provide technical assistance to communities and promote the evergreen communities act. There was also a long-term forest health and reduction of wildfire bill passed.

He also mentioned that DNR has been asked to lead an effort to figure out how to work with small forest landowners on climate change.

Addressing the budget, there was a $4 million cut last biennium that had been recovered by legislature and $2 million gift for the landowner technical assistance. The Family Forest Fish Passage Program (FFFPP) was allocated $10 million and the Forestry Riparian Easement Program (FREP) increased by $6 million.

**Department of Fish and Wildlife**

No comments

**Department of Transportation**

**Susan Kanzler,** Washington State Department of Transportation (WSDOT) will be looking for a fish passage data biologist, Endangered Species Act (ESA) biologist, National Environmental Policy Act (NEPA) coordinator, stormwater inventory lead and hydraulic engineers and more.

Addressing the results of the legislative session, WSDOT Fish passage was well funded at $726 million. There will be 70 fish passage project and there were 30 projects in the current biennium.

## ADJOURN

Closing, Chair Breckel thanked everyone for being here and recognized the challenges of meeting virtually. He also briefly touched on the retreat and hoped that it would be in person.

### Adjourned the meeting at 4:56 p.m.

*The next meeting of the Salmon Recovery Board will occur September 22nd & 23rd, 2021 via Zoom.*

**Approved by:**

_____

WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
Salmon Recovery
Funding Board

# Salmon Recovery Funding Board Briefing Memo

Item 1

**APPROVED BY RCO DIRECTOR MEGAN DUFFY**

**Meeting Date:** September 22-23, 2021

**Title:** Director's Report

**Prepared By:** Megan Duffy, RCO Director


**Summary**
This memo describes key agency activities and happenings.


**Board Action Requested**

This item will be a:
- ☐ Request for Decision
- ☐ Request for Direction
- ☒ Briefing

## Agency Update

### On the Road…

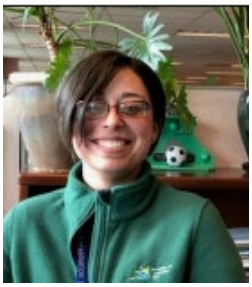
I had the privilege of touring Meadowdale Beach Park in Edmonds with Senator Maria Cantwell in July. Snohomish County used five RCO grants from both the salmon and recreation side of our agency to restore an estuary and develop access to the beach. This is an important area for rearing juvenile Chinook salmon, as well as a transportation corridor for Burlington Northern Santa Fe Railroad. The County had to remove fill to re-establish the estuary, replace a culvert and armored shoreline under the

railroad tracks with a bridge, place logs in the water and plant the creekbanks to create better salmon habitat, move park amenities inland, reroute pathways, and build viewpoints and a wetland boardwalk for viewing salmon. This is a great example of a multi-benefit project, where replacement of an undersized culvert is leading to a new railroad bridge that increases public access and safety and restores habitat for salmon and the health of Puget Sound.

## New Staff on the Move


New work from the Legislature and delayed hiring during the pandemic created a surge of employee recruitment this summer. RCO is looking to fill or has filled five positions and hired multiple contractors to assist on projects.

- **Ashly Arambul**, our compliance assistant, joined the Recreation and Conservation Grant Section as an outdoor grants manager. She joined RCO in 2018 after several years managing recreation sites for the Department of Natural Resources. As the compliance assistant she has been conducting hundreds of compliance inspections. Ashly has a bachelor of science degree from Northland College in Wisconsin where she majored in natural resource management and biology. We are recruiting internally to replace Ashly.



- **Scott Chapman** received a warm goodbye when former staffers, contractors, and family gathered to celebrate his 30-year career at RCO. Scott was our PRISM manager.

- **Leah Dobey** joined the policy team August 16. Leah formerly was the assistant division manager for recreation at the Department of Natural Resources. She has experience in policy development, grant management, contracts, diversity and equity issues, and legislative coordination.

- **Marc Duboiski** started August 1 as manager of the Salmon Section. Marc has been with RCO since 1999, mostly managing salmon and recreation projects. He also has volunteered on numerous PRISM enhancement projects and policy development.
- **Tara Galuska** was appointed as the Governor's orca recovery coordinator, working in the Governor's Salmon Recovery Office. Most of you know that Tara was the manager of RCO's Salmon Section for 7 years. As orca recovery coordinator, she will work with partners to help implement recommendations of the Governor's Southern Resident Killer Whale Task Force.

- **Sarah Johnson Humphries** joined RCO August 19 as our first archaeologist. She will be responsible for review, preparation, and administration of the agency's cultural resources compliance process. Sarah is a Secretary of Interior-qualified archaeologist with more than 10 years of experience. Before joining RCO, she was a senior archaeologist at Equinox Research and Consulting International. She also has experience working on RCO-funded projects throughout north Puget Sound.
- **Josh McKinney** will join RCO September 8 as a communications specialist. Josh has more than 20 years of experience in a range of writing and marketing jobs. Most recently, he was the content development manager for a company that creates museum and visitor center displays. He also created and served as managing editor of an online gaming and entertainment blog network with 115,000 followers.

- **Rob Stokes** will join RCO on October 1 as an outdoor grants manager in the Recreation and Conservation Grant Section. Rob was manager of Georgia's Outdoor Stewardship Program, which provides nearly $25 million in grants and loans for large-scale outdoor recreation, conservation, and stewardship projects. He is moving here from Georgia.

Up next, we will be recruiting for a salmon grants manager and a data position.

In addition to employees, RCO hired Triangle and Associates LLC to help facilitate meetings of the Fish Barrier Removal Board, and Cramer Fish Sciences for the floodplain-scale, remote sensing pilot project in western Washington. RCO also put under contract six engineering firms to help design culvert fixes and nine organizations to evaluate projects in the Family Forest Fish Passage Program. Staff also hired the Prevention Institute as the lead consultant to develop the policy and procedural recommendations for the equity review of our recreation grants, and the Vida Agency as the community engagement specialists for the review. Finally, RCO is recruiting for a consultant to provide organizational support for the Salmon Recovery Network.

## New Director Wraps up Staff Interviews

As the new director of RCO, I thought it was important to meet with employees one-on-one to hear directly from them about the agency and their work. It is challenging to start a new job during a pandemic and not work alongside people in an office. I thought the interviews would give me a chance to meet folks and hear their perspectives on many different issues. Afterall, they know the job better than I do and have insights and ideas that might not occur to me. I've met with 38 employees who requested interviews, and I have one final outstanding meeting in September. I've heard some great ideas so far, especially about how to connect us more. I've also heard thoughts about workloads, ways to streamline work, and positions that could take on different roles than they've had historically. My favorite question to ask staff is what their dream job would be. I'm learning a lot from those answers. I've appreciated all the insights they've given me.

## News from the Boards

The **Habitat and Recreation Lands Coordinating Group** met August 25 for the joint Lands Coordinating Forum, where the agency members discussed recent and planned land acquisitions.

The **Invasive Species Council** met in June and was briefed on tribal and municipal government invasive species capacity surveys. The council next meets September 16 and will discuss integration of cultural impacts into invasive species assessments, and opportunities to increase invasive species preparedness for cities and tribes.

The **Recreation and Conservation Funding Board** met online in June for a board retreat and to authorized $164 million in recreation and conservation grants. In addition, the board heard briefings from the policy team and a presentation on the results of the grant cycle survey. The board next meets October 5-6.

## Fiscal Report

The fiscal report reflects Salmon Recovery Funding Board activities as of August 30, 2021

### Salmon Recovery Funding Board

For July 1, 2021 - June 30, 2023, actuals through August 30, 2021 (FM 02). 8.3% of biennium reported.

| PROGRAMS | BUDGET | COMMITTED | | TO BE COMMITTED | | EXPENDITURES | |
|---|---|---|---|---|---|---|---|
| | New and Re-appropriation 2021-2023 | Dollars | % of Budget | Dollars | % of Budget | Dollars | % of Committed |
| **State Funded** | | | | | | | |
| 2015-17 | $ 1,746,440 | $1,617,835 | 93% | $128,605 | 7% | $457 | 1% |
| 2017-19 | $6,230,576 | $6,081,640 | 98% | $148,936 | 2% | $148,272 | 2% |
| 2019-21 | $14,669,777 | $14,666,290 | 100% | $3,487 | 0% | $352,926 | 2% |
| 2021-2023 | $25,724,000 | $1,000,032 | 4% | $24,723,968 | 96% | $656,999 | 66% |
| **Total** | **48,370,793** | **23,365,797** | **48%** | **$25,004,996** | **52%** | **1,158,654** | **5%** |
| **Federal Funded** | | | | | | | |
| 2016 | $389,018 | $389,018 | 100% | $0 | 0% | $87,144 | 22% |
| 2017 | $4,159,679 | $2,727,632 | 66% | $1,432,048 | 34% | $93,695 | 3% |
| 2018 | $7,627,453 | $5,968,154 | 78% | $1,659,298 | 22% | $241,924 | 4% |
| 2019 | $10,867,937 | $10,867,937 | 100% | $0 | 0% | $282,799 | 3% |
| 2020 | $16,530,979 | $14,309,953 | 87% | $2,221,026 | 13% | $768,499 | 5% |
| 2021 | $17,848,000 | $2,452,775 | 14% | $15,395,225 | 86% | $0 | 0% |
| **Total** | **57,423,066** | **36,715,469** | **64%** | **$20,707,597** | **36%** | **1,474,061** | **4%** |
| **Grant Programs** | | | | | | | |
| Lead Entities | $6,876,576 | $4,838,523 | 70% | $2,038,053 | 30% | $405,511 | 8% |
| PSAR | $107,036,152 | 75,101,319 | 70% | $31,934,833 | 30% | $1,832,572 | 2% |
| **Subtotal** | **219,706,587** | **140,021,108** | **64%** | **79,685,479** | **36%** | **4,870,798** | **3%** |
| **Administration** | | | | | | | |
| Admin/ Staff | 8,117,810 | 8,117,810 | 100% | 0 | 0% | 430,130 | 5% |
| **Subtotal** | **8,117,810** | **8,117,810** | **100%** | **0** | **0%** | **430,130** | **5%** |
| **GRAND TOTAL** | **$227,824,397** | **$148,138,918** | **65%** | **$79,685,479** | **35%** | **$5,300,928** | **4%** |

*Note: Activities such as smolt monitoring, effectiveness monitoring, and regional funding are combined with projects in the state and federal funding lines above.*

## Performance Update

The following data is for grant management and project impact performance measures for fiscal year 2022. Data included are specific to projects funded by the board and current as of August 26, 2021.

### Project Impact Performance Measures

The following tables provide an overview of the fish passage accomplishments funded by the Salmon Recovery Funding Board (board) in fiscal year 2022. Grant sponsors submit these performance measure data for blockages removed, fish passages installed, and stream miles made accessible when a project is completed and in the process of closing. The Forest Family Fish Passage Program, Coastal Restoration Initiative Program, and the Estuary and Salmon Restoration Program are not included in these totals.

| Measure | FY 2022 Performance |
|---|---|
| Blockages Removed | 9 |
| Bridges Installed | 3 |
| Culverts Installed | 4 |
| Fish Ladders Installed | 0 |
| Fishway Chutes Installed | 0 |

Nine salmon blockages were removed so far this fiscal year (July 1, 2021 to August 26, 2021), with seven passageways installed (Table 1). These projects have cumulatively opened 32.42 miles of stream (Table 2).

| Project Number | Project Name | Primary Sponsor | Stream Miles |
|---|---|---|---|
| 17-1228 | Lower Derby Creek Fish Passage | Cascade Col Fish Enhance Group | 1.77 |
| 17-1417 | Chico Cr Fish Passage Golf Club Hill Rd | Kitsap County of | 16 |
| 17-1424 | Coffee Cr Fish Passage Restoration | Mason County Public Works | 4.2 |
| 18-1200 | Hungry Harbor Passage | CREST | 1.2 |
| 19-1601 | Squalicum Creek Fish Passage (Ph 3 & 4) Bellingham | Bellingham City of | 8.9 |
| 19-1636 | Coleman Creek at Vantage Hwy Passage Restoration | Kittitas County Public Works | 0.35 |
| | | **Total Miles** | **32.42** |

### Grant Management Performance Measures

Table 3 summarizes fiscal year 2022 operational performance measures as of August 26, 2021.

| Measure | FY Target | FY 2022 Performance | Indicator | Notes |
|---|---|---|---|---|
| Percent of Salmon Projects Issued Agreement within 120 Days of Board Funding | 90% | **0%** | ● | One agreement for SRFB-funded projects was due to be mailed this fiscal year to date. |
| Percent of Salmon Progress Reports Responded to On Time (15 days or less) | 90% | **91%** | ● | 132 progress reports were due this fiscal year to date for SRFB-funded projects. Staff responded to 120 in 15 days or less. On average, staff responded within 7 days. |
| Percent of Salmon Bills Paid within 30 days | 100% | **100%** | ● | During this fiscal year to date, 250 bills were due for SRFB-funded projects. All were paid on time. |
| Percent of Projects Closed on Time | 85% | **100%** | ● | Nine SRFB-funded projects were scheduled to close so far this fiscal year. All of them closed on time. |
| Number of Projects in Project Backlog | 5 | **3** | ● | Three SRFB-funded projects are in the backlog. |
| Number of Compliance Inspections Completed | 125 | **0** | ● | Staff have not inspected any worksites this fiscal year to date. They have until June 30, 2022 to reach the target. |

WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
Salmon Recovery
Funding Board

# Salmon Recovery Funding Board Briefing Memo

Item 2

**APPROVED BY RCO DIRECTOR MEGAN DUFFY**

**Meeting Date:** September 22-23, 2021

**Title:** Salmon Recovery Management Report

**Prepared By:** Erik Neatherlin, GSRO Executive Coordinator
Tara Galuska, GSRO Orca Coordinator
Marc Duboiski, Salmon Section Manager


**Summary**
This memo summarizes the recent work completed by the Governor's Salmon Recovery Office (GSRO) and the Recreation and Conservation Office's (RCO) Salmon Recovery Section.


**Board Action Requested**
This item will be a:
☐ Request for Decision
☐ Request for Direction
☒ Briefing

## Governor's Salmon Recovery Office

### Federal Affairs

The Governor's Salmon Recovery Office (GSRO) has been working with Governor's Office staff in DC, state agencies, partners, and Congressional delegation on federal funding and infrastructure requests. This work is ongoing and will continue through the fall to secure additional federal funding for salmon and orca recovery. Below is a summary of relevant program funding currently in the bipartisan infrastructure bill passed recently by the Senate.

- **National Culvert Removal, Replacement and Restoration Grant Program: $1 billion** for the U.S. Department of Transportation to create a new program to remove, replace or restore culverts, which will enable the recovery of salmon passage and habitats. This provision was authored by Senator Cantwell, and this program will be the first federal program devoted entirely to culverts. Federal cost-share for the new culverts program is 80%.

- **Pacific Coastal Salmon Recovery Fund**: **$172 million** for NOAA's Pacific Coastal Salmon Recovery Fund, a grants program that provides funding to States and Tribes to protect, conserve, and restore west coast salmon.
- **Fish Passage Barrier Removal Grants: $400 million** for the creation of a new community-based restoration program focused on removing fish passage barriers.
- **EPA Estuary Programs:** The National Estuary Program (NEP) is a network of organizations that protects and restores 28 estuaries around the country, including the Puget Sound and Columbia River Basin.
    - **$89 million** for the Puget Sound Geographic Program
    - **$79 million** for the Columbia River Basin Geographic Program
    - **$132 million** for the National Estuary Program
- **NOAA Habitat Restoration Programs:** Funds will be used to enable communities, Tribes, and states to respond and adapt to climate change impacts.
    - **$491 million** for Habitat Restoration and Community Resilience Grants
    - **$492 million** for the National Ocean and Coastal Security Fund Grants, a funding increase of $458 million
- **Drinking Water & Wastewater Programs:** These provisions of the IIJA help improve overall water quality and prevent pollution to protect salmon-supporting ecosystems. It also includes significant funding for Tribal and rural water systems and would provide funding for stormwater and wastewater systems in Washington state and Puget Sound.
    - **$23.4 billion** for the bipartisan Drinking Water and Wastewater Infrastructure Act
    - **$10 billion** across multiple programs for monitoring and remediation of perfluoroalkyl and polyfluoroalkyl substances (PFAS). These chemicals enter the environment through production or waste streams and are extremely difficult to remove. According to the EPA, PFAS chemicals are known have "adverse reproductive, developmental and immunological effects in animals and humans

This funding will be distributed over a 5-year period beginning in federal fiscal year 2022 unless otherwise indicated in the bill.

## Congressional Letters of Support for Federal Funding

RCO Director Duffy issued several letters to the Congressional Delegation in support of federal funding for salmon recovery priorities (Attachment C). Director Duffy and Salmon Recovery Funding Board (SRFB) Chair, Jeff Breckel, sent letters to Senator Maria Cantwell and Representative Peter DeFazio thanking them for their strong support and work to include a National Culvert Removal, Replacement, and Restoration Grant Program in the Surface Transportation Investment Act of 2021. Director Duffy also sent a letter to Representative Chellie Pingree thanking her for her leadership on climate, environmental protection, and equity in support of funding for the Puget Sound Geographic Program at $50M and the National Estuary Program at $50M in the Environmental Protection Agency Federal Fiscal Year 2022 budget.

## Partner Activities

In June, GSRO Executive Coordinator Erik Neatherlin attended the Upper Columbia Salmon Recovery Board meeting virtually with Rich Innes, Washington D.C. Lobbyist, and presented as part of a federal panel with congressional staff from the offices of Senator Cantwell, Senator Murray, Representative Schrier, and Representative Newhouse. This board meeting has become an annual event for congressional staff and offers a great opportunity for a briefing and dialogue between key congressional staff and the Upper Columbia Board members.

In July, Director Megan Duffy, Erik Neatherlin, Elizabeth Butler, and Kay Caromile attended a site tour with Senator Maria Cantwell at the Meadowdale Beach Park restoration project. This project is a great example of a multi-benefit project, where replacement of an undersized culvert is leading to a new Burlington Northern Santa Fe railroad bridge that increases public access and safety, at the same time it is restoring critical pocket estuary habitat for salmon and the health of Puget Sound.

At Meadowdale Beach, the salmon will return to a new estuary | HeraldNet.com

Sen. Cantwell, local leaders tour Meadowdale Beach Park project aimed at restoring fish habitat - My Edmonds News

In August, GSRO Executive Coordinator Erik Neatherlin was invited to attend a reintroduction and release ceremony in Spokane, Washington. GSRO was honored and grateful to attend this important ceremony. The Spokane Tribal Fisheries released 51 adult Chinook salmon into the Little Spokane River at the Waikiki Springs Nature Preserve and Wildlife Area. This return of native Chinook to the Little Spokane is the first time in 111 years, since the construction of the Little Falls Dam, that salmon have swam in these waters of deep historical and cultural significance to the Spokane Tribe of Indians. Thanks to a partnership among the Spokane Tribe, Inland Northwest Land Conservancy, and Washington Department of Fish and Wildlife, the Waikiki Springs area

is protected because of its ideal habitat for historically native but long displaced fish like salmon.

It's been over a century, but summer chinook are back in the Little Spokane River: 'It's kind of a spiritual experience' | The Spokesman-Review

In August, GSRO attended tours on the Washington Coast and the Lower Columbia hosted by the Coast Salmon Partnership and the Lower Columbia Fish Recovery Board. In attendance were staff from the Office of Financial Management (OFM), regional recovery board members, and project partners and sponsor including the Columbia Basin Land Trust. This tour is part an ongoing effort to increase dialogue and communication, and to strengthen relationships between regional recovery organizations, local project sponsors, state agencies, and OFM. There are more tours planned in the spring and summer.

GSRO staff continued to attend meetings virtually with Regional Salmon Recovery Boards, Washington Salmon Coalition, and Regional Fisheries Enhancement Group representatives throughout the state.

### Statewide Salmon Strategy Update

GSRO is working closely with Governor's Office Staff on final revisions to the statewide salmon strategy update. A final draft version of the strategy update is scheduled to be available for public comment in the fall.

### Salmon Recovery Network

The Salmon Recovery Network (SRNet) met on August 3rd to discuss the outcomes of the 2021-23 state legislative session, implications for salmon and orca recovery, and share information around early salmon recovery priorities for the 2022 supplemental session. SRNet also discussed the federal funding landscape and what opportunities exist for increased coordination and communication. SRNet members also shared information and ideas around the legislative and congressional tours scheduled for the summer and fall.

### 2023 Salmon Recovery Conference

RCO and Western Washington University are in the process of approving the scope of work for the 2023 conference services agreement. We are looking for SRFB members that are willing to be on the conference planning steering committee.

### Pacific Coast Salmon Recovery Fund

Washington's $18.4M Pacific Coast Salmon Recovery Fund (PCSRF) award was accepted in mid-August. The application for this award included the resolution to the NOAA audit

findings and $852,500 of state match from the Snow Creek Uncas Preserve Restoration project.

## Monitoring Update

Monitoring agreements approved by the board in June have been processed through active status. These agreements include status and trends and intensively monitored watershed (IMW) support to both WDFW and Ecology. Other support was approved for the floodplain remote sensing "proof-of-concept" and the Pacific Northwest Aquatic Monitoring Partnership (PNAMP) facilitation of IMW workshops scheduled this fall. The PNAMP workshops will result in key findings to inform progress to date, lessons learned, and management implications for practitioners. The SRFB monitoring sub-committee re-convened this summer and will continue monthly through the winter 2022. The primary objective is to clarify the key uncertainties framework to help guide future monitoring investments while addressing efficiencies and economies of scale. Adaptive management principles are also expected to be explored. Regional monitoring projects with "CLEAR" status will be included in the regional allocations.

## Southern Resident Orca Recovery

Tara Galuska joined GSRO in June as the new Orca Recovery Coordinator The position is responsible for coordinating orca recovery for the state including ensuring the task force recommendations are moving forward. Tara has been meeting with and interviewing members of state agencies and the orca task force and meeting regularly with a state coordination team and with WDFW and NOAA. There is a state agency coordination team in place as well as a multi-agency orca communications team. Work is underway to implement short term recovery actions including orca task force recommendations and increasing communication through a new orca website. Additional efforts are underway to establish a framework for long-term recovery of orcas.

NOAA has prepared a Species in the Spotlight: Priority Actions 2021-2025, Southern Resident Killer Whale Report and is engaged in a five-year population review. GSRO submitted comments on the review to the Federal Register.

In addition, GSRO submitted comments in response to NOAA's posting in the federal register of Amendment 21 to the Pacific Coast Salmon Fishery Management Plan, which considers Southern Resident Killer Whales in fisheries management plans(Attachment D). The Pacific Fisheries Management Council recommended Amendment 21, and management actions will be put into place if Chinook fisheries fall below a certain threshold.

GSRO submitted comments to Ecology in support of their Puget Sound Nutrient General Permit to reduce nutrients in wastewater entering Puget Sound.

Sadly, a male SRKW, K-21, was seen emaciated in the Salish Sea in July and is likely deceased. The Governor released a statement on the whale and provided a strong message for SRKW and salmon recovery. See the statement here.

Finally, Tara Galuska was invited to be a speaker by Orca Net for the Closing Day of Orca Month in June. Tara introduced herself and addressed a group of orca scientists, task force implementers, and enthusiasts online to discuss her new role, communications on orca, and progress on the orca Task Force recommendations.

## Salmon Recovery Section Report

### 2020 Grant Round

The SRFB approved the 2020 Grant Round projects at its September 2020 meeting. Most of the projects are now under contract and work has begun. With the 2021-2023 capital budget finalized, staff started putting the board approved Puget Sound Acquisition and Restoration (PSAR) program projects under contract in July.

### 2021 Grant Round

We have nearly reached the end of the 2021 grant cycle. A detailed update from staff and the review panel is scheduled for the second day of the SRFB meeting, September 23rd. Afterwards, each salmon recovery region will make overview presentations, followed by the board funding decisions by region.

### Other Salmon Related Programs

Estuary Salmon Restoration Program (ESRP) update:

ESRP received an appropriation of $15,708,000 for ESRP projects in the 2021-2023 Washington State Capital Budget. In addition, some previously funded projects have recently closed short, or will shortly, and are expected to return at least $1.5 million of older fiscal year ESRP funding. Returned funds are available to alternate projects on the ESRP 21-23 funding list and to active projects for cost increases. Kay Caromile is currently working to get 42 funded projects under agreement. Additional projects will be funded as returned funds become available.

RCO and WDFW finalized their MOU and contract for WDFW to manage the ESRP program. We've completed a draft schedule for the 2022 ESRP grant round and plan to spend September and October updating our application materials in PRISM and our RFPs for applicants to submit applications. ESRP will post RFPs for three of our four sub-programs: Restoration and Protection, Pre-Design (Learning), Small Grants. The Shore

Friendly program recipients have six-year contracts, so a new RFP won't be needed until 2024. ESRP is also working to develop a program policy manual.

Washington Coast Restoration Resiliency Initiative (WCRRI) update:

The legislature awarded $9,905,000 to fund 10 projects out of 29 evaluated under the grant round for the 2021-2023 biennium. One additional project was funded as a separate proviso. RCO staff collaborated with Coast Salmon Partnership staff, members of the Steering Committee, and volunteer technical review team to conduct the grant round which ran from February to June 2020. The primary purpose of the Washington Coast Restoration and Resiliency program, a biennial grant program, is to address the region's highest priority ecological protection and restoration needs while stimulating economic growth and creating jobs in coastal communities. Projects must provide substantial protection and restoration of ecosystem functions, goods, and services through cost-effective methods. Currently, RCO staff and the Coast Salmon Partnership are preparing for the 2022 grant round which is scheduled to open at the beginning of the year.

Brian Abbott Fish Barrier Removal Board (BAFBRB) update:

In July the BAFBRB received its 2021-2023 budget from the legislature. This grant round generated significant interest and demonstrated need across the state from sponsors requesting funds to correct fish passage barriers that block both salmon and other aquatic species in Washington's rivers and streams. The Board received 96 applications from sponsors for projects with broad geographic distribution. The legislature allocated $26.7 million for the 21-23 biennium to the Board which provides funding for 21 high priority fish passage projects from the submitted list of projects. Of this $26.7 million, $25 million is designated for project construction, with project sponsors providing $17 million in match funds for a total investment of $42 million. This is the third round of BAFBRB projects. In 2017-2019 the Board received $19.7 million and funded 12 projects. In 2019-2021 the Board received $26.4 million and funded 52 projects. RCO Grant Managers are now working with project sponsors to put their projects under agreement. WDFW and RCO staff meet regularly to update manuals and ready PRISM in preparation for the next grant round which opens to project sponsors in November.

Family Forest Fish Passage Program (FFFPP) update:

This program assists small forest landowners in meeting state requirements to provide fish passage on their private forestland roads through removal or replacement. The program provides both financial and technical assistance in replacing fish barriers on private small forestland owner property and focuses on fixing "the worst first." The program is voluntary and administered by three partnering agencies, the Department of Fish and Wildlife, the Department of Natural Resources and the Recreation and

Conservation Office. To date 351 projects have been completed restoring 424 crossings with the installation of a new fish passable structure or removal and abandonment of the road. For the 2021-23 biennium the state legislature awarded the program $5.97 million dollars for fish passage corrections on small forest landowner properties, which is a 20% increase from the previous biennium. During the 2021 construction season, 11 projects will be implemented and 21 projects are slated for construction in 2022. The pandemic impacted both the 2020 and 2021 construction seasons, resulting in fewer projects being implemented due to both quarantine restrictions and material costs.

Chehalis Basin Strategy (CBS) update:

Since June, the Office of the Chehalis Basin (OCB) has passed their 2021-2023 biennial budget which will fund $70 million in projects. The funding will be distributed in the following ways:

- $30.87M will be used for aquatic species habitat restoration
- $30.87M will be used for local flood damage reduction projects
- $4.36M will be used for "integrated" projects which benefit both habitat restoration as well as flood damage reduction
- $3.6M will be retained by OCB for operating and staff costs

OCB is a division within the Department of Ecology, which contracts with RCO through an Inter-Agency Agreement (IAA) for RCO to manage these projects through the PRISM database.

As reported at the June SRFB meeting, with the capital budget finalized, the program project lists will be funded at their respective appropriation levels. Here are the links to the proposed project lists for the 2021-2023 biennium:

ESRP: Estuary and Salmon Restoration Program proposed project list

WCRRI: Washington Restoration and Resiliency Program proposed project list

BAFBRB: Brian Abbott Fish Barrier Removal Board proposed project list

## Salmon Recovery Funding Board Grant Administration

The following table shows projects funded by the board and administered by staff since 1999. The information is current as of August 24, 2021. This table only includes projects funded by SRFB and PSAR dollars, which are administered by the SRFB.

**Table 1. Board-Funded Projects (1999-2021)**

| | Pending Projects | Active Projects | Completed Projects | Total Funded Projects |
|---|---|---|---|---|
| Salmon Projects to Date | 63 | 427 | 2743 | 3,233 |
| Percentage of Total | 1.9% | 13.2% | 84.8% | |

## Strategic Plan Connection

https://www.rco.wa.gov/documents/strategy/SRFB_Strategic_Plan.pdf

The Salmon Recovery Management Report supports *Goal 2* of the board's strategic plan, which focuses on the board's accountability for investments. By sharing information on staff activities and the grant round processes, the board can ensure accountability for the efficient use of resources.

## Attachments

### Closed Projects

**Attachment A** lists projects that closed between May 1- August 25, 2021. Each project number includes a link to information about the project (e.g., designs, photos, maps, reports, etc.). Staff closed out 39 projects or contracts during this time.

### Approved Amendments

**Attachment B** shows the major amendments approved between May 1- August 25, 2021. Staff processed 20 project-related cost amendments during this period; most amendments were minor revisions related to administrative changes or time extensions.

### GSRO Correspondence

**Attachment C** Congressional Letters of support for The National Culvert Removal, Replacement, and Restoration Grant Program in the Surface Transportation Investment Act of 2021.

**Attachment D** Orca Recovery Coordinator Correspondence.

## Salmon Projects Completed and Closed from May 1, 2021 – August 25, 2021

| Project Number | Sponsor | Project Name | Primary Program | Closed Completed Date |
|---|---|---|---|---|
| 19-1349 | Thurston County Public Works | Peissner Road at Elbow Lake Creek Fish Passage | Salmon Federal Projects | 6/16/2021 |
| 20-1262 | SiteCrafting | 2020 SOS Website Development | Salmon Federal Activities | 5/24/2021 |
| 16-1494 | Hood Canal SEG | Big Quilcene Moon Valley Acquisition and Planning | Salmon Federal Projects | 8/19/2021 |
| 15-1189 | Jefferson County of | Big Quilcene River Floodplain Key Pieces | Puget Sound Acq. & Restoration | 7/16/2021 |
| 17-1125 | Capitol Land Trust | CLT Landowner Willingness Assessment | Salmon State Projects | 6/22/2021 |
| 16-1589 | Great Peninsula Conservancy | East Fork Rocky Creek Acquisition | Puget Sound Acq. & Restoration | 7/22/2021 |
| 17-1159 | Fish & Wildlife Dept of | IMW - Deepwater Slough Ph 2: Alternatives Analysis | Salmon State Projects | 7/13/2021 |
| 17-1228 | Cascade Col Fish Enhance Group | Lower Derby Creek Fish Passage | Salmon State Projects | 8/23/2021 |
| 18-1681 | Lummi Nation | MF Porter Creek Reach Phase 2 Preliminary Design | Puget Sound Acq. & Restoration | 6/16/2021 |
| 16-1453 | Nisqually Land Trust | Middle Ohop Protection Phase III | Salmon State Projects | 6/18/2021 |
| 16-2054 | Nooksack Indian Tribe | NF Nooksack (Xwqélém) Farmhouse Ph 3 Restoration | Puget Sound Acq. & Restoration | 7/7/2021 |
| 18-2085 | Umatilla Confederated Tribes | NF Touchet Floodplain & Habitat Rest. RM 3.3-4.3 | Salmon Federal Projects | 6/21/2021 |
| 17-1081 | Pierce Co Conservation Dist. | Nisqually River Knotweed #6 | Salmon Federal Projects | 6/2/2021 |

| Project Number | Sponsor | Project Name | Primary Program | Closed Completed Date |
|---|---|---|---|---|
| 16-1653 | Skagit River Sys Cooperative | Nookachamps Forks Restoration | Salmon State Projects | 5/21/2021 |
| 18-1838 | Bremerton Public Works | Northlake Way Prelim Design | Salmon Federal Projects | 5/25/2021 |
| 18-1832 | Whidbey Camano Land Trust | Pearson Shoreline Protection | Puget Sound Acq. & Restoration | 6/2/2021 |
| 16-1787 | Chelan Co Natural Resource | Peshastin Irrigation Pump Exchange Design | Salmon Federal Projects | 5/5/2021 |
| 19-1662 | Pierce County of | Pierce County LE BN 19-21 | Salmon-LE State Contracts | 8/4/2021 |
| 17-1032 | Mid-Puget Sound Fish Enh Grp | PNP Restoration Reconnection Feasibility Study | Salmon State Projects | 8/12/2021 |
| 18-2227 | Western Washington Univ - Conf | Salmon Recovery Conference Management Services | Salmon Federal Activities | 8/11/2021 |
| 16-1701 | Friends of the San Juans | San Juan Islands Marine Riparian Restoration | Puget Sound Acq. & Restoration | 5/27/2021 |
| 16-2049 | Nooksack Indian Tribe | SF Nooksack (Nuxw7íyem) Nesset Ph 2 Restoration | Puget Sound Acq. & Restoration | 6/3/2021 |
| 16-2052 | Nooksack Indian Tribe | SF Nooksack Fish Camp (Ts'éq) Reach Design | Puget Sound Acq. & Restoration | 7/7/2021 |
| 17-1119 | Lower Columbia FEG | SF Toutle - Little Cow Restoration | Salmon Federal Projects | 8/11/2021 |
| 17-1118 | Lower Columbia FEG | SF Toutle Bear-Harrington Restoration | Salmon Federal Projects | 8/10/2021 |
| 15-1200 | Jefferson Land Trust | Snow Creek Uncas Preserve Phase 2 | Puget Sound Acq. & Restoration | 6/7/2021 |

| Project Number | Sponsor | Project Name | Primary Program | Closed Completed Date |
|---|---|---|---|---|
| 19-1668 | Snohomish County of | Stillaguamish Co-LE County BN 19-21 | Salmon-LE State Contracts | 8/10/2021 |
| 17-1057 | Hood Canal SEG | Tahuya River Estuary Restoration Feasibility | Salmon State Projects | 7/14/2021 |
| 17-1058 | Hood Canal SEG | Tahuya River Watershed Assessment 2017 | Salmon Federal Projects | 5/14/2021 |
| 16-1694 | Lower Columbia FEG | Toutle Confluence Riparian | Salmon Federal Projects | 6/7/2021 |
| 16-2091 | Umatilla Confederated Tribes | Tucannon Complexity & Connectivity (PA-18) | Salmon State Projects | 6/21/2021 |
| 17-1059 | Hood Canal SEG | Union River Reach Restoration Planning | Salmon Federal Projects | 5/12/2021 |
| 18-2088 | Walla Walla Co Cons Dist. | Walla Walla River Restoration Design at RM 35.5 | Salmon Federal Projects | 6/17/2021 |
| 18-2097 | Fish & Wildlife Dept of | WDFW Lower Columbia VSP Monitoring - 2017 | Salmon Federal Activities | 8/10/2021 |
| 19-1359 | Fish & Wildlife Dept of | WDFW Lower Columbia VSP Monitoring - 2018 | Salmon Federal Activities | 8/13/2021 |
| 17-1195 | Trout Unlimited Inc. | Wenatchee-Entiat Beaver Restoration | Salmon Federal Projects | 5/10/2021 |
| 19-1655 | Kitsap County of | West Sound Watersheds Council LE BN 19-21 | Salmon-LE State Contracts | 7/20/2021 |
| 19-1661 | Pacific County of | Willapa Bay LE BN 19-21 | Salmon-LE State Contracts | 8/16/2021 |
| 19-1670 | Thurston Regional Plng Council | WRIA13 LE BN 19-21 | Salmon-LE State Contracts | 8/10/2021 |

## Project Amendments Approved by the RCO Director

| Project Number | Project Name | Sponsor | Program | Type | Date | Amount/Notes |
|---|---|---|---|---|---|---|
| 16-1608 | Woods Creek Culvert Replacements Cooperative | Snohomish Conservation Dist. | PSAR | Cost Change | 7/20/2021 | Sponsor Match is reduced to $461,447, which is a 56% share of the project costs, and the total project cost is reduced to $824,447. |
| 20-1001 | Lower Quinault Invasive Plant Control (Phase 8) | Quinault Indian Nation | Salmon Federal | Cost Change | 5/20/2021 | Increase grant amount by $190,329 in 2020 Quinault LE funds and increase match by $33,577. |
| 18-1367 | Lackamas Creek Protection | Nisqually Land Trust | PSAR | Cost Change | 6/9/2021 | Correction of 2019 Project Change amendment that added riparian planting activities but did not add associated costs. |
| 19-1366 | Grant Creek Construction | Wild Fish Conservancy | Salmon State | Cost Change | 5/17/2021 | Add $24,000 of 15-17 PSAR Returned Funds to project. |
| 20-1135 | Woods Creek RR Bridge Removal Final Design | Adopt A Stream Foundation | PSAR | Cost Change | 6/8/2021 | Add $34,462 of 2017-19 PSAR to fully fund the project. 2017-19 funds were available from the 16-1548P Tolt River - Lower Frew Floodplain Reconnection project. |

| | | | | | | |
|---|---|---|---|---|---|---|
| 19-1147 | Chatham Acres Restoration and Design | Snohomish County Public Works | Salmon Federal | Cost Change | 7/8/2021 | Project experienced significant delays including COVID-19 and the loss of the previous project manager, that prevented progress to meet the original milestones and project end date. Adding match and a new timeline. |
| 17-1119 | SF Toutle - Little Cow Restoration | Lower Columbia FEG | Salmon Federal | Cost Change | 5/13/2021 | Cost decrease of $9,000from the Little Cow project. The remaining funds in Little Cow will be used to complete and submit the final report and final billing. All other project deliverables completed as specified in the grant agreement. |
| 17-1118 | SF Toutle Bear-Harrington Restoration | Lower Columbia FEG | Salmon Federal | Cost Change | 5/14/2021 | Add $15,000 SRFB funds to the project to finish the plant installation at this site. Riparian plant installation delayed due to COVID-19 restrictions. |
| 18-1490 | Cedar Grove Fish Passage Improvement | Skagit County Public Works | PSAR | Cost Change | 6/22/2021 | The PSAR project costs are increased by $113,622, which is made up of $69,098 of returned 2017-2019 funds and $44,524 of 2019-2021 funds. The matching share is increased by $20,089 to maintain the 15% requirement. |
| 19-1475 | Wenatchee River-Monitor | Chelan Co Natural Resource | Salmon Federal | Cost Change | 7/9/2021 | Due to increased log costs, construction costs, and site access costs, the SRFB |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Side Channel Construction | | | | | share is increased by $65,588 and the match share increased by $68,589. |
| 19-1420 | Skagit Forks/Britt Slough Wetlands Reconnection | Skagit Fish Enhancement Group | Salmon State | Cost Change | 6/2/2021 | Adding additional $80,902 of 2017-2019 PSAR funds to the grant to match the updated engineer's estimate. The costs of wood and construction labor has increased. The match share is increased $14,312 to maintain the 15% requirement. The sponsor needs much more than this amount and is exploring all other options - funders and donated wood. The SWC has approved this increase. |
| 16-1487 | Skokomish Valley Road Relocation Final Design | Mason Conservation Dist | PSAR | Cost Change | 8/23/2021 | Reducing PSAR grant funds by $495,000 and reducing match to maintain current percent requirement of 15%. New project total is $363,950. Project scope remains the same and active following removal of funds. The $495,000 of PSAR funds to be added to project 20-1104. |
| 18-1914 | Mid Pilchuck River Integrated Restoration Design | Snohomish Conservation Dist | PSAR | Cost Change | 7/20/2021 | Add 15% match in the amount of $17,277 to the project. |

| | | | | | | |
|---|---|---|---|---|---|---|
| 17-1143 | Mud Bay Salt Marsh Restoration Sucia Island | Friends of the San Juans | Salmon State | Cost Change | 7/20/2021 | This amendment will reduce the SRFB and ESRP funding for the remaining year of monitoring. See attached request. |
| 17-1226 | Methow Bull Trout Population Assessment | Methow Salmon Recovery Found | Salmon State | Cost Change | 7/15/2021 | The grant agreement is adding $19,441 to the budget to complete the data synthesis, identify and prioritize habitat restoration projects, and finalize assessment report. $16,136 is SRFB funds and $3,305 match. |
| 20-1060 | Issaquah Creek In-stream Restoration | Mountains to Sound Greenway | Salmon Federal | Cost Change | 8/12/2021 | This cost Increase adds $631,983of 21-23 PSAR from WRIA 8, as awarded on the September 16. 2020 SRFB Ranked List. Additionally, Special Condition #2 is removed as this additional funding increment affords the full scope of work. |
| 20-1113 | Lower Big Quilcene River Acquisition | Hood Canal SEG | Salmon Federal | Cost Change | 8/19/2021 | Adding $127,223 of PSAR 21-23 funds from the Hood Canal Lead Entity allocation; Also adding $281,727 of PCSRF from project 20-1111, bringing the total PCSRF award to $327,427. |
| 20-1189 | The Evergreen State College | South Puget Sound SEG | Salmon Federal | Cost Change | 8/23/2021 | Adding in $40,909 of 21-23 PSAR from the WRIA 13 Lead Entity allocation. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Bulkhead Removal | | | | | |
| 20-1007 | Rocky Creek Estuary and Riparian Protection | Great Peninsula Conservancy | Salmon Federal | Cost Change | 8/12/2021 | Adding PSAR 21-23 funding - West Sound LE - $258,661 for a total PSAR award of $383,661. This project was awarded $383,661of PSAR funds during the 2020 grant round. Since it was necessary to acquire the Squire property prior to the PSAR 21-23 funds becoming available, Puget Sound Partnership previously awarded the project $125,000 of FY15-17 PSAR funds that were approved through PSP's Rapid Response Fund program. |
| 18-1298 | Elwha Estuary Conservation and Restoration Phase I | Coastal Watershed Institute | PSAR | Cost Change | 8/10/2021 | Reducing the funding for the project. Only funds remaining will be $264,000 in ESRP funds. The funds are only available for reimbursment of post-acquisition activities for the Lamb parcel and related project management. |

**Attachment C**

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Olympia, WA 98504-0917

1111 Washington St. S.E.
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Web site: www.rco.wa.gov

**STATE OF WASHINGTON**

RECREATION AND CONSERVATION OFFICE

July 2, 2021

The Honorable Maria Cantwell
United States Senate
511 Hart Senate Office Building
Washington, DC 20510

Re: National Culvert Removal, Replacement, and Restoration Grant Program

Dear Senator Cantwell:

On behalf of the Washington State Recreation and Conservation Office (RCO) and Salmon Recovery Funding Board (SFRB), we want to thank you for your leadership in introducing the National Culvert Removal, Replacement, and Restoration Grant Program into the Surface Transportation Investment Act of 2021, and congratulate you on its unanimous passage out of the committee. While the work continues on this important legislation in the Senate, we want to recognize your tireless efforts and steadfast leadership on behalf of salmon and orca across Washington State.

The RCO and SRFB provide funding for elements necessary to achieve overall salmon recovery, including habitat projects and other activities that result in sustainable and measurable benefits for salmon and other fish species. Habitat loss is one of the key factors impeding salmon recovery across the Pacific Northwest. Undersized and aging culverts that block fish access to crucial spawning and rearing habitat and migration corridors is a critical factor contributing to this problem. The Washington Department of Fish and Wildlife estimates that the total cost of replacing these culverts in Washington State alone is $16 billion. The National Culvert Removal, Replacement, and Restoration Grant Program proposed in the Surface Transportation Investment Act of 2021 is a vital and necessary step toward repairing salmon runs for both people and orca.

Northwest salmon are in trouble, but recovery is still possible—if we take bold and meaningful action now. The National Culvert Removal, Replacement, and Restoration Grant Program (Sec. 1203) of the Surface Transportation Investment Act of 2021 is the kind of transformative action our salmon and orca need.

Thank you for your continuing support of salmon recovery, and congratulations again on this significant milestone.

Sincerely,

Megan Duffy, Director
Recreation and Conservation Office

Jeff Breckel, Chair
Salmon Recovery Funding Board

cc: Senator Patty Murray
Representative Derek Kilmer
Representative Marilyn Strickland

**Attachment C**

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**STATE OF WASHINGTON**

RECREATION AND CONSERVATION OFFICE

June 28, 2021

The Honorable Chellie Pingree
United States House of Representatives
2007 Rayburn House Office Building
Washington, DC 20515

Re: National Culvert Removal, Replacement, and Restoration Grant Program

Dear Representative Pingree:

On behalf of the Washington State Recreation and Conservation Office (RCO), I want to thank you for your leadership on climate, environmental protection, and equity, and strongly urge you to support funding for the Puget Sound Geographic Program at $50M and the National Estuary Program at $50M in the Environmental Protection Agency Federal Fiscal Year 2022 budget. These Programs are vital to the health, well-being, and economic prosperity of Puget Sound and the entire Pacific Northwest region.

Thank you for considering this request and please contact me if you have any questions at: megan.duffy@rco.wa.gov or 360-280-0822.

Sincerely,

Megan Duffy, Director
Recreation and Conservation Office

cc: Senator Maria Cantwell
Senator Patty Murray
Representative Kilmer

**Attachment C**

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**STATE OF WASHINGTON**

RECREATION AND CONSERVATION OFFICE

June 25, 2021

The Honorable Peter DeFazio
United States House of Representatives
2134 Rayburn Office Building
Washington, DC 20515

Re: National Culvert Removal, Replacement, and Restoration Grant Program

Dear Representative DeFazio:

On behalf of the Washington State Recreation and Conservation Office (RCO) and the Salmon Recovery Funding Board (SRFB), we strongly support the National Culvert Removal, Replacement, and Restoration Grant Program (Sec. 1203) of the Surface Transportation Investment Act of 2021. We urge you to include corresponding language for this important program in the INVEST in America Act (H.R. 3684), as reflected in a bipartisan amendment led by Representative Kilmer and supported by Members from across the Northwest.

The RCO and SRFB provide funding for elements necessary to achieve overall salmon recovery, including habitat projects and other activities that result in sustainable and measurable benefits for salmon and other fish species. Habitat loss is one of the key factors impeding salmon recovery across the Pacific Northwest. Undersized and aging culverts that block fish access to crucial spawning and rearing habitat and migration corridors is a critical factor contributing to this problem. The Washington Department of Fish and Wildlife estimates that the total cost of replacing these culverts in Washington State alone is $16 billion. The National Culvert Removal, Replacement, and Restoration Grant Program proposed in the Surface Transportation Investment Act of 2021 is a vital and necessary step toward repairing salmon runs for both people and orca.

Northwest salmon are in trouble, but recovery is still possible—if we take bold and meaningful action now. The National Culvert Removal, Replacement, and Restoration Grant Program (Sec. 1203) of the Surface Transportation Investment Act of 2021 is the kind of transformative action our salmon need, and we urge you to ensure its inclusion in the House version of the act.

Thank you for continuing to champion salmon recovery for the Pacific Northwest.

Sincerely,

Megan Duffy, Director
Recreation and Conservation Office

Jeff Breckel, Chair
Salmon Recovery Funding Board

cc: Senator Maria Cantwell
Senator Patty Murray
Representative Derek Kilmer
Representative Rick Larsen
Representative Marilyn Strickland
Representative Suzan DelBene
Representative Dan Newhouse
Representative Cathy McMorris Rodgers
Representative Pramila Jayapal
Representative Adam Smith

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STATE OF WASHINGTON
RECREATION AND CONSERVATION OFFICE

June 30, 2021

Jeromy Jording
NMFS West Coast Region
7600 Sand Point Way NE
Seattle, WA 98115

Re: Federal Register docket number NOAA-NMFS-2021-0006

Dear Mr. Jording,

In response to the Federal Register docket number NOAA-NMFS-2021-0006 issued on June 1, 2021, I am writing on behalf of the Washington State Governor's Salmon Recovery Office to offer support of Amendment 21 which considers Southern Resident killer whales (SRKW) in fisheries management decisions. SRKW are listed and protected under the Endangered Species Act and lack of prey is one of the primary threat to their survival.

The Pacific Fisheries Management Council (PFMC) established a workgroup to assess the impacts of the Council area fisheries on Southern Resident killer whales. The workgroup included representatives from West Coast tribes, the states of California, Oregon, Washington, and Idaho, the PFMC, and NOAA Fisheries West Coast Region, and NOAA's Northwest and Southwest Science Centers and held multiple public meetings with opportunity for feedback. A biological opinion was completed as well as a draft Environmental Assessment evaluating alternatives.

Amendment 21 would establish a threshold for annual Chinook salmon abundance below which additional management measures, by both the state and federal government, would be implemented to limit the effects of the fisheries on SRKW. This precautionary management recommendation taking Southern Resident killer whales into consideration in fishery decisions is an important step in species recovery. Sufficient prey is critical to the survival of Southern Resident killer whales and one of the primary threats identified in NOAA's SRKW Recovery Plan. Multiple runs of Chinook, key prey species for SRKW, are also listed under the Endangered Species Act. Amendment 21 is consistent with the protection of SRKW. The Pacific Fisheries Management Council is to be commended for finding and using the best available data and for bringing this difficult topic forward in an objective and transparent manner. For the survival of SRKW, it is important to take a multi-faceted approach on actions to improve their prey base. As models and data improve, it will be important to evaluate the effectiveness of the threshold and adjust accordingly.

Sincerely,

Tara Galuska, Orca Recovery Coordinator
Governor's Salmon Recovery Office

cc: JT Austin, Governor's Senior Policy Advisor
Megan Duffy, Director, RCO
Erik Neatherlin, Executive Director, GSRO
Marc Gorelnik, Chair, Pacific Fishery Management Council

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STATE OF WASHINGTON
RECREATION AND CONSERVATION OFFICE

August 3, 2021

Eleanor Ott, P.E.
Washington State Department of Ecology
PO Box 47696
Olympia, WA 98504-7696

Re: Puget Sound General Permit

Dear Ms. Ott,

In response to the open public comment period, I am writing on behalf of the Washington State Governor's Salmon Recovery Office to offer comments in support of the Puget Sound Nutrient General Permit. Both Puget Sound Chinook and the Southern Resident Killer Whale (SRKW) population are listed under the Endangered Species Act and continue to decline. Three of the primary threats to the SRKW identified in both NOAA's Recovery Plan for Southern Resident Killer Whales (*Orcinus Orca*) and in the Governor's SRKW Task Force Recommendations include prey, vessels, and contaminants. While progress has been made in the threats criteria identified in these plans, collectively more needs to be done to save these species.

In March 2018, recognizing the urgency of the threats facing the SRKW population and the unacceptable loss their extinction would bring, Governor Inslee issued Executive Order 18-02 to convene a Southern Resident Killer Whale Task Force. The Task Force met for two years and published two reports: Southern Resident Orca Task Force Report and Recommendations in Year 1; and a Final Report and Recommendations in Year 2. The Year 1 report established goals in increasing Chinook abundance, decreasing vessel disturbance, reducing exposure to contaminants, and ensuring funding and accountability. The Year 2 report summarizes progress on Year 1 Task Force recommendations and added 13 new recommendations, including a new goal of reducing the threat to SRKW from climate change to include ocean acidification. The Puget Sound General Permit is identified as an important action in the recommendations within the overall goal of reducing the exposure of SRKW and their prey to contaminants.

Clean water and prey are critical to the survival of SRKW. Just this week, a 35-year-old male SRKW, K-21 was seen emaciated with a folded dorsal fin and a 'peanut head' condition, and his sudden health decline reminds us about the urgency of implementing the task force recommendations to reduce exposure to contaminants and vessels and to increase prey. Both climate change and water quality will have further impacts to the food web in Puget Sound. It is necessary to act now to improve the quality of water in Puget Sound, so salmon and orca can continue to live here. The balance of the ecosystem is in peril, and good wastewater management is imperative.

I look forward to the continued work of Ecology and its partners on implementing key actions identified in the SRKW Recovery Plan, the Species in the Spotlight Priority Action Plan, and the Task Force recommendations. We need to do all we can to keep water clean for the health of not only salmon and orcas, but for humans as well. I look forward to working in a collaborative and coordinated manner to recover Southern Resident Killer Whales.

Sincerely,

Tara Galuska

Tara Galuska, Orca Recovery Coordinator
Governor's Salmon Recovery Office

cc: JT Austin, Governor's Senior Policy Advisor
Megan Duffy, Director, RCO
Erik Neatherlin, Executive Director, GSRO
Heather Bartlett, Deputy Director, Department of Ecology

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STATE OF WASHINGTON
RECREATION AND CONSERVATION OFFICE

June 17, 2021

Lynne Barre
NMFS West Coast Region
7600 Sand Point Way NE
Seattle, WA 98115

Re: Federal Register docket number NOAA-NMFS-2021-0029

Dear Ms. Barre,

In response to the Federal Register docket number NOAA-NMFS-2021-0029 issued on April 22, 2021, I am writing on behalf of the Washington State Governor's Salmon Recovery Office to offer comments and documentation in support of maintaining the status of endangered for the Southern Resident Killer Whale population. While progress has been made in the threats criteria identified in NOAA's Recovery Plan for Southern Resident Killer Whales (*Orcinus Orca*), collectively the actions are not sufficient to delist this population. In 2016 at the time of the last 5-year status review, there were 78 whales. The population now stands at 75 whales, and the Southern Resident Killer Whales (SRKW) are in critical danger of going extinct. I strongly encourage NOAA to work closely with the tribes, state and federal agencies, and partners and stakeholders in the region to assess Southern Resident Killer Whale status, identify and emphasize critical actions, and leverage the full weight of federal support to put actions on the ground to recover this iconic species. I also encourage you to rely on the work of the Southern Resident Killer Whale Task Force.

Sufficient prey is critical to the survival of Southern Resident Killer Whales and key species are in decline. The update to the statewide strategy to recover salmon will be finalized by the end of summer of 2021. The biennial State of Salmon report was published in 2020 by the Governor's Salmon Recovery Office. Summary data can be found in the State of the Salmon Report.

In March 2018, recognizing the urgency of the threats facing the Southern Resident Killer Whale population and the unacceptable loss their extinction would bring, Governor Inslee issued Executive Order 18-02 to convene a Southern Resident Killer Whale Task Force. The Task Force met for two years and published two reports: Southern Resident Orca Task Force Report and Recommendations in Year 1; and a Final Report and Recommendations in Year 2. The Year 1 report established goals in increasing Chinook abundance, decreasing vessel disturbance, reducing exposure to contaminants, and ensuring funding and accountability. The Year 2 report summarizes progress on Year 1 Task force recommendations and added 13 new recommendations including a new goal of reducing the threat to SRKW from climate change, including ocean acidification. While key NOAA staff participated in the task force, it is

important to document the extensive work and the conservation actions and recommendations of the reports in the public record for the five-year status review public comment process. The reports are submitted with this comment as attachments.

Actions from the SRKW Task Force recommendations were identified and included in the Washington State enacted 2019-2021 budget, and the legislature approved $1.1 billion for implementation. The 21-23 budget has been approved and, once again, includes significant investments for the actions identified by the SRKW Task Force moving forward.

| Funding by Threat | Enacted Budget 2019-2021 | |
|---|---|---|
| Prey | $ | 803,620,000 |
| Vessels | $ | 143,550,000 |
| Contaminants | $ | 186,740,000 |
| Science and Support | $ | 3,550,000 |
| **Total** | **$** | **1,137,460,000** |

Highlights of some of the actions Washington State agencies have accomplished to implement the recommendations of the SRKW Task Force are compiled in a letter to Governor Jay Inslee dated October 16, 2020, in honor of Orca Day in Washington State. The letter is included as attached documentation in this comment. It will be important for NOAA to expand on this work and identify how NOAA can increase its support role for these efforts.

We look forward to continued work with NOAA and partners on implementing key actions identified in the SRKW Recovery Plan, the Species in the Spotlight Priority Action Plan, and the Task Force recommendations. The 5-year status review is an opportunity to evaluate progress and push ahead on critical actions. I look forward to working in a collaborative and coordinated manner to recover Southern Resident Killer Whales.

Sincerely,

Tara Galuska

Tara Galuska, Orca Recovery Coordinator
Governor's Salmon Recovery Office

cc: JT Austin, Governor's Senior Policy Advisor
Megan Duffy, Director, RCO
Erik Neatherlin, Executive Director, GSRO

WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
Salmon Recovery
Funding Board

# Salmon Recovery Funding Board Briefing Memo

Item **4**

**APPROVED BY RCO DIRECTOR MEGAN DUFFY**

**Meeting Date:** September 22-23, 2021

**Title:** Manual 18

**Prepared By:** Kat Moore, Salmon Senior Outdoor Grants Manager


**Summary**

This memo summarizes the proposed administrative revisions and policy changes to *Salmon Recovery Grants Manual 18: Policies and Project Selection*. These revisions incorporate changes suggested through comments submitted by lead entities in their semi-annual progress reports, suggestions from the Technical Review Panel, and clarifications and updates from Recreation and Conservation Office staff.


**Board Action Requested**

This item will be a:
- ☒ Request for Decision
- ☐ Request for Direction
- ☐ Briefing

## Background

*Salmon Recovery Grants Manual 18* contains the instructions and policies needed for completing a grant application for submission to the Salmon Recovery Funding Board (board) and for managing a funded project. The board approves large policy proposals contained in Manual 18; the Recreation and Conservation Office (RCO) director has authority to approve administrative changes and minor policy clarifications.

The board is briefed on the manual so it can be finalized for the start of the grant round. The revisions incorporate changes suggested in comments submitted by lead entities via their progress reports; suggestions from the SRFB Review Panel; and clarifications and updates from RCO staff. RCO also does a survey every two years of sponsors, lead entities, and participants in the annual grant round. The last survey was conducted in 2020.

The proposed policy changes to Manual 18 for 2022 include the addition of Targeted Investments and new riparian buffer requirements. Staff sent drafts of these proposed policies to lead entity and regional staff for comment prior to the board meeting. Feedback will be presented to the board in separate agenda items.

If the policy changes are approved by the board, RCO will update the manual to include both those and Director-approved administrative changes or minor policy changes. The Manual incorporates the updated Grant Schedule for 2021 (Attachment A).

## Manual 18 Changes Proposed for 2022 Grant Cycle

### Administrative Updates and Policy Clarifications

RCO staff has made the following administrative changes and policy clarifications to Manual 18 and the PRISM application:

- **Grant round calendars**. The regional monitoring projects will continue to follow the same grant timeline as the restoration, acquisition, and planning grants. If the SRFB approves the addition of Targeted Investments into the 2022 grant round, then Targeted Investments will also follow the same grant timeline.
- **Road Maintenance and Abandonment Plan (RMAP) projects**. In 2011, the Forest Practices Board extended the deadline for large forest landowners to complete their road work to October 31, 2021. Since this deadline has passed, RMAP projects will no longer be eligible for SRFB or PSAR funding.
- **Cultural Resource Mapping**. In the middle of the 2021 grant round, RCO introduced a new mapping requirement in PRISM. Applicants are now required to map the "Area of Potential Effect," or APE, for the project in PRISM. Applicants are no longer required to include an APE map as a separate attachment.
- **Puget Sound Acquisition and Restoration (PSAR) appendix.** 2022 is a "PSAR round" – meaning RCO and Puget Sound Partnership (PSP) will solicit projects to be funded with funds requested from 2023-25 biennium. The PSAR appendix will be updated to reflect any changes in the PSAR process by PSP and the Puget Sound Salmon Recovery Council.

### Policy Changes

The board is considering two policy changes: Targeted Investments and new Riparian Buffer requirements. See Agenda items 5 (Riparian) and 6 (Targeted) for more detailed information. Note that the targeted investment policy, priority and criteria were approved in prior SRFB meetings and the remaining issue issues are process oriented.

### Review Panel Recommendations

The Review Panel has two recommendations for major policy changes to Manual 18 that RCO staff would like to develop for the 2023 manual update. Both topics include providing more details to the cost-benefit evaluation criteria – for acquisition of upland areas, and the costs and composition of riparian planting.

### Opportunity for Stakeholder Comment

Staff, sponsors, lead entities, and regions provide feedback throughout the year, which RCO then uses to propose administrative changes. Staff also receives feedback from lead entities through the lead entity progress reports. To prepare for future grant cycles, RCO conducts a sponsor survey every two years. Staff received feedback from the survey in November 2020, and discussed the results of the survey with the Washington Salmon Coalition in January 2021.

## Next Steps

After the SRFB meeting, staff will add any policy changes approved by the board into the manual. Staff will circulate an updated draft of the manual to the lead entities and regions for their review before publishing. Staff expects to release the updated manual in early December 2021. Staff will put the 2022 grant round calendar on the RCO website after approval at the September board meeting.

## Strategic Plan Connection

https://www.rco.wa.gov/documents/strategy/SRFB_Strategic_Plan.pdf

Briefing the board on administrative changes in Manual 18 supports **Goal 1:** Fund the best possible salmon recovery activities and projects through a fair process that considers science, community values and priorities, and coordination of efforts. By sharing information about Manual 18, the board and partners are aware of how projects proceed through the grant round process for funding.

## Actions requested

Motion: Move to accept the 2022 Grant Round Timeline.

## Attachments

A. Grant Round Timeline

# 2022 Grant Schedule

## Salmon Grants

**Please obtain the lead entity's schedule from the lead entity coordinator.**

| Date | Action | Description |
|---|---|---|
| January–April | Complete project application materials submitted at least 2 weeks before site visit **(required)** | **At least 2 weeks before the site visit,** applicants for all projects, including regional monitoring projects, must submit a complete application in PRISM (See Application Checklist). The lead entity provides applicants with a project number **before** work can begin in PRISM. |
| **Track 1** **February** 1–March 18 -Or- **Track 2** **April** 4–May 13 | Site visits **(required)** | RCO screens all applications for completeness and eligibility. The SRFB Review Panel evaluates projects using Manual 18, Appendix F criteria. RCO staff and review panel members attend lead entity-organized site visits. *Site visits may be virtual.* |
| March 23 | SRFB Review Panel meeting | Track 1: SRFB Review Panel and RCO staff meet to discuss projects and complete comment forms for projects visited in February and March. |
| April 1 | **First comment form** For February and March site visits | Track 1: Applicants receive SRFB Review Panel comments identifying projects as "Clear," "Conditioned," "Needs More Information," or "Project of Concern." RCO staff accepts "Clear" applications and returns "Conditioned," "Needs More Information," and "Project of Concern" applications so applicants may update and respond to comments. The Monitoring Panel will provide comments for monitoring projects. |
| April 12 & 13 | Conference call (Optional) | Track 1: Lead entities may schedule a 1-hour conference call with project applicants, RCO staff, and one SRFB Review Panel member to discuss "Needs More Information," "Project of Concern," or "Conditioned" projects. |
| May 18 | SRFB Review Panel meeting | Track 2: SRFB Review Panel and RCO staff meet to discuss projects and complete comment forms for projects visited in April and May. |
| May 25 | **First comment form** For April and May site visits | Track 2: Applicants receive SRFB Review Panel comments identifying projects as "Clear," "Conditioned," "Needs More Information," or "Project of Concern." RCO staff accepts "Clear" applications and returns "Conditioned," "Needs More Information," and "Project of Concern" applications so applicants may update and respond to comments. The |

| | | |
|---|---|---|
| | | Monitoring Panel will provide comments for monitoring projects. |
| June 7 & 8 | Conference call (Optional) | Track 2: Lead entities may schedule a 1-hour conference call with project applicants, RCO staff, and one SRFB Review Panel member to discuss "Needs More Information," "Project of Concern," or "Conditioned" projects.. |
| **June 27, Noon** | **Due Date:** Applications due | Applicants submit final revised application materials via PRISM. All projects, including monitoring and Targeted Investment, must be submitted by this date. See Application Checklist. |
| July 13 & 14 | SRFB Review Panel meeting | SRFB Review Panel and RCO staff meet to discuss projects and complete final comments. SRFB Review Panel will score Targeted Investment projects. |
| July 21 | **Final comment form** | Applicants receive the final SRFB Review Panel comments, identifying projects as "Clear," "Conditioned," or "Project of Concern." The Monitoring Panel will provide final comments for monitoring projects. |
| August 8 | **Due Date**: Accept SRFB Review Panel condition | Applicants with Conditioned projects must indicate whether they accept the conditions or will withdraw their projects. |
| August 12 | **Due Date**: Lead entity ranked list | Lead entities submit ranked lists via PRISM. |
| August 19 | **Due Date:** Regional submittal | Regional organizations submit their Regional Area Summary and Project Matrix. |
| September 7 | Final grant report available for public review | The final funding recommendation report is available online for SRFB members and public review. |
| September 21 and 22 | Board funding meeting | SRFB awards grants. Public comment period available. |

WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
Salmon Recovery
Funding Board

# Salmon Recovery Funding Board Briefing Memo

Item **5**

**APPROVED BY RCO DIRECTOR MEGAN DUFFY**

**Meeting Date:** September 22, 2021

**Title:** Riparian Guidance for Manual 18

**Prepared By:** Erik Neatherlin, GSRO Executive Coordinator
Jeannie Abbott, Lead Entity Program Manager
Kat Moore, Senior Salmon Outdoor Grants Manager


**Summary**
This memo summarizes the state-tribal riparian workgroup and the next steps for modifying the board policy.


**Board Action Requested**
This item will be a:
☒ Request for Decision
☐ Request for Direction
☐ Briefing

## Introduction/Background

In 2013, the Salmon Recovery Funding Board began considering minimum buffer width requirements for its riparian planting projects, and whether to incentivize wider buffer requirements through match requirements. Between the March 2014 and June 2014 meetings staff gathered public comment on statewide riparian width guidelines. At the June 2014 board meeting, staff presented the public feedback on riparian widths. Staff recommended maintaining its current process for evaluating riparian planting projects until new or revised guidelines were developed by the Washington Department of Fish and Wildlife (WDFW) and to pursue additional methods to incentivize private landowners to allow salmon recovery projects on their property. The board agreed with the staff recommendation at that time.

During, the 2019 Centennial Accord meeting, the Governor committed to tribal leaders that he would form a state-tribal work group to recommend an approach to riparian protection. WDFW finalized their riparian guidance in 2020. This is contained in two volumes on *Riparian Ecosystems*. *Volume 1* summarizes the science and *Volume 2* provides management recommendations. In response to the state-tribal work group

effort and the release of the WDFW riparian guidance, Director Cottingham briefed the Salmon Recovery Funding Board (board) in November 2020 about riparian area width requirements for funded projects (Attachment A: SRFB memo November 2020).

Following the November 2020 SRFB meeting, staff prepared draft documents that proposed standard width measurements for the board riparian planting projects.

Staff sent drafts to the regional organizations and lead entities to seek feedback. Based on the response to the proposals, members of the board subcommittee, Jeff Breckel, Stephen Bernath, Brian Cochrane, and staff drafted a second and then final proposal. The differences in the proposals are listed below in Table 1.

| **Proposal Elements** | **Existing Grant Language** | **Initial Proposal** | **2nd Proposal** | **Final Proposal** |
|---|---|---|---|---|
| **Riparian Standard** | No riparian standard | 200-yr SPTH | 200-yr SPTH goal<br>Minimum width (consistent with NOAA and Ecology)<br>• 100' west<br>• 75' east | 200-yr SPTH<br><br>(All applicants are encouraged to meet SPTH riparian standard) |
| **Match Requirements** | 15% match for all projects | 15% = Above SPTH<br><br>35% = Below SPTH | 0% = Above SPTH<br><br>15% = Below minimum width | 0% = Above SPTH<br><br>15% = Below SPTH |
| **Screening Process for Flagging Project** | No separate screening process for riparian projects | Flagged as Project of Concern (POC) if less than SPTH | Flagged as POC if buffer is less than minimum width (100'/75') | Flagged if included on the State's CWA section 303(d) list of temperature impaired streams |
| **Requirements When Project is Flagged** | None | For all POCs require written justification | If less than minimum width, requires justification + letter (WDFW biologist/Tribal biologist) | If on CWA 303(d) list and less than SPTH, requires justification + letter (WDFW biologist/Tribal biologist) |

Section 2 of Manual 18 includes eligible project types. Manual 18 identifies the following types of restoration projects: In-stream fish passage; In-stream Diversion; In-stream and

Floodplain Habitat; Riparian Habitat; Upland Areas; and Estuarine and Marine Nearshore. The Recreation and Conservation Office (RCO) is proposing to update the guidance and requirements for projects whose primary purpose is riparian plantings. RCO is also proposing to update the board Evaluation Criteria to include the proposed riparian width, and to add a question to the application for riparian projects asking "Is the primary activity of the project riparian planting?"

The proposed buffer widths are applicable to projects where riparian planting is the primary purpose. The following proposed Manual 18 language and appendix explain the details of the guidance.

Staff recommend that the board adopt the riparian guidance as a pilot project for three years. A pilot will allow staff to track how many riparian planting projects are funded, the width of those projects, and location.

## Updated Text for Manual 18

Updated Section 2, Eligible Applicants and Projects:

**Riparian Habitat** includes freshwater, marine nearshore, and estuarine activities that will improve the riparian habitat outside of the ordinary high-water mark or in wetlands. Activities may include planting native vegetation; managing invasive species; or controlling livestock, vehicle, and foot traffic within project areas.

- Knotweed Control – Applicants proposing knotweed control as an element of their projects should answer the knotweed questions identified in the restoration proposal. The width of the replanted treated area does not need to meet riparian buffer width requirements for eligibility.
- Stewardship Projects – To ensure the success of riparian habitat projects, applicants may propose stand-alone stewardship for previously installed riparian habitat projects. Sites may be previously funded SRFB projects or other similar riparian habitat planting sites. Eligible activities in stewardship projects may include managing invasive species, replacing unsuccessful plantings, supplementing the site with water, or installing fences or other browse-protection methods. RCO encourages sponsors to follow the guidance for riparian buffer widths described below.
- Riparian plantings – Applicants should refer to Appendix K for requirements on riparian buffer planting widths. For projects where riparian planting is the primary purpose, minimum buffer widths are required. If the primary purpose of the project is not riparian planting, rather the primary purpose is another eligible worktype (i.e., instream restoration, or fish passage) and the riparian plantings

provide an ancillary benefit, the minimum planting width is not required but is recommended.

# Appendix K: Riparian Planting Projects

## Restoring Riparian Habitat

RCO has adopted riparian buffer width standards for applications with riparian planting as the primary purpose. RCO seeks to provide funding for projects that can restore healthy, functioning riparian ecosystems, which are fundamental for clean water, healthy salmon populations, and climate resilient watersheds. RCO requires the minimum buffer widths recommended by Washington State Department of Fish and Wildlife's 2020 *Riparian Ecosystems, Volume 2: Management Recommendations* (*Volume 2*).

## Guidance Documents

Washington Department of Fish and Wildlife's 2012 *Stream Habitat Restoration Guidelines* and the 2020 *Riparian Ecosystems, Volume 2: Management Recommendations* (*Volume 2*). *Volume 2* identifies two types of ecosystems in Washington: forested ecoregions and dryland ecoregions. In general, forested ecoregions dominate western Washington, northeastern Washington, and portions of southeast, north central, and the eastern Cascades. Dryland ecoregions are more readily contained in the Columbia Plateau Ecoregions east of the Cascade Range.

To achieve full riparian function in forested ecoregions, *Volume 2* recommends that planted riparian widths should be one 200-year Site Potential Tree Height (SPTH) measured from the edge of the active channel or active floodplain. For dryland ecoregions, *Volume 2* recommends the planted riparian width should be one 200-year Site Potential Tree Height (SPTH) if available, or the width of the riparian vegetation community. WDFW has developed an online mapping tool to help determine the SPTH for any site.

## Buffer Width Requirements

For applications with the primary purpose of riparian planting, RCO requires the planted riparian buffer meet the widths outlined in Washington Department of Fish and

Wildlife's 2012 *Stream Habitat Restoration Guidelines* and the 2020 *Riparian Ecosystems, Volume 2: Management Recommendations* (*Volume 2*).

For forested ecoregions, the planted riparian width should be one 200-year Site Potential Tree Height (SPTH) measured from the edge of the active channel or active floodplain.

For dryland ecoregions, the planted riparian width should be one 200-year Site Potential Tree Height (SPTH) if available, or the width of the riparian vegetation community. If site conditions do not support tree species or SPTH is less than 100 feet, then the riparian width is determined by the full extent of all riparian vegetation (the riparian zone) or a minimum of 100 feet.

If the primary purpose of the project is not riparian planting, rather the primary purpose is another eligible worktype (i.e., instream restoration, or fish passage) and the riparian planting provide an ancillary benefit, the minimum planting width is not required but is recommended. For example, streambank stabilization cannot be a primary project, e.g.,if a project has both, then riparian planting is the primary purpose.

Applicants, lead entity evaluators, and the SRFB Review Panel should ensure planted riparian widths are appropriate for the site and represent a clear benefit to salmon recovery as articulated in the regional recovery plans. The SRFB Review Panel uses the SRFB Evaluation Criteria, Appendix F, to review each project.

## Exceptions to the Buffer Requirement

RCO recognizes it's not possible to meet a one-size-fits-all requirement at each site. Most riparian planting projects funded by RCO are located on private lands. Private landowners are essential partners to these projects who voluntarily allow riparian plantings on their property to support salmon recovery efforts. Some landowners are not able to offer a wide enough area to meet 200-year SPTH, but still want to participate in restoration. Sponsors are encouraged to apply even if their project does not meet the 200-year SPTH.

For streams listed for temperature on the 303(d) list, the sponsor must provide adequate justification as to why the requirements cannot be met and how the project still restores riparian function. If a project does not meet the 200-year SPTH, the applicant must:

- Provide an exception including: the presence of a structure or property line; road or railway, pipeline, powerline, or other utility; or topography that impedes the ability to meet minimum width requirements.
- If an exception does not apply, then the sponsor must provide the following:
    - Justification that the planting project still achieves the goal of restoring riparian function (i.e., continuity, shade, pollution removal, contributions of detrital nutrients, recruitment of large woody debris, and bank stability, etc.).
    - A letter of support for the project from either:
        - Natural resource management tribal biologist whose Usual and Accustomed areas include the project location or
        - Washington Department of Fish and Wildlife habitat biologist.

For riparian planting projects less than 200-year SPTH and not on streams listed for temperature on the 303(d) list, the project will be reviewed by the local technical advisory group and the state review panel for riparian function.

**Match Requirements**

For projects that meet SPTH from the active channel or floodplain match is not required. For projects that cannot meet the minimum buffer width, the minimum match required is 15%.

Update to Appendix F: SRFB Evaluation Criteria:

Additional Criteria for Riparian Planting Projects

For riparian planting projects, if a project does not meet the required minimum buffer width, the SRFB Review Panel will evaluate the project based on the site-specific conditions and determine whether the proposed width can provide riparian function, will provide a benefit to salmon recovery, and achieves goals as articulated in the regional recovery plans.

**Metrics Collected in PRISM**

Currently collected for riparian planting project at the "worksite" level:

- Total cost for planting
- Species of plants planted in riparian
- Acres planted in riparian
- Miles of streambank planted

- Average riparian width *(in feet, what is the average post-project width of the riparian area {including pre-project and planted vegetation} from the top of the streambank to the edge of the planted or vegetated area {e.g., if the average pre-project riparian width is 15' and is expanded by 70', the average post-project riparian width would be 85'}. Do not include the width of areas up or downstream of your planting site in your calculation)*

**Questions to add in PRISM, restoration supplemental questions**

Is the primary activity of the project riparian planting? Yes / No

- If the applicant chooses "Yes" then they will be required to answer the following questions:
    - Will you meet or exceed SPTH? (add info icon explaining this)
    - Is your project on a 303(d) listed stream for temperature?
    - If yes, then:
        - What is the proposed buffer width?
        - Provide justification that the reduced width provides restored riparian function.
        - Does the project meet an exception? Drop down with (none; structure or property line; road or railway, pipeline, powerline, or other utility; or topography)
        - If none, then a note about requiring an attached letter of support.

## Actions requested

**Motion:** Move to adopt the Manual 18 riparian guidance as a pilot program for 3 years.

## Strategic Plan Connection

Goal 1: Fund the best possible salmon recovery activities and projects through a fair process that considers science, community values and priorities, and coordination of efforts.

RCO Strategic Plan (wa.gov)

## Attachments

Attachment A - SRFB memo November 2020

## Attachment A – Memo from November 2020

### APPROVED BY RCO DIRECTOR KALEEN COTTINGHAM

**Meeting Date:** November 19, 2020

**Title:** State-Tribal Riparian Workgroup Update and Next Steps for Modifying Board Policy

**Prepared By:** Kaleen Cottingham

**Summary**
This memo summarizes the state-tribal riparian workgroup and the next steps for modifying the board policy.

**Board Action Requested**

This item will be a:
- ☐ Request for Decision
- ☐ Request for Direction
- ☒ Briefing

## Introduction/Background

In December 2013, staff briefed the Salmon Recovery Board (board) about riparian area width requirements for funded projects. This was triggered by a request by NOAA that our funded projects meet minimum riparian width recommendations (See Attachment A: SRFB memo December 2013). At the time, WDFW was beginning to review the scientific literature in advance of updating the Stream Habitat Restoration Guidelines developed in 1997. The question before the board in December 2013 was whether the board should require minimum riparian widths for its riparian habitat restoration projects.

Following a staff presentation and testimony, the board asked for data on previously funded projects and to return to discuss next steps in March 2014 (see Attachment A: board minutes December 2013).

In March 2014, staff presented the analysis of the riparian widths on projects recently funded by the board. At the time, NOAA was recommending 100' riparian widths on each side of fish bearing streams and 50' on non-fish bearing streams. In the analysis of 2014 board-funded projects, most of the riparian projects met or exceeded the riparian widths recommended by NOAA (see Attachment B: Memo 5, March 2014).

At the March 2014 meeting, staff recommended the board adopt a policy that applies NOAA's recommended riparian widths as a guideline for projects with a riparian habitat objective in Puget Sound, with a sponsor providing justification if a project had a smaller

riparian width. Additionally, staff recommended the board adopt a policy to encourage project sponsors to pursue riparian conservation easements to compensate landowners who volunteer to use their property for a riparian habitat project.

Following testimony at the March 2014 meeting, the board asked staff to collect public comment on statewide riparian width guidelines (see Attachment B: minutes of the March 2014 board meeting).

At the June 2014 board meeting, staff presented the public feedback on riparian widths (see Attachment C: memo 13 June 2014 board meeting). Staff recommended maintaining its current process for evaluating riparian restoration projects until new or revised guidelines are available from WDFW and to pursue additional methods to incentivize private landowners to allow salmon recovery projects on their property.

Since then, WDFW has been working to finalize their guidance on riparian areas. This is contained in two volumes on Riparian Ecosystems. Volume 1 summarizes the science and volume 2 provides management recommendations. In 2018, WDFW finalized volume 1, Science Synthesis and Management Implications and they expect to finalize volume 2 in 2020. Volume 2 contains the Management Recommendations.

At the 2019 Centennial Accord meeting, the Governor committed to Tribal leaders to form a state-tribal work group to recommend an approach to riparian protection. That workgroup has been convened and is working to develop recommendations for the Governor and tribal leaders this fall.

One of the likely recommendations to the Governor will relate to ensuring that grant funded projects meet or exceed best available science and that those projects protect riparian ecosystem functions important to salmon. Currently, the science (in volume 1) suggests that riparian ecosystems and associated aquatic systems benefit most when the riparian ecosystem is as wide as site potential tree height at 200 years of age or older. Site potential tree height is a technical term from the scientific literature that defines riparian ecosystem functions that increase as the buffers get wider, eventually reaching a plateau where the riparian habitat is fully functioning (i.e., meets functions such as providing: shade that cools water, woody debris, stream bank protection, inputs of nutrients, and filtering of pollution from upslope sources). The literature suggests that fully functioning riparian conditions are achieved when the area of protection (refer to this as either the riparian management zone (RMZ) or riparian ecosystem) is at least as wide as the site potential tree height. Depending on soil and climate and other local factors, the site potential tree height at 200 years can range from 50 feet to beyond 300 feet. For reference and perhaps most pertinent for the board, the science document

summarizes that fully functioning habitat conditions for large woody debris is reached at a range of 100-240 feet depending on the soil type and tree species.

In anticipation of recommendations from the Governor and tribal leaders, the question for the board to discuss is how best to incorporate the best available science into the requirements or guidance we give to our grant applicants and whether to incentivize wider riparian areas through our match requirements.

WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
Salmon Recovery
Funding Board

# Salmon Recovery Funding Board Briefing Memo

Item 6

**APPROVED BY RCO DIRECTOR MEGAN DUFFY**

**Meeting Date:** September 22-23, 2021

**Title:** Targeted Investments Manual 18 Updates

**Prepared By:** Katie Pruit, Planning and Policy Specialist


**Summary**
This memo includes Manual 18 procedures and criteria to guide the implementation of the Targeted Investments policy. Stakeholder input is summarized.


**Board Action Requested**

This item will be a:
- ☒ Request for Decision
- ☐ Request for Direction
- ☐ Briefing

## Introduction/Background

In 2022, the board anticipates funding a new salmon recovery program called Targeted Investments. The Targeted Investments grant program was created by a board policy adopted September 16, 2020. A targeted investment is a project that addresses a board-identified priority to accelerate progress towards achieving salmon recovery. The board may choose one or more Targeted Investment priorities each biennium. For the 2022 grant round, the board chose Southern Resident orca recovery to protect salmonid production in areas deemed critical to successful orca feeding.

The board may fund targeted investments if annual grant round funding is available above the status-quo appropriation. After reviewing the biennial budget at the June 2, 2021 meeting, the board moved to increase the 2022 annual status quo allocation from $18 to $20 million and fund targeted investments at $3.7 million. Although only state funds will be used to fund Targeted Investments, the funding decision is contingent on receiving the PSCRF award which will be awarded next June.

This memo includes proposed Manual 18 procedures and criteria to guide the implementation of the Targeted Investments policy.

## Implementation Overview

The Targeted Investments funding program is proposed as a new appendix to Manual 18. The proposed changes are informed by the board adopted policy and fulfill the board's duty to develop procedures and criteria for the allocation of funds[1]. The proposed Manual 18 changes are included as Attachment A.

In general, the 2022 Targeted Investments funding program follows the annual board funding timeline and general process of preliminary application submittal, site visits, technical review, and feedback. The lead entity must endorse the project, and it must be entered in the salmon recovery portal.

The application process differs from the regular grant round in that only one project may be promoted by each region. The final revised application is due no later than late June (proposed June 27, 2022) to ensure adequate time for Review Panel scoring of the highest priority project in each region.

Another unique feature of the program is how projects are evaluated. Each Targeted Investment project will be scored by the Review Panel using evaluation criteria included in the new appendix to Manual 18. The board approved the criteria at the June 2, 2021 meeting.

The board will make the final decision on which project(s) to fund at the September 2022 funding meeting. The Review Panel will provide the board with a list of scored projects. The board will determine which project(s) to fund fully or partially, depending upon overall project cost. This will safeguard the policy intent to fund high priority project(s) that may not otherwise be possible.

## Stakeholder Input

Staff provided a draft of the Manual 18 changes to the technical Review Panel, the regional recovery organizations, and lead entity coordinators, and allowed 30-days to submit comments. Written comments were received from several regional recovery organizations and one lead entity coordinator.

[1] RCW 77.85.130(1)

## Stakeholder Comment Summary

1) Inconsistency between the policy language for Orca (ESA-listed salmon pops) and the evaluation criteria (includes several non-listed stocks).

   Staff Recommendation: *"ESA-listed" has been removed from the definition of the Orca recovery priority. At the June 2, 2021 meeting, the board adopted Orca recovery evaluation criteria based on NOAA Fisheries and WDFW (2018) SRKW Priority Chinook Stocks Report. Staff do not recommend a change to the evaluation criteria because the NOAA/WDFW report is best available science for prey source (salmon stocks) for Orca recovery. We also amended the species benefit evaluation criteria to reflect this change.*

2) Concerns about how the Targeted Investments process aligns with the local grant process.

   Staff Recommendation: *Staff recommend a parallel process for Targeted Investment applications that follow the existing grant round schedule. We understand this is not ideal for some regions based on their existing process of review. We made some adjustments (such as allowing more than one application for preliminary review) to provide more time for the regions to select one priority project.*

3) Confusion about whether or not Lead Entities are ranking projects.

   Staff Recommendation: *Clarification has been added to Manual 18 that lead entities are not ranking projects. The region should work with the lead entity at the earliest stages of application to ensure the project follows the lead entity preliminary review timeline and will be endorsed by the lead entity.*

4) Disagreement with some of the evaluation criteria and confusion about how it relates to the Orca recovery priority.

   Staff Recommendation: *We added one sentence to clarify all evaluation criteria will be scored based on its benefit to orca prey salmonids. The technical Review Panel accepted the criteria and felt confident they could apply it to scoring applications. The board has reviewed and adopted the evaluation criteria.*

## Board Motion

**Move** to approve the Targeted Investments Program procedures and criteria.

## Next Steps

Once approved, staff will include the approved procedures as an Appendix to Manual 18.

## Strategic Plan Connection

The draft policy supports **Goal 1** of the board's strategic plan: Fund the best possible salmon recovery activities and projects through a fair process that considers science, community values and priorities, and coordination of efforts.

https://www.rco.wa.gov/documents/strategy/SRFB_Strategic_Plan.pdf

## Attachments

**Attachment A** - Manual 18 - Targeted Investments Program

# MANUAL 18
# APPENDIX J:
# TARGETED INVESTMENTS PROGRAM

The Salmon Recovery Funding Board (SRFB) adopted a policy enabling Targeted Investments on September 16, 2020.

A Targeted Investment is a project that addresses a SRFB-identified priority to accelerate progress towards achieving salmon recovery. The general parameters of the policy are to fund Targeted Investments if: 1) the annual regional status quo allocation[1] has been met, 2) the project addresses one or more strategic priorities as determined by the SRFB, and 3) the project cannot be funded within the current allocation or sub-allocation to lead entities. Proposals are submitted by the salmon recovery regional organization (also referred to as "region") and must be endorsed by the lead entity.

The policy, described in this appendix, is inspired by several years of SRFB discussions and the piloting of Targeted Investments in 2019.

## PROCESS OVERVIEW

Each biennium the SRFB determines if there are funds available and chooses one or more policy priorities to target investments. If funding is available, project applications will be accepted during the regular grant round of the second year of the biennium (even years). Each salmon recovery region may promote one project application. The application must be submitted no later than June 27, 2022; the date final revised applications are due according to the 2022 SRFB grant schedule. Applications must meet all regular salmon recovery project application requirements.

Targeted Investments must be endorsed by the lead entity, but they are not part of the annual lead entity ranking process. The project will follow the initial review timeline of the lead entity where the project is located. However, once the preliminary review panel process is complete, the regional recovery organization must select one project for final submittal by the June 27 due date.

On June 2, 2021, the SRFB determined funding is available for Targeted Investments in the 2021-2023 biennium and selected one policy priority: **Southern Resident orca recovery**. The 2021-2023 Targeted Investments project review process will be conducted during the 2022 annual SRFB grant round and will include the steps outlined below.

[1] Status-quo refers to an $18 million annual grant round allocation. The annual allocation is a combination of federal and state funds.

### PROJECT SUBMITTAL:

Each salmon recovery region may promote one final project application, according to the 2022 SRFB grant schedule timeline. Applicants must follow the application timelines and requirements for the 2022 grant round outlined in this manual, and by the lead entity where the project is located.. Targeted Investment projects must also satisfy additional requirements described in this appendix and found in the application questions in PRISM.

### EVALUATION AND REVIEW PROCESS:

Applications will follow Steps 1 through 4 established in *Section 3: How to Apply of this manual*.

Applications will follow *Section 4: SRFB Evaluation Process of this manual*. This includes review of projects by the SRFB Review Panel for technical merit. Applications may have additional review as determined by the lead entity or region and must be submitted no later than the date indicated on the 2022 SRFB calendar. In addition, each Targeted Investment project will be scored by the Review Panel using the evaluation criteria included in this appendix. A list of scored projects will be provided to the SRFB. The SRFB will make the final decision on which project(s) to fund.

### AWARD ADMINISTRATION:

The SRFB will approve funding for one or more Targeted Investments at the September 2022 meeting. Targeted Investment awards will be administered through contracts between project sponsors and the Recreation and Conservation Office.

## FUNDING AND PRIORITY DETERMINATION

### 2021-2023 FUNDING

The SRFB may request project proposals for Targeted Investments, only if funding remains after allocating the annual statewide status quo funding of $18 million. Status quo funding is a combination of the state capital budget and the Pacific Coastal Salmon Recovery Fund.

On June 2, 2021, the SRFB approved a $20 million grant round in 2021, thereby meeting and exceeding the status quo allocation of $18 million. In addition, the SRFB determined up to $3.7 million is available for Targeted Investments.

Projects may be proposed to the SRFB with a combination of Targeted Investment funding and other SRFB awarded funds (regular SRFB funds, PSAR funds, or PSAR large cap funds), but these funding sources may not be used to fulfill Targeted Investment project matching requirements. The same project may simultaneously apply for multiple fund sources (e.g., apply for Targeted Investments, and also be included on the lead entity ranked list). Applicants seeking funding from multiple funding sources should work closely with their RCO grant manager and lead entity coordinator to determine the best way to structure the application and funding. PRISM will track each fund separately to ensure the SRFB and partners can account for the use of the funds.

## PRIORITIES

Each biennium, the SRFB will adopt one or more Targeted Investment priority from the list below.

**Approaching recovery**: The investment improves habitat for an Endangered Species Act-listed species nearing recovery goals, as set by the National Marine Fisheries Service status reviews. The Targeted Investment would address an outstanding habitat restoration and/or protection issue or threat that, if corrected, would move the listed species closer to the recovery goal.

**Southern Resident orca recovery**: The investment focuses on actions that benefit natural origin salmon populations that are a high priority in the Southern Resident orca task force recommendations.

**Populations at risk**: The investment focuses on improving habitat for endangered, threatened, or non-listed populations in decline or at-risk of extinction, where at-risk populations are identified by indicators such as fishery closures or updated status reviews.

**Future threat abatement**: The investment focuses on removing or contributing to the abatement of a threat that will nullify recovery efforts (e.g., climate change, predation).

**Emergency response**: The investment focuses on advancing salmon habitat protection and restoration in watersheds that have experienced natural and/or anthropogenic disasters that have or will result in significant adverse impact on a population.

## PROJECT ELIGIBILITY

Each regional recovery organization may submit only one project for SRFB consideration that meets the biennial priority(ies). In addition to the eligibility requirements found in *Section 2: Eligible Projects*, of this manual, each project proposal must satisfy all of the following eligibility criteria:

1. Address a SRFB-selected Targeted Investment priority.
2. Improve long-term habitat quality and productivity, and therefore resiliency, of salmonids.
3. Advance a project that cannot be funded by the current sub-allocation to lead entities or the current regional allocation*.
4. Leverage additional funds (not including federal Pacific Coastal Salmon Recovery Fund).
5. Restore and/or acquire habitat (may include design).
6. Letter of support from the lead entity where the project is located.
7. The only project selected by a salmon recovery region for funding.

* If the proposal is under the regional allocation, a letter of justification from the region must be included in the application.

## MATCH

Consistent with all SRFB salmon recovery grants, applicants must provide money or resources to match a minimum of 15% or more of the grant, from non-SRFB administered funds. The additional leveraged funds required under eligibility criteria, may be used to satisfy the match requirement.

# EVALUATION AND TECHNICAL REVIEW PROCESS

## TECHNICAL REVIEW

Targeted Investments will initially be reviewed by an RCO grants manager to ensure the proposed application is complete and the project meets the minimum eligibility criteria. Applicants must follow the preliminary application review timeline of the lead entity where the project is located to ensure the project application materials are submitted at least two weeks before SRFB Review Panel site visits and initial review. After the site visits, the SRFB Review Panel will indicate whether a project is clear, conditioned, needs more information (NMI), or a project of concern (POC). Project with a status of NMI or POC will be returned to applicants and given an opportunity to answer questions and comments, and resubmit. Projects will be re-reviewed after the final application is submitted June 27, 2022. Only one project per salmon recovery regional organization is considered for final review by the SRFB Review Panel. The SRFB Review Panel will indicate whether the project is cleared or conditioned for funding, or whether it remains a POC and is not recommended for funding. See Sections 3 and 4 of this manual for more details on the technical review.

## SCORING BY REVIEW PANEL

The Review Panel will score final applications using the Targeted Investments evaluation criteria. No more than one project per region will be scored. The scoring will be used to create a list to be presented to the SRFB. The scoring will occur after the final application deadline in late June once projects have been cleared or conditioned through the review process. Projects that are identified as a final status project of concern (POC) will not be scored or recommended for funding.

## ROLE OF THE SRFB

In addition to setting priorities and determining the availability of funds, the SRFB has the authority to fund Targeted Investments.

The SRFB will determine a project eligible for Targeted Investments funding by considering the following:

1. Meets all eligibility criteria,
2. Meets all evaluation criteria,
3. Is not designated a Project of Concern, and
4. Receives an evaluation score from the SRFB Review Panel.

If more than one project receives the highest score, or the top two or more projects are scored within 3 points, the SRFB may consider the following:

1. Leveraged funds. The amount and source of leveraged funds (i.e., how much additional funding the applicant brings to the project).

2. Critical in sequence. How critical the project is within a sequence of related project. Is the completion of the Targeted Investment project key to achieving the goals of a larger, overall project?

The highest priority project will be funded first. The SRFB will not partially fund more than **one** Targeted Investments project proposal per biennium. For a project to be fully funded the requested project funding has been met with any of the following funding sources: SRFB, PSAR, or PSAR large cap. For example, a 3-million-dollar project may only need an additional 1 million from Targeted Investments to be fully funded.

## EVALUATION CRITERIA

Each project will be evaluated for technical merit using the evaluation criteria in the PRISM application and the scoring criteria developed for Targeted Investments. The applicant's proposal will address how they meet the criteria for acquisition and restoration projects (see Criteria 1-13 established in Appendix F of this manual) and planning projects. In addition, the applicant's proposal will address the scoring criteria listed below. The criteria evaluate Targeted Investments priority benefit, species and habitat benefit, likelihood to succeed, and cost. The highest score possible is 60 points. The priority benefit for the 2022 grant round is Southern Resident orca recovery. The most competitive proposals will protect salmonids in areas determined critical to successful feeding for orca. This means the entire application will be scored based on its benefit to orca recovery.

<table>
<tr><th colspan="3">Priority Benefit – 10 points</th></tr>
<tr><td>Orca recovery benefit</td><td>0-10 based on ESU</td><td>The project focuses on habitat actions that benefit natural origin salmon populations that are a high priority in the Southern Resident orca task force recommendations. Proposals that protect salmonid production in areas determined critical to successful feeding will receive the highest score. Scores based on NOAA Fisheries and WDFW (2018) SRKW Priority Chinook Stocks Report.
<table>
<tr><th colspan="3">Chinook ESU/Stock Group</th><th>Score</th></tr>
<tr><td>Northern Puget Sound</td><td>Fall</td><td>Nooksack, Elwha, Dungeness, Skagit, Stillaguamish, Snohomish</td><td>10</td></tr>
<tr><td>Southern Puget Sound</td><td>Fall</td><td>Nisqually, Puyallup, Green, Duwamish, Deschutes, Hood Canal systems</td><td>10</td></tr>
<tr><td>Lower Columbia</td><td>Fall</td><td>Fall Tules and Fall Brights (Cowlitz, Kalama, Clackamas, Lewis, others)</td><td>10</td></tr>
<tr><td>Upper Columbia & Snake Fall</td><td>Fall</td><td>Upriver Brights</td><td>8</td></tr>
<tr><td>Lower Columbia</td><td>Spring</td><td>Lewis, Cowlitz, Kalama, Big White Salmon</td><td>8</td></tr>
<tr><td>Middle Columbia</td><td>Fall</td><td>Fall Brights</td><td>8</td></tr>
</table>
</td></tr>
</table>

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Snake River | Spring-Summer | Snake, Salmon, Clearwater | 8 | |
| | | Northern Puget Sound | Spring | Nooksack, Elwha, Dungeness, Skagit (Stillaguamish, Snohomish) | 8 | |
| | | Washington Coast | Spring | Hoh, Queets, Quillayute, Grays Harbor | 7 | |
| | | Washington Coast | Fall | Hoh, Queets, Quillayute, Grays Harbor | 7 | |
| | | Middle & Upper Columbia Spring | Spring | Columbia, Yakima, Wenatchee, Methow, Okanagan | 7 | |
| | | Southern Puget Sound | Spring | Nisqually, Puyallup, Green, Duwamish, Deschutes, Hood Canal systems | 5 | |

| **Species and Habitat Benefits 20 points** | | |
|---|---|---|
| **Species** | 0-5 | Proposal addresses multiple orca prey species, and multiple life history stages for one or more orca prey species will receive the highest score.<br>5= multiple life stages of a single orca prey population or multiple populations<br>3= single life stage of a single orca prey population<br>0= no listed population |
| **Ecological Processes and Features** | 0-10 | Projects that recover habitat through process-based solutions will receive the highest scores.<br>• Project identifies limiting factor and life history stage<br>• Project results in a high functioning site that restores or protects ecosystem processes<br>• Surrounding conditions support the project<br>• The site is resilient to future degradation<br>• The project is designed to be resilient to climate change<br>• Sustainable over time, self-sustaining, or naturally increasing benefit; temporary fixes will score lower<br>• Hardened infrastructure solutions are acceptable but will score lower<br>8-10 = The project restores all the natural processes to the site and addresses limiting factors<br>5-7 = The project restores most of the natural processes and addresses most limiting factors<br>0-4 = The project has limited restoration of natural processes or doesn't adequately address limiting factors |

| | | |
|---|---|---|
| **Scale of benefit** | 0-5 | A higher number of quantified benefits and measurable restoration benchmarks will receive the highest score.<br><br>Restores access to or improves juvenile and/or adult high quality, functional habitat (structural/flow/temp) measured by:<br>• Salmon habitat gain in miles<br>• Salmon habitat improved in acres<br>• Salmon habitat protected in acres<br><br>5 = A significant gain in salmon access or habitat from restoration or protection measures<br><br>3 = A moderate gain in salmon access or habitat from restoration or protection measures<br><br>0 = Little or no gain in salmon access or habitat from restoration or protection measures |
| **Likelihood to Succeed – 20 Points** | | |
| **Appropriate Scope w/ Clear Goals and Objectives** | 0-5 | Goals and objectives of the project have been clearly communicated within a scope that is achievable and fitting for the project.<br>• Project addresses root cause of problem identified.<br>• Objective's support and refine biological goals.<br>• Objectives are specific quantifiable actions to achieve stated goal (See Manual 18).<br>• Proposals that demonstrate the project is in the correct sequence and is independent of other actions being taken first will receive the highest score.<br><br>5 = Goals and objectives are clearly communicated and achievable with implementation of the proposed project<br><br>3 = Goals and objectives are not entirely clear or may not all be achievable with implementation of the proposed project<br><br>0 = Project does not address root causes of identified problems or unlikely to meet objectives |
| **Logical Approach and Schedule** | 0-5 | Proposals that demonstrate readiness to proceed will receive the highest score.<br>• An appropriate and achievable time frame and order of events to complete the project.<br>• Level of design complete.<br>• Permit stage.<br><br>4-5 = Project is ready to proceed with an appropriate level of design completed and most permitting requirements completed<br><br>0-3 = Project must still complete important design elements or still require significant permit review |
| **Landowner Support** | 0-5 | Evidence of project support from directly impacted landowners (written or verbal during site visit) will receive the highest score.<br><br>4-5 = Project has evidence of support from impacted landowners (letter of support, landowner acknowledgement)<br><br>0-3 = Project does not have strong evidence of landowner support |

| | | |
|---|---|---|
| **Sponsor/ Participants Experience** | 0-5 | Past experience with restoration and/or acquisition projects reflects a higher likelihood of future success. Proposal sponsors that have successfully implemented salmon restoration projects will receive the highest score.<br>4-5 = Project sponsor has demonstrable experience with successful project implementation<br>0-3 = Project sponsor has little or no demonstrated experience with project implementation |
| **Cost - 10 Points (All Projects)** | | |
| **Best Use of Public Funds** | 0-5 | A well justified funding request that demonstrates good use of funds, availability of matching funds, and a clear and complete budget will receive the highest score.<br>4-5 = Project has a clear budget and justified costs<br>0-3 = Project has a less clear budget and justification of costs |
| **Leverage additional funds** | 0-5 | The proposal leverages additional funds (not including federal Pacific Coastal Salmon Recovery Fund). Any project that leverages a 50% or more match will receive the highest score.<br>4-5 = Project leverages 50% or more in matching funds<br>0-3 = Project leverages less than 50% in matching funds |

## HOW TO APPLY

To apply for Targeted Investment funds, work with the lead entity coordinator to enter project information into the Salmon Recovery Portal and create an application in PRISM. Additional information about the portal is in Section 5 of this manual. Once the project application is submitted through the portal, the portal will assign the project a PRISM project number. Use that project number to find the project in PRISM and complete the application. All applicants must use PRISM Online to complete applications. Applicants must ask the regions to complete a Targeted Investments Project Certification Form for each project submitted and attach the completed forms in PRISM with their final applications. If you need further information about how to submit an application, please see Section 3 of this manual.

## FUNDING TIMELINE

All applications will follow the same timeline and requirements as all other SRFB applications.

## PROJECT AMENDMENTS

Sponsors must follow the amendment process outlined in *Section 6 and Appendix I: Amendment Request Authority Matrix* in the manual.

WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
Salmon Recovery
Funding Board

# Salmon Recovery Funding Board Briefing Memo

Item 7

**APPROVED BY RCO DICTOR MEGAN DUFFY**

**Meeting Date:** September 22-23, 2021

**Title:** Washington Invasive Species Council: Threat of Aquatic Invasive Species to Salmon Recovery

**Prepared By:** Justin Bush, Washington Invasive Species Council


**Summary**

Aquatic Invasive Species (AIS) pose a grave threat to environmental and economic resources, especially to salmon recovery and state and federally listed threatened and endangered species. The Washington Invasive Species Council and Washington Department of Fish and Wildlife will brief the SRFB on threats to salmon and opportunities to work together to prevent and stop invasive species.


**Board Action Requested**

This item will be a:

- ☐ Request for Decision
- ☐ Request for Direction
- ☒ Briefing

## Introduction/Background

Aquatic Invasive Species (AIS) pose a grave threat to environmental and economic resources, especially to salmon recovery and state and federally listed threatened and endangered species. If not stopped, AIS can threaten human health and cause environmental and economic disasters affecting not only our state, but other states and nations.

The Washington Invasive Species Council (council) was established by the Legislature in 2006 to provide policy level direction, planning, and coordination for combating harmful invasive species throughout the state and preventing the introduction of others that may be harmful. The council and partners support the Washington Department of Fish and Wildlife (WDFW) as the lead state agency for prevention of and response to AIS.

Together, the council and WDFW will brief the SRFB on specific threats to salmon including European Green Crab, Quagga and Zebra Mussels, and Northern Pike.

## Strategic Plan Connection

This briefing is associated with SRFB Strategic Plan ***Goal 3:*** *Build understanding, acceptance, and support of salmon recovery efforts.* Aquatic Invasive Species (AIS) are an emerging threat to salmon recovery and SRFB investments. Collaborating to address AIS supports the board's community-based partner organizations and work of its broad partner base.

https://rco.wa.gov/wp-content/uploads/2019/07/SRFB-StrategicPlan.pdf

## Additional Resources

- Aquatic Invasive Species of Greatest Concern
    - European Green Crab
    - Zebra and Quagga Mussels
    - Northern Pike
- 2020-2025 Statewide Invasive Species Strategy
- How Invasive Species Threaten Salmon Story Map
- Salish Sea Transboundary Action Plan for Invasive European Green Crab
- Economic Risk Associated with the Potential Establishment of Zebra and Quagga Mussels in the Columbia River Basin

WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
Salmon Recovery
Funding Board

# Salmon Recovery Funding Board Briefing Memo

Item 8

**APPROVED BY RCO DIRECTOR MEGAN DUFFY**

**Meeting Date:** September 22-23, 2021

**Title:** Carbon Credits and Payments for Ecosystem Services Policy

**Prepared By:** Ben Donatelle, Natural Resources Policy Specialist


**Summary**

In June 2021, the Salmon Recovery Funding Board's climate change subcommittee outlined a series of recommended actions. One near-term action was to consider the carbon credits and payments for ecosystem services policy adopted by the Recreation and Conservation Funding Board. This memo provides background on the policy and outlines the SFRB's option.


**Board Action Requested**

This item will be a:

- ☐ Request for Decision
- ☒ Request for Direction
- ☐ Briefing

## Introduction

In November 2020, the Salmon Recovery Funding Board (board) formed a climate change subcommittee. The subcommittee was directed to develop recommendations to guide the board in considering climate change impacts to salmon recovery funding. The subcommittee identified a series of near- and long-term actions and discussed their recommendations at the board's June 2021 meeting.

One near-term recommendation advises the board to consider adopting the *Carbon Credits and Payments for Ecosystem Services* policy adopted by the Recreation and Conservation Funding Board (RCFB) in January 2020. This policy enables Recreation and Conservation Office (RCO) grantees to enroll RCO-funded projects in carbon offset and other payment for ecosystem services programs.

## Policy Background

In 2019, RCO was approached by several grantees who were interested in enrolling properties that were funded, in part, with RCO grant assistance in carbon offset projects.

At the time, carbon offset projects were explicitly authorized in the Washington Wildlife and Recreation Program's Forestland category, but no agency-wide policy existed to enable this activity in other grant programs. At the direction of RCO's director, staff worked with the grantees, a small group of stakeholders, and RCO's assistant attorney general (AAG) to better understand whether enrolling RCO funded in carbon offset and other payment for ecosystem services programs could be allowable.

The AAG ultimately determined that carbon offset projects could be compatible with RCO funding and a grantee's long-term obligations. Staff developed a briefing memo for the RCFB outlining how carbon offset projects intersect with RCO's legal authority, adopted policies, and a grantee's long-term obligations (Attachment A).

In January 2021, the RCFB adopted the carbon credit and payments for ecosystem services policy. This policy currently applies to all RCFB and RCO recreation and conservation programs and is shown below.

NOTE: Since adopting the policy, *improved forest management (IMF)* projects have emerged as another leading option among carbon offset project developers in Washington. This project type quantifies greenhouse gas removals and emissions reductions that can be attributed to improving forest stewardship practices beyond what would have occurred on the land prior to intervention. The project commitment is typically either 40 or 100 years, and often includes an option for extending the commitment to gain additional credits. Credits under an IMF protocol can result from tree planting, extending harvest rotation, converting to selective harvest or a combination of management actions.

## Carbon Credit and Payments for Ecosystem Services Policy

Properties acquired or encumbered with state funding assistance from the Recreation and Conservation Funding Board may be enrolled in carbon credit and other payments for ecosystem service market programs to the extent that activities generating the credits or payments do not conflict or interfere with the Recreation and Conservation Office (RCO) funding purpose. Through such markets, funded properties may be used to leverage the state's investment to secure a source of income for stewardship and maintenance of conserved properties or future property acquisitions in accordance with RCO's income use policy and Washington Administrative Code 286-13-110.

If the sponsor secures the activity generating the carbon or ecosystem service credits with a restriction on the title of the RCO funded property or properties, the restriction may not:

- Subordinate RCO's deed of right or assignment of right;

- Conflict or interfere with RCO's funding purpose and ability to enforce the terms of RCO's project agreement;
- Reduce or diminish RCO's ability to pursue a remedy in the event RCO issues a determination of non-compliance or conversion for the project area.

If the activities generating carbon or ecosystem services credits are found to be incompatible or conflict with RCO's funding purpose, the RCO funded project area may be subject to a determination of non-compliance or conversion. See RCO *Manual 7: Long-Term Obligations* for more information on compliance, non-compliance and conversion policies and procedures.

### Procedure and delegation of authority

Prior to committing to a carbon finance or other payment for ecosystem services project, the sponsor must provide RCO with written notice. The notice must include:

- Which RCO funded properties will be included in the project;
- The crediting or payment terms and anticipated time commitment of the project;
- Acknowledgement of RCO's income use policy

Prior to recording any deed restriction, the sponsor must provide RCO the opportunity to review it for compatibility with RCO's funding terms and conditions. RCO may approve the deed restriction under the complimentary covenants policy, suggest modifications to receive approval, or deny based on the above provisions. The RCO Director or their designee is responsible for approval of the deed restriction.

### Limitations

This policy only applies only to state funding programs administered by the Recreation and Conservation Funding Board. Properties acquired with federal funds administered by the board are not eligible unless carbon and ecosystem service payment projects are authorized by the federal program.

## Consideration for the Salmon Recovery Funding Board

Because the existing policy only applies to state funded programs administered by the RCFB, properties acquired with Salmon Recovery Funding Board funds are not currently eligible for enrollment in carbon offset projects. However, many RCO grantees combine funding from both boards to acquire and restore property. The policy limitation prevents those projects that could contribute to a carbon offset program from being enrolled.

Adopting the carbon credits and payments for ecosystem services policy is a near-term recommendation of the board's climate change subcommittee. If adopted by the SRFB, the policy would enable RCO grantees to enroll properties acquired with SRFB state funding assistance in carbon and ecosystem service programs. The result is a source of generated revenue that can be used to fund stewardship or future land acquisition projects. Carbon offset programs are largely compatible with the intent and purpose of RCO funding administered by both the Recreation and Conservation Funding Board and the Salmon Recovery Funding Board. The policy has been developed to address the needs of grantees, to secure RCO's investment interests, and provide flexibility to adapt to emerging market opportunities.

The board's choice is whether to enable SFRB funded projects to be enrolled in carbon offset projects.

## Next steps

Pending discussion and direction from the board, RCO staff will adapt the policy to include projects funded with salmon recovery funding board grants. Staff will then bring the policy for back in December for final consideration.

## Strategic Plan Connection

Considering this policy achieves the following goals and strategies within the board's strategic plan:

**Goal 2:** Be accountable for board investments by promoting public oversight, effective projects, and actions that result in the economical and efficient use of resources.

**Funding Source Strategy:** Identify gaps in current funding related to overall salmon recovery efforts and work with partners to seek and coordinate with other funding sources. Work with Salmon Recovery Network Partners to coordinate funding requests at the legislative and congressional levels to achieve funding levels necessary to implement approved recovery plans.

## Attachments

**Attachment A** – Memo on Carbon Financing from the April 2020 Recreation and Conservation Funding Board Meeting (RCFB).

## Attachment A: RCFB memo on carbon financing

### APPROVED BY RCO DIRECTOR KALEEN COTTINGHAM

**Meeting Date:** April 21, 2020

**Title:** Carbon Credit Financing and RCO Funded Projects

**Prepared By:** Ben Donatelle, Natural Resource Policy Specialist

**Summary**
This memo presents a preliminary discussion on developing a policy related to carbon finance projects on lands acquired in fee with Recreation and Conservation Funding Board funding assistance. The concepts of carbon credits and carbon finance projects are discussed, as well as the legal and policy framework by which a carbon finance project intersects with the board's funding programs.

**Board Action Requested**

This item will be a:
- ☐ Request for Decision
- ☐ Request for Direction
- ☒ Briefing

## Background

In October 2019, the Recreation and Conservation Funding Board adopted a policy statement that explicitly encourages applicants to consider the challenges and opportunities climate change poses to their projects.[1] At the same time, the board adopted evaluation criteria for the Urban Wildlife Habitat and Riparian Protection categories that include references to climate change impacts, adaptation, resiliency, and greenhouse gas mitigation.[2] The board adopted these policies while recognizing that climate change issues are dynamic and evolving. With that, the board also requested RCO staff continue bringing forward opportunities to engage in climate-related issues. Carbon finance projects are one such issue.

In a 2018 report, the United Nations Inter-Governmental Panel on Climate Change (IPCC) stressed that active carbon dioxide removal (CDR) techniques must be part of the

[1] RCO Climate Change Policy. See Manual 10B: WWRP Habitat Conservation Account, pg. 33
[2] Manual 10B, pgs. 73-85

portfolio of strategies to prevent global average temperature from rising above 1.5°C.[3] In a follow up report, the University of Washington Climate Impacts Group concurred with the IPCCs recommendations, comparing global warming at 2.0°C to the extreme weather experienced in 2015. That year, temperatures in Washington were 1.9°C warmer than average; 50,000 Columbia River sockeye died; Stevens Pass Ski Area had a 42 percent shorter ski season; over 1,000,000 acres burned while suppression costs exceeded $253 million; and the agricultural sector lost more than $633 million.[4]

Most recently in the 2020 legislative session, the Legislature passed HB 2311, which updates Washington's greenhouse gas emissions reduction goals to align with current scientific recommendations. [5] In addition to new standards, the law specifically directs RCO to, "seek all practical opportunities…to cost-effectively maximize carbon sequestration in their nonland management agency operations, contracting, and grant-making activities."

RCO has received requests from project sponsors interested in developing carbon sequestration projects on lands acquired with RCO funding. This memo briefly describes carbon credits, carbon finance projects, compatibility with the board's programs and strategic priorities, and possible next steps for developing a carbon finance policy.

## Introduction to Carbon Offsets

Carbon offsets, carbon credits, carbon markets and carbon finance projects are how active CDR techniques account for and monetize carbon sequestered from the atmosphere. The advent of carbon and other ecosystem service markets has created expansive opportunities for municipalities, nonprofits, and private landowners to realize and receive compensation for the ecosystem services their lands provide. In many cases, these markets are driving the global expansion of initiatives that plant trees, restore

[3] IPCC, 2018: Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P. R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)]. World Meteorological Organization, Geneva, Switzerland. pgs. 17-19. Available: https://www.ipcc.ch/sr15/chapter/spm/

[4] Snover, A.K., C.L. Raymond, H.A. Roop, H. Morgan, 2019. "No Time to Waste. The Intergovernmental Panel on Climate Change's Special Report on Global Warming of 1.5°C and Implications for Washington State." Briefing paper prepared by the Climate Impacts Group, University of Washington, Seattle. 12 pgs. Available: https://cig.uw.edu/resources/special-reports/no-time-to-waste/

[5] Engrossed Second Substitute House Bill 2311. Available: http://lawfilesext.leg.wa.gov/biennium/2019-20/Pdf/Bills/House%20Passed%20Legislature/2311-S2.PL.pdf#page=1

land, capture methane and other greenhouse gases, and protect agricultural or forested lands from development. So, what are carbon finance projects and how do they intersect with RCO funding programs? A simplified explanation follows.

A *carbon credit* represents one metric ton of carbon dioxide (or equivalent greenhouse gas) sequestered or avoided as the result of a specific action. A credit is generated by *carbon offset projects,* such as tree planting, that result in a quantifiable reduction of carbon in the atmosphere. The number of credits generated by an offset project is accounted for through statistical modeling and the methodologies to do so are prescribed by *protocols*, or the rules governing a carbon finance program. The protocols are developed with significant public input by *carbon registries*, which are typically an incorporated 501c(3) nonprofit organization or government agency that manages the issuance and retirement of carbon credits. In addition to carbon dioxide ($CO_2$), some protocols account for other greenhouse gasses, such as methane, and convert them to an equivalent of $CO_2$ emissions. The registries serialize the credits, which allow them to be sold on the open market as unique, verifiable reductions in atmospheric carbon (or carbon equivalent).[6]

Carbon registries, in part because of the advance of California's cap-and-trade program, have worked diligently over the past decade to strengthen the integrity of carbon markets and expand opportunities in the United States for carbon sequestration projects and credit trading. The three most robust registries are the American Carbon Registry, Climate Action Reserve, and Verra. Each of these registries offer a range of protocols on both the voluntary market and California's more stringent compliance market. Examples that are most relevant to the board's investments include protocols for afforestation and reforestation (tree planting), improved forest management (e.g., extending rotation periods or transitioning to selective harvest rather than clear cutting), and avoided conversion of land use (e.g. permanently protecting forest or agricultural land rather developing for residential or commercial use). Other protocols value carbon sequestered or avoided through methods as diverse as active capture of emissions from agriculture, energy development, or waste management activities; improved industrial processes; converting from fossil fuel-based energy production to renewables; and improving energy efficiency in buildings and construction activities.[7]

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[6] A good article summarizing the basics of carbon offsets is available at: https://www.forbes.com/sites/erikkobayashisolomon/2020/03/13/want-to-understand-carbon-credits-read-this/#6934277b71aa

[7] See https://verra.org/methodologies/ for an example of the variety of protocols Verra Carbon Registry offers.

A carbon credit project is generally initiated through a contractual agreement between the project sponsor and the carbon registry. The project area is designated by the sponsor and may consist of a single property or many dispersed properties. Before carbon credits are issued, the project must submit to a rigorous validation and third-party verification process. This process objectively ensures, 1) the project generates a real, net carbon benefit; 2) the project creates *additionality,* meaning it results in carbon sequestration or avoidance beyond the business-as-usual scenario; 3) each ton of carbon is unique and verifiable; 4) the carbon reduction is permanent; and 5) the project generally complies with the rules and regulations outlined in the protocol.[8]

Upon validation and acceptance by the registry, the project sponsor is issued a share of carbon credits and able to market them. The amount of carbon credits generated varies depending on myriad factors including vegetation and ecosystem type(s) present on the property, zoning and land use potential, baseline conditions, proximity to urban areas, etc. which are all detailed in the protocols.

Most credits on the voluntary market are purchased by companies seeking to reduce their greenhouse gas footprint as a part of a sustainability initiative. A smaller number may be purchased by individual citizens to offset things like car rentals, their at-home greenhouse gas footprint, or airline trips. Carbon finance projects that take extra measures to register through a compliance market, such as the California Air Resources Board, have the opportunity to sell to regulated entities that are required to offset their emissions in some way, either through emissions reduction and efficiency efforts, purchasing allowances from the regulating authority, or investing in offset projects.

As important as it is to understand what a carbon credit is, it's equally important to understand what a carbon credit is not. First, as noted previously, carbon credits are generated as the result of a specific action that sequesters or avoids emissions of greenhouse gases. Carbon credits, themselves, are <u>not</u> a property right, even if in some cases a deed restriction may be a requirement or provide an additional benefit to a carbon finance project. Second, carbon finance projects are <u>not</u> mitigation projects. Carbon finance projects are developed, registered and credits are issued before any specific buyer is identified. Credits are then sold on the open market only after the activity generating the credit is complete. RCO's grant award could aid in generating

[8] See Verra's *VCS Program Guide, Version 4*. Published September 2019. Available: https://verra.org/wp-content/uploads/2019/09/VCS_Program_Guide_v4.0.pdf.
See also, Climate Action Reserve's *Reserve Offset Program Manual*. Published November 2019. Available: https://www.climateactionreserve.org/wp-content/uploads/2019/11/Reserve_Offset_Program_Manual_November_2019.pdf

carbon credits but is not used to satisfy any specific mitigation requirement. Finally, carbon credits are real, measurable, permanent reductions in or avoidance of greenhouse gas emissions that are additional to any regulatory or mandated land management activities. The carbon registries work diligently to ensure credits are conservatively estimated and not double counted. Activities used to generate carbon credits are highlighted by the IPCC and the UW Climate Impacts Group, among many others, as critical to preventing global warming above 1.5°C.

## How do carbon credit projects intersect with RCO funding?

An RCO project sponsor who acquires property with RCO funding assistance could take advantage of carbon markets in a variety of ways. For example, a habitat conservation project may generate measurable carbon benefits by protecting the land acquired from being converted to residential or commercial uses. This type of project could be enrolled in an *avoided conversion* protocol. Once acquired, there is typically a narrow window of time, commonly one to three years, to enroll the property in a carbon finance project.

In another scenario, a project sponsor could conduct a tree planting project on property previously acquired with RCO funding assistance. Calculated under an *afforestation* or *reforestation* protocol, carbon credits could be realized from the carbon sequestered as the newly planted trees grow. The carbon is considered additional to the baseline scenario (i.e., had the trees not been planted) if the trees were not required to be planted by a regulatory or other legal mandate.

These are two simple examples of how carbon finance projects could intersect with lands acquired with RCO funding assistance. They are also likely to be the most common. However, there are myriad ways in which CDR techniques can generate carbon credits and any policy should be flexible enough to accommodate future innovations. The major RCO policy considerations are discussed below.

### Legal and Board Policy Considerations

Acquiring property with RCO funding is guided by legal mandates and policies to ensure the board's investments are used as intended, maintained for their useful life, and remain available for public use. These obligations originate from the laws creating both the board and the accounts the board administers. Further, the board has adopted policies, set forth in the grant manuals, to guide the agency and programmatic operations. The RCO project agreement, which is the contract signed by project sponsors when they are awarded grant funds, also stipulates these obligations. The legal requirements and policies that have the most potential to intersect with carbon finance projects are:

- Income generation and use policies
- Compliance policies and Sponsor's long-term obligations
- RCO's deed of right
- Complementary covenants
- Allowable uses framework; and
- Mitigation policy

### Income and income use

RCO explicitly allows sponsors to generate revenue from a project completed with RCO funding assistance. The policy is codified in Washington Administrative Code[9] and repeated in several grant manuals.[10] The policy is broad but requires income generated be used to offset:

- The sponsor's matching funds.
- The project's total cost.
- The expense of operation, maintenance, stewardship, monitoring, or repair of the facility or program assisted by the funding board grant.
- The expense of operation, maintenance, stewardship, monitoring, or repair of other similar units in the sponsor's system.
- Capital expenses for similar acquisition, development, or restoration.

Past projects have generated revenue from diverse sources such as parking receipts, use and rental fees, grazing fees, forest health and stewardship activities, utility corridors, and more. Any revenue generated from enrolling a property acquired with RCO funding assistance in a carbon finance project must be used in accordance with the same prescribed purposes above.

### Compliance and long-term obligations

RCO's compliance policies rest on several laws and rules that prohibit the project area from being converted, "without prior approval of the board or director…to a use other than that for which funds were originally approved."[11] This prohibition is reinforced by the RCO project agreement and, if the sponsor is acquiring property, the deed of right.

The board has adopted policies that further explain a conversion and guide the process for granting the board's approval. This conversion policy is critical to protecting the

[9] See WAC 286-13-110
[10] See full policy in Manuals 7 (p.7), 3 and 4. Policy also referenced in Manuals 9, 10, 14, 16.
[11] See RCW 79A.25.100; RCW 79A.15.030(9); WAC 286-13-160, 170, and 180

board's investments as they were set forth in the project agreement. Specifically, a conversion is determined if:

- Property interests are conveyed for non-public outdoor recreation, habitat conservation, or salmon recovery uses.
- Property interests are conveyed to a third party not otherwise eligible to receive grants in the program from which funding was derived.
- Non-outdoor recreation, habitat conservation, or salmon recovery uses (public or private) are made in a manner that impairs the originally intended purposes of the project area.
- Non-eligible indoor facilities are developed within the project area.
- Public use of the property or a portion of the property acquired or developed/restored with RCO assistance is terminated, unless public use was not allowed under the original grant.
- If a habitat project, the property or a portion of the property acquired, restored, or enhanced no longer provides the environmental functions for which RCO funds were approved originally.

Section 25 of the RCO Project Agreement stipulates a project sponsor's long-term obligations. This section contains four clauses. The first two clauses refer to the Washington Administrative Code, discussed above, prohibiting a conversion without prior approval of the board. The third clause requires the project continue functioning as intended in perpetuity. The last clause discusses conversions and states, "Conversion includes, but is not limited to, putting such property to uses other than those purposes for which funds were approved or transferring such property to another entity without prior approval via a written amendment to the Agreement."

### Deed of right

As a condition of funding assistance, RCO's deed of right is recorded on the title of all projects that acquire property in fee. A similar "assignment of rights" is recorded for conservation easements. The deed of right conveys to RCO explicit rights to inspect the project area and enforce the terms of the grant agreement. Section four discusses the sponsor's long-term obligations and provides that, "the [sponsor] shall not use or allow any use of the Real Property (including any part of it) that is inconsistent with the [*recreation, conservation, or salmon recovery*] purposes herein granted and as stated in the Project Agreement. The [sponsor] shall also not grant or suffer the creation of any

property interest that is inconsistent with the [*recreation, conservation, or salmon recovery*] purposes herein granted and as stated in the Project Agreement."

### Complementary covenants

The long-term obligations and compliance policies clearly require the preservation of the board's investment. Generally conveying a property right that is inconsistent with the intended purpose of the grant funding purpose is prohibited. However, in specific situations, board policy allows a deed restriction or other compatible, complementary interest to be recorded on a title alongside RCO's deed of right. Examples might include a *notice of grant* or encumbrance from another funding entity, or underground utility easements that do not interfere with the purpose of the grant funding. RCO's policy reserves the right to review the complementary deed restriction for consistency with RCO's deed of right and the project agreement. The policy explicitly states, "As long as the encumbrance from the other funding source is consistent and compatible with RCO's funding, no conversion will occur…"[12]

This is an important policy for carbon financing projects. In most cases, the carbon registry and a carbon finance project sponsor have a simple contractual relationship which requires no encumbrance of the property. However, in some cases, the carbon registry may ask for a deed restriction to protect the resource generating the carbon credit, the trees on the property for example.[13]

### Allowable uses framework

The allowable uses framework[14] establishes a process for allowing unique, site-specific uses of an RCO funded project that are not addressed by existing rules or policy. For example, the City of Spokane's request to locate combined sewer overflow (CSO) tanks under RCO funded park developments was the latest project the board approved under the allowable uses framework. This policy is intended to provide flexibility for the board

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[12] RCO Manual 3: Acquisitions, p. 59

[13] For its Urban Forest Preservation protocol, City Forest Credits requires a deed restriction that states, "Removal of Trees. Grantor shall not cut down, destroy, or remove trees located on the Protected Property, except as necessary to control or prevent hazard, disease or fire or to improve forest health. Recreational non-motor-use trails have negligible or de minimis impacts on biomass and carbon stock and are permissible." In another example, a project developed by Nisqually Land Trust (not on RCO funded property) could have received a bonus allocation of carbon credits had they included the California Air Resources Board as a third party enforcer on an easement held by Washington Department of Natural Resources. The land trust ultimately did not include CAB on the easement for reasons outside their control.

[14] RCO Manual 7: Long Term Obligations, p. 6

to consider unique opportunities without setting a broad policy to deal with every new situation. However, the policy also provides some guidance for the board should it wish to develop a policy for an emerging issue or use of project sites. The policy states:

> *For the use to be approved by RCO or the funding board it must meet all of the following criteria:*
>
> - *The use must be consistent with the essential purposes of the grant (i.e., consistent with the grant agreement and grant program)*
> - *All practical alternatives to the use, including the option of no action, must have been considered and rejected on a sound basis*
> - *The use must achieve its intended purpose with the least possible impact to the habitat, outdoor recreation, or salmon habitat resource*
>
>  - *If the use impacts the type of resource the grant is designed to protect (habitat, outdoor recreation, or salmon habitat), it also must provide at least equivalent benefits to that type of resource so there is no overall impairment.*

The policy concludes by stating that the project site must continue as approved and any income generated on the project site must be managed according to the income and income use policies.

### Mitigation policies

RCOs policies on mitigation are also important to consider as carbon credits could potentially be used in a compliance market to offset regulated entities' greenhouse gas emission reduction requirements. Generally, RCO prohibits using grant funds to fulfill third-party mitigation requirements.[15] However, RCO explicitly allows the use of mitigation money (e.g. cash payments from a mitigation fund, impact fees) as match if, "the board's grant does not replace mitigation money, repay the mitigation fund, or in any way supplant the obligation of the mitigating entity."[16] Even in a regulated market, an entity could purchase carbon credits as one of many possible solutions to achieving emissions goals. However, an entity regulated under a greenhouse gas emissions reduction scheme is not explicitly required to protect habitat, wetlands, or plant trees. Therefore, developing a carbon finance project on property acquired with RCO funding does not supplant any funds that would otherwise be used to protect habitat.

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[15] RCO Manual 3: Acquisition Projects, p. 32

[16] RCO Manual 10B: WWRP Habitat Conservation Account, pg. 47. See also Manuals 9, 10A, 14, 15, 17 & 21.

Taken together, the policies, rules, and laws identified above are clear in their direction: the board's investments are to be safeguarded as a part of the public domain and, in general, maintained in perpetuity for the purpose in which they were originally funded. The laws and policies also allow flexibility for the board to be innovative in addressing emerging issues or opportunities that are compatible with the purpose of the grant funding.

## Issues and options for the Board to discuss at a later time

In response to early inquiries about developing carbon finance projects, RCO staff consulted with our assigned assistant attorney general. Based on that consultation, staff developed preliminary guidance to advise inquiries on existing policy in advance of bringing this issue to the board. The guidance has five provisions:

1. Sponsor must inform RCO in advance which properties will be subject to the carbon finance project and demonstrate the activity generating the credits is consistent with the purpose of the RCO funding.

2. The mechanism securing the carbon credits should not be recorded on title.

3. Income realized from the sale of credits generated on RCO assisted properties must be used in accordance with RCO's income use policy.

4. RCO will amend into the project agreement a special condition noting the project is also part of a carbon finance project and generating carbon credits is not to interfere with the primary purpose of the grant award.

5. For future RCO project applications, the sponsor must, to the extent possible, explicitly state if the proposed property acquisition will be included in a carbon finance project and give the grant evaluation committee an opportunity to consider that as a factor of the project.

The legal and policy framework described in the section above is critical to envisioning how carbon financing opportunities intersect and can be compatible with some RCO funding programs. There are also situations in which a carbon finance project may not be compatible. For example, an RCO project funded by the Youth Athletic Facilities program to build soccer fields could not suddenly be used for a tree plantation to generate carbon credits. That is clearly an incompatible use of the grant assisted site.

The guidance (above) has been helpful as new inquiries come forward, but there are a few outstanding issues for the board to consider. Questions for the board to consider include:

- Considering the guidance described above, does the board feel the need to develop a distinct policy to guide carbon finance projects?
- Does the board want to pilot a policy in selected grant programs or decide initially which programs are compatible with carbon financing projects and which others may not be compatible?
- Would the board consider a complementary covenant placed on a property to secure a carbon finance project a conversion if the project is compatible with RCO's deed of right and the primary purpose of the grant funding?
- Does the board want to retain or delegate to the director the authority to review carbon finance projects that seek to use properties acquired with RCO funding assistance?
- What other sideboards would the board want to consider in developing a carbon finance policy?

## Strategic Plan Link

This issue intersects with several of the board strategic plan objectives, including:

**Objective 1A** Provide leadership to help our partners strategically invest in the protection, restoration, and development of habitat and recreation opportunities.

**Objective 2A** Ensure funded projects and programs are managed efficiently, with integrity, in a fair and open manner, and in conformance with existing legal authorities.

**Objective 2B** Support activities that promote continuous quality improvement.

## Next Steps

Subject to the board's discussion, RCO Staff will begin to develop policy guidance for carbon finance projects and bring the issue back to the board for further discussion.

# Salmon Recovery Grant Funding Report

September 2021

WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
Salmon Recovery
Funding Board

Item 10

## Table of Contents



*Cover photograph by Dave Caudill of the Kilisut Harbor outlet to Puget Sound*

# Part 1: Introduction

Since 1999, the Salmon Recovery Funding Board (SRFB) has been distributing state and federal money to protect and restore salmon habitat. Honoring the "Washington Way" of ground-up salmon recovery decision-making, the SRFB works closely with local watershed groups known as lead entities[1] to identify projects for funding, and regional organizations to prioritize funding.

Lead entities and regions rely on their approved recovery plans to select projects. This partnership has resulted in the SRFB distributing nearly $1.2 billion to more than 3,000 projects statewide, all aimed at bringing salmon back from the brink of extinction.

This report presents information on the process used to review the 2021 applications and develop funding recommendations for the SRFB to consider at its September 23, 2021 meeting.

## Funding Overview

Funding for salmon grants comes from two main sources:

**Salmon Grants:** $20 million from state capital bonds and the Pacific Coastal Salmon Recovery Fund, which is a federal award to the Recreation and Conservation Office (RCO) administered by the National Oceanic and Atmospheric Administration.

**Puget Sound Acquisition and Restoration (PSAR) Grants:** This state capital bond-funded program focuses on Puget Sound and Hood Canal and is jointly administered by RCO and the Puget Sound Partnership. In 2021-2023, this account was funded at $52 million.

In addition, the SRFB set aside up to $500,000 for unanticipated cost increases in 2021.

The SRFB approves and funds salmon grants. It distributes funding for the $20 million salmon grants using a regional allocation formula based on the number of listed and non-listed salmon stocks, number of Evolutionarily Significant Units,

[1] Lead entity groups, authorized under Revised Code of Washington Chapter 77.85, are established in a local area by agreement between the county, cities, and tribes, which choose a coordinating organization for the lead entity. Each lead entity has a citizen committee to rank projects after its technical advisory committee evaluates the scientific and technical merits of projects. Consistent with state law and SRFB policies, all projects seeking funding must be reviewed and prioritized by a lead entity to be considered by the SRFB.

number of Watershed Resource Inventory Areas, and salmon shoreline miles.

The Puget Sound region has 15 lead entities and further allocates its funding based on a formula approved by the Puget Sound Leadership Council. The Washington Coast region has four lead entities and allocates amounts to each lead entity based on their project lists each year.

**Table 1. SRFB Regional Funding Allocation Formula**

| Regional Salmon Recovery Organization | Regional Allocation Percent of Total | 2021 Allocation Based on $20 Million |
|---|---|---|
| Hood Canal Coordinating Council* | 2.4% | $480,000 |
| Lower Columbia Fish Recovery Board** | 20% | $4,000,000 |
| Northeast Washington | 1.9% | $380,000 |
| Puget Sound Partnership* | 38% | $7,600,000 |
| Snake River Salmon Recovery Board | 8.44% | $1,688,000 |
| Upper Columbia Salmon Recovery Board | 10.31% | $2,062,000 |
| Washington Coast Sustainable Salmon Partnership | 9.57% | $1,914,000 |
| Yakima Basin Fish and Wildlife Recovery Board** | 9.38% | $1,876,000 |

*Hood Canal is in the Puget Sound Salmon Recovery Region for Chinook and steelhead but is a separate salmon recovery region for summer chum. Hood Canal's allocation is 2.4%, but also receives $775,512 of the Puget Sound Partnership's regional SRFB allocation for Chinook and steelhead. Hood Canal's total allocation is 6.28% or $1,255,512, and Puget Sound's is 34.12% or $6,824,488.

**There are five projects submitted by the Klickitat County Lead Entity (four funded and one partially funded). Klickitat is receiving $108,000 from the Lower Columbia Fish Recovery Board's regional allocation and $562,800 from the Yakima Basin Fish and Wildlife Recovery Board's regional allocation.

## Regional Monitoring Projects

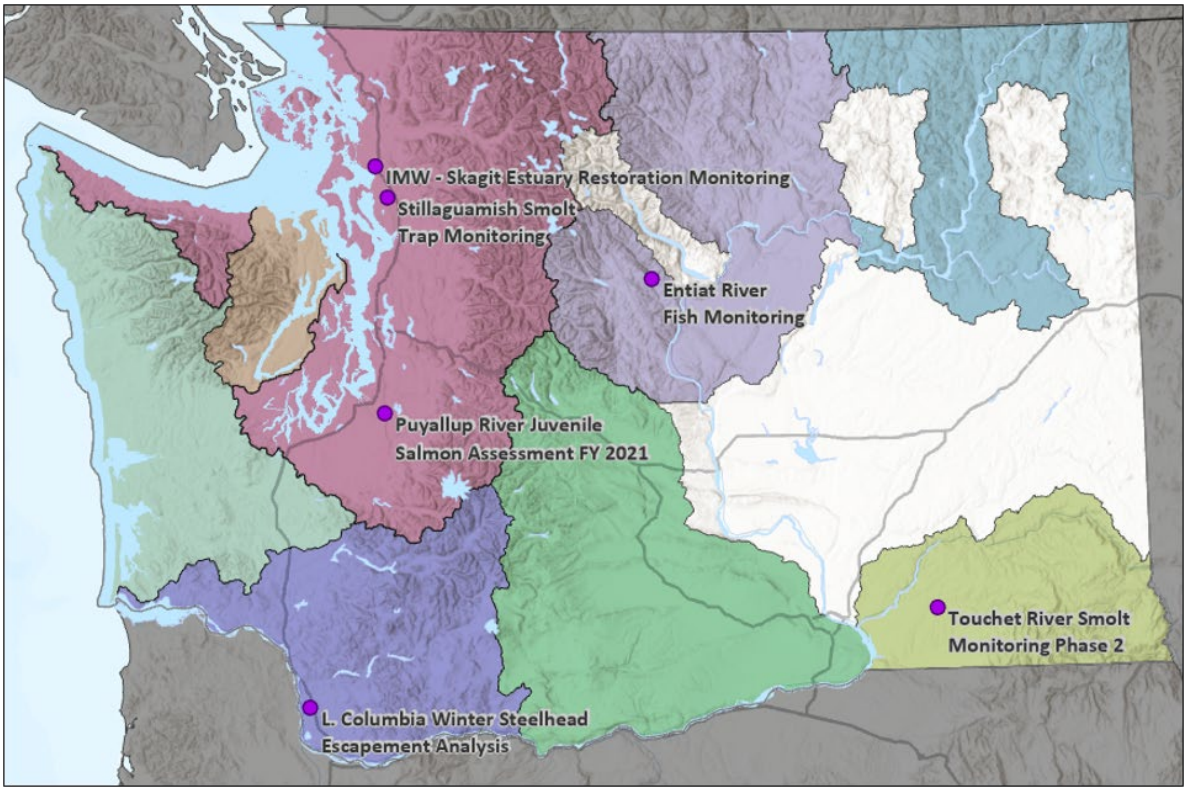
A regional salmon recovery organization may use up to 10 percent of its annual allocation for monitoring activities if the project meets all the following conditions:

- Is certified by the region
- Meets a high priority data gap
- Can be accomplished in 3 years

The project should complement ongoing monitoring efforts and be consistent or compatible with methods and protocols used throughout the state. Data collected must be available to RCO and the public. The region must explain why board funds, rather than other funds, are necessary to accomplish the monitoring. In addition to the criteria, there is a cap on available monitoring funds from the Pacific Coastal Salmon Recovery Fund of $300,000.

This year, the Monitoring Panel reviewed seven regional monitoring proposals. Only six projects, requesting $437,493 were submitted on lead entity ranked lists. The Monitoring Panel reviewed the proposals for eligibility and soundness before submitting them to the board for funding consideration. In June, the board approved using unallocated monitoring funds from previous grant rounds to supplement the $300,000 available for monitoring projects this year. Please see Attachment 1 to view the 2021 grants schedule.

Monitoring proposals are in Attachment 4, and included in the lead entities' ranked lists of projects and allocations in Attachment 6. The funding motions also are provided with the material for your reference.



## Grant Round Principles

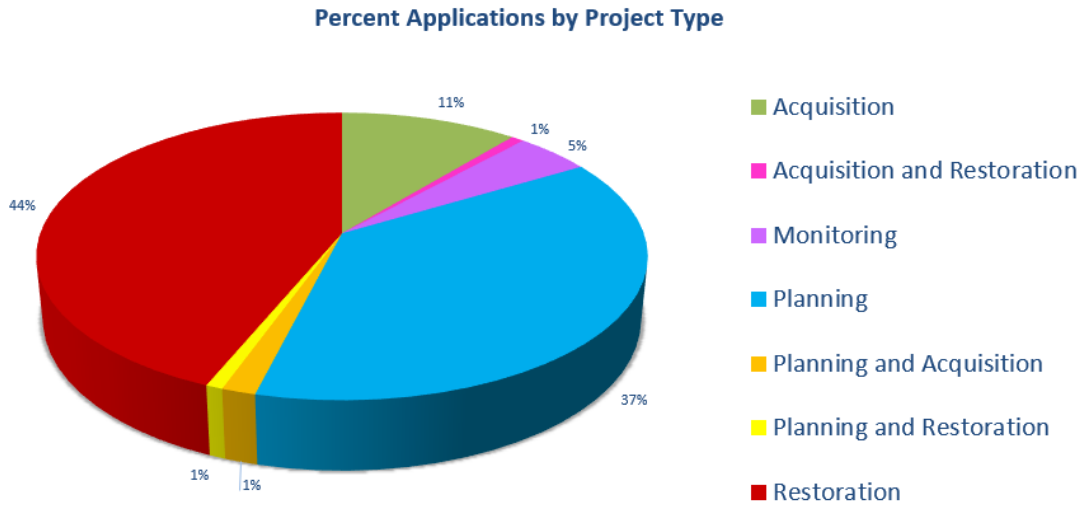
The basic elements of the regional funding allocation approach carry over from the previous funding cycles and include the following:

- Reliance on regional salmon recovery plans and lead entity strategies.
- Review of individual projects by the SRFB Review Panel to identify *Projects of Concern*.
- Provision of flexibility, recognizing different circumstances across the state.
- Recognition of efficiencies and flexibility where possible.

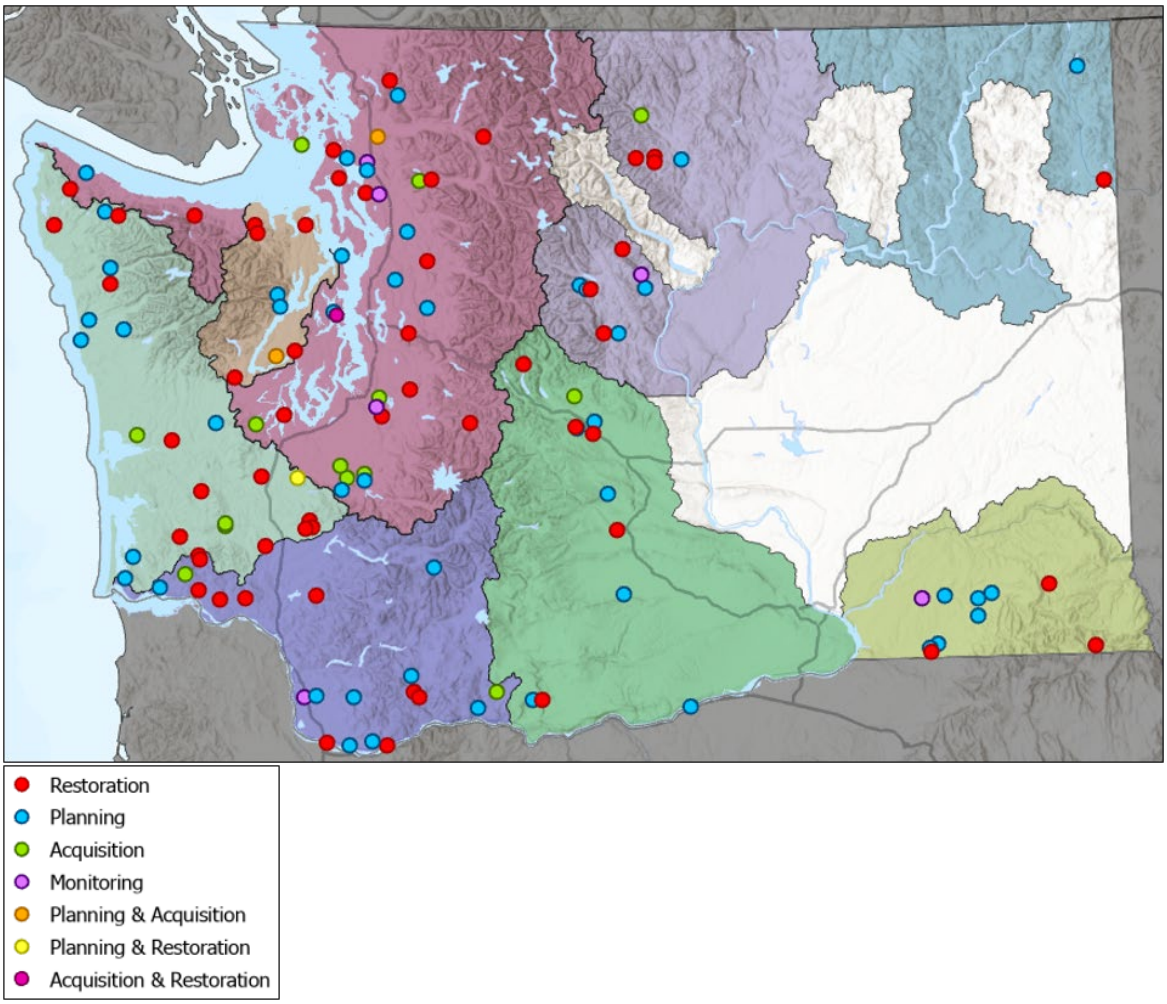
The SRFB also commits to continuing the following key principles:

- Allocate salmon recovery funds regionally.
- The SRFB Review Panel will not evaluate the quality of lead entity habitat strategies that are part of recovery plans already submitted to the Governor's Salmon Recovery Office and the National Marine Fisheries Service. Regional organizations ensure the submitted lists of projects are consistent with the regional recovery plans.
- The evaluation process will be collaborative. The SRFB Review Panel will work with lead entities and project applicants throughout the process to address project design issues and reduce the likelihood that projects submitted are viewed as *Projects of Concern*.
- Each region has different complexities, ranging from varying numbers of watersheds to areas with vastly differing sizes of human populations. These complexities require different approaches to salmon recovery.
- Lead entities are and will continue to be a crucial and fundamental part of the recovery effort.
- Support continues for areas without regional recovery plans (coast and northeast).
- A statewide strategic approach to salmon recovery will continue.
- Funds must be used efficiently to address both listed and non-listed species.

## Grant Applications by Project Type




## Grant Applications by Location



## SRFB Decisions for September

**Salmon Grants:** The board will be asked to approve up to $20 million for projects using salmon state and federal funding.

**Regional Monitoring Projects:** The final project lists contain six monitoring projects, across four regions, requesting $437,493. See Attachment 4 for a table of regional monitoring projects. These projects are submitted and included on lead entity and region project lists for board approval in Attachment 6 and are included in the $20 million allocation of salmon state and federal funding.

All projects described in the above components used *Manual 18: Salmon Recovery Grants* as guidance and completed the technical review process with the SRFB Review Panel.

## Elements of the Grant Round

In the spring, sponsors submitted 184 pre-applications in PRISM, RCO's project database, for this grant cycle. Between April and June 2021, the lead entities coordinated project site visits with the SRFB Review Panel and RCO staff. The site visits allowed the SRFB Review Panel to see project sites, learn project details, and provide feedback to the sponsors to improve the projects. At the end of the review process, 128 projects are advancing to the SRFB for consideration.

Each regional area and corresponding lead entities prepared their respective ranked lists of salmon projects in consideration of the available funding.

Several lead entities also identified alternate projects on their lists. These projects must go through the entire lead entity, region, and SRFB review process. Project alternates may receive funding within 1 year from the original board funding decision only if another project that was designated to be funded cannot be completed or is funded by an entity other than RCO.

## Ranked Lists and Funding Allocations

If a lead entity does not have enough projects to fully obligate its entire allocation, it may contribute funding to projects in other lead entities. The project receiving the contribution must be included on the project lists of both the lead entity receiving the funding and the lead entity providing the funding. This ensures funding goes to those areas in need as a response to the yearly variations in project lists. RCO will not adjust a lead entity's allocation based on these contributions to other lead entities as has been done in the past. Instead, a lead entity must include the projects it would like to contribute funding toward on its own ranked list.

## Guidance *Manual 18: Salmon Recovery Grants*

Manual 18 remains the guidance document for entities applying for funding through the SRFB.

The review panel has raised some topics that RCO staff would like to explore for consideration in the 2023 manual update. Those issues include acquisition of upland areas, and the costs and composition of riparian planting.

## Part 2: SRFB Review Panel Comments

The SRFB Review Panel is comprised of eight members with a broad range of knowledge and experience in salmon habitat restoration and protection approaches, watershed processes, ecosystem approaches to habitat restoration and protection, and project development and management. Members' expertise covers the gamut of issues faced by lead entities and sponsors of SRFB projects. Review panel biographies can be found on RCO's Web site.

The SRFB Review Panel helps the board meet the requirements of the federal Pacific Coastal Salmon Recovery Fund's technical review process. The panel reviews all grant applications to help ensure that each project is: 1) technically sound, meaning that a proposed project provides a benefit to salmon, 2) is likely to be successful, and 3) does not have costs that outweigh the anticipated benefits. Applications labeled *Projects of Concern* do not meet these criteria and will be forwarded to the SRFB for funding consideration unless the lead entity withdraws the application. The review panel does not otherwise rate, score, or rank projects. Members of the panel review project designs to satisfy project conditions or at staff request.

### Project Review Process

The review panel worked throughout the year reviewing projects both before and after the application deadline. This review helps lead entities and sponsors improve each project's benefits to fish and certainty of successful implementation. The benefit and certainty criteria used by the review panel in its evaluation of projects is found in *Manual 18: Salmon Recovery Grants*, Appendix G, and is Attachment 3 in this report. The panel based its evaluations and comments on the following:

- Complete applications due 2 weeks before the early project site visits and consultations. First set of Review Panel Comment Forms.
- Phone calls with lead entities and sponsors for project statuses of *Needs More Information* or *Project of Concern*.
- Final application materials submitted by lead entities and regional organizations.
- Final set of review panel comments after application deadline.

The review process involved an effort to provide early feedback based on complete applications and site visits. Lead entities could complete their site visits by March or May, and the review panel provided an initial comment form. Projects with complete applications received a status of *Clear*, requiring no further revisions for those

applications. Eighteen percent of applications reviewed in March or May were cleared (33/184).

Some applications still lacked information to complete the technical review and received a status of *Needs More Information*. In most cases, providing additional information addressed the concerns. If the review panel saw potential issues with projects not meeting evaluation criteria, the projects were noted as *Projects of Concern* and the panel specifically identified the concerns, and if and how sponsors could address them.

After the initial project reviews, a team of two review panel members conducted a 1-hour phone call with each lead entity to clarify comments. Final applications that were not already cleared were submitted by June 28 for funding consideration. The review panel reviewed all remaining final applications and responses to early comments. The panel then met July 14 to discuss final project proposals and responses to applications. The review panel updated project comment forms with post-application comments by July 21. Projects at that time received a status of either *Clear*, *Conditioned*, or *Project of Concern*.

Lead entities could either withdraw the *Projects of Concern* from their project lists or include them and forward their project lists to the SRFB for funding consideration. A table of all projects grouped by region and lead entity is in Attachment 5.

The interaction with the review panel and the feedback to sponsors intends to improve projects and ensure a clear benefit to salmonids in each watershed. The goal of this thorough review process is to have top priority, technically sound projects submitted to the SRFB for funding.

## Projects of Concern

Before the final project review meeting, there were three Projects of Concern. After the final review, two of projects were still Projects of Concern. One project was withdrawn and the other Project of Concern will be presented to the SRFB.

**Table 3. Project Review History**

| Process Step | Number of Projects |
|---|---|
| Initial Review | 184 |
| Projects Submitted on Ranked Lists | 128* |
| Projects Withdrawn After Review | 56 |
| *Projects of Concern* at Final Review | 3 |
| Final *Projects of Concern* Submitted to SRFB | 1 |

| Process Step | Number of Projects |
|---|---|
| *Includes monitoring projects and previously funded projects receiving additional funding this year for cost increases or because they were only partially funded previously. | |

The 2021 SRFB policies governing a *Project of Concern* are the same as in previous grant rounds. Lead entities and regional organizations must submit their final lists to RCO by August 10, 2021. A regional organization or lead entity had to decide by that date whether to leave a *Project of Concern* on its list for funding consideration.

The sponsor and lead entity have an opportunity to discuss the project at the SRFB funding meeting. If lead entities withdraw a *Project of Concern* before the funding meeting, alternates may be considered for funding. Should the board decide not to approve a *Project of Concern*, the lead entity allocation will be reduced by the project's requested funding amount.

The intent of this policy is both to signal that the SRFB is unlikely to fund a *Project of Concern* and to ensure that lead entities and regional organizations are convinced of the merits of such projects before submitting them to the SRFB.

## *Conditioned* Projects

The review panel labeled 22 projects as *Conditioned* because it felt the projects needed to meet specific conditions to satisfy the SRFB's benefit, certainty, and cost-effectiveness criteria. Attachment 5 contains a summary of the *Conditioned* projects and their review panel conditions.

The review panel continues to use "conditioning" of projects as a tool for strengthening project design and ensuring that proposals that may contain elements of uncertainty but otherwise meet the SRFB evaluation criteria may proceed to an RCO project agreement. A typical project condition consists of assigning an intermediate review between the selection of a preferred project alternative and the preliminary design. Another common condition might be to direct the elimination of a component of a project because it is inconsistent with the SRFB's theme of restoration of natural processes or provides no added benefit to salmon.

RCO staff works with the review panel to track conditioned projects.

## Adjustments to Project Lists

From the time of the SRFB's allocation decisions through the June application deadline, lead entities and regional organizations worked collaboratively to meet their funding targets and to submit a portfolio of projects. Sometimes, when projects

were withdrawn because of a *Project of Concern* designation or because they received funding from other resources, regions and lead entities had to work with grant applicants to adjust project funding amounts and scopes to fit the funding targets or to meet a review panel concern or condition. Ranked lists must be adjusted accordingly. Applicants also may submit alternate projects on their ranked lists.

Applicants working through the lead entity and region could adjust project costs (if warranted) through August 16. Those adjustments are defined as the following:

- Any Conditioned project that needed a change in the application.
- Any Project of Concern where a scope or budget change would address the review panel recommendation and remove the designation.
- Any project that has been modified, without a significant change in scope, to meet the intra-regional funding allocation determined by the regional organization and its partners.
- Any project that has been withdrawn by the sponsor or lead entity.

## Grant Round Process and Observations from the SRFB Review Panel

As in past years, the review panel supported RCO staff and the SRFB by reviewing all proposals for SRFB funding to ensure that they met the board's minimum criteria for benefit to salmon recovery, certainty of successful implementation, and cost-effectiveness.

During 2021, the panel reviewed 182 projects at the initial application stage, 126 of which advanced to SRFB for funding consideration. Teams of two panel members completed the initial application review process for each lead entity's portfolio of projects. The initial review process consisted of reading proposals and supporting documentation; participating in remote presentations with sponsors, local technical advisory committee members, lead entity staff, and the RCO grants manager; and preparing initial review comments. Before submitting the initial evaluations back to sponsors, the two-person teams sought input from the entire panel for selected projects that warranted more in-depth discussion.

Based on the initial application review, the panel assigned a final status of either C*lear* or *Conditioned* to roughly one-third of the applications. The remaining applications were assigned the status of *Needs More Information*, requesting that the sponsor answer specific questions for Manual 18 evaluation criteria to be accurately applied and final project status determined. Sponsors then updated applications and/or provided supplemental documents to address the initial review questions.

Many sponsors also participated in brief zoom sessions with their review panel teams, and these opportunities for one-on-one dialogue frequently resolved the panel's questions. After reviewing the final submittals, the review panel teams assigned final project status. As with the initial review, each team had an opportunity to get input from the entire panel for those few remaining proposals that merited in-depth discussion.

As part of the effort to support the SRFB's desire to fund effective, high-benefit projects for recovering salmon around the state, the panel offers the following observations of relevant issues that were noted during this grant cycle.

## PRISM Evaluation Portal and Virtual Project Presentations

By this year, sponsors, lead entities, RCO grants managers, and review panel members had become accustomed to the significant changes that were implemented in 2020 due to the Lean process and COVID-19 pandemic response. The review panel feels that most of the changes have improved the efficiency of the process and provided tools for improving the quality of applications and technical review. The condensed schedule of the Lean process successfully has streamlined the grant application process. The new PRISM online evaluation portal makes the review panel's work easier and more efficient by allowing access to all project documentation for the entire, statewide pool of proposals with a few mouse clicks, and then being able to share draft evaluation notes between team members and grants managers in a consistent format.

Virtual site presentations are a work in progress. The process of putting together a PowerPoint presentation helped many sponsors refine the information they wanted to share and effectively use visuals to support their points. Drone video footage of the project reaches particularly was useful in some presentations. The presentations were a more efficient use of time, eliminating the delays spent corralling 20 or more people into vans and driving from site to site. Simultaneous with each presentation, panel members could check PRISM attachments or other online information to learn more about the project context. After each day's presentation sessions, a lead entity's technical advisory committee members could remain online for candid debriefing conversations (without the sponsors present), in which review panel members did not previously have the opportunity to participate.

However, some of the virtual tours were either not well prepared or highlighted favorable site conditions while neglecting to show significant site constraints or other problems, which would have been obvious to the review panel and technical advisory committee members during a physical site visit. Even projects with excellent presentations could miss significant problems that would be apparent during an on-site visit, and might lead to clarifying conversations between the sponsor and panel

members. The panel feels that this lack of dialogue and on-site field observations is a big reason why a large number of projects were flagged as *Need More Information* after the initial evaluation.

Looking forward, the review panel recommends that lead entities have the opportunity to use both virtual presentations and on-site meetings, depending on the project circumstances and interests of the review panel team, local Technical Advisory Group members, and staff. Projects such as assessments, multi-site barrier removal design projects, and large-scale acquisition proposals lend themselves well to online presentations, while proposals for habitat restoration designs and construction are better suited to actual field visits.

## Strengthening Resolve for the Development of Large, High-Benefit Projects

Puget Sound Acquisition and Restoration (PSAR) funding was not available for this grant round, which was reflected in the lower number of proposals that were submitted by Puget Sound lead entities. Many of the proposals that were submitted tended to be smaller scale or have moderate benefit. These included fish passage barrier removals in lower tier systems that benefit coho and steelhead, and acquisitions of smaller parcels or ones that provide only marginally more protection than existing Critical Area Ordinance and shoreline regulations. Despite lower funding levels, a few Puget Sound lead entities submitted proposals to do future phases of some high benefit estuary and river restoration projects that are in the design stage. A few of these are highlighted in the "noteworthy projects" list. Elsewhere in the state, the lower Columbia, Yakima and upper Columbia regions assembled strong lists of projects to support long-term priorities.

Previous years' comments emphasized the need for not only adequate funding, but the strengthening of political resolve to implement large-scale, high-benefit projects that will significantly improve recovering Endangered Species Act-listed populations, particularly Puget Sound Chinook and steelhead. The point is still applicable this year. Such projects will require difficult trade-offs with existing uses of land, water, and other resources in rivers and estuaries around the state. The SRFB's adoption of the targeted investment program to begin next year hopefully will provide leverage to help accomplish such trade-offs.

## Tension Between SRFB Benefit and Certainty Criteria and the Priorities of Other Funding Programs

With the growth of other funding programs related directly or indirectly to salmon recovery such as Washington Coast Restoration and Resiliency Initiative, Estuary and Salmon Recovery Program, and the Brian Abbott Fish Barrier Removal Board,

sponsors are seeking SRFB funding to serve as match for projects that were developed through these other programs. We occasionally run into situations where the review panel's application of the Manual 18 criteria for benefit, certainty, and cost-effectiveness finds significant weaknesses in such proposals, which were not identified during the review by the other funding programs. This year, there were a few barrier-removal projects that met the criteria for the Brian Abbott Fish Barrier Removal Board, but which lead entities decided to remove from their lists after the panel's initial review found concerns with the Manual 18 benefit and cost-effectiveness criteria. Another project seeking SRFB match for an Estuary and Salmon Recovery Program-funded preliminary design was identified as a *Project of Concern* due to low certainty that the project can be implemented successfully. The panel recognizes that other funding programs have their own strategic priorities and evaluation criteria for funding projects, but sponsors should not be surprised in the relatively rare situation when these priorities and criteria are not consistent with the SRFB criteria.

## Riparian Planting Costs

The review panel continues to see a wide divergence across lead entities and regions for costs related to riparian planting, making it challenging to evaluate cost-benefit issues in a consistent, statewide manner. Even taking into consideration the differential labor costs between rural and urban counties, costs for planting designs in some central Puget Sound lead entities can be disproportionately high compared to elsewhere in the state. The review panel finds that project designs that use an urban landscaping approach commonly budget $30,000 to $100,000 an acre to cover the purchase of a diverse assemblage of potted trees, shrubs. and forbs, and the higher maintenance that is typically required after planting. In contrast, project designs that us a commercial forestry approach can commonly plant a high density of conifer seedlings and willow/cottonwood live stakes for $2,000 to $15,000 an acre, depending on the amount of maintenance needed. While maintenance will always be required in some settings, the young root systems of seedlings can be more resilient to drought than potted stock with mature root systems that have adapted to regular watering and fertilizing.

Planting diverse, native plant communities is a valid approach to ecological restoration, but in the context of Washington's salmon recovery program, the review panel believes that a commercial forestry approach of quickly establishing a forest stand to provide shade and large wood recruitment is more cost-effective for restoring salmon habitat functions. Given the hundreds of miles of riparian corridor in need of restoration and the limited project funding statewide, the panel would like the board to consider the merits of providing guidance for following a commercial forestry planting approach as consistently as feasible across the state.

## Quantifying Upland Acreage in Acquisition Proposals

RCO's application form for acquisition proposals requires sponsors to identify the relative quantity of upland acreage that is present at each target property. For many years the review panel has considered the relative proportion of upland versus riparian, floodplain, and aquatic acreage as a way to evaluate the property's relative benefit to protecting salmon habitat processes and functions. Sponsors have interpreted this distinction in different ways, and due to the unique setting and circumstances of each acquisition site, a consistent interpretation is not always possible. Nevertheless, to promote consistency in our review process, the panel has drafted guidance on how to estimate the relative quantity of upland acreage, and we recommend working with RCO staff to include this in Manual 18.

## Designing to Meet Project Objectives

In several annual funding reports over the past years, the panel has noted the importance of identifying SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) project objectives for each assessment, restoration, and acquisition project, and then designing the project to accomplish these objectives. While sponsors have generally accepted the need to identify SMART objectives in their project proposals, the panel continues to see project designs that fail to account for the objectives. Restoring low-flow rearing habitat, for example, is a common objective for stream restoration projects, so it follows that design elements such as engineered logjams and large wood material should be sited in the low flow channel where they can be accessible to fish. Unfortunately, each year we review engineering designs for such projects where logjams and large woody materials are sited to respond to 2-year bank-full and higher flow events, while not explicitly evaluating their performance at lower flows that are relevant to the project's objectives. We recognize that from a risk management perspective, it is important to design for high flow scenarios, but focusing on this perspective tends to miss the central objectives of the project. Because the panel seldom has the opportunity to talk directly with a project's engineering design consultants, we continually ask project sponsors to communicate the importance of this point to them.

As in previous years, the review panel would like to highlight a small percentage of proposals that have the potential to result in large-scale actions that will make significant contributions to implementing the local or regional salmon recovery plans. This year, we identified three projects that merit special attention, as listed below.

**Table 5. Noteworthy Projects**

| | | | |
|---|---|---|---|
| 21-1148 McCardle Bay Shoreline Easement | San Juan Preservation Trust | Acquisition of an 11.8-acre conservation easement protecting Tier 1 shoreline, feeder bluff, potential forage fish spawning beach, and adjacent eelgrass on Lopez Island. The landowner actively participated in project development and donated 60 percent of the easement value as match. | Acquisition |
| 21-1123 Kennedy Creek Natural Area Preserve Acquisition | Washington Department of Natural Resources | Acquisition of a 10.7-acre inholding in the 1,600-acre protected Kennedy Creek Natural Area in WRIA 14, protecting 1,460 feet of creek frontage with very high ecological value. The department developed a productive relation with the landowner and has leveraged 67 percent match. | Acquisition |
| 21-1051 Cicero Floodplain Acquisition | Stillaguamish Tribe | Acquisition of 143 acres of floodplain fronting more than 1.2 miles of the North Fork Stillaguamish River including mature forest and a relict side channel, allowing for restoration of habitat forming processes. | Acquisition |

In addition to these three acquisition projects, the review panel is excited about the following planning projects that will explore watershed-scale natural process restoration actions at locations that have potential to provide exceptionally high benefit to achieving Chinook recovery goals. We hope to see these develop into actual restoration projects soon.

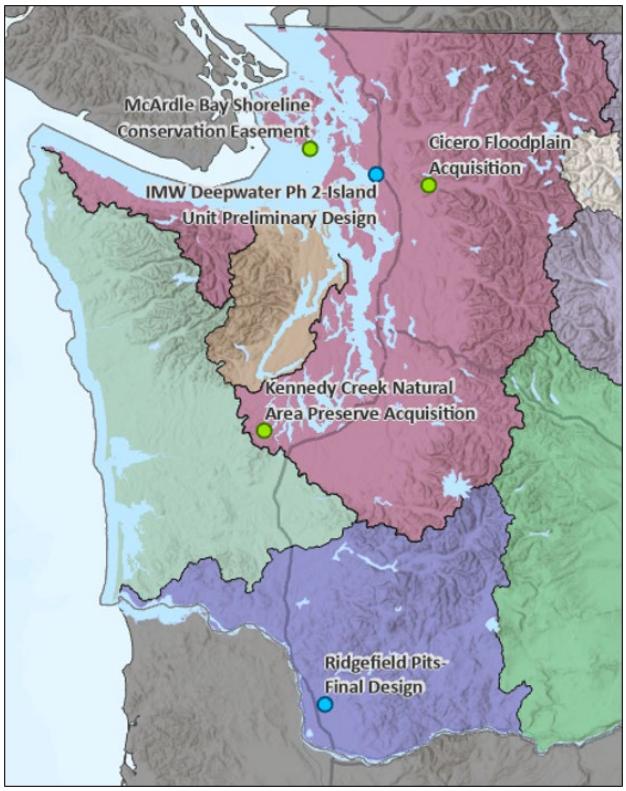



**Table 6. Notable Planning Projects**

| | | | |
|---|---|---|---|
| 21-1187 Deepwater Phase 2 Island Unit Preliminary Design | Washington Department of Fish and Wildlife | The department will move ahead with designing restoration of fluvial and tidal processes at this 270-acre unit of the Skagit Wildlife Area. The department's selection of the "full restoration" alternative for this site shows its leadership and commitment to salmon recovery. | Planning |
| 21-1127 Ridgefield Pits Final Design | Lower Columbia Estuary Partnership | Culmination of long-term planning efforts by multiple stakeholders for restoring habitat and fluvial processes on a 2-mile reach of the East Fork Lewis River that avulsed into former gravel pits during a 1996 flood. | Planning |

## 2021 Recommendations

The following is a summary of key recommendations based on the general observations for this grant round.

- Continue to refine the PRISM online application and evaluation portals, and add a project condition tracking portal.
- Format proposal presentations to incorporate both online virtual presentations and physical site visits, depending on the project type and need for extra scrutiny.
- As part of the riparian planting guidelines that RCO is developing, consider the merits of including guidance for following a commercial forestry planting approach as consistently as feasible across the state.
- Include guidance in Manual 18 on how to estimate the quantity of upland acreage for proposal acquisition sites.

# Part 3: Region Summaries

## Introduction

The SRFB continues to allocate funding regionally rather than to individual lead entities. The following section of the report provides links on the RCO Web site to the region annual summaries about their grant process. The responses are direct submittals from the regions.

## Region Summaries

Hood Canal

Lower Columbia River

Middle Columbia River

Puget Sound

Snake River

Upper Columbia River

Washington Coast

Northeast Region

## Attachment 1: 2021 Grant Schedule

| Date | Action | Description |
|---|---|---|
| October 14 | **Due Date:** Requests for SRFB Review Panel site visits | Lead entities submit their requests for site visits to RCO staff by this date. |
| January–April | Complete project application materials submitted at least 2 weeks before site visit **(required)** | **At least 2 weeks before** the site visit, applicants submit a complete application in PRISM (See Application Checklist). The lead entity provides applicants with a project number from the Salmon Recovery Portal (formerly Habitat Work Schedule) **before** work can begin in PRISM. |
| **Track 1**<br>February 3–March 20<br>-Or-<br>**Track 2**<br>April 1–May 15 | Site visits **(required)** | RCO screens all applications for completeness and eligibility. The SRFB Review Panel evaluates projects using Manual 18, Appendix F criteria. RCO staff and review panel members attend lead entity-organized site visits. *Site visits in May will be limited to areas that have accessibility and weather issues earlier in the year.* |
| March 24 | Lead entity feedback **(optional due date)** | Track 1: If lead entities intend to provide feedback to the applicants via the PRISM module, they must enter comments by this date. |
| March 25 | SRFB Review Panel meeting | Track 1: SRFB Review Panel and RCO staff meet to discuss projects and complete comment forms for projects visited in February and March. |
| April 3 | **First comment form**<br>For February and March site visits | Track 1: Applicants receive SRFB Review Panel comments identifying projects as *Clear*, *Conditioned*, *Needs More Information*, or *Project of Concern*. RCO staff accepts *Clear* applications and returns *Conditioned*, *Needs More Information*, and *Project of Concern* applications so applicants may update and respond to comments. |

| Date | Action | Description |
|---|---|---|
| May 18 | Lead entity feedback **(optional due date)** | Track 2: If lead entities intend to provide feedback to the applicants via the PRISM module, they must enter comments by this date. |
| May 20 | SRFB Review Panel meeting | Track 2: SRFB Review Panel and RCO staff meet to discuss projects and complete comment forms for projects visited in April and May. |
| June 5 | **First comment form**<br>For April and May site visits | Track 2: Applicants receive SRFB Review Panel comments identifying projects as *Clear*, *Conditioned*, *Needs More Information*, or *Project of Concern*. RCO staff accepts *Clear* applications and returns *Conditioned*, *Needs More Information*, and *Project of Concern* applications so applicants may update and respond to comments. |
| Early June | Conference call (Optional) | Tracks 1 and 2: Lead entities may schedule a 1-hour conference call with project applicants, RCO staff, and one SRFB Review Panel member to discuss *Needs More Information*, *Conditioned, or Project of Concern* projects. |
| **June 29, Noon** | **Due Date:** Applications due | Applicants submit final revised application materials via PRISM. See Application Checklist. |
| June 29–July 14 | RCO and SRFB Review Panel review | RCO staff and the SRFB Review Panel review revised applications. The review panel evaluates projects using Manual 18, Appendix F criteria. |
| July 15 | SRFB Review Panel meeting | SRFB Review Panel and RCO staff meet to discuss projects and complete comments. |
| July 29 | **Final comment form** | Applicants receive the final SRFB Review Panel comments, identifying projects as *Clear*, *Conditioned*, or *Project of Concern*. |
| August 14 | **Due Date**: Accept SRFB Review Panel condition | Applicants with *Conditioned* projects must indicate whether they accept the conditions or will withdraw their projects. |
| August 14 | **Due Date**: Lead entity ranked list | Lead entities submit ranked lists via PRISM. |

| Date | Action | Description |
|---|---|---|
| August 21 | **Due Date:** Regional submittal | Regional organizations submit their recommendations for funding, including alternate projects (only those they want the SRFB to consider funding), and their Regional Area Summary and Project Matrix. |
| September 7 | Final grant report available for public review | The final funding recommendation report is available online for SRFB members and public review. |
| September 22, 23 | Board funding meeting | SRFB awards grants. Public comment period available. |

## Attachment 2: SRFB Review Panel Evaluation Criteria

The following criteria is from Appendix F in Manual 18.

To help ensure that every project funded by the SRFB is technically sound, the SRFB Review Panel will note for the SRFB any projects it believes have the following:

- Low benefit to salmon
- Low likelihood of being successful
- Costs that outweigh the anticipated benefits of the project

Projects that have a low benefit to salmon, a low likelihood of success, or costs that outweigh the anticipated benefits will be designated as *Projects of Concern*. The review panel will not otherwise rate, score, or rank projects. It is expected that projects will follow best management practices and will meet local, state, and federal permitting requirements.

The SRFB Review Panel uses the SRFB Individual Comment Form to capture its comments on individual projects.

When a *Project of Concern* is identified, the sponsor will receive a comment form identifying the evaluation criteria on which the status was determined. Before the regional area meetings, the regional recovery organization that represents the area in which the project is located can contact the review panel chair if there are further questions. At the regional area meetings, there is opportunity for the review panel to discuss project issues and work with the regional recovery organization and the regional technical team advisors to determine if the issues can be resolved before the list of *Projects of Concern* is presented to the SRFB.

## Criteria

For acquisition and restoration projects, the panel will determine that a project is not technically sound and cannot be significantly improved if it meets the following conditions:

1. It is unclear there is a problem to salmonids the project is addressing. For acquisition projects, this criterion relates to the lack of a clear threat if the property is not acquired.
2. Information provided or current understanding of the system is not sufficient to determine the need for, or the benefit of, the project.

3. Incomplete application or proposal.
4. Project goal or objectives not clearly stated or do not address salmon habitat protection or restoration.
5. Project sponsor has not responded to review panel comments.
6. Acquisition parcel prioritization (for multi-site proposals) is not provided or the prioritization does not meet the projects goal or objectives.
7. The project is dependent on other key conditions or processes being addressed first.
8. The project has a high cost relative to the anticipated benefits and the project sponsor has failed to justify to the satisfaction of the review panel.
9. The project does not account for the conditions or processes in the watershed.
10. The project may be in the wrong sequence with other habitat protection, assessments, or restoration actions in the watershed.
11. The project does not work towards restoring natural watershed processes or prohibits natural processes.
12. It is unclear how the project will achieve its stated goals or objectives.
13. It is unlikely that the project will achieve its stated goals or objectives.
14. There is low potential for threat to habitat conditions if the project is not completed.
15. The project design is not adequate or the project is sited improperly.
16. The stewardship description is insufficient or there is inadequate commitment to stewardship and maintenance, and this likely would jeopardize the project's success.
17. The main focus is on supplying a secondary need, such as education, stream bank stabilization to protect property, or water supply.

## Additional Criteria for Planning Projects

For planning projects (e.g. assessment, design, inventories, and studies), the review panel will consider the criteria for acquisition and restoration projects (1-13) and the following additional criteria. The review panel will determine that a project is not

technically sound and cannot be improved significantly if it meets the following criteria:

A. The project does not address an information need important to understanding the watershed, is not directly relevant to project development or sequencing, and will not clearly lead to beneficial projects.

B. The methodology does not appear to be appropriate to meet the goals and objectives of the project.

C. There are significant constraints to the implementation of projects following completion of the planning project.

D. The project does not clearly lead to project design or does not meet the criteria for filling a data gap.

E. The project does not appear to be coordinated with other efforts in the watershed or does not use appropriate methods and protocols.

## Attachment 3: Guide for Lead Entity Benefit and Certainty Criteria

### Benefit and Certainty Criteria

The SRFB developed the following criteria several years ago for evaluating benefit to fish and certainty of project success. With the evolution of lead entity strategies and recovery plans, the SRFB shifted to a technical evaluation of site-specific projects using the Project of Concern criteria. Use the benefit and certainty criteria listed below only for lead entity guidance in their evaluation of projects through their local processes.

| Identified and Prioritized in the Strategy | High BENEFIT Project | Medium BENEFIT Project | Low BENEFIT Project |
|---|---|---|---|
| Watershed Processes and Habitat Features | Addresses high priority habitat features and/or watershed process that significantly protect or limit the salmonid productivity in the area.<br><br>**Acquisition:** More than 60 percent of the total project area is intact habitat, or if less than 60 percent, project must be a combination that includes restoration.<br><br>**Assessment:** Crucial to understanding watershed processes, is directly relevant to project development or sequencing, and clearly will lead to new projects in high priority areas. | May not address the most important limiting factor but will improve habitat conditions.<br><br>**Acquisition:** 40-60 percent of the total project area is intact habitat, or if less than 40-60 percent, project must be a combination that includes restoration.<br><br>**Assessments:** Will lead to new projects in moderate priority areas and is independent of addressing other key conditions first. | Does not address an important habitat condition in the area. |

| Identified and Prioritized in the Strategy | High BENEFIT Project | Medium BENEFIT Project | Low BENEFIT Project |
|---|---|---|---|
| Areas and Actions | Is a high priority action in a high priority geographic area.<br><br>**Assessment:** Fills an important data gap in a high priority area. | May be an important action but in a moderate priority geographic area.<br><br>**Assessment:** Fills an important data gap, but is in a moderate priority area. | Addresses a lower priority action or geographic area. |
| Scientific | Is identified through a documented habitat assessment. | Is identified through a documented habitat assessment or scientific opinion. | Is unclear or lacks scientific information about the problem being addressed. |
| Species | Addresses multiple species or unique populations of salmonids essential for recovery or Endangered Species Act-listed fish species or non-listed populations primarily supported by natural spawning. Documented fish use. | Addresses a moderate number of species or unique populations of salmonids essential for recovery or Endangered Species Act-listed fish species or non-listed populations primarily supported by natural spawning. Documented fish use. | Addresses a single species of a low priority. Documented fish use. |
| Life History | Addresses an important life history stage or habitat type that limits the productivity of the salmonid species in the area or project addresses multiple life history requirements. | Addresses fewer life history stages or habitat types that limit the productivity of the salmonid species in the area or partially addresses fewer life | Is unclear about the salmonid life history being addressed. |

| Identified and Prioritized in the Strategy | High BENEFIT Project | Medium BENEFIT Project | Low BENEFIT Project |
|---|---|---|---|
| | | history requirements. | |
| Costs | Has a low cost relative to the predicted benefits for the project type in that location. | Has a reasonable cost relative to the predicted benefits for the project type in that location. | Has a high cost relative to the predicted benefits for that particular project type in that location. |

| **Certainty Criteria** | | | |
|---|---|---|---|
| **Identified and Prioritized in the Strategy** | **High CERTAINTY Project** | **Medium CERTAINTY Project** | **Low CERTAINTY Project** |
| Appropriate | Scope is appropriate to meet its goals and objectives. | Is moderately appropriate to meet its goals and objectives. | The methodology does not appear to meet the goals and objectives of the project. |
| Approach | Is consistent with proven scientific methods.<br><br>**Assessment:** Methodology will address effectively an information or data gap or lead to effective implementation of prioritized projects within 1-2 years of completion. | Uses untested or incomplete scientific methods.<br><br>**Assessment:** Methods will effectively address a data gap or lead to effective implementation of prioritized projects within 3-5 years of completion. | Uses untested or ineffective methods. |
| Sequence | Is in the correct sequence and is independent of other | Is dependent on other actions being taken first that are | May be in the wrong sequence with other |

| Certainty Criteria | | | |
|---|---|---|---|
| **Identified and Prioritized in the Strategy** | **High CERTAINTY Project** | **Medium CERTAINTY Project** | **Low CERTAINTY Project** |
| | actions being taken first. | outside the scope of this project. | protection and restoration actions. |
| Threat | Addresses a high potential threat to salmonid habitat. | Addresses a moderate potential threat to salmonid habitat. | Addresses a low potential threat to salmonid habitat. |
| Stewardship | Clearly describes and funds stewardship of the area or facility for more than 10 years. | Clearly describes but does not fund stewardship of the area or facility for more than 10 years. | Does not describe or fund stewardship of the area or facility. |
| Landowner | Landowners are willing to have work done. | Landowners potentially contacted and likely will allow work. | Landowner willingness is unknown. |
| Implementation | Actions are scheduled, funded, and ready to take place and have few or no known constraints to successful implementation including projects that may result from this project. | Have few or no known constraints to successful implementation as well as other projects that may result from this project. | Actions are unscheduled, unfunded, and not ready to take place, and have several constraints to successful implementation. |

## Attachment 4: Regional Monitoring Project List

| | | | | |
|---|---|---|---|---|
| 21-1017 | Touchet River Smolt Monitoring Phase 2 | Washington Department of Fish and Wildlife | Snake River | $151,921 |
| 21-1019 | Stillaguamish Smolt Trap Monitoring | Stillaguamish Tribe of Indians | Puget Sound | $40,000 |
| 21-1041 | Puyallup River Juvenile Salmon Assessment Fiscal Year 2021 | Puyallup Tribe of Indians | Puget Sound | $50,192 |
| 21-1126 | Lower Columbia Winter Steelhead Escapement Analysis | Washington Department of Fish and Wildlife | Lower Columbia | $100,000 |
| 21-1184 | Entiat River Fish Monitoring | Chelan County Natural Resources | Upper Columbia | $45,380 |
| 21-1191 | Intensively Monitored Watershed-Skagit Estuary Restoration Monitoring | Skagit River System Cooperative | Puget Sound | $50,000 |
| | | | **Total** | **$437,493** |

## Attachment 5: Conditioned Projects and Project of Concern List

### Salmon State Projects

Conditioned Projects=22

Project of Concern=1

#### Lead Entity: Chehalis Basin LE

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 6 | 21-1043 Restoration | Lewis Conservation District MF Newaukum Trib-Alpha Fish Passage Construction | Application Complete | Needs more information | Conditioned A |
| 7 | 21-1185 Planning | Mason Conservation Dist Cloquallum Creek at Cloquallum Rd LWD Design | Application Complete | Needs more information | Conditioned A |

#### Lead Entity: Island County LE

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 3 | 21-1067 Restoration | NW Straits Marine Cons Found Polnell Point Armor Removal Construction | Application Complete | Conditioned A | |

#### Lead Entity: Kalispel Tribe-Pend Oreille LE

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| | 21-1205 Restoration | Kalispel Tribe Duncan Springs Thermal Refugia Project | Application Returned | Conditioned A | |

**Lead Entity: Klickitat County LE**

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 2 | 21-1203 Restoration | Mid-Columbia RFEG Rattlesnake Gulch Fish Passage & Restoration 2021 | Application Resubmitted | Needs more information | Conditioned A |
| 2 | 21-1203 Restoration | Mid-Columbia RFEG Rattlesnake Gulch Fish Passage & Restoration 2021 | Application Resubmitted | Needs more information | Conditioned A |

**Lead Entity: Lower Col Fish Recovery Bd LE**

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 5 | 21-1078 Restoration | Cowlitz Conservation Dist Upper Germany Creek Restoration Project | Application Complete | Needs more information | Conditioned A |

**Lead Entity: Pierce County LE**

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 5 | 21-1022 Restoration | Pierce Co Public Works Fennel Creek Restoration Phase 3-Construction | Application Returned | Needs more information | Conditioned A |

**Lead Entity: Snake River Salmon Rec Bd LE**

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 2 | 21-1004 Restoration | Walla Walla Co Cons Dist Walla Walla River RM 35.5 Restoration | Application Complete | Needs more information | Conditioned A |
| 6 | 21-1011 Planning | Columbia Conservation Dist | Application Complete | Needs more information | Conditioned A |

| | | | | | |
|---|---|---|---|---|---|
| | | Mainstem Touchet Project Area 10 Design | | | |
| 5 | 21-1012 Planning | Columbia Conservation Dist Mainstem Touchet Project Area 15 Design | Application Complete | Needs more information | Conditioned A |
| 9 | 21-1013 Planning | Walla Walla Co Cons Dist Mill Creek RM 1.75 Design | Application Complete | Conditioned A | |
| 10 | 21-1015 Planning | Walla Walla Co Cons Dist Mainstem Touchet Project Area 01 Design | Application Complete | Needs more information | Conditioned A |

**Lead Entity: Upper Columbia Salmon Rcy Bd**

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 4 | 21-1173 Planning | Methow Salmon Recovery Found Sugar Reach Restoration Preliminary Design | Application Complete | Needs more information | Conditioned A |
| 5 | 21-1174 Restoration | Yakama Nation Twisp Horseshoe Floodplain Restoration | Application Complete | Needs more information | Conditioned A |

**Lead Entity: West Sound Partners LE**

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 2 | 21-1058 Planning | Mid-Puget Sound Fish Enh Grp Fletcher Bay Rd Culvert Removal Design | Application Complete | Conditioned A | |

| | | | | | |
|---|---|---|---|---|---|
| 3 | 21-1053<br>Planning | Mid-Puget Sound Fish Enh Grp<br>Point No Point Estuary Restoration Prelim Design | Application Complete | Project of Concern (POC) | Project of Concern (POC) |

**Lead Entity: Willapa Bay LE**

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 4 | 21-1142<br>Planning | CREST<br>South-Greenhead-Bear Confluence Design | Application Complete | Needs more information | Conditioned A |
| 3 | 21-1143<br>Planning | Sea Resources<br>Clearwater Creek Bridge Design | Application Complete | Needs more information | Conditioned A |
| 1 | 21-1162<br>Restoration | Pacific Conservation Dist<br>Lower Forks Creek Large Wood Debris Implementation | Application Complete | Needs more information | Conditioned A |

**Lead Entity: WRIA 13 LE-Jennifer O'Neal, Steve Toth-1 project**

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 2 | 21-1135<br>Restoration | Thurston Conservation District<br>Zangle Cove Bulkhead Removal | Application Complete | Conditioned A | |

**Lead Entity: Yakima Basin FWRB LE**

| LE Rank | Number Type | Sponsor Project Name | Proj Status | Initial Review | Final Review |
|---|---|---|---|---|---|
| 7 | 21-1197<br>Restoration | Mid-Columbia RFEG<br>Lower Cowiche Floodplain Restoration | Application Complete | Conditioned A | |
| 10 | 21-1200<br>Planning | Mid-Columbia RFEG<br>Taneum Creek | Application Complete | Conditioned A | |

| | | | | | |
|---|---|---|---|---|---|
| | | Campground Restoration Design | | | |

## Project Review Comments

# PROJECT: 21-1053 P, Point No Point Estuary Restoration Prelim Design

Sponsor: Mid-Puget Sound Fish Enh Grp
Program: SALMON ST PROJ
Status: Application Complete

## MEETING: Initial Review

Shared: 4/14/2021

**Review Status:** Project of Concern (POC)

| Topics | Comments |
|---|---|
| Review Panel Comments-Initial | |
| Questions (response required) | |
| | Reply: We appreciate the review panel's thorough and thoughtful review of our application. Responses are given below to Improvements to Make Project Technically Sound and General Comments. |
| Improvements to Make Project Technically Sound (response required) | |
| | Clarify in your proposal why only one conceptual design was prepared from the feasibility study, given that "four highly developed conceptual design" were originally included in the objectives of project 17-1032 which funded the feasibility study. |

| Topics | Comments |
|---|---|
| | Reply: There are three conceptual alternatives presented in the Feasibility Study, primarily alternatives around how to connect the upper and lower marsh and the total extent of restoration. All three conceptual designs include replacing the existing tide gate with an open tidal channel to the east. Based on feedback from project partners, surrounding property owners, and the greater Hansville community, the primary conceptual alternative (full restoration) is the concept that will move forward to preliminary design. A full summary of the findings of our outreach efforts and explanation of the three concepts developed are included in the attached Final Feasibility Report. We ruled out restoring tidal connection to the north early on in our project planning due to (1) the known presence of cultural resources that should not be disturbed, and (2) the location of existing historic, park, and community infrastructure along the north shore. We did not develop a conceptual design alternative for replacing the tidegate with an MTR as recommended in the Skillings Connolly 2019 report, as an MTR would not provide adequate access to the site or rearing habitat restoration for juvenile Chinook salmon, one of the primary goals of this project. Our original proposal for the feasibility study included developing up to four high-level conceptual alternatives because (1) we knew that the project would require an intensive level of partner and community outreach and engagement from the start to be successful due to the complexity of the project and the history of the area, (2) our initial scope for the feasibility study was limited in order to keep costs within the funding amount available and we were unable to secure additional funds for design until the 2020 ESRP grant round, and (3) we knew that coastal processes would likely only be able to support an open tidal channel in a few locations. |
| | A primary focus of the feasibility study was stakeholder engagement. The August 2020 feasibility report by Blue Coast Engineering touches on this lightly. Please include a brief update on this work in the proposal and provide initial feedback received and future outreach still planned. |
| | Reply: As of June 25, 2021, our partner, landowner, and community member outreach component of the feasibility study is complete. Full results of this outreach are included in the Final Feasibility Report uploaded to PRISM on 6/23/2021, please see Appendix B: Outreach Summary Report. Early outreach efforts focused on working with the relevant Kitsap County |

| Topics | Comments |
|---|---|
| | departments and Commissioner Gelder to ensure the County's support of the project prior to engaging with the community, and required completing enough data collection to show that the project was feasible and to develop a concept that could be approved by the County. We received approval in late 2019 to begin our full outreach efforts, but those were subsequently delayed due to COVID-19 and staff changes at Mid Sound. We were able to quickly mobilize in early 2021 to complete our partner and community outreach and finalize the Feasibility Study based on the results of those efforts by June 25, 2021.<br><br>Mid Sound held 34 partner and community meetings in the first half of 2021, plus additional one-on-one conversations with interested parties. We presented the Conceptual Design, draft feasibility study, project goals and next steps to, and gathered feedback from, over 40 project partners, including staff from:<br><br>• Kitsap County Parks, Community Development, and Public Works departments;<br><br>• Natural resource and cultural staff from the Suquamish, Port Gamble S'Klallam, Jamestown S'Klallam, and Skokomish tribes and the Point No Point Treaty Council;<br><br>• Washington Department of Fish and Wildlife;<br><br>• Conservation and recreation groups including Wild Fish Conservancy, North Kitsap Puget Sound Anglers and Kitsap Audubon;<br><br>• US Lighthouse Society (headquarters in Point No Point Park) and US Coast Guard;<br><br>• County Commissioner Gelder and State Representative Kilmer's office.<br><br>We also connected with 44 area landowners, focusing on those closest to the Park who would be impacted most heavily by the project and who have on-the-ground insights for project design. This included: |

| Topics | Comments |
|---|---|
| | • The neighborhoods uphill of the project and using Hillview Lane, a private road that runs through the Park and will be part of the project design;<br>• The neighborhood north and west of the Park along Point No Point Road, which is along the access route to the Park;<br>• The greater area community (Hansville/Norwegian Point) surrounding the Park.<br><br>As a result of the Feasibility technical studies and outreach, the Point NoPoint estuary restoration is well-positioned for our next stage of design development. We confirmed that existing physical conditions support the project, and have built a strong foundation of partner engagement and community interest in the project. Those who have concerns have provided important questions and clarity on the design and management priorities for us to address moving ahead. Partners have brought strong ideas for enhancing the project including outreach and education opportunities, native plant harvesting for tribes, and habitat and invasive plant considerations. We will continue to pursue these topics as we develop our design further and explore alternatives in the next phase.<br><br>Throughout future phases of the project, we will be sending regular project update emails to all partners and community members who have signed up to receive Point No Point project emails. We plan to provide updates to and gather feedback from our partner, landowner, and community groups through webinars, meetings, and design review workshops at key milestones, including the completion of data collection, the draft 30% design, 60% design and permitting, and final design. |
| | Because implementation of marsh restoration is likely infeasible due to impacts on neighboring private property, a more productive next step for working towards the goal would be for Kitsap County and other stakeholders to begin acquiring and removing development from these neighboring properties. It is likely that an acquisition program will become necessary to respond to predicted sea level rise within the next several |

| Topics | Comments |
|---|---|
| | decades, and the sponsor and county may want begin working on a long term plan for carrying this out. |
| | Reply: We currently do not think the community would be in favor of an acquisition program, and we are working on project designs that would not require acquisition to be successful. However, we understand that sea level rise is a growing threat to the surrounding community and will keep in mind the possibility of acquisitions in our discussions with the County, homeowners, and project partners. The property owners whose parcel and private road could be included in the project footprint are critical partners in our communications and design development. Thus far we have not had resistance to the project, and have addressed concerns and questions raised to date. We will continue to include them in our design development and can adjust the project footprint to avoid these properties if required. Therefore, acquisition is not required to reach project goals, and given the resistance of the community to this approach alongside their support for the current design trajectory, this is not our recommended pathway. We will continue to consider acquisition as a project alternative as we move forward with preliminary design. |
| | General Comments (response not required) |
| | Generally speaking, you should list all previous projects at the site even if they were not funded. Particularly for a site that has been proposed several times over the years by different sponsors. Each project may reference different elements and have discussions worth consideration in the comment forms. Project 13-1192 in particular had relevant background. |
| | Reply: Project 13-1192 has been added to the previous projects list. Our understanding is that the project was proposed and funded but not supported by Kitsap County and was therefore unable to proceed. We have focused much of our early outreach efforts and planning on engaging with Kitsap County and other landowners and key partners to ensure that we have the support needed to properly move forward on preliminary design. |
| | We recognize this as a high priority site for restoration. |
| | You may find it useful to partner with Wild Fish Conservancy in completing your stakeholder and landowner outreach tasks under the active grant that |

| Topics | Comments |
|---|---|
| | you have. WFC is the sponsor of Finn Creek Design and Permitting (20-1018) which is located close to the current project; you may find overlap in land ownership and be able to realize efficiency in effort by working together. |
| | Reply: Thank you for this suggestion. We have been in touch with WFC on coordinating our outreach for this project and the Finn Creek restoration project and plan to work together once both projects are ready to move forward on their next phases. |
| | The results of the 17-1032 feasibility study show that local land elevation and the modeled high tide and high runoff water levels that will result from the proposed restoration will result in substantial flooding on the private properties located along Point No Point Road. The proposed 2000-foot dike may be effective in preventing flooding from the marsh side, but will block the existing drainage patterns from Point No Point Road southward into the marsh. The Skillings Connolly study recommends major infrastructure improvements such as pump stations and a new outfall to address current flooding, even before loss of flood storage in the marsh by the restoration project is taken into account. Past experience with equivalent coastal marsh restoration SRFB design projects shows that the local residents will be opposed to paying for this infrastructure and its perpetual operation.<br><br>Past experience also has shown that it is likely that the reintroduction of tidal prism into the marsh will cause hydraulic rise and salinity intrusion on the water table, which will negatively impact septic systems and landscaping on private lots. Of the eight water supply wells that were identified in the site vicinity, two that are screened at 20 to 25 feet BGS will very likely also be impacted by salt water intrusion, For these reasons, the review panel believes that objections from the adjacent private property owners will make it infeasible to implement the restoration design. |
| | Reply: We don't yet have a full picture of the hydraulics of the site; this is a priority to address early in our preliminary design phase. We have not yet modeled the restored salt marsh with preliminary design details - high tide and high runoff water levels presented in the report were modeled assuming an open tidal channel but no other restoration. Several model results do not produce flooding in the wetlands for |

| Topics | Comments |
|---|---|
| | scenarios where flooding has been observed (also noted in the Skillings-Connolly report), e.g. standing water in ditches in the marsh during the middle of summer at low tide. The stream ditch directed straight toward PNP road may be contributing to flooding, and restoration could help to address this.<br><br>Replacing the tide gate with a tidal channel outlet will create a larger capacity for flood water transport out of the marsh. The project design intends to include protective responses to any potential property or infrastructure flooding once modeled during Preliminary Design, including the potential to modify the project footprint and/or install setback levees to manage the design as the data indicates is needed. Improved hydraulics, vegetation, and tidal flushing will all enhance flood storage and conveyance capacities compared to current conditions. Kitsap County Public Works is aware of and plans to address drainage problems - we are coordinating with them on design. Marsh storage capacity is currently reduced by invasive species growth and collapsing of channel banks/disconnected channels. This is a data gap we need to address before preliminary design alternatives can be developed. Existing ditch function will be considered and addressed with the County as part of design development.<br><br>One key difference between Point No Point and Greenbank is that Point No Point provides the opportunity for complete barrier embayment restoration with a larger project area, complete tidal flushing, freshwater stream, and barrier beach. We understand that groundwater and flooding impacts would need to be mitigated, however we have not completed groundwater studies and hydraulic modeling to understand likely impacts. These are the studies and analysis that would be funded by in this next phase of design, allowing us to understand the full extent and design the best solution to these concerns. The Greenbank project area was more constrained and with limited tidal exchange volume, while Point No Point has enough area to restore full tidal prism and will create more habitat for juvenile Chinook. Kitsap County is a partner and is already looking into new drainage options for the site, and the County supports removing the tide gate. Private property owners are engaged in our outreach and design considerations, and ultimately private |

| Topics | Comments |
|---|---|
| | parcels can be excluded from the project without jeopardizing the restoration goals. |
| | These issues were evaluated carefully in SRFB Project 17-1140 "Greenbank Marsh Restoration Design," at a project site with equivalent ground surface elevation, drainage and water table conditions as at Point No Point. The restoration objectives at Greenbank proved to be infeasible, and it is unrealistic to expect a different outcome at Point No Point. |
| | Reply: We have reviewed the Greenbank Marsh project, appreciate the lessons that came out of that project, and have taken the results of that project into account in our feasibility study and outreach efforts. Based on the work we have completed to date, we feel that several important differences between the Greenbank project and this project do allow us to reasonably expect a different outcome. The Greenbank project area was more constrained and with limited tidal exchange volume, while Point No Point has enough area to restore the full tidal prism and will create more habitat for juvenile Chinook. Kitsap County is a partner and is already looking into new drainage options for the site, and the County supports removing the tide gate. Private property owners are engaged in our outreach and design considerations, and ultimately private parcels can be excluded from the project without jeopardizing the restoration goals. |

## MEETING: Final Review

Shared: 7/19/2021

**Review Status:** Project of Concern (POC)

| Topics | Comments |
|---|---|
| Review Panel Comments-Final | |
| General Comments | |
| | The review panel provided detailed initial review comments that explain the POC designation. The sponsor subsequently provided results of the Spring 2021 landowner outreach survey, which support the review panel's belief that there is negligible certainty that the project objectives will ultimately be achieved. The survey shows that many adjacent landowners are concerned about ditch flooding and septic systems and don't feel that |

| Topics | Comments |
|---|---|
| | these concerns are being addressed, and wonder why project planning is proceeding ahead of addressing these issues.<br><br>SRFB grants have funded design and acquisition projects at project sites with similar potential for nearshore habitat restoration in WRIA 6, including Iverson Marsh, Dugualla Lagoon, Deer Lagoon, Swan Lake, and Greenbank Marsh. At each of these sites, objections from a portion of the adjacent property owners regarding impacts to drainage and water table were sufficient to prevent the projects from proceeding to construction. Based on the information provided by the sponsor, there is no reason to expect a different outcome at the Point No Point project site. In our experience, certainty of implementation hinges on acquisition and removal of all the adjacent residential development, and to date there is no plan to do this. |

# Attachment 6: Ranked Project Lists

## REGION: HOOD CANAL/PUGET SOUND

| | |
|---|---|
| Regional Allocation/Allotment: | $1,255,512.00 |
| Remaining: | $0.00 |

### HOOD CANAL COORDINATING COUNCIL LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 8

*Salmon Allocation* $1,255,512.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 20-1105 Acq,Rest | Mason Conservation Dist<br>Skokomish RM 6.5 Acquisition and Restoration | $570,000.00 | $100,589.00 | $302,790.00 | $403,379.00 |
| | 2 | 19-1285 Acq | Hood Canal SEG<br>Big Quilcene Moon Valley Acquisition | $369,913.00 | $66,872.00 | $414,891.00 | $481,763.00 |
| | 3 | 21-1033 Rest | North Olympic Salmon Coalition<br>Eastern Straits Summer Chum Riparian Stewardship | $113,799.00 | $22,501.00 | $113,799.00 | $136,300.00 |
| | 4 | 21-1034 Rest | Hood Canal SEG<br>Riparian Enhancement and Knotweed Control 2021 | $209,539.00 | $41,573.00 | $209,539.00 | $251,112.00 |
| | 5 | 21-1024 Plan | Jefferson County of<br>Dosewallips Wolcott Flats & Rocky Brook Planning | $163,625.00 | $28,875.00 | $163,625.00 | $192,500.00 |
| | 6 | 21-1038 Plan | Hood Canal SEG<br>Duckabush Oxbow Additional Preliminary Design | $50,868.00 | $0.00 | $50,868.00 | $50,868.00 |
| Alternate | 7 | 21-1048 Rest | Mason Conservation Dist<br>Skokomish Floodplain Reconnection & Rd. Impr | $1,611,320.00 | $284,357.00 | $0.00 | $284,357.00 |
| Alternate | 8 | 21-1021 Plan,Acq | Hood Canal SEG<br>Tahuya R RM 9.5 Acquisition & Preliminary Design | $554,199.00 | $100,215.00 | $0.00 | $100,215.00 |
| | | | Totals: | $3,643,263.00 | $644,982.00 | $1,255,512.00 | $1,900,494.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 20-1105 RCO Note** This is a cost increase for a previously approved project.

**Project 19-1285 RCO Note** This is a cost increase for a previously approved project.

**Overall Note** Hood Canal receives a regional allocation of $480,00 plus a portion of Puget Sound's regional allocation, $775,515 for a total allocation of $1,255,512.

## REGION: LOWER COLUMBIA

| | |
|---|---|
| Regional Allocation/Allotment: | $4,000,000.00 |
| Remaining: | $0.00 |

### KLICKITAT LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 5

*Salmon Allocation* $670,800.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1202 Plan | Mid-Columbia RFEG<br>Lower Snyder Creek Restoration Design | $160,000.00 | $28,300.00 | $160,000.00 | $188,300.00 |
| | 2 | 21-1203 Rest | Mid-Columbia RFEG<br>Rattlesnake Gulch Fish Passage & Restoration 2021 | $110,725.00 | $19,700.00 | $110,725.00 | $130,425.00 |
| | 3 | 21-1248 Plan | Eastern Klickitat CD<br>Pine Creek Fish Passage Design | $165,000.00 | $30,000.00 | $165,000.00 | $195,000.00 |
| | 4 | 21-1244 Plan | Underwood Conservation Dist<br>White Salmon River Conservation Assessment 2021 | $75,246.00 | $13,280.00 | $75,246.00 | $88,526.00 |
| Partial | 5 | 21-1241 Acq | Columbia Land Trust<br>Upper Rattlesnake Creek Conservation | $352,500.00 | $1,503,057.00 | $159,829.00 | $1,662,886.00 |
| | | | Totals: | $863,471.00 | $1,594,337.00 | $670,800.00 | $2,265,137.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1241 RCO Note** This is a partially funded project. It is also receiving an additional $7,305 from the Lower Columbia LE. The total funding in 2021 for this project is $167,134.

**Overall Note** Klickitat Lead Entity received $108,000 from Lower Columbia and $562,800 from Mid-Columbia Region

### LOWER COLUMBIA FISH RECOVERY BOARD LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 20

*Salmon Allocation* $3,892,000.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1126 Mon | Fish & Wildlife Dept of<br>Winter Steelhead Escapement Analysis | $100,000.00 | $17,700.00 | $100,000.00 | $117,700.00 |
| | 2 | 21-1061 Rest | Lower Columbia FEG<br>SF Toutle Lower Brownell Reach Restoration | $771,342.00 | $140,539.00 | $771,342.00 | $911,881.00 |
| | 3 | 21-1130 Acq | Columbia Land Trust<br>Grays River Conservation Area | $600,000.00 | $2,436,310.00 | $600,000.00 | $3,036,310.00 |
| | 4 | 21-1104 | Cowlitz Indian Tribe | $810,099.00 | $162,750.00 | $810,099.00 | $972,849.00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Rest | Mitchell Creek Floodplain Reconnection | | | | |
| | 5 | 21-1078<br>Rest | Cowlitz Conservation Dist<br>Upper Germany Creek Restoration Project | $219,000.00 | $39,000.00 | $219,000.00 | $258,000.00 |
| | 6 | 21-1103<br>Rest | Cowlitz Indian Tribe<br>Grays 4C Restoration | $684,899.00 | $601,700.00 | $684,899.00 | $1,286,599.00 |
| | 7 | 21-1127<br>Plan | Lower Columbia Estuary Partner<br>Ridgefield Pits- Final Design | $295,796.00 | $52,636.00 | $295,796.00 | $348,432.00 |
| | 8 | 21-1139<br>Plan | Wahkiakum Conservation Dist<br>Ervest Tide Gate Project | $79,000.00 | $16,000.00 | $36,691.00 | $52,691.00 |
| | 9 | 21-1107<br>Rest | Cowlitz Indian Tribe<br>The Shire - Ecosystem Restoration | $366,868.00 | $72,596.00 | $366,868.00 | $439,464.00 |
| Partial | 10 | 21-1241<br>Acq | Columbia Land Trust<br>Upper Rattlesnake Creek Conservation | $352,500.00 | $1,503,057.00 | $7,305.00 | $1,510,362.00 |
| Alternate | 11 | 21-1098<br>Rest | Mid-Columbia RFEG<br>Beaver Reach Side-Channel Restoration | $192,800.00 | $34,500.00 | $0.00 | $34,500.00 |
| Alternate | 12 | 21-1050<br>Rest | Underwood Conservation Dist<br>Stabler Bend Side Channel 2021 | $260,570.00 | $45,985.00 | $0.00 | $45,985.00 |
| Alternate | 13 | 21-1108<br>Plan | Cowlitz Indian Tribe<br>Cispus Floodplain Reconnection Project | $199,570.00 | $0.00 | $0.00 | $0.00 |
| Alternate | 14 | 21-1080<br>Rest | Wahkiakum Conservation Dist<br>Cleveland Skamokawa Creek Restoration Project | $184,585.00 | $55,000.00 | $0.00 | $55,000.00 |
| Alternate | 15 | 21-1099<br>Plan | Mid-Columbia RFEG<br>Dry Creek Fish Passage Design | $64,784.00 | $12,000.00 | $0.00 | $12,000.00 |
| Alternate | 16 | 21-1128<br>Plan | Lower Columbia Estuary Partner<br>East Fork Thermal Assessment & Design - Phase 2 | $143,786.00 | $25,930.00 | $0.00 | $25,930.00 |
| Alternate | 17 | 21-1049<br>Plan | Underwood Conservation Dist<br>Washougal River Habitat Assessment & Design | $198,311.00 | $35,000.00 | $0.00 | $35,000.00 |
| Alternate | 18 | 21-1110<br>Rest | Lewis Conservation District<br>Graves Fish Passage 2021 | $49,791.00 | $200,076.00 | $0.00 | $200,076.00 |
| Alternate | 19 | 21-1133<br>Rest | Wahkiakum Co. Public Works<br>Clear Creek Reconnection and Public Safety Project | $655,265.00 | $218,716.00 | $0.00 | $218,716.00 |
| Alternate | 20 | 21-1069<br>Plan | Lower Columbia FEG<br>Lower Lacamas Creek Design - Phase 1 2021 | $199,877.00 | $37,000.00 | $0.00 | $37,000.00 |
| | | | Totals: | $6,428,843.00 | $5,706,495.00 | $3,892,000.00 | $9,598,495.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1139 RCO Note** This project is fully funded. $42,309 is being provided by the Snake River Salmon Recovery Board, and is included on their list.

**Project 21-1241 RCO Note** This is a partially funded project. It is on the Klickitat list. Total funding for this project is $167,134.

## REGION: NORTHEAST WASHINGTON

Regional Allocation/Allotment: $380,000.00

Remaining: $0.00

### KALISPEL TRIBE-PEND OREILLE LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 2

*Salmon Allocation* $380,000.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1205 Rest | Kalispel Tribe<br>Duncan Springs Thermal Refugia Project | $326,000.00 | $78,548.00 | $222,750.00 | $301,298.00 |
| | 2 | 21-1204 Plan | Kalispel Tribe<br>Harvey Creek Design | $157,250.00 | $27,750.00 | $157,250.00 | $185,000.00 |
| | | | Totals: | $483,250.00 | $106,298.00 | $380,000.00 | $486,298.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1205 RCO Note** This project is fully funded. The Skagit Watershed LE will be providing $103,250.00 of their 2021 SRFB allocation to this project, it is included on their list.

## REGION: PUGET SOUND

Regional Allocation/Allotment: $6,824,487.00

Remaining: $0.00

### GREEN/DUWAMISH AND CENTRAL PUGET SOUND WATERSHED (WRIA 9) LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 2

*Salmon Allocation* $328,772.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| Partial | 1 | 20-1067 Rest | Kent City of<br>Downey Farmstead Side Channel II | $4,610,000.00 | $873,545.00 | $195,895.00 | $1,069,440.00 |
| Partial | 2 | 21-1002 Rest | King Co Water & Land Res<br>Flaming Geyser State Park Riparian Revegetation | $295,895.00 | $104,105.00 | $132,877.00 | $236,982.00 |
| | | | Totals: | $4,905,895.00 | $977,650.00 | $328,772.00 | $1,306,422.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Overall Note** Klickitat Lead Entity received $108,000 from Lower Columbia and $562,800 from Mid-Columbia Region

## ISLAND COUNTY LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 3

*Salmon Allocation* $241,828.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| Partial | 1 | 20-1134 Acq | Whidbey Camano Land Trust WRIA 6 Nearshore Protection Tool Implementation | $795,000.00 | $145,000.00 | $20,246.00 | $165,246.00 |
| | 2 | 21-1066 Rest | NW Straits Marine Cons Found Hoypus Point Shoreline Restoration Construction | $155,058.00 | $150,000.00 | $155,058.00 | $305,058.00 |
| | 3 | 21-1067 Rest | NW Straits Marine Cons Found Polnell Point Armor Removal Construction | $66,524.00 | $428,033.00 | $66,524.00 | $494,557.00 |
| | | | Totals: | $1,016,582.00 | $723,033.00 | $241,828.00 | $964,861.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 20-1134 RCO Note** This project was partially funded on the 2020 ranked list. In 2021, the project will receive $20,246 in 2021 SRFB, as well as $30,000 in unallocated Island 21-23 PSAR funds.

## KENNEDY-GOLDSBOROUGH BASIN (WRIA 14) SALMON RECOVERY LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 2

*Salmon Allocation* $233,952.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1123 Acq | Natural Resources Dept of Kennedy Creek Natural Area Preserve Acquisition | $210,556.00 | $429,494.00 | $113,707.00 | $543,201.00 |
| | 2 | 20-1086 Rest | South Puget Sound SEG West Oakland Bay Restoration 2020, 2C | $5,730,376.00 | $1,013,652.00 | $120,245.00 | $6,744,028.00 |
| | | | Totals: | $5,940,932.00 | $1,443,146.00 | $233,952.00 | $7,287,229.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1123 RCO Note** This project will be fully funded with the following additional funds: $121,119.04, in 17-19 PSAR and $249,623.96, 21-23 PSAR.

## LAKE WASHINGTON/CEDAR/SAMMAMISH WATERSHED (WRIA 8) LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 2

*Salmon Allocation* $435,234.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| Partial | 1 | 21-1208 Rest | Issaquah City of<br>Lower Issaquah Creek Stream & Habitat Enh | $450,000.00 | $80,000.00 | $435,234.00 | $515,234.00 |
| Alternate | 2 | 21-1105 Plan | Snohomish County of<br>Cutthroat Creek Restoration Final Design | $196,700.00 | $34,714.00 | $0.00 | $34,714.00 |
| | | | Totals: | $646,700.00 | $114,714.00 | $435,234.00 | $549,948.00 |
| | | | Remaining Allocation: | | | $0.00 | |

## NISQUALLY RIVER SALMON RECOVERY LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 4

*Salmon Allocation* $418,610.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1031 Acq | Nisqually Land Trust<br>Nisqually Floodplain Small Lots Acquisition 2021 | $44,136.00 | $7,800.00 | $44,136.00 | $51,936.00 |
| | 2 | 21-1029 Acq | Nisqually Land Trust<br>Lower Ohop Protection 2021 | $130,000.00 | $22,950.00 | $130,000.00 | $152,950.00 |
| | 3 | 21-1030 Acq | Nisqually Land Trust<br>Nisqually River McKenna Reach Protection 2021 | $74,642.00 | $13,200.00 | $74,642.00 | $87,842.00 |
| Partial | 4 | 21-1032 Plan | South Puget Sound SEG<br>Mashel River Habitat Designs RM 0-3 | $198,000.00 | $0.00 | $169,832.00 | $169,832.00 |
| | | | Totals: | $446,778.00 | $43,950.00 | $418,610.00 | $462,560.00 |
| | | | Remaining Allocation: | | | $0.00 | |

## NORTH OLYMPIC PENINSULA LEAD ENTITY FOR SALMON

2021 September (Ranked List is in "Accepted" status) Number of Projects: 5

*Salmon Allocation* $719,010.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| Partial | 1 | 21-1094 Rest | Lower Elwha Klallam Tribe<br>Elwha River Vegetation Enhancement | $455,720.00 | $81,133.00 | $246,747.00 | $327,880.00 |
| | 2 | 21-1062 Rest | Jamestown S'Klallam Tribe<br>Upper Dungeness R Large Wood Restoration Phase III | $318,020.00 | $1,000,000.00 | $271,613.00 | $1,271,613.00 |
| Partial | 3 | 21-1101 Rest | North Olympic Salmon Coalition<br>Dungeness Riparian Recovery Phase III | $175,907.00 | $39,000.00 | $15,650.00 | $54,650.00 |
| | 4 | 21-1054 Plan | Lower Elwha Klallam Tribe<br>Little Hoko River Restoration Design | $185,000.00 | $0.00 | $185,000.00 | $185,000.00 |
| Alternate | 5 | 21-1102 Rest | North Olympic Salmon Coalition<br>Johnson Ck Triple Culvert Restoration Construction | $1,287,109.00 | $260,000.00 | $0.00 | $260,000.00 |
| | | | Totals: | $2,421,756.00 | $1,380,133.00 | $719,010.00 | $2,099,143.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1094 RCO Note** This is a partially funded project and will also receive $17,360 in 19-21 PSAR funds. Total funding in 2021 for this project is $264,107.

**Project 21-1062 RCO Note** This project will be fully funded with an additional $46,407 in 19-21 PSAR funds.

**Project 21-1101 RCO Note** This is a partially funded project and will also receive $25,807 in 19-21 PSAR funds. Total funding in 2021 for this project is $41,457.

## PUYALLUP AND CHAMBERS WATERSHED SALMON RECOVERY LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 4

*Salmon Allocation* $564,452.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 2 | 21-1041 Mon | Puyallup Tribe of Indians<br>Puyallup River Juvenile Salmon Assessment FY 2021 | $50,192.00 | $14,668.00 | $50,192.00 | $64,860.00 |
| | 3 | 21-1028 Acq | Sumner City of<br>Pacific Pointbar LB 4.4-4.8-Acquisition Phase III | $310,250.00 | $54,750.00 | $310,250.00 | $365,000.00 |
| Partial | 4 | 21-1040 Rest | South Puget Sound SEG<br>Greenwater River Restoration (RM 4.0-4.3) | $455,060.00 | $80,649.00 | $204,010.00 | $284,659.00 |
| Alternate | 5 | 21-1022 Rest | Pierce Co Public Works<br>Fennel Creek Restoration Phase 3 - Construction | $249,900.00 | $44,210.00 | $0.00 | $44,210.00 |
| | | | Totals: | $1,065,402.00 | $194,277.00 | $564,452.00 | $758,729.00 |
| | | | Remaining Allocation: | | | $0.00 | |

## SAN JUAN COUNTY LEAD ENTITY FOR SALMON RECOVERY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 1

*Salmon Allocation* $308,602.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| Partial | 1 | 21-1148 Acq | San Juan Preservation Trust<br>McArdle Bay Shoreline Conservation Easement | $416,250.00 | $634,650.00 | $308,602.00 | $943,252.00 |
| | | | Totals: | $416,250.00 | $634,650.00 | $308,602.00 | $943,252.00 |
| | | | Remaining Allocation: | | | $0.00 | |

## SKAGIT WATERSHED COUNCIL LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 6

*Salmon Allocation* $1,245,196.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1187 Plan | Fish & Wildlife Dept of<br>IMW Deepwater Ph 2-Island Unit Preliminary Design | $613,626.00 | $0.00 | $613,626.00 | $613,626.00 |
| | 2 | 21-1190 Plan | Skagit River Sys Cooperative<br>IMW McGlinn Feasibility Phase 3 | $108,515.00 | $20,000.00 | $108,515.00 | $128,515.00 |
| | 3 | 21-1188 Plan,Acq | Skagit Land Trust<br>Skagit Watershed Habitat Acquisition V | $391,000.00 | $69,000.00 | $269,805.00 | $338,805.00 |
| | 4 | 21-1189 Rest | Skagit River Sys Cooperative<br>2021 Collaborative Skagit Riparian Stewardship | $100,000.00 | $17,648.00 | $100,000.00 | $117,648.00 |
| | 5 | 21-1191 Mon | Skagit River Sys Cooperative<br>IMW Estuary Restoration Monitoring | $50,000.00 | $9,803.00 | $50,000.00 | $59,803.00 |
| | | 21-1205 Rest | Kalispel Tribe<br>Duncan Springs Thermal Refugia Project | $326,000.00 | $78,548.00 | $103,250.00 | $181,798.00 |
| | | | Totals: | $1,589,141.00 | $194,999.00 | $1,245,196.00 | $1,440,195.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1188 RCO Note** This project is fully funded, and the remaining balance ($121,195) for this project will be on the Snohomish LE 2021 ranked list.

**Project 21-1205 RCO Note** This project is located in the Kalispel Tribe / Pend Oreille LE, and is fully funded.

## SNOHOMISH BASIN LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 5

*Salmon Allocation* $568,219.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1070 Plan | Wild Fish Conservancy<br>Snoqualmie River Large Wood Placement Concept Des | $91,758.00 | $25,000.00 | $76,217.00 | $101,217.00 |
| | 2 | 21-1210 Plan | Adopt A Stream Foundation<br>Catherine Creek LWM Pre-Design | $87,120.00 | $0.00 | $87,120.00 | $87,120.00 |
| | 3 | 21-1072 Rest | Snohomish Conservation Dist<br>Woods Creek Culvert Coop. - 118th St. Construction | $255,143.00 | $45,100.00 | $255,143.00 | $300,243.00 |
| | | 21-1153 Plan | Lummi Nation<br>SF Nooksack Skookum Edfro Ph 3 Design | $100,000.00 | $17,651.00 | $28,544.00 | $46,195.00 |
| | | 21-1188 Plan,Acq | Skagit Land Trust<br>Skagit Watershed Habitat Acquisition V | $391,000.00 | $69,000.00 | $121,195.00 | $190,195.00 |
| | | | Totals: | $925,021.00 | $156,751.00 | $568,219.00 | $724,970.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1070 RCO Note** This project is fully funded and will receive $15,541 in 21-23 PSAR.

**Project 21-1153 RCO Note** This project is located in WRIA 1 / Nooksack LE and is fully funded.

**Project 21-1188 RCO Note** This project is located in Skagit Watershed LE and is fully funded.

## STILLAGUAMISH RIVER SALMON RECOVERY CO-LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 3

*Salmon Allocation* $554,522.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1019 Mon | Stillaguamish Tribe of Indians<br>Stillaguamish Smolt Trap Monitoring | $40,000.00 | $7,059.00 | $40,000.00 | $47,059.00 |
| | 2 | 21-1051 Acq | Stillaguamish Tribe of Indians<br>Cicero Floodplain Acquisition | $783,550.00 | $155,000.00 | $361,522.00 | $516,522.00 |
| | 3 | 21-1084 Rest | Snohomish Conservation Dist<br>Targeted Big Buffers in the Stillaguamish | $153,000.00 | $27,000.00 | $153,000.00 | $180,000.00 |
| | | | Totals: | $976,550.00 | $189,059.00 | $554,522.00 | $743,581.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1051 RCO Note** This project is fully funded and will receive an additional $422,028 in unallocated 21-23 PSAR funds.

## WEST SOUND PARTNERS FOR ECOSYSTEM RECOVERY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 3

*Salmon Allocation* $295,932.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1052 Acq,Rest | Bainbridge Island Land Trust<br>Springbrook Cr Preserve Protection & Restoration | $303,648.00 | $494,564.00 | $149,595.00 | $644,159.00 |
| | 2 | 21-1058 Plan | Mid-Puget Sound Fish Enh Grp<br>Fletcher Bay Rd Culvert Removal Design | $85,000.00 | $50,000.00 | $85,000.00 | $135,000.00 |
| Partial | 3 | 21-1053 Plan | Mid-Puget Sound Fish Enh Grp<br>Point No Point Estuary Restoration Prelim Design | $76,774.00 | $203,836.00 | $61,337.00 | $265,173.00 |
| | | | Totals: | $465,422.00 | $748,400.00 | $295,932.00 | $1,044,332.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1052 RCO Note** This project is fully funded and will receive an additional $154,053 in 21-23 PSAR funds.

## WRIA 1 WATERSHED MANAGEMENT BOARD

2021 September (Ranked List is in "Accepted" status) Number of Projects: 2

*Salmon Allocation* $714,559.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1132 Rest | Nooksack Indian Tribe SF (Nuxw7íyem) Homesteader Ph1 Restoration | $643,103.00 | $113,489.00 | $643,103.00 | $756,592.00 |
| | 2 | 21-1153 Plan | Lummi Nation SF Nooksack Skookum Edfro Ph 3 Design | $100,000.00 | $17,651.00 | $71,456.00 | $89,107.00 |
| | | | Totals: | $743,103.00 | $131,140.00 | $714,559.00 | $845,699.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1153 RCO Note** This project is fully funded and will receive an additional $28,544 from Snohomish County Lead Entity

## WRIA 13 SALMON HABITAT RECOVERY LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 3

*Salmon Allocation* $195,599.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1138 Plan | South Puget Sound SEG Upper Deschutes Conceptual Design | $145,117.00 | $25,750.00 | $145,117.00 | $170,867.00 |
| | 2 | 21-1135 Rest | Thurston Conservation District Zangle Cove Bulkhead Removal | $30,922.00 | $82,150.00 | $30,922.00 | $113,072.00 |
| | | 16-1399 Plan,Rest | South Puget Sound SEG Butler Cove Estuary Connectivity Project | $192,000.00 | $35,000.00 | $19,560.00 | $54,560.00 |
| | | | Totals: | $368,039.00 | $142,900.00 | $195,599.00 | $338,499.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 16-1399 RCO Note** This is a cost increase for a previously approved project..

## REGION: SNAKE RIVER

| | |
|---|---|
| Regional Allocation/Allotment: | $1,688,000.00 |
| Remaining: | $0.00 |

### SNAKE RIVER SALMON RECOVERY BOARD LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 13

*Salmon Allocation* $1,688,000.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1017 Mon | Fish & Wildlife Dept of Touchet River Smolt Monitoring Phase 2 | $151,921.00 | $26,810.00 | $151,921.00 | $178,731.00 |
| | 2 | 21-1004 Rest | Walla Walla Co Cons Dist Walla Walla River RM 35.5 Restoration | $249,999.00 | $51,000.00 | $249,999.00 | $300,999.00 |
| | 3 | 21-1010 Plan | Tri-State Steelheaders Inc Mill Creek Passage - Gose St Conceptual Design | $182,112.00 | $32,138.00 | $182,112.00 | $214,250.00 |
| | 4 | 21-1005 Rest | Asotin Co Conservation Dist Cougar Creek Fish Passage Restoration | $200,000.00 | $50,000.00 | $200,000.00 | $250,000.00 |
| | 5 | 21-1012 Plan | Columbia Conservation Dist Mainstem Touchet Project Area 15 Design | $199,500.00 | $58,000.00 | $199,500.00 | $257,500.00 |
| | 6 | 21-1011 Plan | Columbia Conservation Dist Mainstem Touchet Project Area 10 Design | $105,464.00 | $28,000.00 | $105,464.00 | $133,464.00 |
| | 7 | 21-1016 Plan | Walla Walla Co Cons Dist Coppei Creek Project Area 07 Design | $59,328.00 | $12,000.00 | $59,328.00 | $71,328.00 |
| | 8 | 21-1007 Rest | Pomeroy Conservation Dist Tumalum Creek PALS | $145,500.00 | $25,700.00 | $145,500.00 | $171,200.00 |
| | 9 | 21-1013 Plan | Walla Walla Co Cons Dist Mill Creek RM 1.75 Design | $110,488.00 | $23,000.00 | $110,488.00 | $133,488.00 |
| | 10 | 21-1015 Plan | Walla Walla Co Cons Dist Mainstem Touchet Project Area 01 Design | $108,768.00 | $0.00 | $108,768.00 | $108,768.00 |
| | 11 | 20-1050 Rest | Umatilla Confederated Tribes North Touchet Phase 3 | $395,417.00 | $304,833.00 | $101,000.00 | $405,833.00 |
| | 12 | 20-1053 Rest | Nez Perce Tribe Tumalum Creek Culvert Restoration | $316,110.00 | $67,861.00 | $31,611.00 | $99,472.00 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 13 | 21-1139 Plan | Wahkiakum Conservation Dist Ervest Tide Gate Project | $79,000.00 | $16,000.00 | $42,309.00 | $58,309.00 |
| | | Totals: | $2,303,607.00 | $695,342.00 | $1,688,000.00 | $2,383,342.00 |
| | | Remaining Allocation: | | | $0.00 | |

**Project 20-1050 RCO Note** This is a cost increase for a previously funded project.

**Project 20-1053 RCO Note** This is a cost increase for a previously funded project.

**Project 21-1139 RCO Note** This project is located in the Lower Columbia LE and is fully funded.

## REGION: UPPER COLUMBIA

| | |
|---|---|
| Regional Allocation/Allotment: | $2,062,000.00 |
| Remaining: | $0.00 |

### UPPER COLUMBIA SALMON RECOVERY BOARD LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 13

*Salmon Allocation* $2,062,000.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1175 Rest | Yakama Nation<br>Mystery & War Creek Reach Wood Restoration | $366,770.00 | $984,970.00 | $366,770.00 | $1,351,740.00 |
| | 2 | 21-1180 Rest | Chelan Co Natural Resource<br>Nason Kahler Instream Complexity Restoration Ph 2 | $421,370.00 | $163,924.00 | $421,370.00 | $585,294.00 |
| | 3 | 21-1184 Mon | Chelan Co Natural Resource<br>CCNRD Entiat River Fish Monitoring | $45,380.00 | $128,613.00 | $45,380.00 | $173,993.00 |
| | 4 | 21-1173 Plan | Methow Salmon Recovery Found<br>Sugar Reach Restoration Preliminary Design | $401,148.00 | $76,319.00 | $401,148.00 | $477,467.00 |
| | 5 | 21-1174 Rest | Yakama Nation<br>Twisp Horseshoe Floodplain Restoration | $199,500.00 | $164,470.00 | $199,500.00 | $363,970.00 |
| | 6 | 21-1171 Plan | Chelan Co Natural Resource<br>Nason Crk RM 12 Floodplain Reconnection | $95,200.00 | $16,800.00 | $95,200.00 | $112,000.00 |
| | 7 | 21-1176 Rest | Yakama Nation<br>Lower Little Bridge Creek Wood Restoration | $122,500.00 | $237,675.00 | $122,500.00 | $360,175.00 |
| | 8 | 21-1179 Plan | Cascade Col Fish Enhance Group<br>Restore Lower Peshastin Creek Ph 2 Final Design | $127,273.00 | $0.00 | $127,273.00 | $127,273.00 |
| | 9 | 21-1169 Plan | Chelan Co Natural Resource<br>Nason Crk RM 9.4-Thermal Refuge Prelim Design | $94,152.00 | $0.00 | $94,152.00 | $94,152.00 |
| | 10 | 21-1183 Acq | Okanogan County of<br>Mazama Bridge Habitat Acquisition | $158,100.00 | $27,900.00 | $158,100.00 | $186,000.00 |
| Partial | 11 | 21-1182 Rest | Trout Unlimited Inc.<br>Wenatchee-Entiat Beaver-Powered Restoration | $125,490.00 | $103,982.00 | $30,607.00 | $134,589.00 |
| Alternate | 12 | 21-1165 Plan | Cascadia Conservation District<br>Entiat Prioritization Assessments | $187,383.00 | $33,073.00 | $0.00 | $33,073.00 |
| Alternate | 13 | 21-1177 Rest | Yakama Nation<br>Fox Creek & Silver Falls Side Channel Restoration | $360,000.00 | $737,500.00 | $0.00 | $737,500.00 |
| | | | Totals: | $2,704,266.00 | $2,675,226.00 | $2,062,000.00 | $4,737,226.00 |
| | | | Remaining Allocation: | | | $0.00 | |

## REGION: COASTAL

Regional Allocation/Allotment: $1,914,000.00

Remaining: $0.00

### CHEHALIS BASIN LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 11

*Salmon Allocation* $746,406.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1081 Rest | Chehalis Basin FTF<br>Geissler Cr at Geissler Rd Fish Passage Const 1 | $306,410.00 | $54,074.00 | $306,410.00 | $360,484.00 |
| | 2 | 21-1074 Acq | Chehalis R Basin Land Trust<br>West and East Hoquiam Acquisitions | $84,427.00 | $14,998.00 | $84,427.00 | $99,425.00 |
| | 3 | 21-1035 Rest | Lewis County Public Works<br>MF Newaukum at C. Alpha Fish Passage Const (SRFB) | $177,734.00 | $710,938.00 | $177,734.00 | $888,672.00 |
| | 4 | 21-1089 Plan,Rest | Thurston Conservation District<br>Scatter Creek S Tributaries Project Development | $132,778.00 | $23,500.00 | $132,778.00 | $156,278.00 |
| Partial | 5 | 21-1042 Rest | Thurston County of<br>Black R Trib - Littlerock Rd. Fish Pass. Con. | $100,000.00 | $1,400,000.00 | $45,057.00 | $1,445,057.00 |
| Alternate | 6 | 21-1043 Rest | Lewis Conservation District<br>MF Newaukum Trib - Alpha Fish Passage Construction | $95,559.00 | $25,000.00 | $0.00 | $25,000.00 |
| Alternate | 7 | 21-1185 Plan | Mason Conservation Dist<br>Cloquallum Creek at Cloquallum Rd LWD Design | $169,125.00 | $0.00 | $0.00 | $0.00 |
| Alternate | 8 | 21-1027 Acq | Capitol Land Trust<br>Willapa Hills Farm Property Conservation Easement | $154,029.00 | $298,363.00 | $0.00 | $298,363.00 |
| Alternate | 9 | 21-1026 Acq | Capitol Land Trust<br>Collins Property Conservation Easement | $154,029.00 | $298,363.00 | $0.00 | $298,363.00 |
| Alternate | | 21-1036 Rest | Lewis County Public Works<br>MF Newaukum Trib-Kruger Fish Passage Const (SRFB) | $222,212.00 | $888,846.00 | $0.00 | $888,846.00 |
| Alternate | | 21-1037 Rest | Lewis County Public Works<br>Lucas Crk Trib MP 4.39 - Fish Passage Const (SRFB) | $392,573.00 | $659,516.00 | $0.00 | $659,516.00 |
| | | | Totals: | $1,988,876.00 | $4,373,598.00 | $746,406.00 | $5,120,004.00 |
| | | | Remaining Allocation: | | | $0.00 | |

## NORTH PACIFIC COAST LEAD ENTITY

**2021 September (Ranked List is in "Accepted" status) Number of Projects: 5**

***Salmon Allocation***
**$387,918.00**

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1137 Rest | Wild Salmon Center<br>Low-Tech SSHEAR Site Restoration | $29,181.00 | $5,836.00 | $29,181.00 | $35,017.00 |
| | 2 | 21-1144 Plan | Trout Unlimited Inc.<br>Anton and Cedar Creeks Fish Passage Design Project | $137,625.00 | $0.00 | $137,625.00 | $137,625.00 |
| | 3 | 21-1159 Rest | Pacific Coast Salmon Coalition<br>Kugel Creek Culvert Supplement | $206,000.00 | $40,000.00 | $206,000.00 | $246,000.00 |
| Alternate | 4 | 21-1163 Plan | Jefferson County of<br>Hoh River Lindner Floodplain Preliminary Design | $255,255.00 | $45,045.00 | $0.00 | $45,045.00 |
| Partial | 5 | 21-1164 Rest | Pacific Conservation Dist<br>Letsinger Barrier Removal and Channel Re-meander | $318,750.00 | $56,250.00 | $15,112.00 | $71,362.00 |
| | | | Totals: | $946,811.00 | $147,131.00 | $387,918.00 | $535,049.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1164 RCO Note** This project is located in the Willapa Bay LE. This project will be partially funded with funding from Willapa Bay LE, Quinault LE, and North Pacific Coast LE.

## QUINAULT INDIAN NATION LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 5

*Salmon Allocation* $377,499.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1117 Rest | 10,000 Years Institute<br>Snahapish River Invasive Plant Control (Phase 3) | $80,000.00 | $14,426.00 | $80,000.00 | $94,426.00 |
| | 2 | 21-1122 Plan | Trout Unlimited Inc.<br>Donkey Creek Tributary Fish Passage Design | $102,366.00 | $0.00 | $102,366.00 | $102,366.00 |
| | 3 | 21-1115 Plan | Quinault Indian Nation<br>QIR Fish Passage Design 2021 - S.F. Salmon R. Trib | $76,000.00 | $0.00 | $76,000.00 | $76,000.00 |
| | 4 | 21-1116 Plan | Quinault Indian Nation<br>QIR Tributary Fish Passage Design 2021 - Raft R. | $91,000.00 | $0.00 | $91,000.00 | $91,000.00 |
| Partial | | 21-1164 Rest | Pacific Conservation Dist<br>Letsinger Barrier Removal and Channel Re-meander | $318,750.00 | $56,250.00 | $28,133.00 | $84,383.00 |
| | | | Totals: | $668,116.00 | $70,676.00 | $377,499.00 | $448,175.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1164 RCO Note** This project is located in the Willapa Bay LE. This project will be partially funded with funding from Willapa Bay LE, Quinault LE, and North Pacific Coast LE.

## WILLAPA BAY LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 4

*Salmon Allocation* $402,177.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1162 Rest | Pacific Conservation Dist<br>Lower Forks Creek Large Wood Debris Implementation | $320,535.00 | $56,565.00 | $320,535.00 | $377,100.00 |
| Partial | 2 | 21-1164 Rest | Pacific Conservation Dist<br>Letsinger Barrier Removal and Channel Re-meander | $318,750.00 | $56,250.00 | $81,642.00 | $137,892.00 |
| Alternate | 3 | 21-1143 Plan | Sea Resources<br>Clearwater Creek Bridge Design | $177,600.00 | $0.00 | $0.00 | $0.00 |
| Alternate | 4 | 21-1142 Plan | CREST<br>South-Greenhead-Bear Confluence Design | $178,609.00 | $8,630.00 | $0.00 | $8,630.00 |
| | | | Totals: | $995,494.00 | $121,445.00 | $402,177.00 | $523,622.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1164 RCO Note** This project will be fully funded with additional funding included on the Quinault LE and North Pacific Coast LE lists.

## REGION: MID COLUMBIA

| | |
|---|---|
| Regional Allocation/Allotment: | $1,876,000.00 |
| Remaining: | $0.00 |

### KLICKITAT LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 5

*Salmon Allocation* $670,800.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 21-1202 Plan | Mid-Columbia RFEG<br>Lower Snyder Creek Restoration Design | $160,000.00 | $28,300.00 | $160,000.00 | $188,300.00 |
| | 2 | 21-1203 Rest | Mid-Columbia RFEG<br>Rattlesnake Gulch Fish Passage & Restoration 2021 | $110,725.00 | $19,700.00 | $110,725.00 | $130,425.00 |
| | 3 | 21-1248 Plan | Eastern Klickitat CD<br>Pine Creek Fish Passage Design | $165,000.00 | $30,000.00 | $165,000.00 | $195,000.00 |
| | 4 | 21-1244 Plan | Underwood Conservation Dist<br>White Salmon River Conservation Assessment 2021 | $75,246.00 | $13,280.00 | $75,246.00 | $88,526.00 |
| Partial | 5 | 21-1241 Acq | Columbia Land Trust<br>Upper Rattlesnake Creek Conservation | $352,500.00 | $1,503,057.00 | $159,829.00 | $1,662,886.00 |
| | | | Totals: | $863,471.00 | $1,594,337.00 | $670,800.00 | $2,265,137.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 21-1241 RCO Note** This is a partially funded project. It is also receiving an additional $7,305 from the Lower Columbia LE. The total funding in 2021 for this project is $167,134.

**Overall Note** Klickitat Lead Entity received $108,000 from Lower Columbia and $562,800 from Mid-Columbia regions.

## YAKIMA BASIN FISH AND WILDLIFE RECOVERY BOARD LEAD ENTITY

2021 September (Ranked List is in "Accepted" status) Number of Projects: 10

*Salmon Allocation* $1,313,200.00

| Alternate or Partial | Rank | Project Number, Project Type | Project Sponsor, Project Name | Grant Request | Sponsor Match | Proposed Salmon Funding | Total Funding |
|---|---|---|---|---|---|---|---|
| | 1 | 20-1391 Rest | Mid-Columbia RFEG<br>2020 Yakima Basin Riparian Stewardship | $283,161.00 | $50,094.00 | $182,856.00 | $232,950.00 |
| | 2 | 20-1203 Acq | Kittitas Conservation Trust<br>Upper Yakima River Floodplain Acquisition | $292,629.00 | $51,641.00 | $65,662.00 | $117,303.00 |
| | 3 | 21-1195 Plan | Yakama Nation<br>Toppenish Passage and Screening Assessment | $104,050.00 | $36,670.00 | $104,050.00 | $140,720.00 |
| | 4 | 21-1077 Rest | Kittitas Conservation Trust<br>Kachess River Restoration - Phase I | $492,145.00 | $86,850.00 | $492,145.00 | $578,995.00 |
| | 5 | 21-1209 Plan | North Yakima Conserv Dist<br>Wenas Creek Passage & Screening Prelim Des | $80,000.00 | $15,000.00 | $80,000.00 | $95,000.00 |
| | 6 | 21-1196 Rest | Yakama Nation<br>Taneum Creek Rag-Heart Habitat Enhancement | $229,381.00 | $41,826.00 | $229,381.00 | $271,207.00 |
| Partial | 7 | 21-1197 Rest | Mid-Columbia RFEG<br>Lower Cowiche Floodplain Restoration | $342,980.00 | $61,100.00 | $159,106.00 | $220,206.00 |
| Alternate | 8 | 21-1199 Rest | Mid-Columbia RFEG<br>Taneum Creek Rehabilitation and Recreation Mngmt | $320,433.00 | $57,598.00 | $0.00 | $57,598.00 |
| Alternate | 9 | 21-1170 Plan | Trout Unlimited Inc.<br>Swauk Cr: Supplemental Flows P&C Designs | $199,478.00 | $0.00 | $0.00 | $0.00 |
| Alternate | 10 | 21-1200 Plan | Mid-Columbia RFEG<br>Taneum Creek Campground Restoration Design | $157,440.00 | $0.00 | $0.00 | $0.00 |
| | | | Totals: | $2,501,697.00 | $400,779.00 | $1,313,200.00 | $1,713,979.00 |
| | | | Remaining Allocation: | | | $0.00 | |

**Project 20-1391 RCO Note** This project was partially funded in the 2020 SRFB grant round; this additional increment will fully fund the project.

**Project 20-1203 RCO Note** This is a cost increase for a previously funded project.

# KITSAP COUNTY BOARD OF COMMISSIONERS

*Efficient, accessible and effective county services*



September 1, 2021

Jeff Breckel, Chair
Salmon Recovery Funding Board
Recreation and Conservation Office
PO Box 40917
Olympia WA 98504-0917

Dear Mr. Breckel,

The Kitsap County Board of Commissioners would like to express our strong support for Mid Sound Fisheries Enhancement Group's (Mid Sound) request for Salmon Recovery Funding Board funding. Mid Sound's proposal would continue the great work to support the Point No Point Estuary Restoration through the next needed step of preliminary design and engineering.

In the 1800s, the estuary at Point No Point was transformed to allow for development of the Point No Point Lighthouse and residential growth. Tidal influence was eliminated and the ecological function of the wetlands changed with the construction of berms, roads, and a tide-gate. This grant will help Mid Sound continue developing design alternatives for the potential removal of a tide-gate and restoration of estuary wetlands on County-owned park land at Point No Point. The biological, ecological, and cultural significance of the Point No Point Estuary for salmon recovery in the Puget Sound region is vital.

Since February 2020, Mid Sound and Blue Coast Engineering have collaborated with Commissioner Gelder, Kitsap County leadership and senior staff from Public Works, Parks, and Community Development to discuss restoration options. Mid Sound also conducted extensive outreach and education to the surrounding landowners and community to ensure the next phase in preliminary design addresses all perspectives. The positive outcome of outreach efforts was shared with the County in June of 2021. Based on this analysis, there is a high likelihood a future design plan can be developed that is mutually beneficial to our community, habitat and the various County departments who manage public assets in the area. Kitsap County is fully committed to working with Mid Sound to complete data collection, finalize design alternatives, and collaborate with the surrounding community to ensure estuary restoration actions are successful.

We appreciate the opportunity to further our public/private partnership aimed at developing a project design that can be mutually beneficial to the community and salmon recovery efforts in Kitsap County. The Kitsap County Board of Commissioners urges the Salmon Recovery Funding Board to approve funding for this project.

614 Division Street, MS-4 • Port Orchard, Washington 98366-4676 • (360) 337-7080• FAX (360) 337-4632
From: Olalla (253) 851-4147 • Bainbridge Island (206) 842-2061
www.kitsapgov.com

Sincerely,

Robert Gelder
Chair

Charlotte Garrido
Commissioner

Edward E. Wolfe
Commissioner

Cc: Salmon Recovery Funding Board members
Sarah Heerhartz, Mid Sound Fisheries Enhancement Group
Tom Ostrom, Suquamish Tribe
Andrew Nelson, Kitsap County Public Works Director
Alex Wisniewski, Kitsap County Parks Director
Jeff Rimack, Kitsap County Community Development Director

Puget Sound
Salmon Recovery Council

31 August 2021

Chair Jeff Breckel
Salmon Recovery Funding Board
c/o Washington State Recreation and Conservation Office
PO Box 40917
Olympia WA 98504-0917

**RE: Point No Point Estuary Restoration Preliminary Design (PRISM # 21-1053) – Support for Appeal of Project of Concern Designation**

Dear Chair Breckel,

On behalf of the Puget Sound Salmon Recovery Council, I write to offer our strong support for the Mid Sound Fisheries Enhancement Group's Point No Point Estuary Restoration Design project (PRISM # 21-1053). We understand that the project has been labeled a Project of Concern (POC) by the SRFB Review Panel for the FY22 Lead Entity Grant Round and that West Sound Partners for Ecosystem Recovery (WSPER) Lead Entity are appealing that POC designation. After thorough consideration of this project and the SRFB Review Panel's comments, the Puget Sound Salmon Recovery Council unanimously agreed to lend our support to WSPER's appeal of the POC designation.

This project would complete the feasibility and design phase of a restoration project with two objectives: to restore tidal inundation and fish access to the former Point No Point salt marsh, and to restore pocket estuary habitat for out-migrating juvenile Chinook. This project has been identified as the highest local priority salmon project by the WSPER Lead Entity, based on a study commissioned to prioritize nearshore protection and restoration projects benefitting juvenile Chinook along the eastern shoreline of Kitsap County.

The Puget Sound Salmon Recovery Council has heard from the project sponsor regarding the SRFB review panel's final comments and believes that the project sponsor has conducted extensive outreach to adjacent and nearby landowners in the affected area and has not identified any concerns that would affect their ability to successfully complete this project. Critically, we do not foresee any conflicts that could affect the project's viability; on the contrary, work funded under this proposed award will advance needed feasibility work to ensure the project's success.

The Puget Sound Salmon Recovery Council requests that you move to clear this project for funding and allow the sponsor to complete the feasibility phase of design for this important salt marsh and pocket estuary habitat. Thank you for all that you do for salmon recovery in Puget Sound and Washington State.

Puget Sound
Salmon Recovery Council

Sincerely,

David Troutt
Chair
Puget Sound Salmon Recovery Council

cc: Dave Herrera, Vice Chair, Puget Sound Salmon Recovery Council
Bill Blake, Vice Chair, Puget Sound Salmon Recovery Council
Laura Blackmore, Executive Director, Puget Sound Partnership
Amber Moore, Salmon Recovery Manager, Puget Sound Partnership
Carrie Byron, PSAR Program Manager, Puget Sound Partnership
Rebecca Hollender, Lead Ecosystem Recovery Coordinator, Puget Sound Partnership
Sarah Heerhartz, Executive Director, Mid Sound Fisheries Enhancement Group
Kirvie Mesebeluu-Yobech, Lead Entity Coordinator, West Sound Partners for Ecosystem Recovery

THE SUQUAMISH TRIBE
PO Box 498 Suquamish, WA 98392-0498

August 31, 2021

Salmon Recovery Funding Board
Washington State Recreation and Conservation Office
PO 40917
Olympia, WA 98504-0917

VIA EMAIL

Subject: Support for Mid Sound Fisheries Enhancement Group's Point No Point Preliminary Design project (21-1053)

Dear Board Members:

The purpose of this letter is to communicate the Suquamish Tribe's (the Tribe) steadfast support for Mid-Puget Sound Fisheries Enhancement Group's ("Mid Sound") SRFB grant proposal for the Point No Point estuary restoration preliminary design project.

The Suquamish people have lived, fished, hunted, and gathered in and around Puget Sound since time immemorial. The Suquamish Tribe ("Tribe") is a federally-recognized Indian Tribe and pursuant to the 1855 Treaty of Point Elliott, the Tribe reserved the right to fish and gather shellfish at its "usual and accustomed" (U&A) fishing grounds and stations. The Tribe's U&A includes the Admiralty Inlet area, including the area of the northern Kitsap Peninsula known as Point No Point. Restoration of the 32 acre saltmarsh at Point No Point is enormously important to the Suquamish Tribe due to the positive contribution it is expected to have on recovery of Puget Sound Chinook salmon; to the continued abundance and productivity of numerous other salmon and non-salmon fish species and populations important to the exercise of the Tribe's treaty rights; and finally to the recovery of the broader Puget Sound ecosystem itself.

Strategic Importance of the Project

The Point No Point marsh is located within the West Sound Partners for Ecosystem Recovery Lead Entity ("West Sound"). The habitat strategy for the West Sound Lead Entity contains a primary focus on the protection and restoration of nearshore ecosystem functions, foremost among them restoration of barrier embayments, including the Point No Point marsh. The 2016 West Sound Nearshore Integration and Synthesis report (a project funded by the Salmon Recovery Funding Board) identified Point No Point marsh restoration as the number one priority project among over 400 nearshore projects. Indeed, as a large marsh and estuarine system located at the convergence of Admiralty Inlet, Hood Canal, and the main body of Puget Sound, the restoration of the Point No Point marsh is of regional importance and significance located in the migratory path of salmon populations originating from every part of the Puget Sound region.

Landowner and Community Support

The boundaries of the restoration project include portions of 2 properties, one privately owned and one owned by Kitsap County. Both landowners support this project. In addition, Mid Sound has conducted impressive (if not unprecedented among SRFB funded projects) outreach and engagement to hear and address the concerns of the community. The result of this outreach and engagement underscored the community's support for the restoration of the Point No Point marsh. It also confirmed long-standing concerns about flooding, drainage, and sea level rise, but it is important to understand that these are not new concerns, nor necessarily associated with the restoration project. Nevertheless, addressing these issues is a major technical component of this preliminary design project. This project is a critical step in moving this regionally important project forward and will answer difficult technical questions, including those of the Technical Review Panel.

The Suquamish Tribe fully supports this project and we urge the Salmon Recovery Funding Board to approve funding for this project, without conditions.

Sincerely,

Leonard Forsman, Chairman

West Sound Partners
for Ecosystem Recovery

August 5, 2021

Jeff Breckel, Chair
Salmon Recovery Funding Board
Recreation and Conservation Office
PO Box 40917
Olympia WA 98504-0917

Subject: Letter of Support for Point No Point Restoration Reconnection Preliminary Design #21-1053

Dear Mr. Breckel,
The West Sound Partners for Ecosystem Recovery Executive Committee, and citizens of the cities, counties, and tribes in eastern WRIA 15, would like to express our strong support for Mid Sound Fisheries Enhancement Group's (Mid Sound) Salmon Recovery Funding Board grant request to continue their work on the estuary restoration design at Point No Point.

The Point No Point project remains one of the highest priority nearshore restoration actions in Puget Sound Region because of its potential to restore a large barrier embayment with significant estuary habitat for migrating juvenile salmon. The WSPER lead entity commissioned the West Sound Nearshore Integration and Synthesis of Chinook Salmon Recovery Priorities, completed in 2016, that identified the Point No Point project as the highest benefit project out of 420 potential protection and restoration actions. Coastal wetlands such as those that existed historically at Point No Point are critical nearshore habitats for juvenile Chinook that have largely been lost in central Puget Sound; this project presents a unique opportunity to advance Puget Sound Chinook recovery efforts while benefiting the local community.

Mid Sound recently completed a feasibility study for an earlier SRFB-funded phase of the project, including technical feasibility and extensive partner and community outreach. We respectfully disagree with the Review Panel's designation of this project as a 'project of concern'. Contrary to the Review Panel's conclusion, the feasibility report documented strong community, landowner, Tribal, and Kitsap County support for the project. The West Sound Partners for Ecosystem Recovery Executive Committee discussed the Point No Point project at their May 6, 2021 meeting and expressed unanimous support for Mid Sound's efforts to continue developing this regionally significant restoration project. The estuary restoration at Point No Point is a high priority for salmon recovery in our region, and we look forward to seeing the project move forward. We urge the Salmon Recovery Funding Board to approve funding of this project.

West Sound Partners
for Ecosystem Recovery

Sincerely,

DocuSigned by:
F19A5D9A5D7A4A4...

Leonard Forsman
Chairman, Suquamish Tribe
Executive Committee Chair
West Sound Partners for Ecosystem Recovery

Charlotte Garrido
Commissioner, Kitsap County
Executive Committee Vice Chair
West Sound Partners for Ecosystem Recovery

CC:

Bob Bugert, Wenatchee
Chris Endresen Scott, Conconully
Jeromy Sullivan, Port Gamble S'Klallam Tribe
Stephen Bernath, Washington Department of Natural Resources
Brian Cochrane, Washington State Conservation Commission
Jeff Davis, Washington Department of Fish and Wildlife
Annette Hoffmann, Washington Department of Ecology
Susan Kanzler, Washington Department of Transportation
Laura Blackmore, Puget Sound Partnership Executive Director
Amber Moore, Puget Sound Partnership Salmon Recovery Manager

| | |
|---|---|
| **From:** | Christine Brinton |
| **To:** | Lundquist, Wyatt (RCO) |
| **Cc:** | Christine Brinton |
| **Subject:** | Project of Concern: Point No Point Estuary project in Hansville WA |
| **Date:** | Wednesday, September 8, 2021 9:56:53 AM |

External Email

Dear My Lundquist,

I am a property owner less than 1/8 mile from the proposed project. I have extreme concerns regarding the project that is up for review at your forthcoming meeting on September 22,2021.

I participated in a zoom video presentation done earlier this summer by the Mid Puget Sound Fisheries Enhancement Group for homeowners on Point No Point Road. The presentation left me very concerned about this project and the scope of the changes to the area.

Let me be clear in the beginning, I am a great supporter of enhancing salmon in our state. I am a member of North Kitsap Puget Sound Anglers Club and live on the salt water and try to be a good steward of our environment. I also am in favor of increasing recreational options for citizens and improving the quality of my immediate neighborhood. However, I also have great reservations about this project which I list below:

- It is obvious that this project has been in the planning for several years and a great deal of time and money has already been spent on the project, but it was not until I received notice this summer of the Zoom call for our neighborhood was I even aware of this project. I have lived on the property since 2004 and this was the FIRST time I learned of the project.
- There was no public notice or call for input years ago as this planning started. Stakeholders in its outcome, meaning the adjacent landowners, did not have any opportunity to give input. The Zoom call was to TELL us what was going to take place in our neighborhood.
- There is nothing that I can find on-line that publicly identifies what this project entails, only the bits of information shared on the Zoom call.
- The few issues that were shared on the Zoom call indicated there would be a long high dike built parallel to Point No Point Road and it would have a walking trail on the top. There was no planning in the project to create ample parking for visitors to use so they could walk along the dike. Currently there is an extreme parking shortage for users of the Point No Point Lighthouse Park which creates hazardous parking along the road and at times partially blocks one or both lanes. This project would only add to the number of visitors attracted to the estuary project without thought to where they would safely park. When asked about this issue the presenter had NO answer on parking mitigation.
- I am also extremely concerned about the perpetual maintenance of this large dike. This is not a static structure that is one and done. It will need to be

maintained in perpetuity so that there are no breeches of the dike causing untold damage to surrounding properties and private homes. The flow of water in and out of the proposed project is huge and the force of that water movement can be catastrophic in severe weather, extreme tides, tidal waves, and climate change. When asked about long-term maintenance there was no answer because it seems there are no plans to maintain it nor a budget for maintenance.

- There was also mention of creating a boardwalk for visitors to enjoy the views of the estuary which surely will be enjoyable to both residents and visitors, but again there are no plans for parking for these visitors or money for maintenance of the boardwalk.
- There are no specific plans for bridging Hill View Lane that crosses a portion of the proposed estuary. This is critical as Hill View Lane is a vital emergency exit for people living in the area if Point No Point Road becomes impassable due to a natural disaster.

Please take into consideration the long-term effects this project has on the surrounding property and the visitor experience which it will attracted to the area.

Respectfully,

*Christine Brinton*
*8480 NE Point No Point Rd*
*Hansville, WA 98340*
*360-620-5841*

Audubon | WASHINGTON

5902 Lake Washington Blvd. S.
Seattle, WA 98118

206.652.2444
wa.audubon.org

**Point No Point Letter of Support**

September 9, 2021

**To**: Salmon Recovery Funding Board

**Re**: Support for Mid Sound Fisheries Enhancement Group's Point No Point Preliminary Design project (21-1053)

**From**: Trina Bayard, Director of Bird Conservation, Audubon Washington, and Lynn Willmott, President, Kitsap Audubon Society

We are writing in support of Mid Sound Fisheries Enhancement Group's SRFB proposal for the Point No Point estuary restoration preliminary design project. The Point No Point restoration project aligns strongly with Audubon's ecological goals for estuary restoration in Puget Sound, and we support Mid Sound's proposal to continue developing the project through preliminary design.

Restoration of the Point No Point estuary is the highest priority project for juvenile Chinook salmon in the West Sound region. Estuaries provide critical rearing habitat for out-migrating juvenile salmon, productive foraging habitat for numerous other species, and support habitat-forming coastal processes for the Puget Sound ecosystem. Smaller "pocket estuaries" such as the one historically located at Point No Point have been largely lost or heavily altered due to human activity, and their restoration is a key component of the West Sound region's strategy for Chinook recovery.

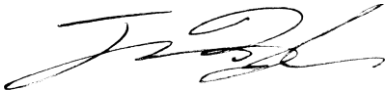
The marine waters off of Point No Point are designated as a Globally ranked Important Bird Area (IBA) due to the importance of the area as foraging grounds for marine birds. Over 230 bird species have been observed in the vicinity, and the park is a popular birding location. In addition to the IBA designation, Audubon's Puget Sound Conservation Strategy identifies the Point No Point area as a high priority site for restoration and protection. This project will not only support Chinook, but an entire food web including forage fish, salt marsh species, marine and estuary birds, and marine mammals including the Federally-listed Southern Resident Killer Whales.

Mid Sound has engaged a diverse team of project partners and community voices from a very early stage in their feasibility process to provide input on technical details and the broader context of this project. They are committed to restoring habitat for salmon while benefitting the nearby community and surrounding park area.

Audubon Washington has consulted with Mid Sound on this project during the Feasibility stage, and is looking forward to continuing to provide input on the avian habitat values of potential restoration options moving forward. We disagree with the review panel's designation that this is a project of

concern and encourage the Salmon Recovery Funding Board to remove the Project of Concern status and provide funding support for the preliminary design phase.

Respectfully,



Trina Bayard, Ph.D.
Director of Bird Conservation
Audubon Washington

Lynn Willmott
President
Kitsap Audubon Society

JAMESTOWN S'KLALLAM TRIBE
1033 Old Blyn Highway, Sequim, WA 98382 360/683-1109 FAX 360/681-4643

September 10, 2021

Re: Support for Mid Sound Fisheries Enhancement Group's Point No Point Preliminary Design project (21-1053)

Dear Members of the Salmon Recovery Funding Board:

I am writing in support of Mid Sound Fisheries Enhancement Group's SRFB proposal for the Point No Point estuary restoration preliminary design project. The Point No Point restoration project aligns strongly with Jamestown's interest in the protection and restoration of Treaty Resources. In addition, this area is of critical historic and continuing cultural importance to our community, and restoration of this site would provide key opportunities for cultural engagement and enhancement at the site.

Improving juvenile chinook marine survival is a challenging and dire need. Restoration of the Point No Point estuary is the highest priority project for juvenile Chinook salmon in the West Sound region. Estuaries provide critical rearing habitat for out-migrating juvenile salmon, productive foraging habitat for numerous other species, and support habitat-forming coastal processes for the Puget Sound ecosystem. Smaller "pocket estuaries" such as the one historically located at Point No Point have been largely lost or heavily altered due to human activity, and their restoration is a key component of the West Sound region's strategy for Chinook recovery.

Mid Sound has engaged a diverse team of project partners and community voices from a very early stage in their feasibility process to provide input on technical details and the broader context of this project. Jamestown staff have been invited to engage with Mid Sound on this project during the Feasibility stage. The Tribe will provide input on the habitat values of potential restoration options moving forward as well as ways to respect and prioritize the cultural importance of this site. We recognize the regional importance of this project and encourage the Salmon Recovery Funding Board to remove the Project of Concern status and provide funding support for the preliminary design phase.

Respectfully,

Hansi Hals
Natural Resources Director

**PORT GAMBLE S'KLALLAM TRIBE**
**NATURAL RESOURCES DEPARTMENT**
31912 Little Boston Rd. NE – Kingston, WA 98346



Recreation and Conservation Office
1111 Washington Street S.E.
Olympia, Washington 98501

Re: Support for Mid Sound Fisheries Enhancement Group's Point No Point Preliminary Design project (21-1053)

To: Salmon Recovery Funding Board

The Port Gamble S'Klallam Tribe is writing this letter in support of the Mid Sound Fisheries Enhancement Group's SFRB proposal for Point No Point estuary restoration preliminary design project. The Point No Point restoration project aligns strongly with the Port Gamble S'Klallam Tribe's environmental values and ecological goals and is crucial in protecting the Tribe's resources. We support Mid Sound's proposal to continue developing the project through preliminary design. In addition, this site is critically important to our community both historically and culturally, and restoration of this site would provide many opportunities for cultural engagement and enhancement.

Estuaries provide crucial services to many important species. Out-migrating Chinook salmon juveniles rely upon the prey-rich environment of estuaries before they are ready to migrate into the ocean. Restoration of the Point No Point estuary is, in fact, the highest priority project for reversing the trend of decreasing Chinook salmon in the West Sound region. Chinook salmon populations in the Salish Sea have been declining since 1984, the 22 extant populations of Chinook salmon (out of at least 37 historically) are at 10% or less of their historic numbers[1], and as they play a vital role in supporting Tribal treaty rights, it is of the utmost importance that the restoration be completed.

Forage fish also utilize estuaries to spawn. Puget Sound herring biomass has been declining for over 40 years[2] and have experienced population-wide shifts in age structure, largely through the destruction of habitat and other human activities. As a keystone species and one of the most important species within the marine food web, it is of the utmost importance that we do everything we can in order to restore herring habitat and facilitate their recovery.

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[1] Pacific Salmon Commission,

[2] Siple, M. C., Francis, T. B. 2016. Population diversity in Pacific herring of the Puget Sound, USA. *Oecologia*, 180: 111–125.

Without herring and other forage fish, the food web collapses, along with the marine and coastal systems in and around Puget Sound. As such, we should be doing everything we can to ensure that future generations have a robust, healthy Puget Sound ecosystem, and this means reversing the current trend of declining marine resources within the area with projects such as the restoration of the Point No Point estuary. It promises to support Chinook salmon, forage fishes, and a large number of other critically important species such as salt marsh species, marine birds, and marine mammals, which includes the Federally-listed Southern Resident Killer Whale population.

Mid Sound has engaged a diverse team of project partners and community voices from a very early stage in their feasibility process to provide input on technical details and the broader context of this project. They are committed to restoring habitat for salmon while benefitting the nearby community and surrounding park area, and to respecting and promoting local Tribal interests and values for this land.

The Port Gamble S'Klallam Tribe has been coordinating and consulting with Mid Sound on this project during the feasibility state and is looking forward to continuing to provide input on the habitat values of potential restoration options moving forward, as well as ways to respect and prioritize the cultural importance of Point No Point. We recognize the regional importance of this project and encourage the Salmon Recovery Funding Board to remove the Project of Concern status and provide funding support for the preliminary design phase.

Respectfully,

Paul McCollum
Director, Natural Resources Department
Port Gamble S'Klallam Tribe

**Point No Point Letter of Support**

August 30, 2021

To: Salmon Recovery Funding Board

Re: Support for Mid Sound Fisheries Enhancement Group's Point No Point Preliminary Design project (21-1053)

From: North Kitsap Puget Sound Anglers

I am writing in support of Mid Sound Fisheries Enhancement Group's SRFB proposal for the Point No Point estuary restoration preliminary design project. The Point No Point restoration project aligns strongly with North Kitsap Puget Sound Anglers' environmental values and ecological goals, and we support Mid Sound's proposal to continue developing the project through preliminary design.

Restoration of the Point No Point estuary is the highest priority project for juvenile Chinook salmon in the West Sound region. Estuaries provide critical rearing habitat for out-migrating juvenile salmon, productive foraging habitat for numerous other species, and support habitat-forming coastal processes for the Puget Sound ecosystem. Smaller "pocket estuaries" such as the one historically located at Point No Point have been largely lost or heavily altered due to human activity, and their restoration is a key component of the West Sound region's strategy for Chinook recovery. This project will not only support Chinook, but an entire food web including forage fish, salt marsh species, birds, and marine mammals including the Federally-listed Southern Resident Killer Whales.

Mid Sound has engaged a diverse team of project partners and community voices from a very early stage in their feasibility process to provide input on technical details and the broader context of this project. They are committed to restoring habitat for salmon while benefitting the nearby community and surrounding park area.

North Kitsap Puget Sound Anglers has been coordinating and consulting with Mid Sound on this project during the Feasibility stage, and is looking forward to continuing to provide input on the recreational fisheries perspective for potential restoration options moving forward. We recognize the regional importance of this project and encourage the Salmon Recovery Funding Board to remove the Project of Concern status and provide funding support for the preliminary design phase.

Respectfully,

Don White
President
North Kitsap Puget Sound Anglers

Wild Fish Conservancy
NORTHWEST

**Point No Point Letter of Support**

August 31, 2021

To: Salmon Recovery Funding Board

Re: Support for Mid Sound Fisheries Enhancement Group's Point No Point Preliminary Design project (21-1053)

From: Jamie Glasgow, Director of Science, Wild Fish Conservancy

To whom it may concern,

We submit this letter in support of Mid Sound Fisheries Enhancement Group's SRFB proposal for the Point No Point estuary restoration preliminary design project. The project aligns strongly with Wild Fish Conservancy's mission to restore natural processes that create and maintain wild fish ecosystems, and we support Mid Sound's proposal to continue developing the project through preliminary design.

Restoration of the Point No Point salt marsh was identified as the West Sound region's highest priority project, out of 420 projects considered, in the 2016 *West Sound Nearshore Integration and Synthesis of Chinook Salmon Recovery Priorities*. Estuaries provide critical rearing habitat for out-migrating juvenile salmon, productive foraging habitat for numerous other species, and support habitat-forming coastal processes for the Puget Sound ecosystem. Smaller pocket estuaries such as the one historically located at Point No Point have been filled and altered due to human activity, and their restoration is a key component of the West Sound region's strategy for Chinook recovery. This project will not only benefit Chinook and other wild salmonids, but an entire food web including forage fish, salt marsh species, birds, and marine mammals including the Federally-listed Southern Resident Killer Whales.

Mid Sound has engaged a diverse team of qualified consultants, project partners, and community voices from a very early stage in their feasibility process to overcome design constraints and provide input on technical details of this project. Mid Sound brings over 70% match to the project budget, and is committed to restoring habitat for salmon while benefitting the nearby community and surrounding park area.

Due to the similarity of our ongoing nearby Finn Creek Estuary Restoration Design Project, Wild Fish Conservancy has been coordinating with Mid Sound on this project during the feasibility stage; our organizations will continue to collaborate on data collection and public outreach across the two projects. We recognize the regional importance of these estuary habitat restoration projects and

encourage the Salmon Recovery Funding Board to remove the Project of Concern status and provide funding support for the preliminary design phase.

Respectfully,

Jamie Glasgow
Director of Science and Research
Wild Fish Conservancy

State of Washington
DEPARTMENT OF FISH AND WILDLIFE
Mailing Address: 600 Capitol Way N, Olympia, WA 98501-1091 • (360) 902-2200 • TDD (360) 902-2207 Main Office Location:
Natural Resources Building, 1111 Washington Street SE, Olympia, WA

September 9, 2021

To: Salmon Recovery Funding Board

Re: Mid Sound Fisheries Enhancement Group's Point No Point Preliminary Design project (21-1053)

I am writing in recognition of Mid Sound Fisheries Enhancement Group's SRFB proposal for the Point No Point estuary restoration preliminary design project. The Point No Point restoration project aligns strongly with Washington Department of Fish and Wildlife's environmental values and ecological goals, and we are pleased at Mid Sound's proposal to continue developing the project through preliminary design.

We acknowledge that the restoration of the Point No Point estuary is one of the highest priority projects for juvenile Chinook salmon in the West Sound region. These estuaries provide critical rearing habitat for out-migrating juvenile salmon, productive foraging habitat for numerous other species, and support habitat-forming coastal processes for the Puget Sound ecosystem. Smaller "pocket estuaries" such as the one historically located at Point No Point have been largely lost or heavily altered due to human activity, and their restoration is a key component of the West Sound region's strategy for Chinook recovery. This project will not only support Chinook, but an entire food web including forage fish, salt marsh species, birds, and marine mammals including the Federally-listed Southern Resident Killer Whales.

We are aware that Mid Sound has engaged a diverse team of project partners and community voices from a very early stage in their feasibility process to provide input on technical details and the broader context of this project. They are committed to restoring habitat for salmon while benefitting the nearby community and surrounding park area.

I have been coordinating and consulting with Mid Sound on this project during the feasibility stage, and am looking forward to continuing to provide input on the habitat values of potential restoration options moving forward. We recognize the regional importance of this project and encourage the Salmon Recovery Funding Board to remove the Project of Concern status and provide funding support for the preliminary design phase.

Respectfully,

Nam Siu,
Area Habitat Biologist,
Washington Department of Fish and Wildlife

Comments for the Salmon Recovery Funding Board Meeting Sept. 22-23, 2021
Prepared 9/21/2021

Thank you for the chance to make a public comment. I am making the following remarks in my individual capacity, but to understand my involvement in SRFB issues, please know I am a citizen member (for Clallam County) of North Pacific Lead Entity (on both its technical and citizen committees), one of its caucus members to the Coast Salmon Partnership (Washington Coast Region), and its delegate to the Coast Salmon Foundation. For twenty years I represented a treaty tribe on the coast (in-house staff) and served on these committees, but now that I am retired (2017), I serve as a volunteer citizen for Clallam County.

I am asking the SRFB to reconsider termination of funding support for RMAP projects and to extend it. While "all state and private forest roads should be brought up to new forest road standards by 2021 through Road Maintenance and Abandonment plans (RMAPS)" and I am here citing https://www.forestsandfish.com/environmental-protection/road-improvements/ , in fact there may be some outliers still needing work. Further, the need for RMAP-type work goes on as this genre of habitat restoration is a continuum. I am mindful that the federal “culvert case” (*US v. Washington*, subproceeding 01-1, 827 F.3d.836 (2016)) does not put legal obligations on private landowners. This makes it even more important to have financial assistance to private landowners via grant programs like SRFB so that we can facilitate salmon habitat improvement on private lands. As pressures of climate change increase, now is not the time to disable funding opportunities for restoration. Opportunities to fund RMAP programs should continue and the program itself should continue, for the greater good of the iconic salmonids that we all value.

There are those who argue that we should not fund projects on private timberland as the owners/operators have the sole obligation to shoulder their own stream/road maintenance. Even for these companies, handling all obligations in time for specific fish needs may not always be feasible without a program match. In some cases, the timber company must select between a number of expensive projects, so assistance from other Lead Entity sponsors and partners, via matching funds or in-kind work like engineering, is a viable way to accomplish major projects and RMAP has been an excellent means of identifying and describing stream restoration needs related to roads. Both the restoration strategy of our Lead Entity and its grant score sheet take note of urgency in performing a specific project and attach value to that urgency. We don’t want to say “wait” until a landowner can deal with it all, without assistance. The fish are at stake and we know their clock is ticking.

There are many small forest landowners listed in RMAP, subject to barrier corrections, that are sometimes shown leniency because they *are* small landowners with very limited funding options. The only way those barriers will likely be corrected in a timely manner is with funding assistance. The FFFPP program is insufficient to address that need. SRFB funding of RMAP projects is an important additional means for them to make such improvements.

The caption to the movie on the above-cited url states that by 2021, 100% of the identified barriers will be eliminated. However, we all know that culvert maintenance does not stop, that it is a continuum. In fact, climate change will place new stresses on existing systems. Recognizing that new culverts are designed to better deal with climate change, that still does not obviate the fact that many culverts are legacy structures in the system, at present. We cannot put a cap on this important RMAP program or to fund issues it identifies—not if we want salmon to be a continuum.

North Pacific Coast Lead Entity in its September 21st meeting voted to support continuation of funding of RMAP projects via SRFB. I do hope the SRFB will agree.

Thank you for your attention to this matter.

Katherine Krueger
790 J Street
Forks, WA 98331
(360) 374-4311

**From:** Valerie Jansson Overmyer
**To:** Lundquist, Wyatt (RCO)
**Subject:** PNP Estuary Restoration Project
**Date:** Monday, September 20, 2021 11:56:29 AM

External Email

My husband and I live less than .75 miles from the proposed Point No Point Estuary Restoration Project. The home has been in the family for four generations so knowledge of the history of this area is well known to us. Salmon fishing was a large part of the family experience. We are very concerned regarding the impact the Restoration project will have on our community.

Our major concerns include the following:

1. There is no identified plan or funding for long-term management or maintenance of the estuary or surrounding area. Current low county staffing for Point No Point Lighthouse Park and the lack of any state presence/enforcement of permitted parking at the WDFW parking lot results in illegal parking and excessive littering including but not limited to dog waste not properly disposed.
2. Experience with winter storm surges (especially coinciding with King tides) causes near annual flooding reducing access on Point No Point Road west of the WDFW parking lot. The constant high ground water level also contributes and in rainy months many of the septic systems within the .30-mile area of the proposed estuary than are non-functional and are of ecological concern.

3. The volume of traffic with increased visitors over the last two years has already negatively impacted our neighborhood. Current parking is inadequate especially on weekends and holidays. The suggested speed limit in front of our home is 10 mph. Traffic is in excess of 35 mph making walking, bike riding or dog walking a risk and the Kitsap County Sheriff does not have the staff to enforce. My combat wounded husband can no longer safely ride his recumbent tricycle on the road. There has been an increase of trespassing on private property to gain access to the beach and we have felt threatened on our own property on several occasions.

Please consider the impact this project will not only have on our community and properties but the potential overwhelming number of visitors to deluge an area that cannot manage.

Sincerely,

Melvin and Valerie Overmyer
8092 NE Point No Point Road
Hansville, WA. 98340

## Puget Sound Region comments re: Targeted Investment Process

Thank you for the opportunity to provide comment on this agenda item.

- The Puget Sound regional organization thanks RCO staff for their work to solicit and respond to feedback from regions and lead entities in preparing the Targeted Investments memo and Manual 18 changes.
- We remain committed to working with the Puget Sound lead entities, RCO staff, the other regional directors, and the SRFB to implement the first round of this new Targeted Investment process. We thank you for listening to our concerns at the last SRFB meeting around the one project per region requirement. We would like to highlight a few key points regarding the 2022 Targeted Investment round:
    - Choosing one project for all of Puget Sound will be difficult given that there are 15 lead entities within the region and will likely result in some very strong projects that contribute to orca recovery not being advanced to the final ranking process.
    - We are committed to following the Targeted Investment process outlined today for 2022 to better understand how the process can best work in Puget Sound.
    - We are very interested in working with RCO staff and the SRFB during and after the 2022 process is completed to review lessons learned and make any improvements to ensure that the best and highest priority projects are funded.
    - We urge RCO staff and the SRFB to formally identify the 2022 Targeted Investment effort as a pilot, to solicit input and feedback both during and after the pilot process, and to remain open to adjusting as needed.
- Thank you again for your time and we look forward to continuing to work with you on the Targeted Investment process.

Amber Moore, Director, Puget Sound Regional Organization

September 21, 2021

Jeff Breckel, Chair
Salmon Recovery Funding Board
Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

RE: Point No Point Estuary Restoration Project – Do Not Support

Dear Mr. Breckel,

As an adjacent landowner to the Point No Point Estuary Restoration project I am provide comment on the proposed project. I strongly support salmon restoration actions and have worked in salmon recovery for many years; however I do not support this project and the use of salmon recovery funds.

The Salmon Recovery Funding Board (SRFB) needs to prioritize the limited funds they have available for projects with the greatest direct benefit to salmon recovery. The need for this project to construct a large, possibly 2,000 foot levee to contain the project and hopefully protect the adjoining community does not appear to provide a good cost to salmon recovery benefit return.

Many of the proposed design concepts for this project arise from the existing land use, siting and topography of the area; and that long-term persistent community issues have not been adequately addressed. Local issues include road flooding, excessive traffic, speeding, trespass and many others that have come with the development of public access areas (Kitsap County Point No Point Lighthouse park, Washington Department of Fish and Wildlife undeveloped boat launch parking lot and Kitsap County overflow parking area). While the main focus of the proposed project is not on resolving the infrastructure and community issues, these issues cannot be ignored by the project either. To utilize salmon habitat restoration funds to address these issues while other entities have not is not appropriate.

Of great concern is the long-term management and maintenance of the proposed project. This project will not be a 'build it and walk away' type of action; it will require long-term management and maintenance, and the funding for these efforts is not established. The energy dynamics of the east facing beach where this project proposes to breach an existing dike and connect to the marine waters is intense and highly variable. Sediment and drift log transport is exceedingly high, and storms can and have overtop the existing dike. What happens when a storm either closes the entrance to the estuary with sediment and/or wood; or overtops the existing dike and begins to erode that existing dike or new levee? Who do the neighbors call when the estuary cannot drain, the levee fails or the road is flooded? Kitsap County is the main landowner of the project site and as such would likely have primary responsibility for operating and maintaining the flood control levee. Does the County have the resources to conduct annual inspection and maintenance; or repair and reconstruct the project should there be an issue? Does the SRFB provide funding to the County to support the long-term management and maintenance of this site? Assuming the levee would be permitted and regulated by the U.S. Army Corps of Engineers is Kitsap County (and the private landowner where a portion of the levee will be

constructed) able to meet the maintenance and reporting requirements of a publically owned flood control structure?

The potential for impacts to septic systems is also of concern. There is no public sewer system in this area therefore every home is on septic. An increase in the groundwater elevation could impact existing functioning septic systems or contaminate groundwater. An increase in groundwater elevation could also impact stormwater discharge from the Washington Department of Fish and Wildlife boat ramp parking lot that utilizes a constructed bioswale across the road from the project site to capture the runoff from the 1.6 acre parking area. If septic or stormwater control systems cannot function does the SRFB or Kitsap County have funding available to either replace the septic systems that fail or acquire the property of affected parties?

I encourage the SRFB to direct salmon habitat recovery funds to projects where the greatest benefit to salmon recovery can be generated from each dollar spent. The project cost (estimated at $5 million), unfunded long-term maintenance expenses, community impacts, and the possible failure of this project due to the dynamic marine system at this location do not equate to a sensible salmon recovery investment by the SRFB.

Thank you,

Patty Michak
Hansville resident since 1995

September 26, 2021

RECEIVED
SEP 29 2021
WA STATE
RECREATION AND CONSERVATION OFFICE

Jeff Breckel, Chair
Salmon Recovery Funding Board
Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

Dear Mr. Breckel, Board Members, and Technical Review Committee,

RE: **Point No Point Estuary Salmon Recovery Project**

I am a landowner and resident of Point No Point and I wish to register my extreme disappointment at the way landowner concerns and letters regarding the proposed Point No Point Estuary were handled. Your September 22 and 23, 2021 meeting was supposed to be open to public comment and public letters from effected landowners. **These letters were to be seen and read by the Board at or prior to your meeting.**

I was in attendance on September 23 and testified as a concerned landowner. During the meeting there was **NO mention of the number of letters received from landowners nor was there any indication as to the contents of those letters.** I accessed your Board packet of materials from your website today (September 26, 2021) and found that none of the letters from landowners were included except mine. My letter was the only one that was included in the Board packet when I am certain there were many more, because I spoke to the authors. It is curious why letters from other agencies and entities that were supportive of this project were included in the Board packet and commented on during the meeting and those from landowners with concerns were not.

I would also like to **know where and when were the Land Use Permits posted and the open public meetings held regarding this project?** Private citizens that own property adjacent to this project and all along Point No Point Road and Hillview Lane have been left out of the process to date. This feels deliberate. Yet the tribes, fishing clubs, environmental organizations, Kitsap County, and other Agencies were included and actively sought out to provide letters of support for the project. **PLEASE REMEMBER NONE OF THESE GROUPS AND ORGANIZATIONS LIVE HERE.....I LIVE 200 FEET FROM THE PROPOSED ESTUARY.**

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Dear Salmon Recovery Funding Board,

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I participated in a zoom video presentation done earlier this summer by the Mid Sound Fisheries Enhancement Group for homeowners on Point No Point Road. The presentation left me very concerned about this project and the scope of the changes to the area.

Let me be clear in the beginning, I am a great supporter of enhancing salmon in our state. I am a member of North Kitsap Puget Sound Anglers Club and live on the salt water and try to be a good steward of our environment. I also am in favor of increasing recreational options for citizens and improving the quality of my immediate neighborhood. However, I also have great reservations about this project which I list below:

- It is obvious that this project has been in the planning for several years and a great deal of time and money has already been spent on the project, but it was not until I received notice this summer of the Zoom call for our neighborhood was I even aware of this project. I have lived on the property since 2004 and this was the FIRST time I learned of the project.
- There was no public notice or call for input years ago as this planning started. Stakeholders in its outcome, meaning the adjacent landowners, did not have any opportunity to give input. The Zoom call was to TELL us what was going to take place in our neighborhood.
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Additional issues since my September 8, 2021, letter include:

- What are the plans to prevent damage to landscaping, septic systems, and wells due to rising water levels and infiltration of saltwater?

I look forward to hearing from the Board as well as Kitsap County how these important issues will be resolved.

Respectfully,

**Christine Brinton**
8480 NE Point No Point Rd
Hansville, WA 98340
360-620-5841

Cc: Robert Gelder, Charlotte Garrido and Edward Wolfe, Kitsap County Commissioners

September 25, 2021

Jeff Breckel, Chair
Salmon Recovery Funding Board
Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917



Dear Mr. Breckel, Board Members, and Technical Review Committee,

RE: **Point No Point Estuary Salmon Recovery Project**

First, I would like to say that I am not opposed to salmon recovery in the State of Washington, but this proposed project at Point No Point has many potential issues not addressed.

1. Turning the current freshwater marsh into a saltwater estuary WILL KILL OFF all the surrounding plants and trees.
2. There are over 200 different types of birds that use the current freshwater marsh and it is designate an important resources for the migratory bird flyway.
3. There are many different types of wildlife and aquatic life that currently inhabit the freshwater marsh such as river otter, racoons, snakes, frogs, and many more that will be displaced or die.
4. The dynamics of the Point No Point beach with the strong currents along this section of Puget Sound are unpredictable due to King Tides and storms from the North during winter months. This past winter 2020/2021 there was only a minor cut of 12-18" drop in the height of the beach from Norwegian Point in the west to the east end of Point No Point. During the winter of 2017/2018 there was a 4-foot drop in the level of the beach AND a loss of approximately 15 feet in the beach depth. During the winter of 1990 the cut along the beach was a depth of 8 – 10 FEET deep. Several of my long-term neighbors still remember that winter and the beach damage caused by the severe winds, tides, and storms. Where does all the hundreds of thousands of cubic yards of sand go? It comes back in the spring and more that likely it will refill the channel to the new estuary you want to create, each year.
5. Point No Point lies along an earthquake Faultline. What is the plan to protect the proposed levee from failure due to earth movement during a quake?
6. Localized flooding is already a serious issue along the length of Point No Point Road. Now with the proposed levee there will be increased flooding issues to private properties, residences, the Historic Lighthouse, and roadway. How do you plan to address these issues?

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7. The water levels and water table will increase along Point No Point Road. This will affect the septic systems, drain fields and wells of all the residences. What are your plans to protect these expensive systems?
8. Hillview Lane is a private roadway which joins Point No Point Road crossing the proposed estuary. It is a vital evacuation route in case of a natural disaster which would close Point No Point Road. If it is removed or modified to a point where it will not withstand a natural disaster, how will residents evacuate in case of earthquake, flooding, tsunami? Hillview is our only escape route.
9. Why are you not opening more Fish Hatcheries or increasing the size of current hatcheries? Since it seems like there are several million dollars that are available for salmon recovery.
10. I suggest you use this money to solve the problems at the Hood Canal Bride, where 70% of the hatchery fish that are released south of the bridge are eaten by seals and sea lions. This figure came from a presentation by a fisheries biologist from the WDFW at a meeting of North Kitsap Puget Sound Anglers (NKPSA).
11. The project managers for this project and the Commission members seem to be very short sighted. You are only thinking about salmon and no other impacts brought on by the project to the surrounding area. Remember Salmon do not exist in a vacuum, they are part of the total ecosystem, and this project is too narrowly focused.
12. There does not seem to be a plan or budget to maintain and repair the Estuary after the initial project is complete. Kitsap County does NOT have the financial funds to take care of any problems that arise from this project. Point No Point Road had damage that occurred to the roadway during the construction of the WDFW Boat Launch Parking Lot and this damage has never been repaired. Needless to say, a breeched levee is expensive.
13. Are the proposed levees being built and maintained to the Army Corp of Engineers specifications? How often will the main channel to the estuary have to be dredged to keep the water flowing properly? Due to the shifting of hundreds of thousands of cubic yards of sand each year this channel will fill rapidly and dramatically.
14. An issue of high concern to myself and many other members of the community is <u>where and when were the Land Use Permits posted and the open public meetings held regarding this project?</u> Private citizens that own property adjacent to this project and all along Point No Point Road and Hillview Lane were deliberately LEFT OUT of the process. Yet the tribes, fishing clubs, environmental organizations, Kitsap County, and other Agencies were included and actively sought out to provide letters of support for the project. This purposeful exclusion of the people most directly affected by your project is WRONG. It is nothing more than Big Government pushing a project through without any regards to private citizens.
15. There is one thing in common with all those that have shown support for this project and that is NONE of them live here and will NOT have to deal with ALL the extra

construction traffic, noise, damage to the roadway, dramatic changes and potentially catastrophic risks to their homes and property.

All these issues make this project detrimental to the surrounding landscape, homes, septic systems, private property, wildlife, and aquatic life. I support scrapping this project and stop spending money on it, redirect funds to for salmon recovery to other sites in the state that will not have such negative impact.

Thank you,

Donald E. Thomsen
Resident of 8480 Point No Point Road NE. Hansville, WA 98340

Cc: Robert Gelder, Charlotte Garrido and Edward Wolfe, Kitsap County Commissioners

September 25, 2021



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Salmon Recovery Funding Board
Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

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Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

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360-620-5841

Cc: Robert Gelder, Charlotte Garrido and Edward Wolfe, Kitsap County Commissioners

*Melvin & Valerie Overmyer*
*8092 NE Point No Point Road*
*Hansville, WA. 98340*

September 20, 2021

Jeff Breckel, Chair
Salmon Recovery Funding Board
PO Box 40917
Olympia, WA 98504-0917

RE: Point No Point Estuary Restoration Project proposal

Dear Mr. Breckel,

My husband and I live less than .75 miles from the proposed Point No Point Estuary Restoration Project. The home has been in the family for four generations so knowledge of the history of this area is well known to us. Salmon fishing was a large part of the family experience. We are very concerned regarding the impact the Restoration project will have on our community.

Our major concerns include the following:

1. There is no identified plan or funding for long-term management or maintenance of the estuary or surrounding area. Current low county staffing for Point No Point Lighthouse Park and the lack of any state presence/enforcement of permitted parking at the WDFW parking lot results in illegal parking and excessive littering including but not limited to dog waste not properly disposed.
2. Experience with winter storm surges (especially coinciding with King tides) causes near annual flooding reducing access on Point No Point Road west of the WDFW parking lot. The constant high ground water level also contributes and in rainy months many of the septic systems within the .30-mile area of the proposed estuary than are non-functional and are of ecological concern.
3. The volume of traffic with increased visitors over the last two years has already negatively impacted our neighborhood. Current parking is inadequate especially on weekends and holidays. The suggested speed limit in front of our home is 10 mph. Traffic is in excess of 35 mph making

walking, bike riding or dog walking a risk and the Kitsap County Sheriff does not have the staff to enforce. My combat wounded husband can no longer safely ride his recumbent tricycle on the road. There has been an increase of trespassing on private property to gain access to the beach and we have felt threatened on our own property on several occasions.

Please consider the impact this project will not only have on our community and properties but the potential overwhelming number of visitors to deluge an area that cannot manage.

Sincerely,

Valerie Overmyer RN, BSN

Melvin Overmyer USN, Retired
Valerie Overmyer RN BSN

*Melvin & Valerie Overmyer*
*8092 NE Point No Point Road*
*Hansville, WA. 98340*

September 20, 2021

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Salmon Recovery Funding Board
PO Box 40917
Olympia, WA 98504-0917

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Valerie Overmyer RN, BSN

Melvin Overmyer USN, Retired
Valerie Overmyer RN BSN

Skagit River North Fork Diversion

To the Bay Front Estuary


1937 Skagit River Diversion

Bad for Salmon and Skagit River Estuaries

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OCT - 6 2021

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**From:** maplest327 <maplest327@aol.com>
**To:** maplest327 <maplest327@aol.com>
**Subject:** Puget Sound estuary collapse in Chinook low marshes
**Date:** Sat, 29 Sep 2018 12:47



September 23, 2018

Steve Martin
Executive Coordinator - Governor's Salmon Recovery Office

Re: Bad dams, but good 1937 Skagit River Diversion? No protection for the river delta estuary edge from high wind-waves? Current estuary collapse not acknowledged?

Dear Steve,

After reading the Orca Task Force initial draft, I was struck by the lack of any attention to protection of the low marsh lateral edge from wind-wave erosion.....the cause of our river delta estuary collapse. And while the lower Snake River dams and some of Puget Sound dams were listed as removal targets for salmon, there was no mention at all about removal or channeling of the estuary-shrinking and salmon-killing 1937 Skagit River Diversion. Is the new Atlantic Coast estuary science not received here yet? No barrier islands here, heavier wave energy here....worse than the Atlantic Coast. Puget Sound river delta estuary collapse is not caused by enlarged, expanding tidal flats as the new science demonstrates? Can that be explained in light of the new estuary survival paradigm shift?

There are many estuary restoration projects in our Puget Sound river deltas, but not in the tide flats. None of them address our current estuary collapse in these river deltas. No protection for the lateral estuary edge from wind-wave erosion? Why is that.....the only place you can successfully protect the estuary lateral edge? Tide flat expansion, where high wind-wave erosion is shrinking the estuaries needs to be halted with some type of tide flat barrier/berm/geotube barrier. Washington State river delta estuaries do not get a pass on the new paradigm shift discovered by Giulio Mariotti, Sergio Fagherizzi "Critical width of tidal flats triggers marsh collapse in the absence of sea level rise", Sergio Fagherazzi, Giulio Mariotti "Marsh collapse does not require sea level rise" and John R. Gunnell "How a marsh is built from the bottom up". These researchers have demonstrated the mechanism for river delta estuary collapse all over the world....high wind-wave caused erosion by tidal flats that have expanded past the critical threshold width. That includes most Puget Sound river delta estuaries.

The estuary survival equation is no longer "Sea level rise vs. sediment rate". It is now "Critical threshold width of tidal flat vs. sediment rate". That changes everything and exposes a huge threat and opportunity in our estuaries. River delta estuaries with even modest sediment are very stable in the vertical direction. They can keep up with sea level rise with the sediment. But they are completely unstable in the horizontal direction. Estuary edges are easily eroded away by high wind-waves across enlarging tidal flats. This must be understood or continuing to use the old theoretical model of estuary survival, let alone expanding these marshes.... will fail and doom these marshes. There is no more "we always have both estuary and tideflat in one river delta basin". That is not happening. Only one will exist in the future and that means the Puget Sound tide flats win and the river delta estuaries will be destroyed entirely by wind-waves across steadily enlarging tide flats. There is no equilibrium between estuary and tide flat. The new research is clear on that.

To save our Chinook and river delta estuaries, we must understand and utilize the new paradigm shift discovered by these estuary scientists. If not, nearly all Puget Sound estuaries will collapse to nothing...and with that collapse comes the extinction of all wild Chinook salmon that depend so heavily on a large, healthy delta estuary. The use of some type of tidal flat berm or geotube barrier to help reduce wind waves will not only save our estuaries, but give us a tremendous opportunity to vastly expand the low marsh estuary acreage that all scientists agree is crucial to saving and increasing our wild Chinook populations. We have all of the technology to do this now. It is being done elsewhere on the Pacific Coast, Gulf Coast and Atlantic coast....turning tide flats into low marsh and protecting the lateral estuary edge from high wind-waves,

A few quotations from Giulio Mariotti and Sergio Fagherazzi "Critical width of tidal flats triggers marsh collapse in the absence of sea level rise": " High rates of wave-induced erosion along salt marsh boundaries challenge the idea that marsh survival is dictated by the competition between vertical sediment accretion and relative sea-level rise. Because waves pounding marshes are often locally generated in enclosed basins, the depth and width of surrounding tidal flats have a pivoting control on marsh erosion. Here, we show the existence of a threshold width of tidal flats bordering salt marshes. Once this threshold is exceeded, irreversible marsh erosion takes place even in the absence of sea-level rise. This catastrophic collapse occurs because of the positive feedbacks among tidal flat widening by wave-induced marsh erosion, tidal flat deepening driven by wave bed shear stress, and local wind wave generation. The threshold width is determined by analyzing the 50-year evolution of 54 marsh basins along the US Atlantic Coast. The presence of a critical basin width is predicted by a dynamic model that accounts for both horizontal marsh migration and vertical adjustment of marshes and tidal flats. Variability in sediment supply, rather than in relative sea-level rise or wind regime, explains the different critical width , and hence erosion vulnerability, found at different sites."

**From:** maplest327 <maplest327@aol.com>
**To:** maplest327 <maplest327@aol.com>
**Subject:** Fwd: Sad Stories We Have To Bear
**Date:** Wed, Oct 14, 2015 11:10 am

Oct 1, 2015

1972 ARCO OIL SPILL RUINED CHERRY POINT, WA HERRING DNA

1989 EXXON OIL SPILL RUINED PRINCE WILLIAM SOUND, AK HERRING DNA

On June 4, 1972 at least 21,000 gallons of crude oil ( likely much more ) was pumped into the Cherry Point herring estuary at the ARCO ( now BP ) oil terminal. The Cherry Point herring were spawning with a very large spawning event at the time ( June 6, 1972 - Bellingham Herald ). The crude oil was pumped into the Cherry Point herring estuary and then flowed north onto Canadian beaches 20 miles away. The oil coated 8 miles of beaches, which were hand cleaned by Canadian volunteers. ARCO told the Canadian government on June 5, 1972 that ARCO spilled only 500 gallons of oil at Cherry Point ( June 9, 1972 Canadian House of Commons debates ). This ARCO major oil spill has ruined the Cherry Point herring DNA. It is the ultimate cause of the Cherry Point herring crash..... 3 years after the major oil spill.

The Cherry Point herring population, once the largest in Puget Sound, crashed 3 years after the 1972 ARCO oil spill. The Cherry Point herring are now running at 6% of their peak population and dropping. The population is in extremely critical condition. Cherry Point herring are a distressed population of fish. These fish are no longer normal. They have had very high mutation rates for many decades with twisted spines, enlarged hearts and misshapen heads. They have poor reproduction, poor aerobic capacity, damaged immune systems and more.

Hershberger, et al 2005 ( Abnormalities in Larvae from the Once-Largest Pacific Herring Population in Washington State Result Primarily from Factors Independent of Spawning Location ) demonstrated that Cherry Point herring skeletal abnormalities were not caused by local conditions at Cherry Point. Herschberger also showed that removing Cherry Point herring eggs from Cherry Point and raising them elsewhere in Puget Sound did not reduce the high mutation rate. Cherry Point herring eggs are now DNA damaged and mutate badly, no matter where the eggs and embryos are raised.

Incardona, et al 2007 study ( Unexpectedly high mortality in Pacific herring embryos exposed to the 2007 Cosco Busan oil spill in San Francisco Bay ) shows the same pattern of high skeletal abnormalities as Hershberger, in addition to widespread cardiac defects.

Incardona, et al 2015 study ( Very low embryonic crude oil exposures cause lasting cardiac defects in salmon & herring ) in Prince William Sound, Alaska demonstrated the continued cardiac problems in PWS herring after the Exxon Valdez Oil Spill into estuaries at spawning time in 1989. Incardona's 2015 study lowered the threshold for oil exposure damage to herring and pink salmon embryos and demonstrated the very long term damage that oil spills into estuaries have on embryos with very low concentrations of oil.

Recent studies of how toxins, like crude oil can permanently damage DNA through epigenetics have opened a window into the toxin-biological mechanisms that explain the herring crashes 3-4 years after oil has been dumped into herring estuaries at spawning time. Skinner, et al 2015 study ( Environmentally induced epigenetic transgenerational inheritance of sperm epimutations promotes genetic mutations ) demonstrated how a toxin given to a gestating female mammal (F0 generation) causes DNA damage in the F3 and F4 generations. The toxin induces epigenetic damage, which destabilizes the DNA and causes DNA mutations in the F3 and F4 generations. Skinner was looking at differentially methylated regions of the DNA which gave rise to DNA mutations. The disease produced by the toxin was from a combination of epigenetic and genetic changes. Both the epigenetic and genetic changes are inheritable, with the epigenetic changes being non-Mendelian in nature. Epigenetic inheritance has been observed in plants, flies, worms, fish, mice, rats, pigs and humans.

The 4 year lag in the herring crash after the Exxon Valdez dumped 11 million gallons of crude oil into the Prince William Sound, AK herring estuary at spawning time in 1989, is purported to be evidence that the massive oil spill did not cause the herring crash. The delay in crashing is not evidence of that at all. On the contrary, the delay in crashing is completely predictable and has several biological mechanisms, which are additive in their effect 3-4 years and more after an oil spill into a herring estuary at spawning time:

1) Skinner demonstrated the delay, with the F3 and F4 generations showing DNA mutations after toxin exposure to F0 and F1.

2) The herring embryos that survived the oiling need 2- 3 years to mature before laying damaged eggs in numbers.....a 2-3 year lag.

3) All successive herring spawnings after estuary oiling spread the damaged DNA throughout the entire herring population.

4) Other recent epigenetic studies identify how toxins also affect histone modifications that damage DNA.

So the net result is that a herring population crash would not be expected when oil first goes into a herring estuary. It would be expected 3-4 years later when the multiple biological mechanisms have their combined, negative effect. This lag time from oil spill to herring crash is to be expected in all herring estuaries that are oiled at spawning time. That was the case at Cherry Point, Washington in 1972 and that was the case in Prince William Sound, Alaska in 1989.

Unfortunately, as Incardona demonstrated in his 2015 study, there is still so much residual, leaking oil in Prince William Sound, AK from EVOS that herring and pink salmon embryos are hatching into still oil polluted waters that continue to damage the embryos. And Incardona's research has lowered the oil exposure damage threshold, showing how very low concentrations of residual oil from the 1989 oil spill still cause damage to herring and salmon embryos today.

Herring in Prince Willliam Sound, AK have been hit internally with DNA damage dating to 1989 and hit externally from still toxic waters when their eggs hatch.....a double blow to Alaska herring. The PWS herring now struggle against two major threats to their survival.....caused by one, massive oil spill and it's long term, residual effects.

The Cherry Point herring in Washington are rapidly losing their struggle to survive their oil damaged DNA caused by the 1972 ARCO oil spill into their estuary. The Cherry Point herring crash continues unabated and the zero line gets ever closer. The Cherry Point herring will not be able to recover from this crash without more time and without immediate, effective intervention by humans.

Kurt Zwar
SkagitFarmedIsland.org

**From:** maplest327 <maplest327@aol.com>
**To:** maplest327 <maplest327@aol.com>
**Subject:** Forage fish research...Cherry Point Herring DNA
**Date:** Tue, Feb 12, 2019 5:22 pm



February 12, 2019

Dr. Joseph K. Gaydos
SeaDoc Society Science Director
942 Deer Harbor Rd.
Eastsound, WA 98245

Re: Preventing Cherry Point herring extinction by restoring their oil damaged DNA

Dr. Gaydos,

I am not able to satisfy all of SeaDoc Society's science proposal requirements, but would hope someone would look at the ultimate cause of the Cherry Point herring collapse to find a way to save them from extinction. The collapse of the Cherry Point herring estuary starting in 1974 has not been scientifically explained, as the science to explain it is relatively new....Epigenetic science. I have enclosed an article I wrote in 2015 to WDFW and the tribes detailing how the ARCO oil spill in 1972 at Cherry Point damaged the CP herring DNA epigenetically. The **delayed CP herring crash** in 1974, 1975, 1976 is purported to be proof that the ARCO oil spill in 1972 did not cause the CP herring crash. **The delay in crashing is NOT evidence at all.** On the contrary, the **delay in crashing is completely predictable and has several biological mechanisms**; which are additive in their effect 2-4 years after an oil spill into a spawning herring estuary. My 2015 letter details this.

I have enclosed a copy of Michael K. Skinner et al.... "Environmentally induced epigenetic transgenerational inheritance of sperm epimutations promote genetic mutations"....published August 2015 in Epigenetics. This is the primary science I am using outside of referencing earlier work in my 2015 letter about Hershberger's 2005 et al research...."Abnormalities in Larvae from the Once-Largest Pacific Herring Population in Washington State Result Primarily from Factors Independent of Spawning Location". I also referenced Incardona's 2007 study in San Francisco Bay from the Cosco Busan oil spill and Incardona's 2015 study of lasting cardiac defects in salmon and herring in Prince William Sound.

No one had the ability to do detailed epigenetic work on CP herring in 2005 and the regular genetic research on them appeared normal then. The Cherry Point herring need a full Epigenetic study to determine the extent and genetic location of hypermethylated sites in CP herring DNA that has been inherited since 1972 and continues to damage the entire CP herring population. Cherry Point herring were always prized by local salmon fishermen in the 1950s, 1960s and earlier for their extra large size. These were the herring kings of the Salish Sea. Now CP herring are sick fish due to a epigenetic disease. The 1972 ARCO oil spill directly into the spawning CP herring estuary is the ultimate cause of the CP herring collapse. Cherry Point herring are small, unfit and going extinct due to the epigenetic damage they have inherited and transmitted to the entire CP herring population since 1972. This epigenetic damage to CP herring is inheritable, though not Mendelian in nature. The Cherry Point herring epigenetic damage can now be studied in detail, as was done in Skinner's 2015 study.

**Hypothesis:**

Cherry Point herring were and are epigenetically damaged from the 1972 ARCO crude oil spill in the spawning CP herring estuary. Cherry Point herring DNA hypermethylation and histone changes need to be evaluated epigenetically. This damage is still present in CP herring and can now be studied epigenetically, as in Skinner's study. Since **epigenetic damage is reversible**....a possible path to saving CP herring from extinction may be available to us and should be fully evaluated.

**Proposal:**

1) Study CP herring DNA epigenetically for hypermethylated DNA sites and histone changes.

2) Study the toxicity of currently available hypomethylating drugs on fish. These drugs have already been authorized for human epigenetic diseases.

3) Develop possible epigenetic drug delivery methods for treating CP herring (ie: in food in CP herring staging area; dispersed directly over CP herring spawning events).

**Study Participants:**

Whoever can do detailed epigenetic studies of CP herring. There are genetics labs at the University of Washington, WSU (Skinner's lab is at the Center for Reproductive Biology, WSU) or other universities that can do these epigenetic and fish toxicity studies.

Cherry Point herring are going extinct. They were at 6% of 1972 numbers in 2015 when I wrote my letter about epigenetic damage to CP herring. CP herring have declined further and are running at 4% of normal. They and we are almost out of time and we need to fully evaluate the epigenetic damage that the 1972 ARCO oil spill has done to their DNA.....and try to find a way to treat this **epigenetically diseased fish population.**

Thanks for reviewing this proposal to evaluate Cherry Point herring epigenetically.

Sincerely,

Kurt Zwar
1202 S. 10th St.
Mount Vernon, WA 98274
maplest327@aol.com
360 899-9480

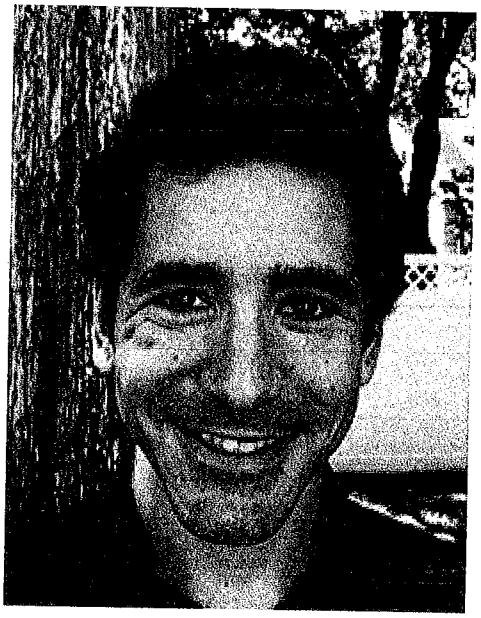
# Mariotti Receives 2014 Luna B. Leopold Young Scientist Award

Giulio Mariotti received the 2014 Luna B. Leopold Young Scientist Award at the 2014 American Geophysical Union Fall Meeting, held 15–19 December in San Francisco, Calif. The award recognizes "a young scientist for making a significant and outstanding contribution that advances the field of Earth and planetary surface processes."



By AGU 31 March 2015

## Citation



(https://eos.org/wp-content/uploads/2015/03/Mariotti_Giulio-Leopold_Award_SIZED.jpg)

Giulio Mariotti

We are pleased to honor Giulio Mariotti with the Luna B. Leopold Young Scientist Award for ground-breaking experimental and theoretical work at the intersection of physical and biotic processes in coastal landscapes. Giulio is a geomorphologist who applies his considerable quantitative and observational skills to improve our understanding of Earth surface processes. While keeping a firm grasp on the detailed fluid and sediment dynamics of coastal systems, Giulio has been able to step back from the

details and consider how best to pare a problem down to the simplest possible representations and/or observations to get at the underlying system controls and responses.

Through work in the field, the lab, and numerical modeling, Giulio has provided key insights into the interactions of coastal hydrodynamics, morphodynamics, and ecological processes. For example, with a simple dynamic model Giulio showed the existence of a threshold width for tidal flats bordering salt marshes. Once this threshold is exceeded, irreversible marsh erosion takes place even in the absence of sea level rise. He also determined through a series of laboratory experiments how wrinkle structures in siliciclastic deposits can be microbially induced, shedding light on the feedbacks between flow, sediment motion, and microbial growth.

Giulio's creativity, quantitative skills, and productivity place him in the very top tier of young scientists in Earth and planetary surface processes who have followed in the footsteps of Luna Leopold.

—P. L. Wiberg, University of Virginia, Charlottesville

## Response

I would like to thank the Earth and Planetary Surface Processes focus group for this award and for the trust they put in my capabilities. My academic achievements were made possible by my adviser, Sergio Fagherazzi, who distilled in me the art of observing processes and landforms in the field and translating them into mathematical models. I am also in debt to Taylor Perron and Tanja Bosak, who followed me during my off-the-beaten-path adventure in experimental microbial sedimentology.

I confess that when I started working on ecogeomorphology, I thought about biotic processes as an obstacle to the quantitative understanding of geomorphology. This was the view of a freshly graduated engineering student, with a lot of mathematical tools in his bag but with a quite narrow vision of nature. Luckily, interactions with scientists from different backgrounds—biologists, ecologists, paleontologists, and biochemists—taught me to look at life not as an inconvenience, but rather as an opportunity to give purpose to my geomorphology-based research. Such a change of view led my interest toward questions about the origin and evolution of life and the functioning and fate of modern coastal ecosystems.

There are plenty of biotic-driven questions relevant to society that can be addressed using the tools of geomorphology. My wish is to continue along this road, working with old and new colleagues who are the true catalysts for my work. Thanks to all of you.

—G. Mariotti, Massachusetts Institute of Technology, Cambridge

**Citation:** AGU (2015), Mariotti receives 2014 Luna B. Leopold Young Scientist Award, *Eos, 96,* doi:10.1029/2015EO027031. Published on 31 March 2015.

**From:** maplest327 <maplest327@aol.com>
**To:** maplest327 <maplest327@aol.com>
**Subject:** Preventing estuary collapse in Puget Sound river delta estuaries...a reasoned defense and opportunity
**Date:** Sun, Jul 22, 2018 1:20 pm

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June 26, 2018



Kelly Susewind - Director
WDFW
600 Capital Way North
Olympia, WA 98501

Re: Preventing estuary collapse in Puget Sound river delta estuaries - Protecting the lateral estuary edge from high wind-waves

Dear Mr. Susewind,

Congratulations on your new position as Director of WDFW. I am hopeful that with your Geologic Engineering background, you may be able to see the fate of Puget Sound river delta estuaries in the new light of recent Atlantic Coast estuary science research. I have enclosed some research articles of these scientists: Sergio Fagherazzi - "Marsh Collapse Does Not Require Sea Level Rise", Giuilio Mariotti - "Critical width of tidal flats triggers marsh collapse in the absence of sea level rise" and John R. Gunnell - "How a marsh is built from the bottom up" et al. These scientists have discovered that Atlantic Coast river delta estuaries are collapsing due to lateral damage of low marsh estuary edges from high wind-waves and NOT from drowning by sea level rise. This is a paradigm shift that needs to be understood if we are to save our river delta low marsh estuaries and Chinook salmon in Puget Sound.

Most Puget Sound river deltas face south...into the strong winter winds. They are all vulnerable to high wind-waves across tidal flats that pound the estuary edges for months. Only by creating new marshlands are we attempting to make up for the natural loss at the estuary edge. The man-made additions are done by turning adjacent land (usually farm land) into estuary. This is not a long term solution for the survival of the estuary or Chinook salmon. And the ever-growing tide flats create higher wind-waves that will destroy the entire low marsh....by severely eroding the estuary edge. The recent Atlantic Coast research demonstrates this. And recent work in the Skagit River delta "Skagit Chinook Habitat Monitoring Status and Trends: Change in Skagit Tidal Delta Habitat Extent, 2004-2013" Eric Beamer & Karen Wolf....(copy enclosed) show continued, natural low marsh loss in the Skagit South Fork and Bay Front estuaries.

The primary sediment problem in the Skagit River delta is the 1937 Skagit River Diversion, jutting into the Skagit River immediately northeast of Fir Island. This 1937 diversion unnaturally forces most of the Skagit River water, sediment and salmon smolts down the North Fork at high speed. Most of the sediment and salmon smolts are pushed out into deeper water where the sediment builds up in deep water and the smolts are exposed to increased predation away from the low marsh. The 1937 Skagit River Diversion is damaging Skagit River estuaries by throwing away valuable sediment in the North Fork instead of sending it into the South Fork....where it needs to go to fill a very large, growing tidal flat. A major channeling of the 1937 Skagit River Diversion...sending most of the water, sediment and salmon smolts back into the South Fork is primary to halting the chronic sediment imbalance in the Skagit delta. A diversion of North Fork waters into the Bay Front will also be needed to halt the erosion at the Bay Front estuary.

The new estuary science explains how a natural element ( the critical threshold width of tide flats adjacent to river delta estuaries ) is the pivoting factor in determining if a river delta estuary will collapse to nothing or grow and completely fill in a tide flat. Nature will decide, with sediment flow being the opposing force against high wind-wave estuary edge erosion. These scientists have shown with their work, including lab verification, that there is no equilibrium between low marsh estuary and tide flats. This is absolutely new. We will NOT keep both estuary and tide flat in one basin. One will win the battle. And the pivoting factor in low marsh estuary vs. tidal flat survival..... is the critical threshold width of the tidal flat.

Puget Sound has lost over 50,000 acres of river delta estuary. This is the place where Chinook salmon spend up to 6 months after coming down river....before heading into the Salish Sea and ocean. We cannot have more Chinook salmon without more river delta low marsh estuary acreage. We now know that high wind-waves are collapsing river delta estuaries around the world and we know how to prevent that from happening....by protecting the estuary lateral edge. Then we can increase low marsh acreage by trapping more sediment in the tide flats. Raise the tide flats a little and they will shoal up. And then the adjacent low marsh plants will quickly colonize the newly elevated land. John R. Gunnell showed how this happens naturally and we can build from that knowledge. We have higher energy waves than the Atlantic Coast and no barrier islands to protect and expand the low marsh estuary. But these scientists show us how we can help save and expand our estuaries here.

We are creating new estuaries in the Mississippi River delta by redirecting Mississippi river water and sediment into adjacent tide flats. Filling them and creating new estuary. It is the way back from the horrible, long term estuary loss in Louisiana. We can learn from them. We have the technology now using Geotubes to trap sediment. We are already doing this in the North Fork of the Toutle River in Washington to sequester sediment upstream that is flowing down the Toutle River from Mt. St Helens. It works there. The Geotube tide flat sediment trap will accomplish two things....(1) Protect the estuary edge from high wind-waves and (2) Allow us to increase the low marsh acreage for Chinook salmon and try to make up for the massive loss of this estuary acreage that occurred during the past 150 years.

The Stillaguamish River delta estuary is in very bad shape. The North part of the estuary is nearly gone....from sediment loss. The Chinook salmon populations there are in extremely critical condition with fewer than 200 summer run Chinook salmon alive. DNA has already been taken from the Stilly salmon populations....to try resurrect them from impending extinction. If the Stilly low marsh estuary is not increased soon, we will see this Puget Sound river lose it's estuary and then lose it's salmon. I would hope that we can start here in Puget Sound river deltas. We can use Geotubes to trap sediment in the Stilly tide flats. Protect the estuary edge and increase the low marsh acreage by semicircling the entire Stilly delta. We are watching the Stilly lose it's estuary and salmon in real time. And now we know how to stop the loss. How to defend the estuary edge. How to grow a much larger low marsh estuary in the Stillaguamish River delta tide flats. The Stillaguamish River delta tidal flats is the place to begin. A place to utilize the new estuary paradigm shift and create a working model for river delta estuary protection/enlargement and Chinook salmon recovery.

Thank you for receiving this new Atlantic Coast estuary research. The paradigm shift these scientists have discovered with (1) river delta estuaries collapsing without sea level rise and (2) NO equilibrium existing between low marsh estuary and tidal flats..... may be difficult to accept. It may be hard to accept that either the estuary or tidal flat will disappear in each marine basin....only one will survive. It is so different than our current model of estuary survival of sea level rise vs sediment flow. I would hope that Washington estuary scientists will carefully study Fagherazzi, Mariotti and Gunnell et al research to understand that the pivoting factor in river delta estuary survival.....is the critical threshold width of the adjacent tidal flat. And that is bad news for all Puget Sound river delta estuaries with large, expanding tidal flats (most of them). The wider the tidal flat....the more destructive the high wind-waves against the lateral estuary edge. Understanding the new estuary model and it's implications for Puget Sound estuaries will be vital in future efforts to protect and expand our river delta low marsh estuaries for Chinook salmon.

I hope you will seriously consider this new research.

Thank you.

Sincerely,

Kurt Zwar
1202 S. 10th St.
Mount Vernon, WA 98274
maplest327@aol.com
360 899-9480

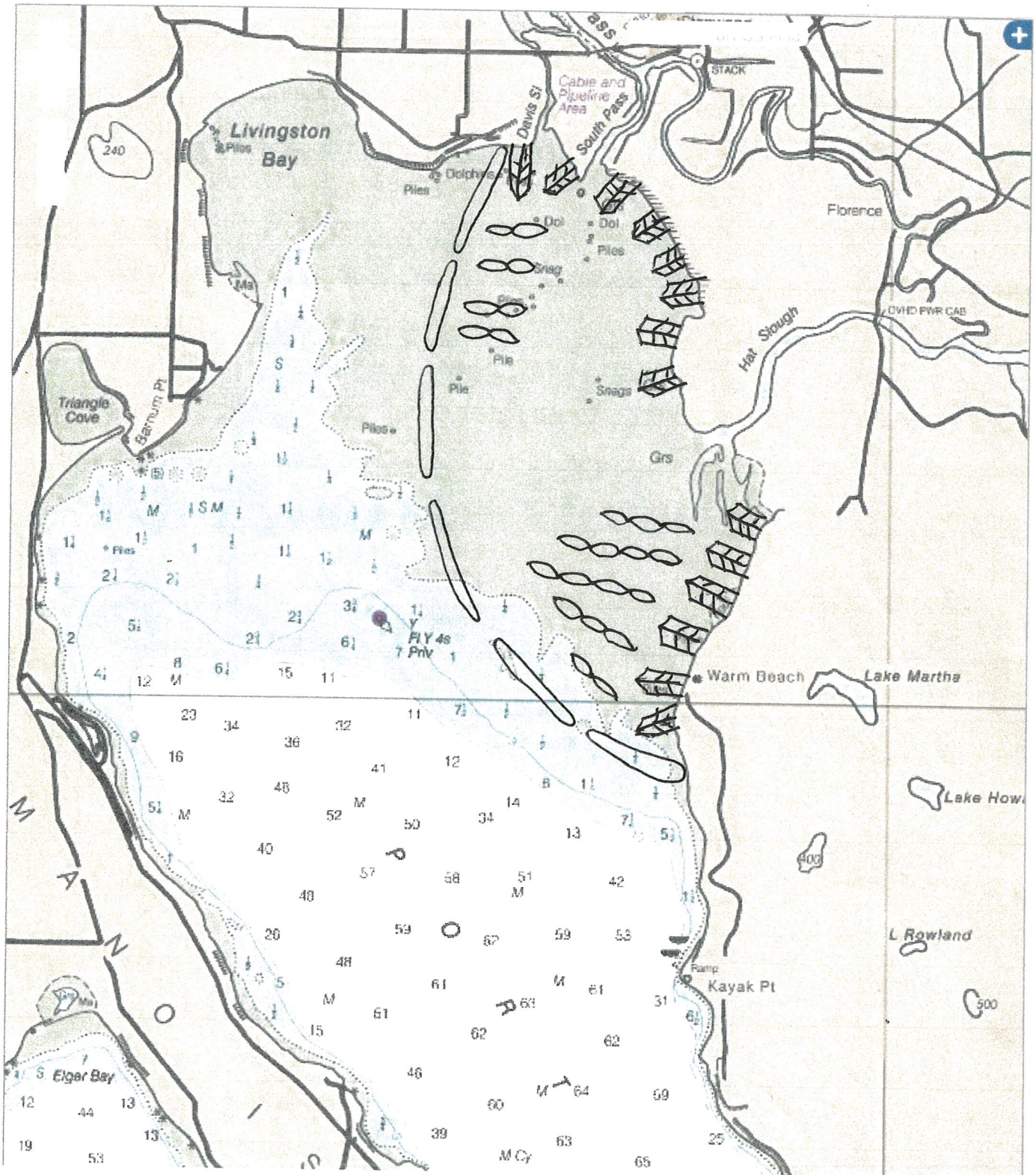
Feb 20, 2016

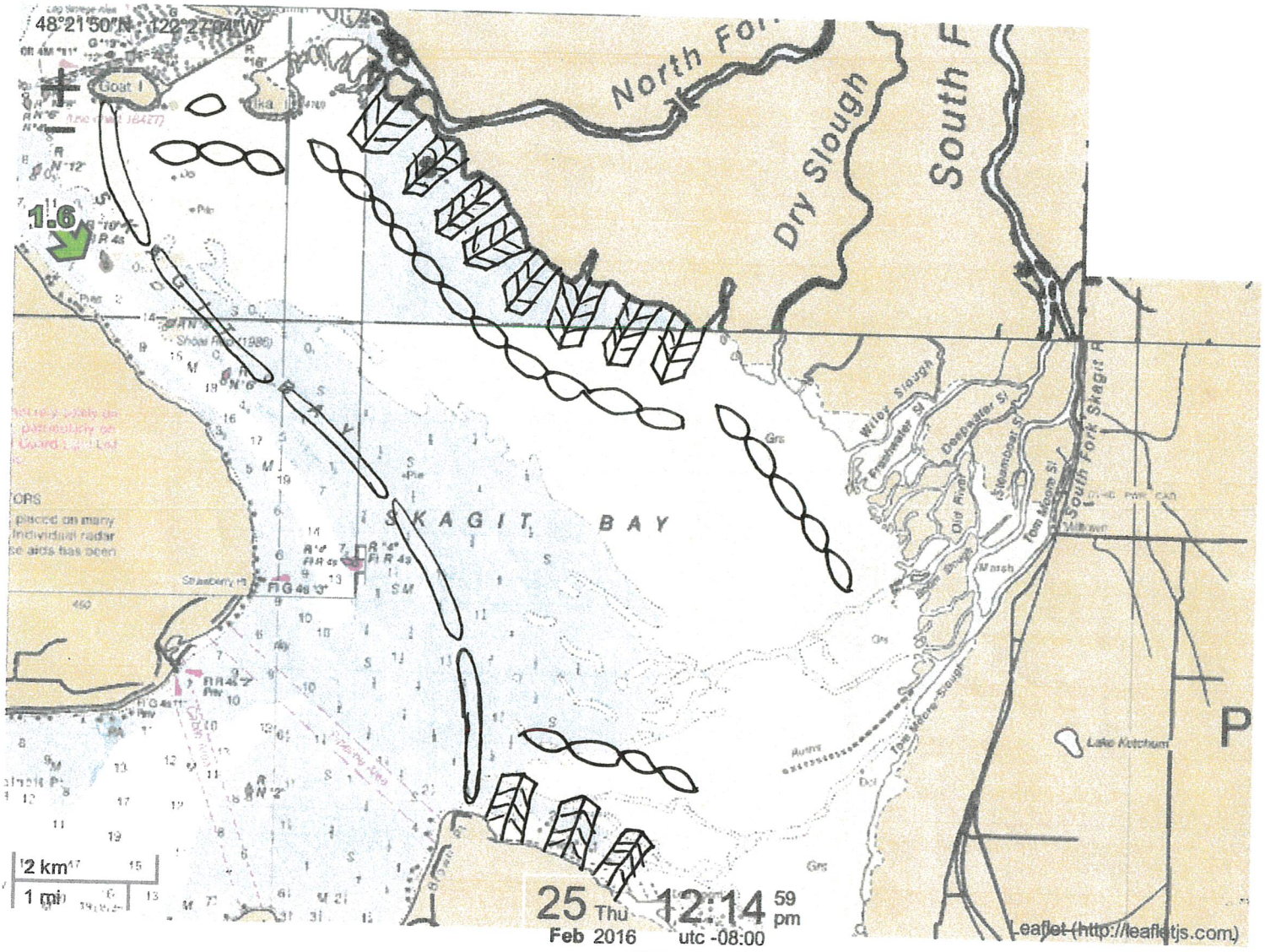
RECEIVED
OCT - 6 2021
WA STATE
RECREATION AND CONSERVATION OFFICE

STILLAGUAMISH RIVER DELTA & ESTUARY

GEOTUBES BRUSH FENCES SUNKEN WOOD BOATS

Kurt Zwar






Feb 20, 2016

**Tides** **Settings**

## Cherry Point

Strait of Georgia, Washington

SKAGIT RIVER DELTA & ESTUARY

GEOTUBES BRUSH FENCES SUNKEN WOOD BOATS

Kurt Zwar

Feb 20, 2016

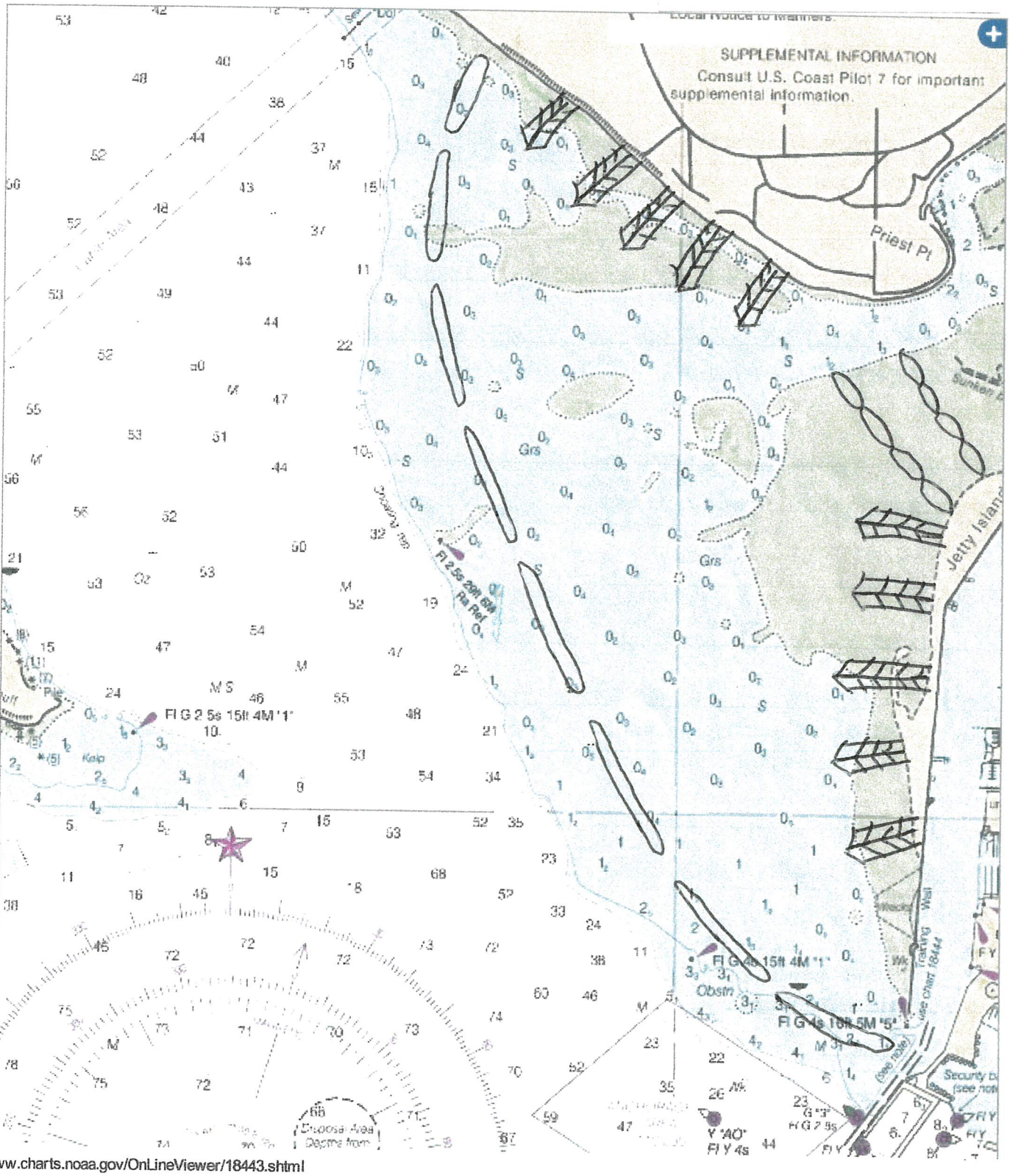
# SNOHOMISH RIVER DELTA & ESTUARY

GEOTUBES

BRUSH FENCES

SUNKEN BOATS

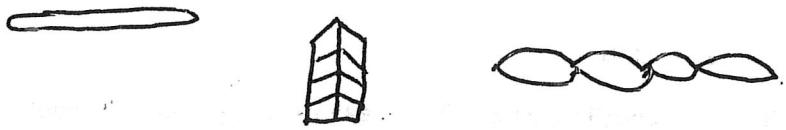
Kurt Zwar



Feb 20, 2016

NOOKSACK RIVER DELTA & ESTUARY

GEOTUBES BRUSH FENCES SUNKEN WOOD BOATS



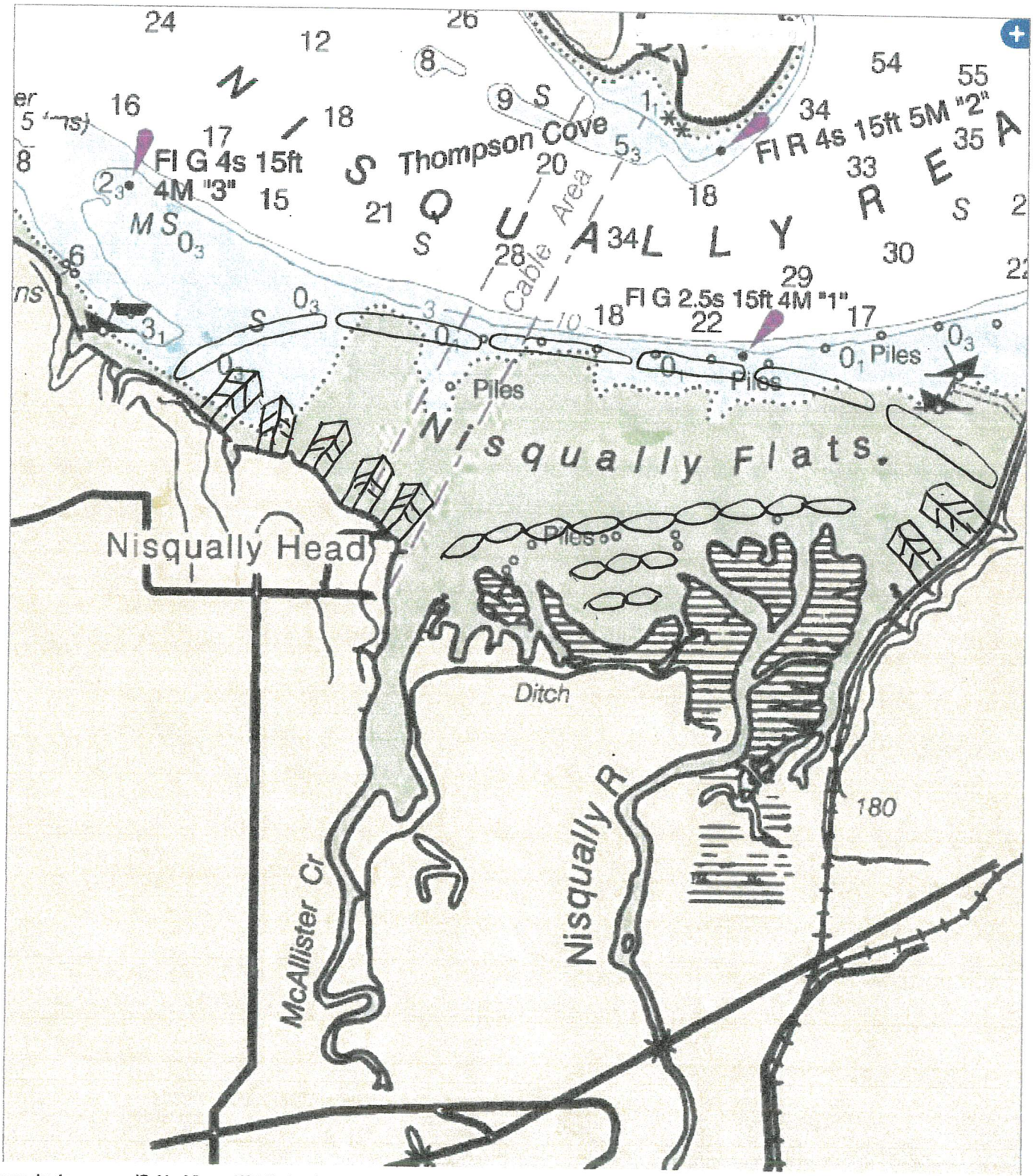
Kurt Zwar

Mar 1, 2016

NISQUALLY RIVER DELTA & ESTUARY

GEOTUBES BRUSH FENCES SUNKEN WOOD BOATS

Kurt Zwar

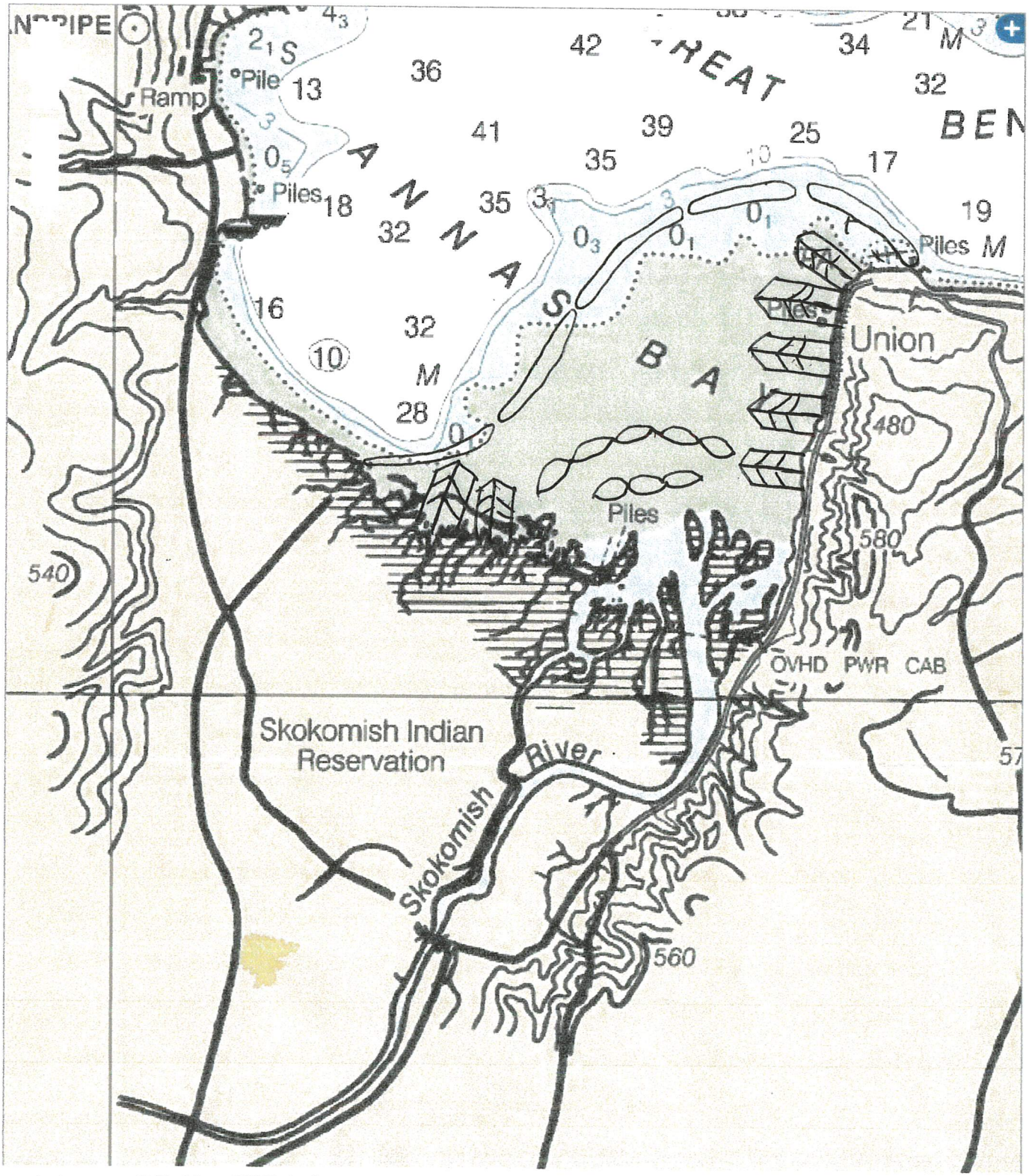


Mar 1, 2016

SKOKOMISH RIVER DELTA & ESTUARY

GEOTUBES BRUSH FENCES SUNKEN WOOD BOATS

Kurt Zwar

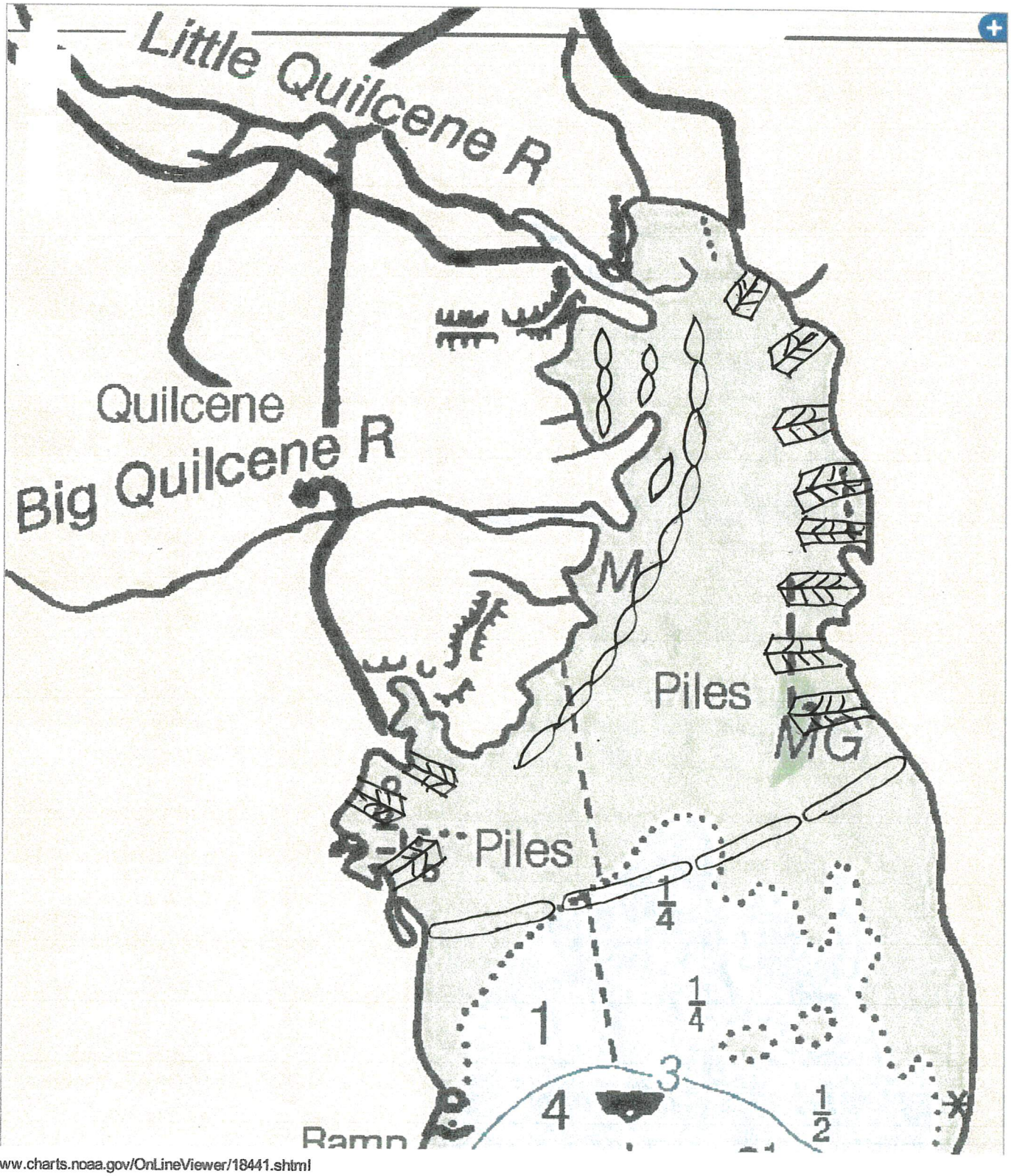


Mar 1, 2016

BIG QUILCENE RIVER DELTA & ESTUARY

GEOTUBES BRUSH FENCES SUNKEN WOOD BOATS

Kurt Zwar

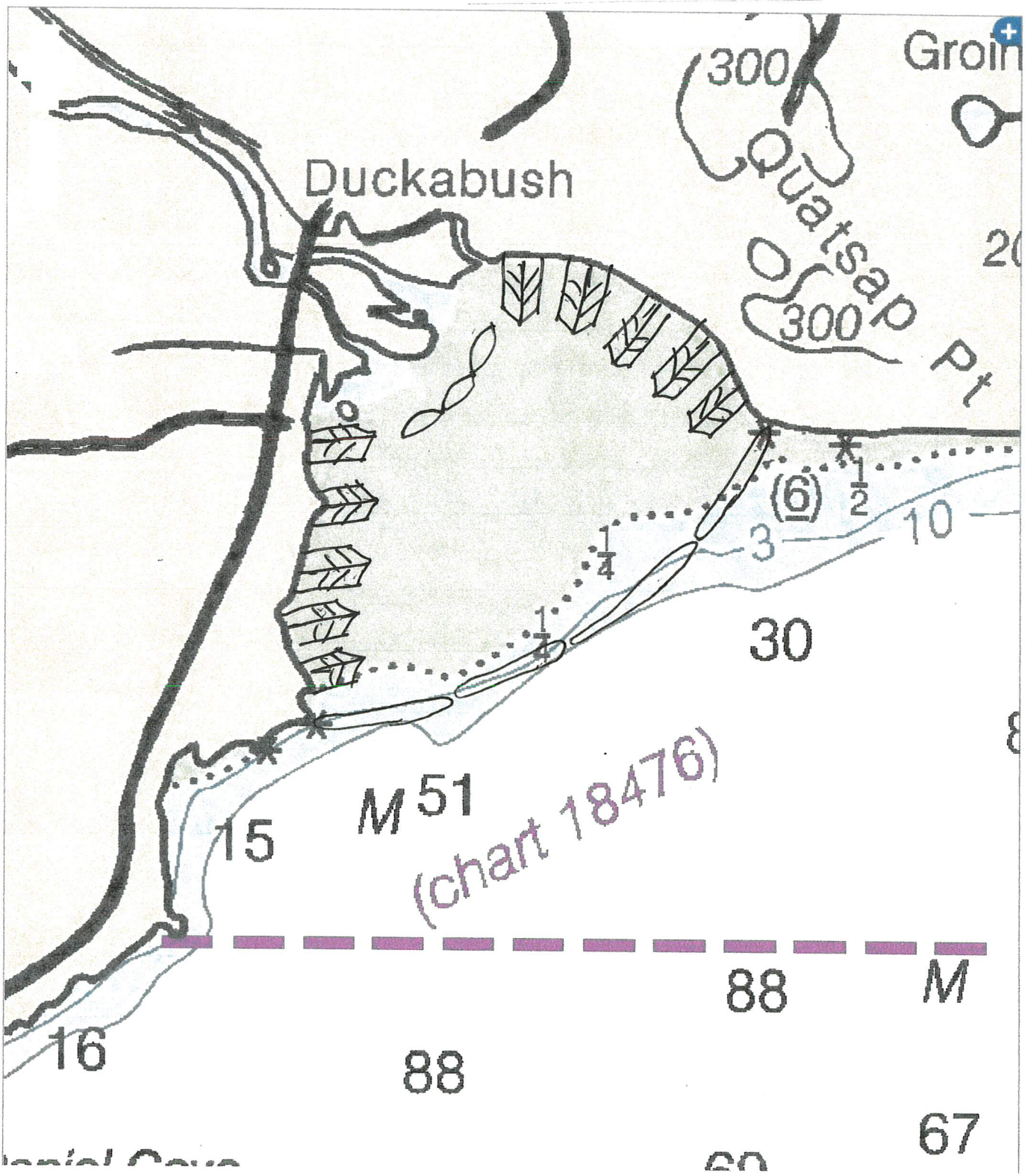


Mar 1, 2016

DUCKABUSH RIVER DELTA & ESTUARY

GEOTUBES BRUSH FENCES SUNKEN WOOD BOATS

Kurt Zwar

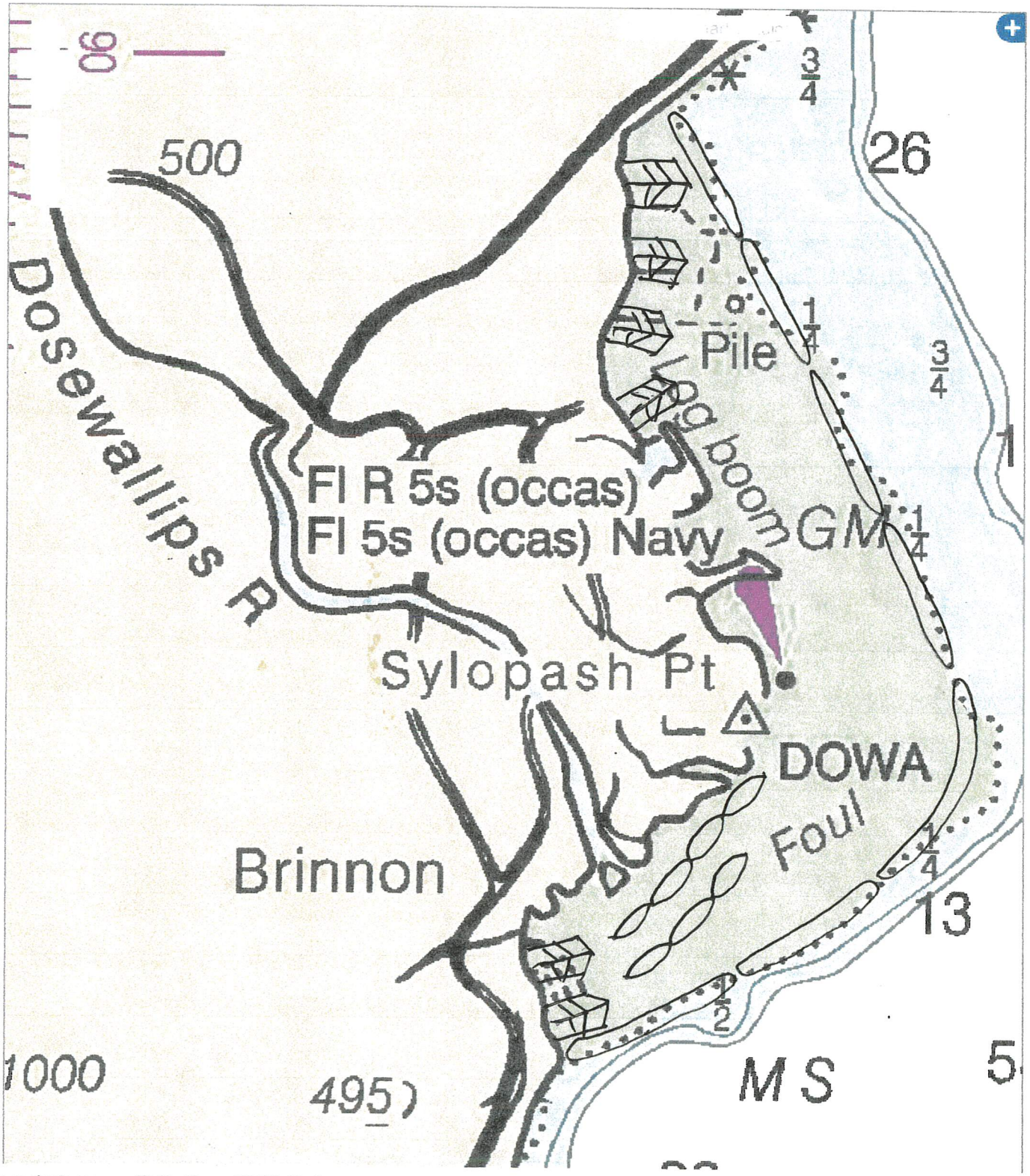


Mar 1, 2016

DOSEWALLIPS RIVER DELTA & ESTUARY

GEOTUBES BRUSH FENCES SUNKEN WOOD BOATS

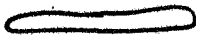
Kurt Zwar



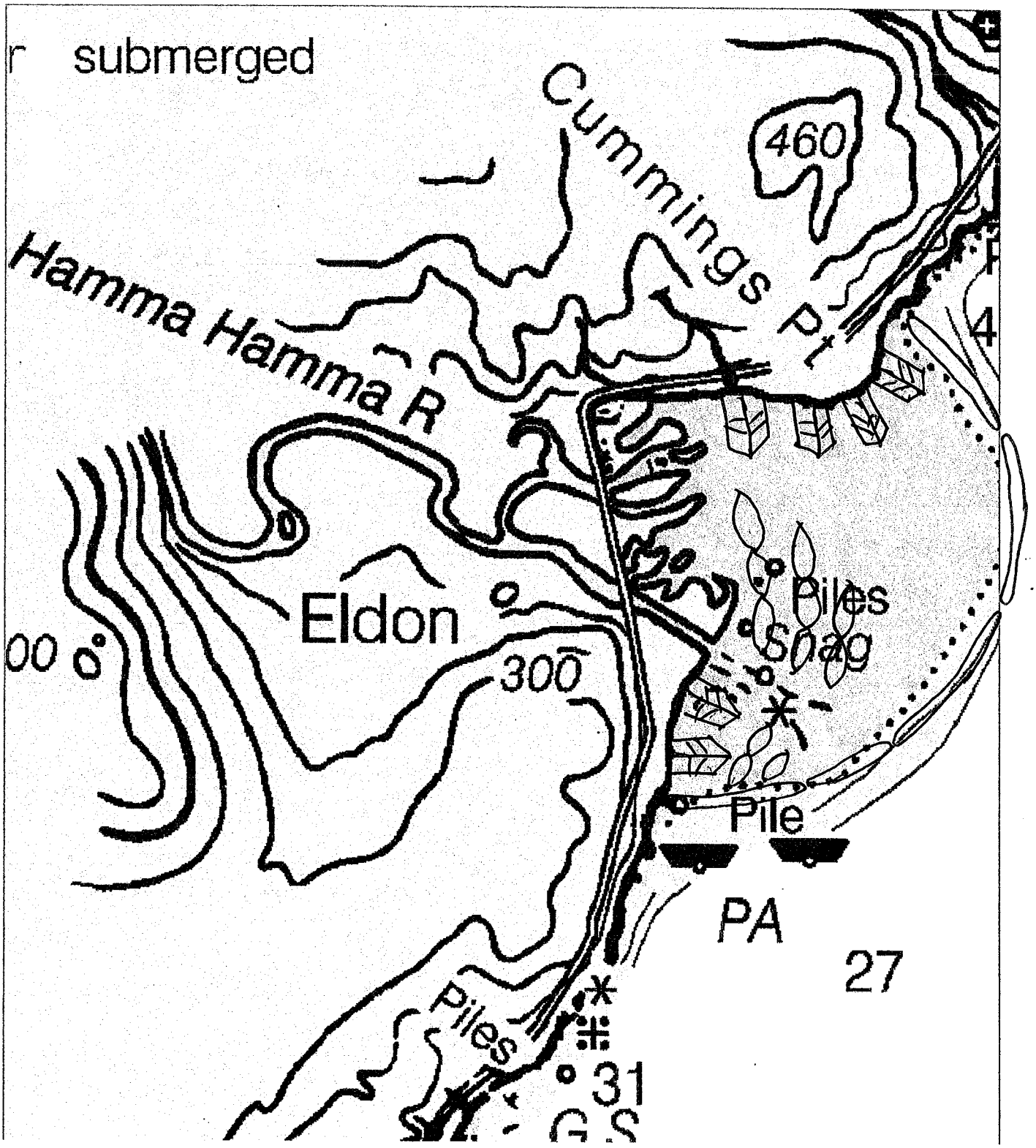
Mar 1, 2016

HAMMA HAMMA RIVER DELTA & ESTUARY

GEOTUBES BRUSH FENCES SUNKEN WOOD BOATS



Kurt Zwar



Search...



# IAI Installs Geotextile Tubes to Restore Emergent Marsh Habitat in Florida

JUNE 23, 2017 BY IAI

1 COMMENT


Next week, IAI Project Manager, Kirk Foley, will be presenting a technical paper on IAIs work on the Mile Point Training Wall project, at the WEDA Dredging Summit & Expo '17. The paper was co-authored by Kirk and IAI Technical Director, Aaron Wright, and describes the challenges of installing a geotextile tube wall in the fast-moving, tidally-influenced waters of the Jacksonville Intracoastal Waterway.

IAI completed this unique geotextile tube installation in 2016, as part of a larger USACE project. The geotextile tube installation, approximately 3,763-feet long, was designed to protect Great Marsh Island from land loss due to tidal erosion. Emergent wetlands like Great Marsh Island are an important part of Florida's ecology, providing important habitat for migratory birds and other wildlife.

IAI installed the geotextile tubes near the intersection of the St. Johns River and the Intracoastal Waterway. This area experiences difficult cross-currents at ebb tide, eroding wetlands and creating challenging conditions for construction efforts. The wall was installed in partially in the water, and partially on land; later, dredge spoils were pumped behind the geotextile tube wall, restoring wetland and increasing the size of Great Marsh Island to about 52 acres of marsh habitat.

IAI developed a custom geotextile tube layout plan to achieve the required elevations of the wall. Along the more than 3,000-foot long alignment length, water depths varied significantly. Geotextile tubes ranging from a 17-foot circumference to 60-foot circumference were deployed in a single layer, while in the deepest section, a three-layer stack of 34-foot circumference geotextile tubes were needed to meet the design elevation.

Customized filling techniques developed by IAI's crew were utilized to safely and accurately place the scour aprons and geotextile tubes in areas with high velocity currents. Our personnel recognized that the use of scour aprons in this application was critical, and successfully executed the installation. The scour aprons protected the sand base that the geotextile tubes were installed on top of, and prevented it from being washed out by the currents.

IAI filled the geotextile tubes with sand to a height of 6-feet MLLW in temporary areas of the alignment. When dredging behind the wall was complete, the temporary tubes were cut open and levelled to allow water to flow in and out of the marsh land. The remainder of the geotextile tubes and scour aprons were left in place under the surface of the water, to provide the island with continued erosion protection.

IAI served as a subcontractor to Manson Construction Company on this project.

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# Lake Sinissippi Wetland Rehabilitation

MARCH 14, 2014 BY IAI

## Scope of Work:

IAI was contracted by the Lake Sinissippi Improvement District to design and construct an erosion control berm which would isolate a 40-acre portion of man-made Lake Sinissippi in an effort to remediate a marsh wetland environment that had been deteriorated by a non-game fish species.

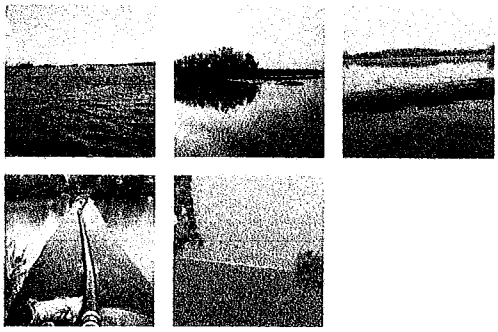
## Summary:

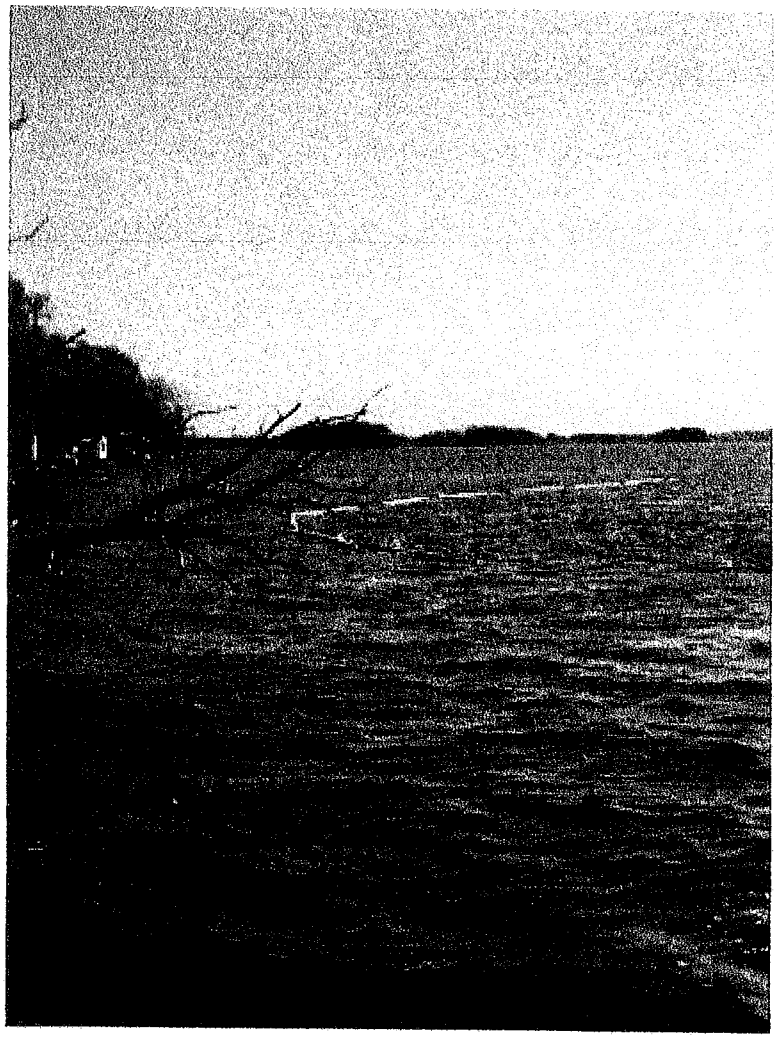
IAI deployed almost 800 lineal feet of 30 foot circumference Geotube® containers in a straight line to connect two shorelines of a bay. IAI utilized a hydraulic dredge to remove sediment from the lake bottom, increasing the navigable depth of the lake. The dredged sediment was then used to fill the Geotube® containers to bring their height above the water surface such that the wetland area was isolated from the rest of the lake. Additional dredged sediment was then pumped in behind the Geotube® containers to reduce the depth of water in the wetland area and provide a foothold for native flora.

It was then possible for the lake association to work in conjunction with the State of Wisconsin's Department of Natural Resources and the local chapter of a national sportsperson's club to eradicate the non-game fish in the wetland and plant naturally-occurring wetland flora to restore the natural habitat.

Since the conclusion of the project, the Geotube® containers which were installed to form the barrier between the wetland and the lake have remained in place, despite harsh Wisconsin winters and heaves of ice sheets. And the wetland area behind the Geotube® berm is completely rehabilitated with natural flora taking hold.

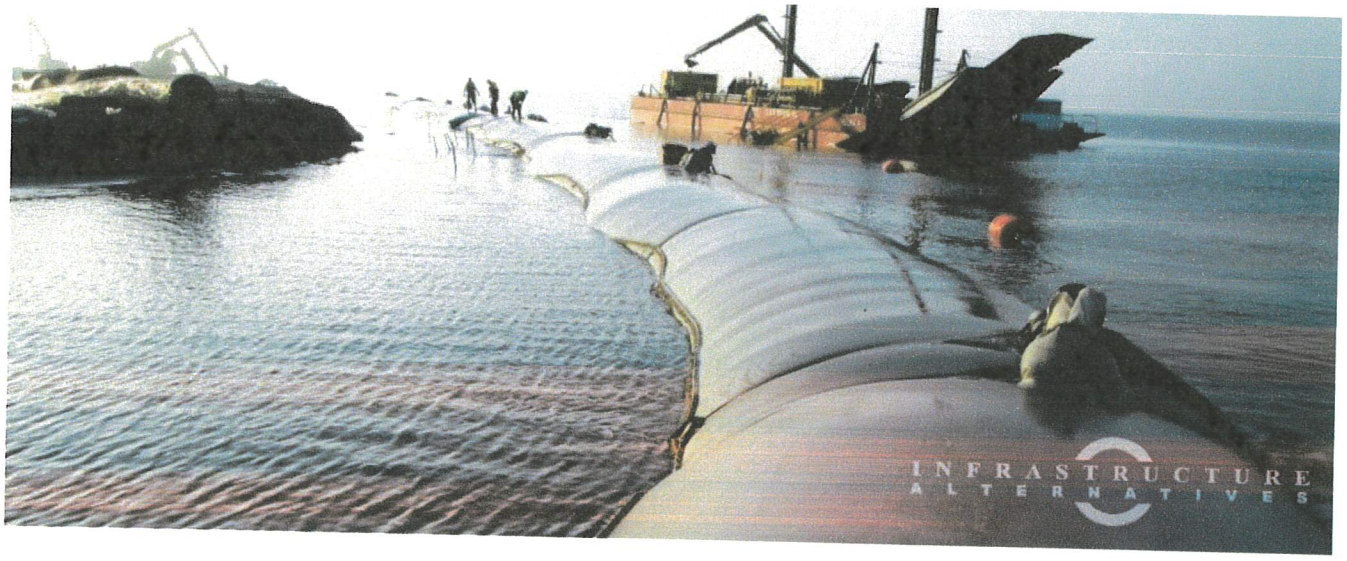
## Project Photo Gallery





# Raccoon Island Marsh Creation

MARCH 19, 2014 BY IAI




The Raccoon Island Marsh Creation Project was led by the Natural Resources Conservation Service in the Spring of 2013 to establish a larger breeding ground for pelicans. A dike was installed and material was dredged from the ocean to create the marsh.

This shoreline protection project utilized hydraulic dredging to install 4,620 feet of scour aprons and 400 feet of geotextile tubes bordering Raccoon Island. IAI (IAI) was responsible for dredging, installation of the geotextile tubes and scour aprons.

The initial dike for the marsh creation was completed by Weeks Marine; sand was hydraulically dredged to create the dike, which surrounds the north end of Raccoon Island. IAI installed geotextile tubes 10 feet from the dike on the ocean floor utilizing an 8 inch electric submersible pump to fill the tubes. The tubes were intended to protect the dike from washing out, however the dredged material was fine grain sediment and did not allow the geotextile tubes to fill to the desired height. IAI was then able to successfully implement an alternative approach and installed scour aprons.

IAI maintained and repaired the dike as needed, installed 6 millimeter plastic over the dike and installed geotextile scour aprons. 4,620 feet of 50 feet wide scour aprons was placed on top of the dike. The scour apron acts reduces erosion of the dike by protecting it from the action of the waves.

## Scope of Work

- Survey and stake work zones
- Construct geotextile tube header system
- Maintain dike structure with marsh buggy excavators
- Cover dike with 6 millimeter plastic
- Fill and install geotextile scour aprons
- Fill and install geotextile tubes
- Sew geotextile scour apron fabric together as they were deployed
- Decommission geotextile tube header system

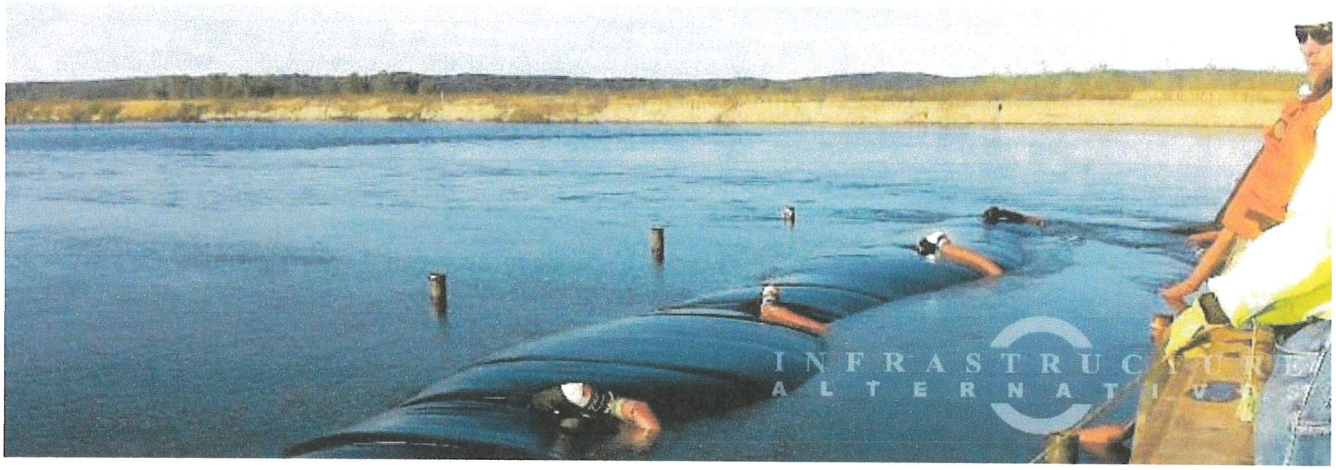
## Equipment Utilized

- (4) Marsh Buggy Excavators
- (3) barges ranging from 80 feet to 120 feet long
- 18 ton crane
- 75 horse power diesel electric submersible pump equipped with a jet ring
- 200 kW generator
- 6” electric dry prime pump
- 4,620 linear feet of scour aprons
- 400 linear feet of geotextile tubes

## Project Photo Gallery

# Missouri River Sandbar Habitat Restoration

MARCH 18, 2014 BY IAI




Summary:

As part of an effort to restore emergent sandbar habitat in the Missouri River for two endangered species of bird (the least tern and the piping plover), the U.S. Army Corps of Engineers let this project. IAI provided geotextile tube installation and filling services, deploying and filling approximately 1,028 lineal feet of 40 foot circumference geotextile tubes in the turbulent Missouri River.

The tubes were filled with sandy borrow material to a height of about one foot above the normal depth of the river, such that the top surface of the tubes was above the water surface. Tubes

installed ranged from 157 feet to 200 feet in length and were placed end-to-end to create a line of tubes within the river. The line of tubes forms a barrier to suspended sediment in the river, trapping it and causing sandbars to form which provide needed habitat for the endangered bird species and replace sandbars which have been lost over the years due to dredging and dam construction on the Missouri. After four to six months, sediment had built up enough behind the tubes to create small islands in the river. At this point, the tubes were removed from the river.

IAI personnel deployed the geotextile tubes and scour apron simultaneously into the river from a barge, then worked from small work boats to secure the tubes into position, measure the filled height of each tube, remove fill pipe connections and seal the fill ports after filling. Currents in the Missouri during the performance of the project were four to eight miles per hour with heavy undertows.

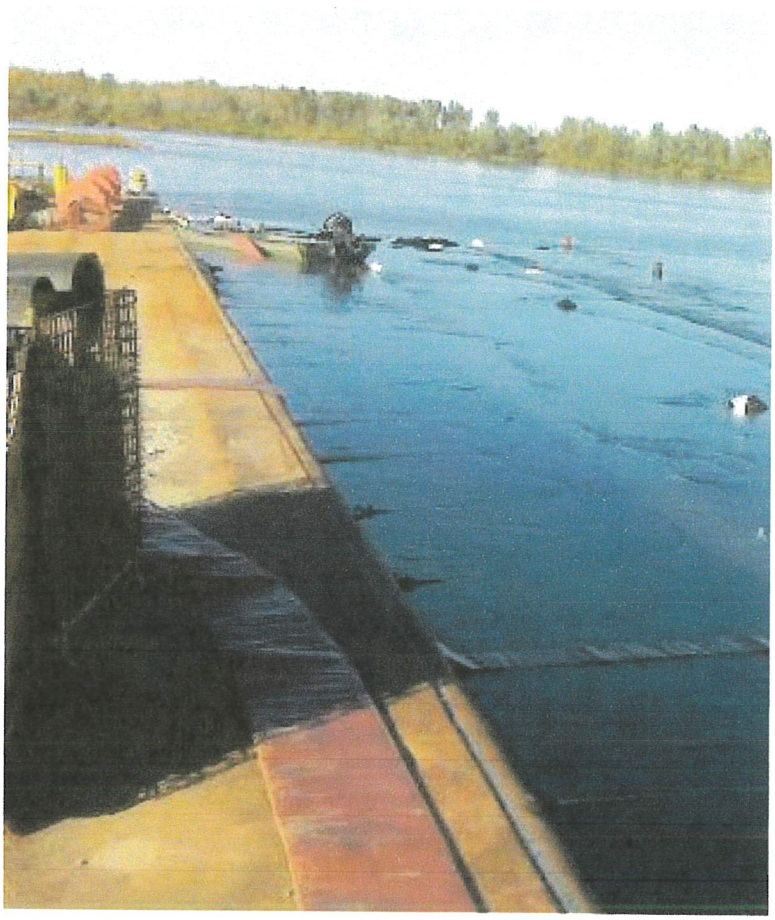
## Scope of Work:

IAI was retained by the General Contractor to install and fill geotextile tubes in the river.

## Equipment Utilized:

- 1,028 lineal feet of 40 foot circumference geotextile tubes
- Work boats

## Project Photo Gallery



# Mount St. Helens Grade Building Structures

MARCH 17, 2014 BY IAI


Summary:

IAI installed 2,300 lineal feet of scour apron and 2,300 lineal feet of 40 foot circumference geotextile tubes in the North Fork Toutle River as part of an effort to reduce flooding by trapping sand and sediments flowing from the Mount St. Helens volcano into the river. The tubes have been placed in the river, along with massive timber structures (constructed by others) to create barriers to the river flow, slowing it down and allowing the sediment it carries to build up behind the

geotextile tube and timber structures. The project was conducted to reduce flooding in the local area and also to create new wetlands habitats for birds and other wildlife.

The geotextile tubes utilized for the project were manufactured with debris shields, which reinforced the strength of the geotextile fabric, increasing protection against damage from punctures and UV rays. The tubes were filled with volcanic ash to a height of 6 feet above normal river bed elevations and then covered with an additional 3 feet of sand and rip-rap.

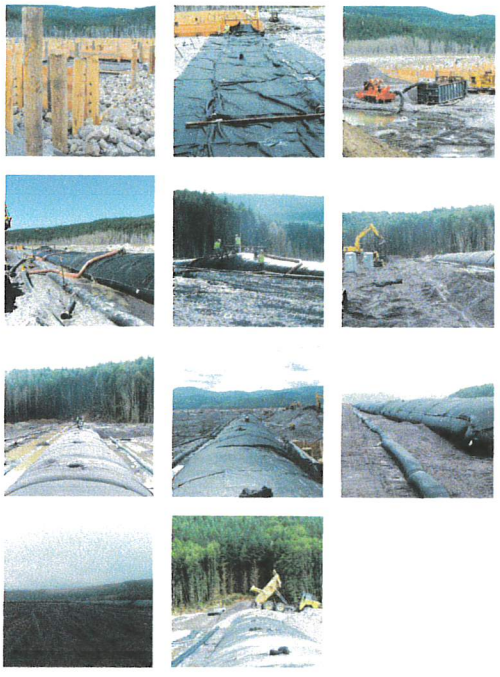
## Scope of Work:

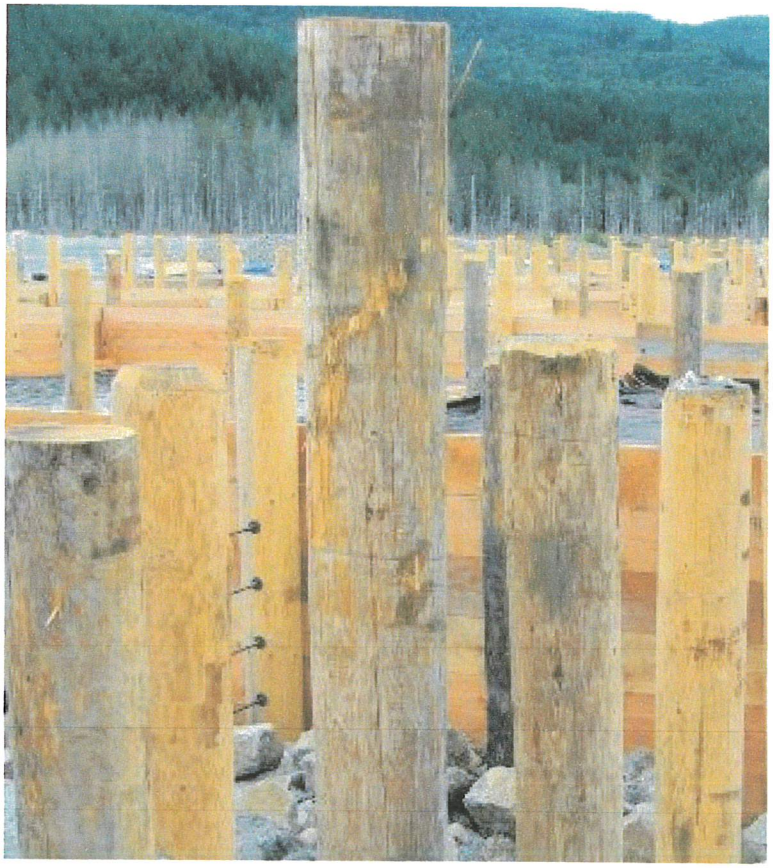
IAI was retained by the General Contractor to install and fill 2,300 feet of geotextile tubes and scour apron.

## Equipment Utilized:

- 2,300 lineal feet of 40 foot circumference geotextile tubes
- 2,300 lineal feet of scour apron
- Two 8 inch diameter submersible pumps for filling the tubes with ash slurry
- 12 inch diameter pump for dilution water to fluidize ash
- 8 inch diameter slurry conveyance pipeline
- 200 kW generator
- 2 All Terrain Vehicles

## Project Photo Gallery





Geology, published online on 20 June 2013 as doi:10.1130/G34582.1



# How a marsh is built from the bottom up

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## ABSTRACT

**Salt marshes are valuable yet fragile ecosystems, disappearing globally at an alarming rate. Facing this crisis, it becomes increasingly important to understand what forces drive their formation. Previous studies of marsh ontogeny relied on stratigraphy and physical monitoring, depending on inferences from multi-century and daily time scales, respectively. In this study, vertical accretion rates are evaluated at the same time resolution as a marsh's lateral expansion, providing the first comprehensive view of a laterally expanding marsh's sedimentary trajectory. $^{210}$Pb-derived (half-life, $t_{1/2}$, of 22.3 yr) accretion rates are examined in a marsh at the Newport River (North Carolina, United States), a location experiencing ongoing emergence of new marshland over the past century. Accretion rates at all marsh sampling sites begin with slow sedimentation characteristic of the bay bottom, then shift to rapid, persistent sedimentation, eventually progressing from submerged mudflat to marsh table. Acceleration of vertical accretion occurs asynchronously across the marsh and prior to vegetative colonization, indicating a physical mechanism. We hypothesize that extant marsh tables act as promontories, effectively shielding adjacent mudflats from erosive forces, dictating the trajectory of marsh emergence, and yielding the pattern of alongshore marsh emergence at the Newport River.**

## INTRODUCTION

In terms of ecosystem services, salt marshes are one of the most valuable environments in the world, acting as a shoreline buffer against storms and flooding, a refuge for wildlife, and a potential sink for pollutants (Costanza et al., 1997). Despite the benefits people derive from these coastal landforms, anthropogenic activities such as land reclamation, hydraulic alteration (Gedan et al., 2009), sediment starvation (Syvitski et al., 2005), and oil drilling (Kennish, 2001) have played a hand in the loss of 1%–2% of global salt marsh stocks every year (Duarte et al., 2008). Furthermore, global climate change is expected to cause a dramatic increase in storms, drought, and the rate of sea-level rise, all of which in excess will harm vegetation and may lead to marsh collapse (Cahoon, 2006; McKee et al., 2004; Kirwan et al., 2010). Among these climatic effects, accelerating sea-level rise has drawn a great deal of attention because it has the potential to affect every coastal marsh on the planet.

This crisis necessitates an understanding of what processes lead to the creation or destruction of marshland. When it comes to marsh survival, the biogeomorphology of mature marshes appears to be well understood, with young marshes asymptotically approaching a mature elevation (Pethick, 1981) constrained by sediment delivery (Cahoon and Reed, 1995) and marsh-grass productivity (Morris et al., 2002). This dynamic equilibrium has been studied under various sea-level rise scenarios with numerous numerical models (Kirwan et al., 2010), providing valuable insight regarding marsh collapse, a phenomenon documented in the Louisiana delta (southern United States) (Day et al., 2011) and Chesapeake Bay (eastern United States) area (Kearney et al., 2002).

Despite our current grasp of mature marsh homeostasis, there have been fewer observations and experiments regarding marsh creation. Generally, marshland emerges when basin infilling outpaces relative sea-level rise (Redfield, 1965), but marsh shorelines can also migrate over centuries due to variations in sedimentary and erosional regimes (Schwimmer and Pizzuto, 2000), advancing when accretion outpaces erosion due to waves (Fagherazzi et al., 2006). Such phases of land creation frequently accompany anthropogenic sediment pulses driven by land-use change. Marshes prograded in the Yangtze delta (China) following agricultural development in the 9$^{th}$ century (Yoshinobu, 1998), in San Francisco Bay (California) after hydraulic mining in the 1850s (Atwater et al., 1979), and in New England (eastern United States) throughout European settlement (Kirwan et al., 2011). Although the sediment pulses that created those marshes are no longer active, the marsh platforms persist as metastable entities (Mudd, 2011).

Marsh shoreline morphodynamics are inferred from variation in aerial photography (van de Koppel et al., 2005; Temmerman et al., 2003), sequence stratigraphy (Schwimmer and Pizzuto, 2000), and characteristic physical regimes of extant structures (Fagherazzi et al., 2006; Callaghan et al., 2010). These observational approaches provide fragmentary snapshots of how the marsh boundary behaves, elucidating mechanisms of marsh expansion, but not observing the whole sedimentary trajectory. In contrast to these studies, an actively growing marsh at the Newport River in North Carolina (United States) (Fig. 1) provides a rare glimpse of an expanding marsh's initial pattern of accretion, demonstrating systematic variations in its sedimentary record that, although consistent with current conceptual models, has not actually been observed to date.

## SITE AND METHODS

Subsequent to extensive land clearing ca. A.D. 1964, there was a documented increase in sedimentation and marsh areal extent at the mouth of the Newport River (Mattheus et al., 2009). In this study, $^{210}$Pb-based geochronologies of sediment accretion rates were developed in eight cores collected there. One core was in the open bay, one was in a tidal mudflat, and six followed the lateral trajectory of the marsh's expansion delineated by the aerial photographs used in Mattheus et al., 2009 (Fig. 1). Precise surface elevation was determined at each site using a Trimble RTK-GPS. $^{210}$Pb activities were determined via alpha counting of polonium, and accretion rates were modeled based on downcore variations in activity (Appleby, 2001). Characteristic $^{210}$Pb decay patterns, visual descriptions, X-rays, gamma radiometry, and historical data were used to validate assumptions of the geochronology derived for each core. Further treatment of the field and analytical methods, raw results, and data interpretation can be found in the GSA Data Repository[1].

## RESULTS

Through the course of their respective sedimentary histories, all six marsh sites and the mudflat site abruptly shifted from a slower continuous accretion rate to a more rapid one. Although this acceleration in accretion occurred at all of the emergent sites, it did not happen at the same time across locations.

Using the $^{210}$Pb-derived accretion rates and the years of marsh emergence (from Mattheus et al., 2009), a timeline of marsh accretion was constructed (Fig. 2A). The acceleration in vertical accretion rates (the shift from blue to green) generally occurred later at sites closer to the

[1]GSA Data Repository item 2013239, methodology and analysis of geochronologies, is available online at www.geosociety.org/pubs/ft2013.htm, or on request from editing@geosociety.org or Documents Secretary, GSA, P.O. Box 9140, Boulder, CO 80301, USA.

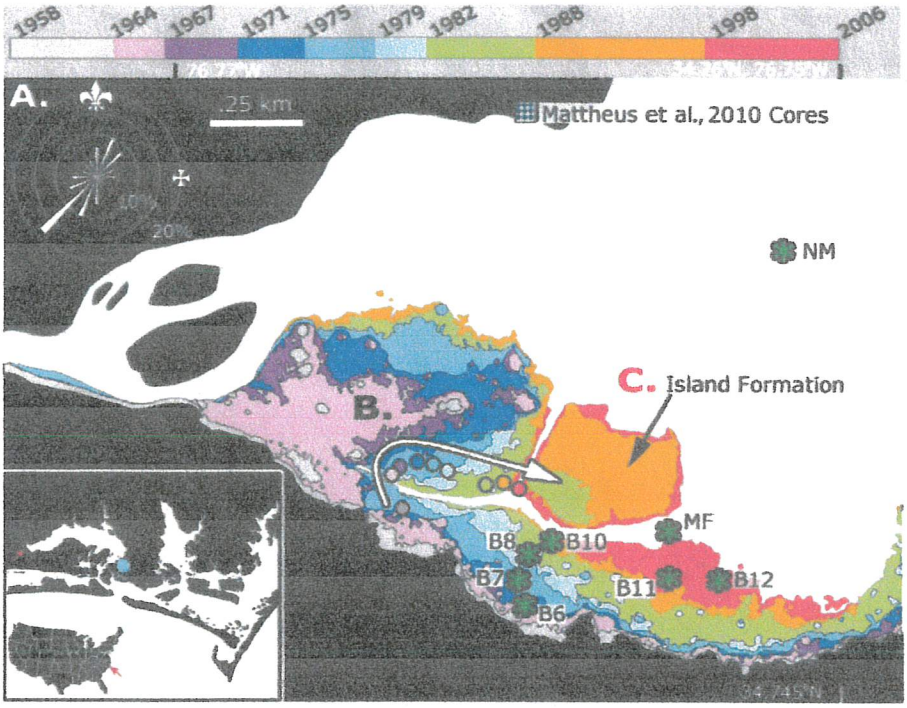


**Figure 1. Lateral marsh expansion found via aerial photography (Mattheus et al., 2009) on southern side of Newport River mouth (North Carolina, United States). Colored horizons indicate newly exposed marshland up to indicated year. Asterisks are where cores were taken. Square symbol marks cores from Mattheus et al. (2010) on north shore. A: Wind rose of daily mean from A.D. 2005 to 2011; note southwestern modality. Fleur-de-lis—north; cross—east. Weather station marked by blue circle in inset. Data retrieved from http://cdo.ncdc.noaa.gov/qclcd/QCLCD?prior=N&state=NC&wban=93765. B: Centroid of new landmass from 1958 through year (at the end of the interval) indicated by the color on each circle. Arrow marks general trajectory. C: Island formation.**

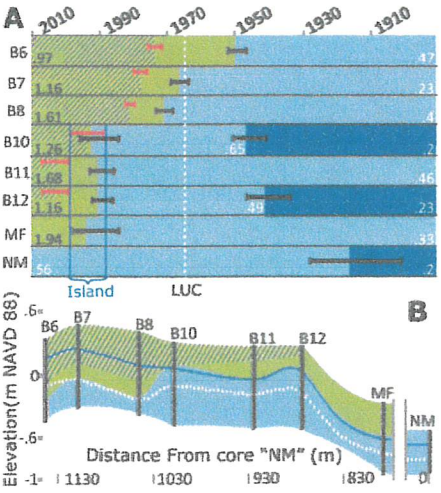


**Figure 2. A: Timeline of accretion and emergence. Blue fields denote relatively slower accretion, while green designates rapid accretion. Textured fields designate grass colonization. LUC (land use change) corresponds with upstream clear-cutting in 1964. Numbers displayed are accretion rates (cm/yr). Years were estimated by dividing depth in core by rate of accretion. Error bars in black are maximum and minimum predictions due to accretion rate error. Emergence dates were determined from aerial photography; error bars in red are from number of years between photographs. B: Sequence diagram of marsh table. Marsh emergence and isochron depths (A.D. 1990 in blue, 1964 in white) are the product of accretion rates by number of years from present (error not shown). Isochron depths were connected using smoothed lines.**

bay and not every site had an increase in accretion that coincided with the A.D. 1964 land-use change. Site B6 began to rapidly accrete prior to the sediment pulse, while sites B8, B10, B11, B12, and MF all began to rapidly accrete after the pulse, in some cases over 20 yr later. Also, there is evidence of slower lateral accretion from 1888 to 1964 (Mattheus et al., 2009), so the increased sediment supply in 1964 is not the sole factor driving marsh emergence in the Newport River. Considering the sequence diagram (Fig. 2B), the transition from slow (blue) to rapid (green) accretion appears at a variety of elevations, so the transition into a marsh-building sedimentary regime also is not necessarily controlled by a simple relationship with respect to mean sea level.

Comparing the reconstructed $^{210}$Pb timelines with the aerial photography (Fig. 2A), it is evident that accelerated accretion (transition from blue to green) occurred prior to vegetative colonization (textured). This is certain in every case except site B10, where the error bars for the year of accelerated accretion (in black) and of marsh emergence (in red) overlap. Furthermore, accretion at the bare mudflat site accelerated as well, mirroring the pattern found in the marsh sites.

This shift in steady accretion rates marks a transition in sedimentary regimes. Occurring prior to vegetative colonization, some change in the physical environment promoted sedimentation on mudflats, and eventually marsh emergence. This physical transition occurred in the upper bay environment prior to, during, and after the land-use change that increased the sediment load of the river. Because lateral expansion accelerated after 1964, we are apparently observing a physical phenomenon that existed before the anthropogenic modification to the watershed, but was positively augmented by the additional sediment load.

Curiously, there is no evidence of yet another increase in accretion after marsh-grass colonization. Direct organic matter deposition and biologically mediated capture and settling of particles are expected to increase accretion. Nevertheless, these mechanisms are affected by variations in flow velocity, tidal range, and plant characteristics (Mudd et al., 2010), features which constantly change as a marsh emerges, so it is uncertain how colonization should impact accretion. In this study, the average error of $^{210}$Pb-derived accretion rates for rapidly accreting sediment sequences was 2.6 mm/yr. When modeling the effects of biomass on marsh accretion, Mudd et al. (2010) predicted perturbations on the scale of millimeters per year. In the field, Morris et al. (2002) saw a 2 mm/yr increase in accretion after adding fertilizer to increase canopy effects. Although it is a different manipulation, if the addition of canopy to a bare mudflat enhanced accretion rates at similar scales, the change in accretion may not be detectible by this study's methods.

## DISCUSSION

The accreting marsh platform in the Newport River likely received both direct inputs of new sediment from the river (Mattheus et al., 2009) as well as reworked sediment from the upper bay, as has been seen in other marshes adjacent to muddy embayments (Fagherazzi and Priestas, 2010). In addition, microtidal estuaries are suspected to see faster vegetative colonization (Friedrichs and Perry, 2001). All of these factors conspired to rapidly create new marshland, but with a pattern of accretion that

preceded vegetative colonization. Some physical transition occurs on a mudflat before marsh emergence, leading to relatively rapid sediment accretion. As demonstrated by the cores in the Newport River, this pattern of rapid accretion, once initiated, continues at the same rate after marsh-grass colonization and likely persists until the marsh approaches its mature equilibrium elevation defined by hydroperiod (Allen, 2000).

This transition from slow to rapid accretion as a mudflat grows into a marsh supplements the conceptual model derived in the Venice Lagoon, Italy (Fagherazzi et al., 2006). Mudflats erode when approached by the wave base, leading to sediment re-suspension and export. In the relatively sediment-starved context of the Venice Lagoon, this sediment reworking led to a bifurcation in landforms with eroded subtidal mudflats, emergent marshes, and very few intermediate landforms (Fagherazzi et al., 2006). Alternatively, in the sediment-rich Newport River, similar shear stress effects led to slow accretion on some subtidal mudflats, but others accreted rapidly when shielded from erosive forces.

The ongoing pattern of lateral expansion proceeding from 1888 to 1964 accelerated after an increase in sediment load (Mattheus et al., 2009). Nevertheless, while increased sediment load augments deposition, the presence or absence of erosion steers the trajectory of marsh expansion. The average migration of the new landmass is shown in the displacement of its centroid over time (Fig. 1B). Following the expansion of a groin-like peninsula in 1964, new marsh has, on average, migrated in an alongshore pattern. This contrasts with the shore-normal expansion modeled by Kirwan and Murray (2007) and possibly expected from Mariotti and Fagherazzi (2010). These models predict mudflat erosion to depend primarily on bathymetry, but the irregularity of natural shoreline geometry can form small promontories, shielding leeward mudflats from waves and promoting marsh expansion.

For instance, as marked by blue vertical lines in Figure 2A, sites B10, B11, B12, and MF all transition from slow to rapid vertical accretion during the formation of a small marsh island to the northeast of site B10 (Fig. 1C). The blue, A.D. 1990 isochron in Figure 2B indicates the period of the island's formation and demonstrates the coincidence of this transition across sites despite their apparent variation in elevation. The emergence of the nearby marsh island may have shielded that whole segment of adjacent shoreline from erosive storm and wave effects, yielding a quiescent environment near sites B10, B11, B12, and MF while they were still submerged and promoting rapid sedimentation.

Furthermore, the absence of wind-driven wave processes partly explains the rapid marsh expansion when examining the marked contrast in geomorphology between the northern and southern shores of the Newport River estuary. The southern shore has an expanding, gently sloping shoreline with accretion rates there varying from 0.97 to 1.94 cm/yr. In contrast, the smaller marsh to the north has a stationary, scarped shoreline, indicating some combination of erosion at the marsh's face and slow relative accretion at its foot (van de Koppel et al., 2005; Fagherazzi et al., 2006), and accretion rates vary from 0.09 to 0.76 cm/yr (Mattheus et al., 2010). Winds near the Newport River blow from the southwest for most of the year (Fig. 1A); consequently, subtidal mudflats adjacent to the southern shore experience the least shear stress from wind waves. This contrast in geomorphology as a result of wave regimes mirrors Callaghan et al.'s (2010) physical study in the Westerschelde Estuary (Netherlands), further demonstrating that marsh expansion may occur where wave erosion is weakest.

This study records the ontogeny of a marsh as it progresses from a bay bottom to a mudflat to a vegetated marsh table over the past century. Before a marsh emerges, submerged flats experience a shift in energetic regimes that promotes sedimentation. The Newport River experiences rapid accretion because it is a well-protected and sediment-rich area, but ambient physical processes make this accretion dynamic. It is hypothesized that a predominantly cross-river wind regime and progressive alongshore emergence reduced shear stress over mudflats leeward of the marsh platform. This effectively shielded submerged segments of the southern embayment from erosive energy and allowed a new regime of accelerated sediment accretion. Although rates of accretion and emergence likely differ for back-barrier marshes and other physical settings, this general pattern of emergence may happen elsewhere. This is an important case study that refines and substantiates current physical theory on the subject, supporting physical observations (Callaghan et al., 2010; Fagherazzi et al., 2006) and models (Mariotti and Fagherazzi, 2010) with a sedimentary record of actual events. Furthermore, it guides expectations of where marsh expansion may be occurring, and hints at how marshes could be created artificially.

## ACKNOWLEDGMENTS

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SPECIAL ISSUE ON COASTAL LONG TERM ECOLOGICAL RESEARCH



# Marsh Collapse Does Not Require Sea Level Rise

BY SERGIO FAGHERAZZI, GIUILIO MARIOTTI, PATRICIA L. WIBERG, AND KAREN J. McGLATHERY

Sea level rise is only one of the causes of deterioration of coastal wetlands. What really matters is the sediment budget of a salt marsh and its surroundings.

ABSTRACT. Salt marshes are among the most productive ecosystems on Earth, providing nurseries for fish species and shelter and food for endangered birds. Salt marshes also mitigate the impacts of hurricanes and tsunamis, and sequester large volumes of carbon in their peat soil. Understanding the mechanisms responsible for marsh stability or deterioration is therefore a key issue for society. Sea level rise is often viewed as the main driver of salt marsh deterioration. However, while salt marshes can reach equilibrium in the vertical direction, they are inherently unstable in the horizontal direction. Marsh expansion driven by sediment supply rarely matches lateral erosion by waves, creating a dynamic landscape. Recent results show that marsh collapse can occur in the absence of sea level rise if the rate at which sediment is eroded at marsh boundaries is higher than the input of sediment from nearby rivers or from the continental shelf. We propose that the horizontal dynamics and related sediment fluxes are key factors determining the survival of salt marshes. Only a complete sediment budget between salt marshes and nearby tidal flats can determine the fate of marshes at any given location, with sea level rise being only one among many external drivers. Ancient Venetians understood this dynamic very well. They manipulated the supply of sediment to the Venice lagoon, Italy, in order to control the long-term evolution of the intertidal landscape.


Figure 1. Allegory of the struggle between land and sea in the Venice lagoon, Italy. The banner reads: "An element opposes another element." *From Trevisan (1715)*

## THE ENDLESS STRUGGLE BETWEEN LAND AND SEA AT SALT MARSH BOUNDARIES

In 1715, Bernardo Trevisan published his treatise on the Venice lagoon, Italy. In a now famous engraving by Andrea Zucchi, he presented an allegory of two women violently fighting at the shore (Figure 1). One of them is semi-undressed, as if she were emerging from a swim in the ocean, with algae covering her head. She is the sea. Her foe has a thick canopy of marsh vegetation replacing the hair. She represents the land. The two women are pushing each other, trying to dislodge the enemy and conquer ground. The wrestlers seem well matched, and it is hard to determine who will win. The sea already has a foot on land, indicating a possible temporary victory, but the struggle is clearly ongoing. The city of Venice lies at the horizon, an engaged bystander waiting for the final outcome of the battle. This allegory represents the endless struggle between land and ocean for the control of Venice. The banner reads: "An element opposes another element."

Mainland people fleeing barbaric invasions built the city-state of Venice on marshlands around the fifth century CE. It quickly developed into one of the most powerful mercantile states in human history. At its apogee, the city was the third largest in Europe and the terminus for lucrative goods that traveled from the Far and Middle East on the Silk Road. For population density and diversity and cultural and economic relevance, Venice was qualitatively the equivalent of New York City in the twentieth century.

Venice's location—surrounded by water—was critical for its defense. Venetians understood that the intertidal landscape is extremely dynamic, with rivers, waves, and currents constantly reshaping the coast and creating a complex succession of salt marshes, tidal flats, and channels. The ongoing silting of the lagoon was of particular concern in the fifteenth century. Large rivers, carrying sediment from the mountains to the ocean, were debouching into the lagoon, infilling large areas. Similar shallow lagoons were converted to land both north and south of the Venice lagoon, cutting off coastal cities from the ocean.

To counteract the silting of the lagoon, Venetians executed one of the most complex engineering projects of human history. Between the fifteenth and eighteenth centuries, they diverted all rivers discharging into the lagoon, eliminating direct sediment input and thus saving the sea from the land. (Sediment brought by overwash events or through tidal exchange at the inlets was negligible compared to the sediment discharged by rivers.) It is important to note that Venetians were not aware of possible oscillations in sea level, and the rate of sea level rise was probably much lower than it is now for

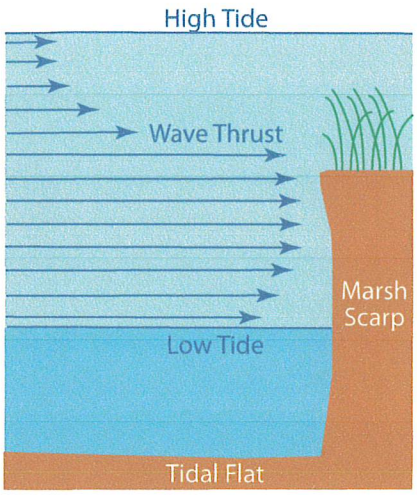


Figure 2. Thrust exerted by waves on a marsh scarp. The thrust is maximum when the water level is just below the marsh platform and decreases during high tides or storm surges. *Modified after Tonelli et al. (2010)*

most of Venice's history.

Other societies have also dealt with the delicate equilibrium between land and sea. Ancient Chinese relocated coastal cities at the mouth of the Yellow River due to complex erosion/accretion patterns (Chen and Zong, 1998), and Frisians were among the first to erect dykes to hold back the advances of the sea (Charlier et al., 2005). Today, we recognize salt marshes as among the most productive ecosystems on Earth, providing nurseries for fish species and shelter and food for endangered birds. They are important to humans because they mitigate the impacts of hurricanes and tsunamis and sequester large volumes of carbon in their peat soil. Understanding the mechanisms responsible for marsh stability or deterioration is therefore a key issue for society.

The long experience of Venetians with the intertidal landscape provides a series of exceptional insights into the evolution of these environments and on how to protect them from change. Two observations are still valid today:

1. There is an eternal struggle between the land and the ocean at salt marsh boundaries; thus, equilibrium seems precarious.
2. Rivers are major players in intertidal morphodynamics, providing sediment for salt marsh expansion.

Here, we define horizontal equilibrium as when the lateral area of a salt marsh is constantly maintained at the centennial time scale, that is, the marsh boundaries do not migrate in time.

## WAVE EROSION OPPOSES MARSH EXPANSION

If sediment discharged by rivers is the major player in salt marsh formation, erosion caused by waves is the opposing element. Waves control erosion along marsh boundaries (van der Wal and Pye, 2004; Mariotti et al., 2010; Tonelli et al., 2010), and loss of marsh area through marsh edge erosion has been observed in many coastal environments, with rates ranging from ~ 0.1 m to > 3 m $yr^{-1}$ (e.g., Day et al., 1998; Schwimmer, 2001; Wilson and Allison, 2008; Marani et al., 2011; Sean McLoughlin, Virginia Coast Reserve Long Term Ecological Research, *pers. comm.*, 2013). Indeed, new evidence shows that salt marshes are particularly weak when exposed to wave action.

Marsh scarps expose bare sediment below the vegetation surface, and this material can be easily removed by incoming waves (Feagin et al., 2009). Recent results at the Virginia Coast Reserve Long Term Ecological Research (LTER) site show that when the water elevation equals marsh elevation, waves exert the maximum thrust on the scarp and are therefore the most dangerous for erosion. These water-level conditions are very common during a tidal cycle, and suggest that storm surges are not necessarily responsible for scarp deterioration (Tonelli et al., 2010; Figure 2). Downcutting at the scarp toe is also common along marsh boundaries, resulting in cantilever failure and detachment of large blocks. Removal of the vegetated surface often takes place during moderate storms, and once the protective vegetation mantle is gone, waves easily erode the bare sediment (Figure 3). While marshes seem very resilient in the vertical direction as a result of sediment input, they are weak in the horizontal because of erosion caused by waves.

## BIOLOGY AFFECTS SEDIMENT STRENGTH AND MARSH BOUNDARY EROSION

Sediment and ecological characteristics also contribute to erosional processes at marsh boundaries. Much of the alongshore variability in marsh erosion is attributable to small-scale, local variations, such as the morphology of the edge, sediment grain size, vegetation characteristics, and the abundance of bivalves and burrowing crabs (Phillips, 1986; Feagin et al., 2009; Sean McLoughlin, *pers. comm.*, 2013).

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These physical and biotic characteristics determine erosion resistance and exposure to wave activity.

Aboveground vegetation slows flow velocities, traps sediment, and attenuates waves and turbulence (Christiansen et al., 2000; Leonard and Croft, 2006; Mudd et al., 2010; Riffe et al., 2011). At the same time, belowground roots and rhizomes help to stabilize marsh sediment (Coops et al., 1996; Micheli and Kirchner, 2002; Sean McLoughlin, *pers. comm.*, 2013) and play an important role in reducing erosion. Edge stability is a function of the binding capacity of the root system to sediment, which is determined by the biomass, length, diameter, and tensile strength of the roots (van Eerdt, 1985). Root strength typically decreases with depth, making marsh edges susceptible to undercutting. Excessive nutrients can also weaken creek banks and marsh boundaries, triggering slumping and lateral erosion. In fact, high nutrient levels increase aboveground leaf biomass, decrease the dense, belowground biomass of bank-stabilizing roots, and increase microbial decomposition of organic matter, leading to weaker, more porous soil (Deegan et al., 2012).

Sediment shear strength increases as the ratio of root biomass to sediment mass increases, and marshes with dense root mats are generally more resistant to erosion from wave attacks and tidal currents (van Eerdt, 1985; Allen, 1989; Micheli and Kirchner, 2002; Watts et al., 2003). However, Feagin et al. (2009) failed to find a relationship between belowground biomass and edge erosion, and attributed erosion resistance to sediment characteristics, including bulk density, percent sand, water content, and organic matter. Their results suggest that above a threshold bulk density of 0.9 g $cm^{-3}$, increases in the fractions of very coarse sand and bulk density lead to higher erodibility. In contrast, McLoughlin (2010) found a strong inverse correlation between bulk density, fraction of sand, and erosion rate. Less-consolidated sediment is more easily eroded than firmer, muddier sediment, and edges with sandy sediment are typically more susceptible to undercutting from wave action than those with finer-grained sediment (Allen, 1989).

The abundance and composition of invertebrates in marshes, including burrowing crabs and bivalves, also influence marsh edge resistance to erosion (McLoughlin, 2010). Dense, interconnected crab burrows, which can reach densities as high as 700 $m^{-2}$ along some marsh edges, decrease sediment shear strength and increase permeability and water content, ultimately reducing soil strength and erosion resistance (Allen and Curran, 1974; Montague, 1980; Escapa et al., 2008). On the other hand, the presence of bivalves such as the ribbed mussel *Guekensia demissa* may stabilize marsh edges and reduce erosion rates by both slowing wave and current velocities and binding sediment to the root mat (Bertness, 1984).

Intertidal oyster reefs adjacent to marsh edges may similarly reduce wave energy and erosion rates (Meyer et al., 1997; Piazza et al., 2005; Scyphers et al., 2011). Within the Virginia Coast Reserve, median erosion rates for four marshes located in proximity to oyster reefs (but not directly fronted by reefs) are 0.1–0.2 m $yr^{-1}$ over the last 50 years (Taube, 2013). These rates are within the wide range of erosion rates observed at mainland marsh sites without nearby reefs (McLoughlin, 2010; Taube 2013), but smaller than rates observed on island or back-barrier marshes fronting large expanses of open water (Sean McLoughlin, *pers. comm.*, 2013).

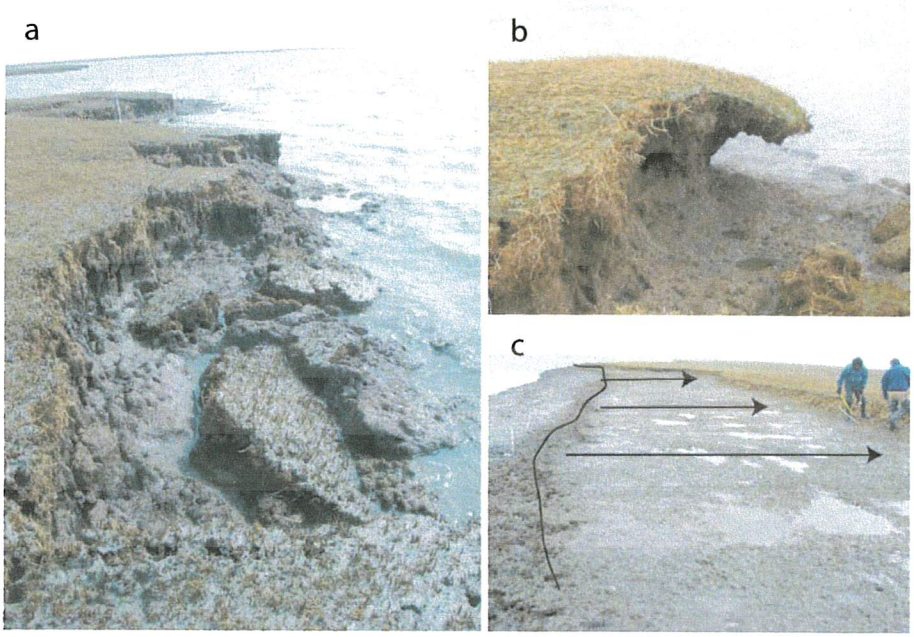


Figure 3. Different mechanisms of marsh boundary degradation by wave erosion at the Virginia Coast Reserve Long Term Ecological Research site: (a) slumping, (b) undercutting, and (c) root scalping (removal of the active root layer forming a denuded terrace). *Adapted from Fagherazzi et al. (2013)*

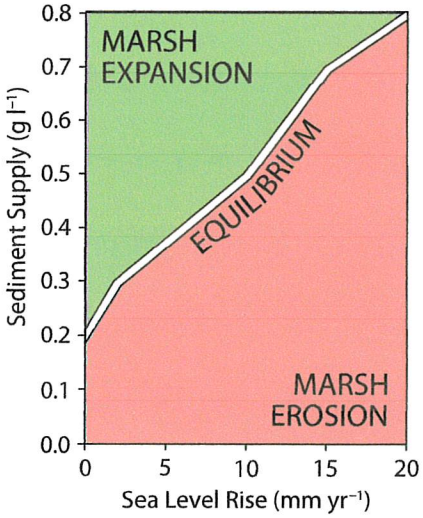


Figure 4. Occurrence of marsh lateral erosion/expansion as a function of sea level rise and sediment supply for a given wave climate (results from the model of Mariotti and Fagherazzi, 2010). Lateral equilibrium exists only for specific values of sediment supply and sea level rise. Marsh erosion can also occur for a constant sea level, if sediment availability is low.

Measurements of wave transformations across oyster reefs in the Virginia Coast Reserve LTER indicate that they can significantly dissipate wave energy when water depths are below mean high water, but are less effective when water depths are greater (Taube, 2013), similar to the findings of Fagherazzi and Wiberg (2009) regarding wave-generated bed shear stresses in shallow coastal bays.

## A PARADIGM SHIFT: MARSHES AS NONEQUILIBRIUM LANDSCAPES

There is strong evidence that salt marshes are very resilient to increases in sea level (Kirwan et al., 2010). An increase in sea level results in more flooding of the marsh surface, and, therefore, there is more time for sediment to settle on the platform (Reed, 1995; Temmerman et al., 2005). This feedback keeps the marsh tied to sea level so that it tracks fast sea level variations (D'Alpaos et al., 2011). Ecogeomorphic feedbacks also favor the vertical stability of marshes. Some of the most common marsh plants increase their biomass if the marsh platform level decreases; more biomass promotes belowground organic production and aboveground sediment trapping, increasing marsh elevation in the long run (Fagherazzi et al., 2012). For example, Morris et al. (2013, in this issue) show that plant productivity at the Plum Island Sound LTER, Massachusetts, and North Inlet, South Carolina, respond positively to variations in mean high water at annual time scales. As a result, most marshes display accretion rates that are higher than local rates of sea level rise as long as sediment is available in the water column. Numerical models indicate that vertical drowning and marsh collapse result only from extremely high rates of sea level rise of $> 10$ mm yr$^{-1}$ (Kirwan et al., 2010). Marsh resilience to drowning is thus strongly related to sediment supply.

As discussed above, marsh boundaries are very sensitive to wave erosion. Whereas marshes can find an equilibrium elevation with respect to sea level and maintain such equilibrium when sea level increases, they seem unable to maintain their horizontal extent. The intrinsic weakness of the marsh scarp prevents the marsh from attainting static equilibrium in which neither erosion nor progradation occur. Even modest storms are able to wash away sediment that cannot be replaced at roughly the same time. Dynamic equilibrium, when erosion equals progradation, also seems unlikely in the long term. Figure 4 shows results of a numerical model of the dynamics of a marsh boundary (Mariotti and Fagherazzi, 2010). For a given sea level rise and wave climate, equilibrium is only present for a very specific value of sediment supply. However, sediment supply is an external variable—a function of nearby rivers and other sediment sources—and mechanisms that would tune its value to match local wave erosion are not present.

The main reason for this lack of equilibrium is that processes responsible for marsh expansion are weakly linked, if at all, to processes responsible for marsh erosion. Sediment availability is mostly dictated by riverine inputs to the coast, and therefore has a terrestrial origin, while coastal processes dictate wave erosion, which is largely disconnected from the presence of rivers.

## MARSH COLLAPSE DOES NOT REQUIRE SEA LEVEL RISE

Because waves in coastal bays are locally generated by wind, the extent of the tidal flat plays a principal role in the wave regime. The larger and deeper the tidal flat, the larger the waves (Fagherazzi and Wiberg, 2009). As a result, large tidal flats promote erosion of the marsh boundary.

Based on this simple observation, Mariotti and Fagherazzi (2013) determined a critical tidal flat size in the lagoons of the Virginia Coast Reserve LTER. This critical size, of the order of a few square kilometers, strongly depends on sediment availability to the system. Tidal flats larger than this critical size continue to enlarge as the larger waves erode the salt marsh boundary and increase the size of the tidal flat that then increases wave height, thus establishing positive feedback that leads to catastrophic marsh deterioration. Tidal flats smaller than the critical size will instead shrink, due to marsh expansion and a decrease in wave-induced erosion

of the marsh boundary, leading to the complete conversion of tidal flats to salt marshes. This model suggests that the coexistence of salt marshes and tidal flats is always transitory; bays either tend to become filled with salt marshes or are transformed into wave-dominated open water (Figure 5).

Sediment availability determines whether marshes prograde seaward and counteract wave erosion. Large amounts of sediment, either coming from rivers or imported from the continental shelf by tidal exchange through the inlets (Figure 5), allow marsh progradation even in the presence of waves (Yang et al., 2001, 2002). The model of Mariotti and Fagherazzi (2013) shows that sediment availability increases the critical tidal flat size, preventing irreversible marsh erosion. Tidal flats that would enlarge when little sediment is available might shrink when more sediment is present. Conversely, a disappearing tidal flat might switch to erosive conditions if sediment availability suddenly decreases. For very large sediment availability, all tidal flats will be transformed into salt marshes, independent of the size of nearby tidal flats.

Sea level rise deepens the water over tidal flats and increases the sediment flux from tidal flats to salt marshes. Such processes change the tidal flat equilibrium, increasing wave energy and hence indirectly promoting marsh boundary erosion. However, this effect is relatively small compared to the role played by tidal flat size and sediment availability. Mariotti and Fagherazzi (2013) show that differences in sea level rise (0–10 mm $yr^{-1}$) do not explain the different erosional behavior of tidal flats at various sites along the US Atlantic coast. Sediment availability and the size of nearby tidal flats seem to be the major factors determining the dynamics of marsh boundary erosion. An unexpected finding of Mariotti and Fagherazzi (2013) is that erosion of the marsh boundary occurs even in the absence of sea level rise. Indeed, marsh boundaries can be degraded by waves even if sea level remains constant.

In fact, high inputs of sediment can counteract very fast rates of sea level rise (Yang et al., 2001). If the rate at which waves and currents are removing sediment from the marsh boundary is higher than the rate at which sediment is provided by rivers and by the adjacent sea or continental shelf, the marsh will enter into an erosive state, and this state can be irreversible even in absence of sea level rise (Mariotti and Fagherazzi, 2013).

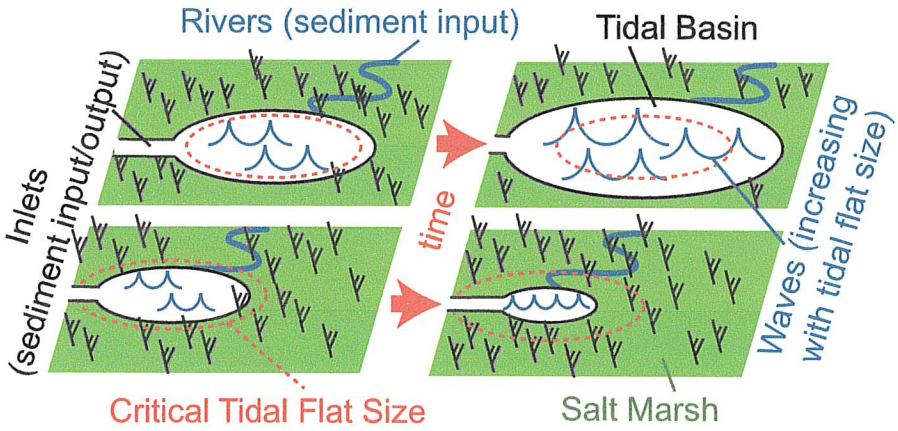


Figure 5. Evolution of tidal bays subject to wave erosion at the boundaries, sediment inputs from rivers, and sediment exchange with the ocean. If the tidal flats are larger than a critical size, irreversible marsh erosion occurs. On the contrary, a small tidal flat area (smaller than the critical size) promotes infilling and marsh formation.

## ASSESSING MARSH RESILIENCE: A SEDIMENT BUDGET APPROACH

Focusing on whether marshes can keep pace with sea level rise might not be the correct direction to take in order to understand the fate of salt marshes. It may be wise for our society to consider measures to prevent coastal erosion that might include removal of dams, as is being done in the western United States to enhance salmon fisheries, and river diversion. (Note that more than $2.5 billion were spent on beach nourishment on the East Coast and Gulf of Mexico in the last century; see Trembanis et al., 1999.) Waters of the Mississippi River have been concentrated into one distributary to improve navigation; now there is consideration of diverting some of those waters to provide more sediment to Louisiana marshes (Nittrouer et al., 2012).

Here, we advocate a holistic approach based on a detailed analysis of a marsh's sediment budget and surroundings, including the key role of vegetation in sediment transport processes. All sediment fluxes from marshes to nearby tidal flats, as well as the role of tidal channels in providing or removing sediment, must be quantified at each marsh location.

The absence of horizontal stable equilibrium means that salt marshes lack internal feedbacks that can counteract variations in wave regime and sediment supply. A conservation strategy aimed at

preserving salt marsh extension might therefore be undermined by the dynamic nature of these landforms. Rather than preserving marshes in their present conditions, coastal managers should instead promote marsh expansion by providing enough sediment to the intertidal area. They can also target a specific ratio of salt marsh to tidal flat area for a given system, without addressing local erosion or progradation.

The major threat for marsh survival is lack of sediment supply rather than sea level rise because horizontal change in salt marshes occurs faster than vertical change. Sea level rise endangers marsh survival only if sediment is scarce, and it is not much of a problem if there is an abundance of sediment.

Furthermore, sediment inputs to the coastal ocean have changed more over the past century than rates of sea level rise. Anthropogenic reduction of sediment supply due to dam construction (Syvitski et al., 2005) is potentially catastrophic for salt marshes. Sea level rise can only exacerbate existing erosive processes by trapping large amounts of sediment on the marsh platform. This sediment is no longer available to promote marsh formation and counteract lateral erosion (Mariotti and Fagherazzi, 2013).

While our findings are readily applicable to coastal areas with substantial river inputs, they also apply to fringing marshes, in which the ocean is the sediment source. Again, a marsh can expand even in presence of sea level rise if sediment supply and organogenic accumulation are large enough to offset drowning and lateral erosion (e.g., Redfield, 1965).

> RECENT RESULTS SHOW THAT MARSH COLLAPSE CAN OCCUR IN THE ABSENCE OF SEA LEVEL RISE IF THE RATE AT WHICH SEDIMENT IS ERODED AT MARSH BOUNDARIES IS HIGHER THAN THE INPUT OF SEDIMENT FROM NEARBY RIVERS OR FROM THE CONTINENTAL SHELF.

As a final observation, it is not difficult to envision how ancient Venetians would counteract today's threat from the ocean that is resulting in the rapid disappearance of salt marshes in the Venice lagoon. They would most surely enhance the sediment supply to the coast by removing dams or diverting rivers, the opposite of what they did to prevent infilling several centuries ago.

## ACKNOWLEDGMENTS

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# Critical width of tidal flats triggers marsh collapse in the absence of sea-level rise



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**High rates of wave-induced erosion along salt marsh boundaries challenge the idea that marsh survival is dictated by the competition between vertical sediment accretion and relative sea-level rise. Because waves pounding marshes are often locally generated in enclosed basins, the depth and width of surrounding tidal flats have a pivoting control on marsh erosion. Here, we show the existence of a threshold width for tidal flats bordering salt marshes. Once this threshold is exceeded, irreversible marsh erosion takes place even in the absence of sea-level rise. This catastrophic collapse occurs because of the positive feedbacks among tidal flat widening by wave-induced marsh erosion, tidal flat deepening driven by wave bed shear stress, and local wind wave generation. The threshold width is determined by analyzing the 50-y evolution of 54 marsh basins along the US Atlantic Coast. The presence of a critical basin width is predicted by a dynamic model that accounts for both horizontal marsh migration and vertical adjustment of marshes and tidal flats. Variability in sediment supply, rather than in relative sea-level rise or wind regime, explains the different critical width, and hence erosion vulnerability, found at different sites. We conclude that sediment starvation of coastlines produced by river dredging and damming is a major anthropogenic driver of marsh loss at the study sites and generates effects at least comparable to the accelerating sea-level rise due to global warming.**

salt marsh boundary erosion | wave erosion

Wave-induced boundary erosion is a leading process threatening salt marshes (1, 2), but it is remarkably unexplored compared with the vertical dynamics of the marsh platform (3, 4). Wave-induced boundary erosion is particularly relevant along coastlines with limited subsidence such as the Mid-Atlantic coast of the United States, where large marsh areas are deteriorating (5, 6) despite marsh accretion keeping pace with contemporary rates of sea-level rise (7, 8). Here, we focus on the evolution of three salt marsh sites on the US Atlantic Coast, subjected to different rates of wave-induced boundary erosion: Cape May, NJ, Virginia Coast Reserve, VA, and Charleston Sound, SC (Fig. 1). All sites are characterized by barrier islands sheltering shallow bays with extensive salt marshes and tidal flats. The bays are connected to the open sea by multiple inlets, experience limited direct riverine inputs (9, 10), and are subject to similar wind conditions (*SI Text*). Relative sea-level rise (RSLR) is on the order of 2 mm/y and tidal range of ~1.4 m (*SI Text*). These embayments are characterized by rounded tidal flats surrounded by salt marshes, which are referred to as marsh basins (11, 12).

Stevenson et al. (13) reported loss of brackish marshes driven by the enlargement of marsh basins, referred to by the authors as ponds. They suggested the existence of a pond threshold width that, once exceeded, leads to ponds widening by wave-induced boundary erosion. Here, we expand this idea by (*i*) developing a physically based model for the morphological evolution of marsh basins and (*ii*) collecting and analyzing an extensive dataset of marsh basin morphology.

Because locally generated wind waves are controlled by fetch and water depth, both variables should be accounted for when predicting the morphological evolution of a marsh basin. We therefore develop a simple dynamic model that includes the following processes: (*i*) wave power and related marsh boundary erosion increases with tidal flat fetch and depth; (*ii*) marsh boundary erosion increases the fetch of the adjacent tidal flats, thus increasing wave power (1, 14); (*iii*) marsh boundary erosion releases sediments that become available to settle on the tidal flats, reducing water depths and thus decreasing wave power (1, 14, 15); (*iv*) fetch and depth control sediment resuspension by waves on the tidal flat. This resuspension mechanism, combined with tidal fluxes, determines the sediment exchange with the open sea and whether the tidal flat erodes or aggrades in time (16).

## Dynamic Model

We approximate a marsh basin with a cylinder carved into a salt marsh (Fig. 2*A*). The basin has a characteristic width $w$ and a characteristic depth $h$ computed with respect to mean high-water level (MHW), a datum that varies with RSLR. The marsh platform has a depth of $h_m$ with respect to MHW (Fig. 2*B*). Assuming that the marsh platform accretes vertically with the same rate of RSLR (3), $h_m$ is a constant that we set here equal to 0.2 m, a typical value for Mid-Atlantic marshes (3). Marsh boundaries are characterized by a steep cliff connected to the tidal flat through a gently sloping profile. The depth of the cliff base $h_b$ is assumed to increase with the tidal flat depth, and it is computed by means of a semiempirical bed profile (*SI Text*).

Changes in basin width (Fig. 2) stem from the competition between marsh boundary erosion $B_e$ [m/y] and marsh boundary progradation $B_a$ [m/y]:

$$\frac{dw}{dt} = 2(B_e - B_a). \quad [1]$$

The marsh erosion rate is set equal to the incoming wave power density at the marsh boundary, $W$ (*SI Text*), multiplied by an erodability coefficient $k_e$ and divided by the marsh boundary cliff face height $h_b - h_m$ (1). Marsh boundary progradation is simulated as a redistribution of tidal flat sediments toward peripheral areas, which tend to be sheltered from the action of waves and currents. We model marsh boundary progradation as a gently sloping surface dominated by accretion, obtaining $B_a = k_a w_s C_r \rho^{-1}$, where $k_a$ is a nondimensional parameter related to the marsh boundary geometry and here fixed equal to 2 (*SI Text*), $w_s$ is the settling velocity set equal to 0.5 mm/s, $\rho$ is the dry sediment bulk density, set equal to 1,000 kg/m$^3$, and $C_r$ is the reference

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(22), drastically reducing the sediment supply to the near-shore continental shelf. The lack of offshore sediment inputs is one of the causes of sediment starvation within the Virginia marshes (12, 23). An exception is notable in the southern portion of the Virginia Coast Reserve, where close proximity to a sediment depositional cell formed by tidal fluxes out of Chesapeake Bay promotes higher sediment availability (24).

On the other hand, North Inlet marshes (SC), located about 50 km north of Charleston Sound, have imported a substantial quantity of inorganic sediments from the ocean, which allowed them to keep pace with RSLR (10). This high sediment availability has been associated with the discharge of the adjacent Pee Dee River (25). Similarly, the elevated availability of inorganic sediment in the Charleston marshes is probably associated with the vicinity of the Cooper and Santee Rivers.

We showed that irreversible marsh collapse can occur because of the positive feedback between marsh boundary erosion, tidal flat bed erosion, and wave generation in tidal flats. Sediment starvation deepens tidal flats and inhibits marsh boundary progradation. Marsh erosion widens nearby tidal flats, thus increasing wave energy and promoting further erosion in a runaway effect. RSLR enhances this process by deepening tidal flats and increasing the sediment flux from tidal flats to salt marshes. The dynamics of the marsh boundary is primarily controlled by sediment supply rather than RSLR, as shown by a sensitivity analysis (Figs. 3 and 4). In addition, irreversible marsh erosion via horizontal retreat can occur in the absence of RLSR, a scenario not predicted by models of salt marsh vertical evolution (3, 20, 21, 26).

We conclude that lack of sediment supply, often associated with human activities (27), is a major driver of marsh loss at the study sites and generates effects at least comparable to the accelerating sea-level rise due to global warming. This finding advocates for salt marsh preservation projects based on the restoration of the natural sediment supply at the coastline by dam removal and controlled river diversions (28).

Finally, we suggest that the critical basin width could be used as an indicator of a possible shift from a stable, closing marsh basin, to an unstable expanding basin. From the perspective of marsh-loss mitigation, the model can be used to individuate systems near the threshold size, where protection intervention should be concentrated. For example, structures aimed to reduce wave energy might be used to prevent marsh basins from entering the erosive state.

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# Skagit Chinook Habitat Monitoring Status and Trends: Change in Skagit Tidal Delta Habitat Extent, 2004 – 2013

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This report presents 2013 results from GIS census polygon data of the vegetated Skagit tidal data. GIS polygons were created using methods described in Beamer et al. (2015) from high resolution orthophotos flown in 2013. Tidal delta extent results from 2013 are compared to results from other time periods, including the desired future conditions identified in the Skagit Chinook Recovery Plan (SRSC and WDFW 2005).

## Results

Between 2004 and 2013 the net change in the Skagit River's tidal footprint is an increase of 83 hectares of intertidal footprint (Table 1, Figure 1).

Human and natural causes of habitat change were detected over the nine-year period, with restoration outpacing both natural and human causes of lost tidal delta extent. We are not losing tidal delta habitat faster than we are gaining it. Completed restoration projects are the primary reason for a net increase in tidal delta extent (Table 2). A total of 122 hectares was restored over the nine-year period, an average of 13.6 hectares restored per year.

Two unique habitat changes were detected. The first is a 15-hectare gain in habitat from a passive failure of a levee on WDFW lands, which was not repaired. The site is located along West Pass (Figure 1). The second is a 36-hectare loss also located along West Pass, in an area of extensive spartina marsh removal (Beamer et al. 2009). Spartina is an invasive plant in west coast estuaries that colonizes mudflat. In 2004 this area was mapped as (unnatural) marsh and in 2013 as unvegetated, thus showing a loss per our reporting methods.

Direct human causes of lost tidal delta extent were minor (Table 1). Only two incidents of lost habitat due to human cause were detected: 1) a loss of a third of a hectare due to levee repair along the North Fork Skagit River near the Forks; and 2) a 0.04-hectare filled channel as part of the Fisher Slough Restoration Project which helped re-meander Fisher Creek and create a blind channel lobe. Overall, direct human-caused losses of tidal delta extent were less than 0.04 hectares per year.

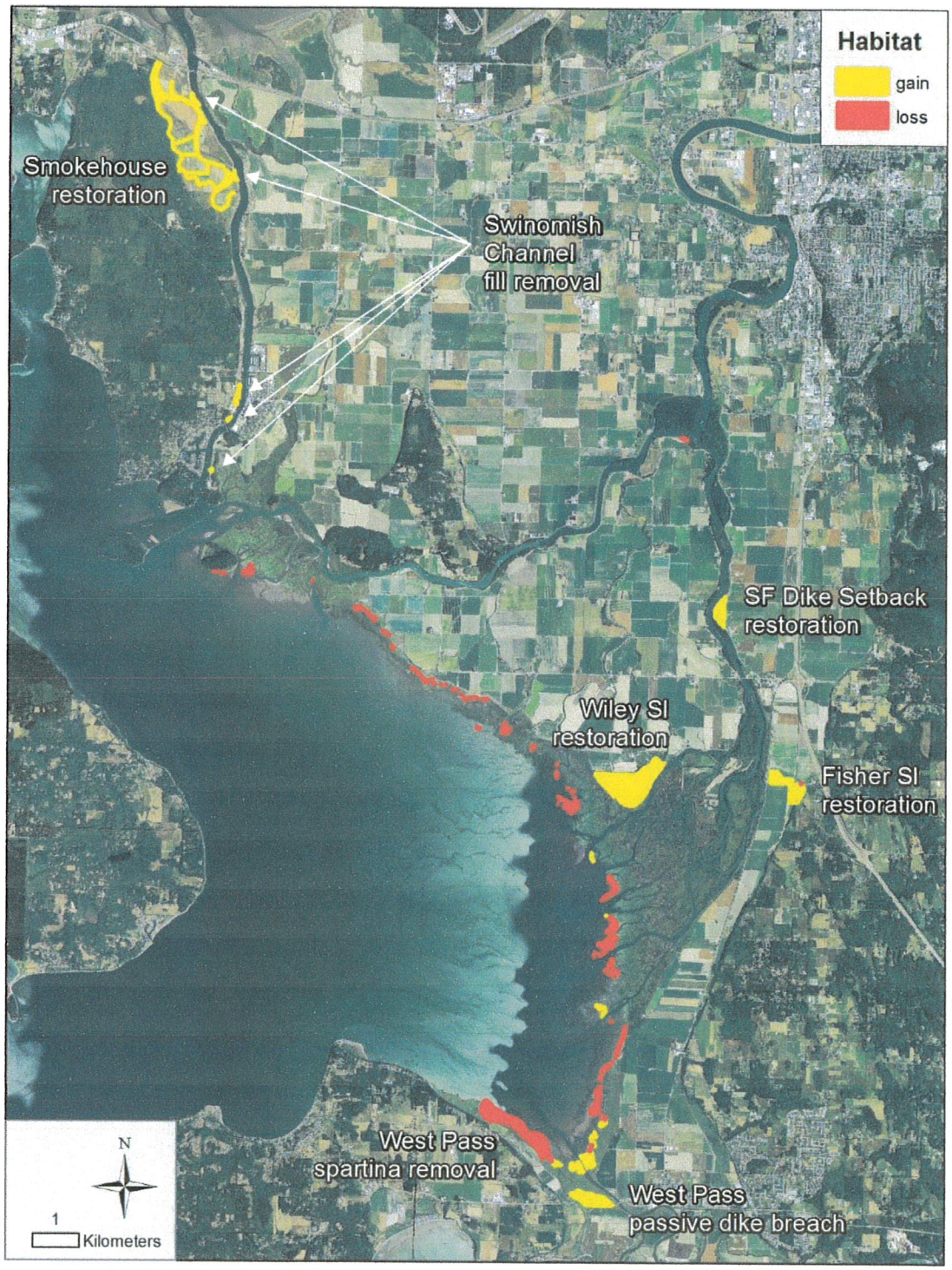
Natural changes in tidal delta extent occurred over the nine-year period with a net loss in tidal delta extent, primarily along the bay front (Figure 1), resulting in 12.6 hectares gained but 29.9 hectares lost. Overall, natural-caused change of tidal delta extent was a loss of 1.9 hectares per year.

Table 1. Gains and losses of Skagit tidal delta extent by cause for the period 2004 through 2013.

| Cause of change | | Gain (ha) | Loss (ha) | Net change (ha) |
|---|---|---|---|---|
| **General** | **Specific** | | | |
| human | channel filled in | | 0.041 | -0.041 |
| | levee repair | | 0.354 | -0.354 |
| | restoration | 121.917 | | 121.917 |
| | invasive sp. (spartina) removal | | 36.295 | -36.295 |
| natural | passive dike breach | 15.071 | | 15.071 |
| | erosion and progradation | 12.621 | 29.889 | -17.269 |
| | **Total** | **149.608** | **66.580** | **83.028** |

Table 2. Gains and losses of Skagit tidal delta extent by restoration project for the period 2004 through 2013.

| Restoration project (year completed) | Gain (ha) | Loss (ha) | Net change (ha) |
|---|---|---|---|
| Fisher Sl restoration (2011) | 18.657 | 0.041 | 18.615 |
| SF Dike Setback restoration (2007) | 8.369 | | 8.369 |
| Smokehouse restoration (2008) | 26.902 | | 26.902 |
| Swinomish Channel fill removal (2008) | 3.366 | | 3.366 |
| Wiley Sl restoration (2009) | 64.623 | | 64.623 |
| **Total** | **121.917** | **0.041** | **121.876** |




Erosion & Estuary Collapse

Figure 1. Map of gains and losses of Skagit tidal delta extent for the vegetated delta for the period 2004 through 2013.

## What is the pace of tidal delta restoration since Chinook Recovery Plan implementation began?

We have data more current than 2013 for restoration because the 52-hectare Fir Island Farms restoration project was completed in the summer of 2016 (Figure 2, top panel). Adding Fir Island Farms to the restoration results shown in Table 1, a total of 174 hectares was restored between 2004 and 2016, averaging 14.5 hectares restored per year. However, the pace of restoration has slowed in recent years (Figure 2, bottom panel). During the first four years of Chinook Recovery Plan implementation (i.e., since 2005) 103.3 hectares of tidal delta extent were restored, an averae of 25.8 hectares per year. Since 2009, another 71.2 hectares has been restored, an average of 10.2 hectares per year.

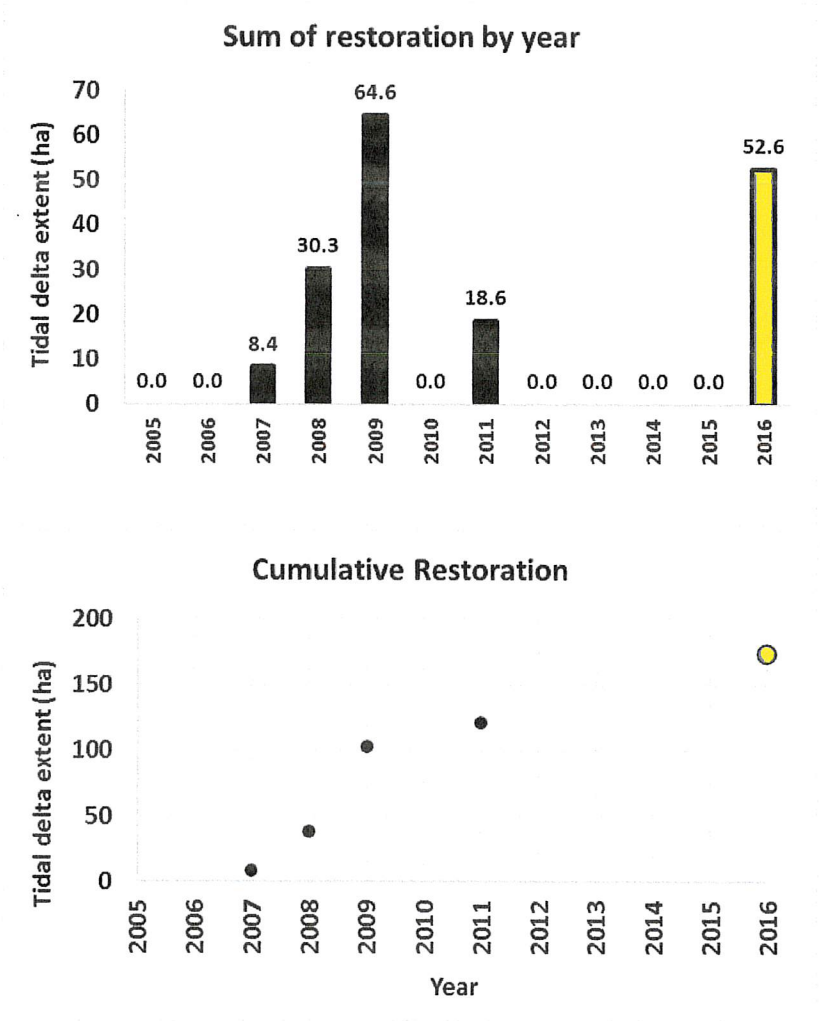



Figure 2. Annual (top panel) and cumulative (bottom panel) restoration influence on Skagit tidal extent. The solid black bars and circles reflect results from restoration projects shown in Table 2 and were detected in the 2013 tidal delta GIS polygon layer. The yellow bar and circle includes Fir Island Farms, which was completed in 2016 and helps inform the recent pace of restoration.

## How are the results adding up compared to goals?

Table 3 shows recent Skagit tidal delta extent results (2000, 2004, and 2013) compared to the Skagit Chinook Recovery Plan's desired future condition (DFC) and historic condition. The Skagit's DFC is 37.0% of the tidal delta's historic extent. At the beginning phase of Chinook Recovery Plan implementation (reflected by the 2004 result) the Skagit's tidal delta extent was 29.6% of its historic condition and already 80.0% of the DFC. In 2013 the Skagit's tidal extent was 30.3% of its historic condition and 81.9% of DFC.

Table 3. Skagit tidal delta extent indicator results compared to historic and Skagit Chinook recovery plan desired future conditions (DFC).

| Source | Year | Status | DFC | Historic condition |
|---|---|---|---|---|
| Skagit Phase I (source[1]) | 2000 | 3,118 ha (73.7% of DFC) | 4,232.6 ha (37.0% of Historic) | 11,438 ha |
| Skagit Monitoring Pilot[2] | 2004 | 3,384.65 ha (80.0% of DFC) | | |
| SRSC Habitat Status & Trends Program | 2013 | 3,467.68 ha (81.9% of DFC) | | |

[1]Page 7 (historic, Year 2000) & page 41 (DFC) of Beamer et al. 2005; Note: DFC = year 2000 conditions + restoration goal of 1,114.6 ha

[2] Beamer et al. 2015

## How long will it take to reach Skagit tidal delta desired future condition?

Our monitoring results demonstrate it will be the net sum of natural- and human- caused gains and losses of delta habitat over time that will achieve the Skagit tidal delta's DFC of 4,232.6 hectares.

If overall gains and losses (i.e., net result of Table 1) continue at the same pace as observed between 2004 and 2013 – including the two unique habitat changes described above – the Skagit's DFC for tidal delta extent will not be achieved until year 2096, 91 years after Chinook Recovery Plan implementation started. Moreover, once DFC has been achieved, periodic tidal delta restoration, at the rate of 19 hectares per decade, will be required to maintain DFC assuming the observed rate of natural delta habitat loss remains the same.

However, large scale spartina infestation in the Skagit tidal delta has been eradicated and dike failures are usually repaired or become official restoration projects, so we excluded the effects from these two unique observations to more realistically estimate three scenarios of how long it could take to achieve Skagit tidal delta DFC. The scenarios are: 1) fastest observed restoration

pace, 2) slowest observed restoration pace, and 3) achieve DFC at the midpoint of a 50-year recovery plan. The rates used for restoration and natural habitat losses are shown in Table 4. All values, except the rate of restoration needed to achieve Scenario 3, are from observed data. Table 4 shows results for: (a) the year when DFC is achieved; (b) the amount of restoration required to achieve DFC; (c) the amount of additional restoration required to maintain DFC through year 2106; and (d) the total amount of restoration needed to achieve and maintain DFC through 2106. Year 2106 is the year when DFC is achieved by Scenario 2, the slowest of the three scenarios to achieve DFC.

Under Scenario 1 the Skagit's DFC for tidal delta extent is achieved in year 2045, 40 years after Chinook Recovery Plan implementation started (Table 4). Under Scenario 2, DFC is achieved in year 2106, over 100 years after Chinook Recovery Plan implementation started! Under Scenario 3 DFC is achieved in year 2030, but it takes an average of 47 hectares per year of restoration, nearly a doubling of the fastest observed restoration pace to date. Interestingly, achieving DFC sooner requires less total restoration to achieve and maintain DFC. Moreover, it is likely that costs for completing large capital projects such as tidal delta restoration will increase over time. Together these two issues suggest it is more cost effective overall to achieve DFC sooner rather than later.

Table 4. Summary of scenarios for achieving Skagit tidal delta extent DFC.

| DFC scenario | DFC achieved (year) | Restoration amount needed (2014-DFC) | Additional restoration to maintain DFC though year 2106 | Total restoration to achieve and maintain DFC |
|---|---|---|---|---|
| **Scenario 1: Fastest observed restoration pace**<br>• Restoration pace = 25.8 ha/yr<br>• Natural gain/loss rate = -1.9 ha/yr | 2045 | 825.6 ha | 117.1 ha | 942.7 ha |
| **Scenario 2: Slowest observed restoration pace**<br>• Restoration pace = 10.2 ha/yr<br>• Natural gain/loss rate = -1.9 ha/yr | 2106 | 948.6 ha | 0.0 ha | 948.6 ha |
| **Scenario 3: DFC by mid-point of a 50 year recovery plan**<br>• Restoration pace = 47.0 ha/yr<br>• Natural gain/loss rate = -1.9 ha/yr | 2030 | 799.0 ha | 145.9 ha | 944.9 ha |

## What are the caveats to these results?

*Spatial extent*: These results apply to the Skagit indicator: *Tidal delta habitat extent* for the vegetated Skagit tidal delta, excluding any changes to low density marsh which cannot be reliably delineated through remote sensing. There is some future work needed to ensure all data layers used for status and trends analysis comparing historic, contemporary, and future time periods are using the exact same spatial extent. We found inconsistencies in mapping between 2004 and 2013 to occur primarily in southern Padilla Bay north of State Route Highway 20, and therefore excluded this area from results in this fact sheet. No restoration has occurred to date in this area north of the highway, and delta fringe erosion/progradation does not appear to be as acute as in Skagit Bay. The spatial extent for results shown in Figures 1 & 2 and Tables 1 & 2 is:

- northern border is State Route Highway 20;
- southwestern border is English Boom along Camano Island;
- southeastern border is West Passage's bifurcation with South Passage near Stanwood; and
- Skagit River upstream border is upstream of bifurcation of the North and South Forks and includes the dike setback floodplain areas of Cottonwood (west side) and Britt Slough (east side).

*Reporting of unnatural marsh areas*: The area of extensive spartina marsh removal near West Pass was mapped as marsh in 2004 and unvegetated in 2013, and thus shows as a loss in vegetated tidal delta extent per our reporting methods. For this fact sheet we did not apply to the results concepts of functioning or impairment to tidal delta habitat areas. Tidal delta habitat areas that are disturbed by dredging, a muted hydrology, and/or overwater structures are classified as 'impaired' or 'partially impaired' in estuarine habitat functions provided to juvenile salmon depending on the degree of disturbance (see chapter 4 of Beamer et al. 2015). Natural tidal habitats disturbed by invasive plants should also be added to the impairment list, and included in chapter 4 of our habitat status and trends methods (Beamer et al. 2015).

*Reporting of habitat types within tidal delta extent*: The results shown in this fact sheet only apply to the indicator: *Tidal delta habitat extent* and do not account for changes in specific habitat types (e.g., extent of blind and distributary channel) which have not been completely delineated yet in the 2013 data layer. It is important to complete delineation of the GIS data layer into habitat types especially to track the channel results because large changes in intertidal footprint by restoration projects can have downstream or 'outside the dikes' effects (Hood 2004) and restored habitat conditions within project areas do not necessarily remain the same over time as natural processes interact with the site. One completed restoration project accounted for in the 2013 result, Wiley Slough, is expected to create significant downstream or 'outside the dikes' increases in tidal channel extent. The approximately 52-hectare tidal footprint of the Fir Island Farms Restoration Project (not accounted for in the 2013 result because restoration occurred in summer 2016) is also expected to create significant downstream increases in tidal channel extent. The habitat effects of the built Milltown Island Restoration Project are not observable in our tidal delta extent results. Milltown Island, located in the South Fork Skagit tidal delta, had significant restoration activity between 2004 and 2013 but there was no change in overall tidal footprint. The project was designed

to increase river and tidal connectivity to the site, not restore isolated habitat due to diking. Thus, there is no gain/loss tidal extent polygon shown in Figure 1 for Milltown.

## What are the lessons learned and recommendations for adaptive management?

The status and trends results for tidal delta extent provide several lessons related to implementation of the Skagit's tidal delta recovery strategy and its monitoring plan. Taken together, these lessons lead to three recommendations for adaptive management.

**Monitoring plan related:**

*Good news*: The GIS census methods work for measuring the indicator: *Tidal delta habitat extent.*

**Recommendation**: Continue monitoring tidal delta extent (and other habitat extent indicators) for the Skagit tidal delta with a maximum interval period for monitoring data layers of 5-7 years.

**Recovery plan strategy related:**

*Good news*: The fundamental habitat hypothesis of the Skagit Chinook Recovery Plan to protect and restore the tidal delta is supported by the actions implemented. Overall, the Skagit tidal delta is gaining habitat faster than it is losing it. Completed restoration projects are the primary reason for a net increase in tidal delta extent; direct human causes of lost tidal delta extent were minor.

*Bad news*: Natural changes in tidal delta extent resulted in a net loss in tidal delta extent, primarily along the Skagit bay front, further supporting findings that sea level rise is offsetting the delta's natural habitat formation processes (Hood et al. 2016). In addition, human-caused changes to sediment routing within the delta are likely inhibiting habitat formation by creating areas that are sheltered from sediment supply but not from sea level rise nor wind wave intensity (Hood et al. 2016).

*More bad news*: While restoration efforts are responsible for the net increase in Skagit tidal delta extent over our study period, the pace of restoration slowed mid-period from 25.8 to 10.2 hectares per year. If restoration gains and natural losses continue at the overall observed 2004 – 2013 pace, the Skagit's DFC for tidal delta extent will not be achieved until year 2096. The pace of restoration would need to be nearly double the fastest observed pace to achieve Skagit tidal delta DFC 25 years after the start of Chinook Recovery Plan implementation.

**Recommendation**: Increase the current pace and magnitude of tidal delta restoration to: (a) realistically achieve DFC near the midpoint of a 50-year recovery plan implementation period; and (b) maintain DFC over time. The current pace of restoration leads to DFC in 80-90 years from now. Periodic ongoing restoration will be needed to offset chronic natural loss of marsh.

**Recommendation**: Explicitly incorporate sea level, storm surge, and sediment routing within the Skagit tidal delta into an updated recovery strategy for the Skagit tidal delta. Projects that can improve sediment routing and deposition within the delta may offset chronic natural loss of marsh.

## References

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**From:** maplest327@aol.com,
**To:** maplest327@aol.com,
**Subject:** Sediment starvation collapsing Skagit River delta estuaries
**Date:** Thu, Sep 30, 2021 3:39 pm



September 26, 2021

Richard Brocksmith
Executive Director
Skagit Watershed Council

Re: Sediment starvation of the Skagit River estuary, Skagit River delta estuary collapse and extinction of native Skagit River Chinook salmon

Dear Richard,

The Skagit River delta estuary is badly **eroding**. Along nearly the entire low marsh perimeter from the South Fork estuary at Stanwood through the bay front estuary. This is classic **estuary collapse**. This loss can be clearly seen on page 3, Figure 1 of "Skagit Chinook Habitat Monitoring Status and Trends: Change in Skagit Tidal Delta Habitat Extend, 2004-2013". By **Eric Beamer and Karen Wolf.** All of the estuary edge in red in their satellite photo is low marsh lost due to **EROSION**. High wind-wave action across expanding tidal flats, against the fragile low marsh perimeter edge is collapsing the Skagit River delta low marsh. The most important part of the Chinook salmon life cycle depends on large low level marsh acreage in the river delta estuary. Native Chinook salmon smolt need up to 6 months to grow there before entering the Salish Sea. This critical low marsh perimeter acreage is being steadily lost due to **sediment starvation and erosion** from high wind-waves across an enlarging tidal flat. **The Skagit River delta estuary is collapsing.** The etiology of this collapse is now understood in new science, that we have not yet accepted or responded to.

All around the world rising sea levels are sinking islands and inundating shorelines. All continents. There is one coastal place where this is **NOT** happening: river delta estuaries with sufficient sediment flow. The old equation of sea level rise vs. sediment flow has been proven false when it is applied to a river delta estuary. The **pivotal factor** in determining the survival of river delta estuaries is the **width of the tidal flat** immediately in front of the low marsh estuary. The second factor is river **sediment flow. Giulio Mariotti and Sergio Fagherazzi** in their seminal 2013 paper **"Critical width of tidal flats triggers marsh collapse in the absence of sea-level rise"** demonstrates how river delta estuaries are collapsed by enlarging tidal flats and their high wind-wave erosion, **NOT DROWNING BY SEA LEVEL RISE.** A new river delta estuary survival paradigm has been established. We need to accept and work with this reality or lose the Skagit River estuary and native Skagit River Chinook salmon.

A common misconception of river delta estuaries is that both estuary and tide flat will necessarily exist in the same river basin in the future. This is false. Mariotti's paper demonstrates a critical threshold that determines whether a basin will fill in with estuary or tide flat. The size of the tidal flat and sediment flow will determine that. There is no equilibrium between estuary and tide flat. **John R. Gunnell et al "How a marsh is built from the bottom up"** details the growth of low marsh estuaries **only after** sufficient sediment is delivered to the adjacent tide flats. The increased sediment flow builds higher extant marsh tables that act as promontories, effectively shielding adjacent tide flats from erosive forces. The tide flat can then shoal up and be colonized by nearby low marsh plants. A high sediment flow can counter high-wind waves, enabling an estuary and tide flat to co-exist. It is not a stable relationship with no equilibrium existing between the low marsh estuary and tide flat.

While we know now that dams are completely negative regarding salmon and delta estuary survival, we have not addressed the **Elephant in the Room in the Skagit River.** The **1937 Skagit River Diversion** forces most of the Skagit River water, sediment and salmon smolts to go down the North Fork in fast moving water. Before 1937 the majority of the Skagit River water, sediment and salmon smolts used to go into the South Fork estuary, helping maintain the large South Fork estuary size and higher salmon populations. Since 1937 this critically valuable sediment has been forced down the North Fork and dumped in deep water off the North Fork estuary. Vital sediment wasted in the North Fork, that needs to go to the South Fork estuary. Many Chinook salmon smolts pushed down the fast moving North Fork will be pushed out into deeper Skagit Bay water, where they are exposed to increased predation. This is fixable now. We need to punch a big hole in the 1937 Skagit River Diversion (or remove it entirely) and let the Skagit River deliver a lot more sediment to the South Fork estuary that is eroding and shrinking. Only increased sediment to the Skagit River South Fork estuary will save the Skagit River estuary and native Skagit River Chinook salmon. This is a necessary fix and absolutely critical to prevent total collapse of the Skagit River estuary.

**Sergio Fagherazzi and Giulio Mariotti** in their paradigm making paper **"Marsh Collapse Does Not Require Sea Level Rise"** demonstrate that river delta estuaries are strong in the vertical direction as long as sufficient sediment reaches the tide flat. The river delta estuaries are however, weak on the lateral edge which is highly vulnerable to high wind-waves

generated by enlarging tidal flats. There are 2 different things that can help protect the lateral estuary edge: (1) higher sediment level delivered to the tide flats and (2) a protective, shallow berm or elevation that helps reduce the wind-wave energy against the lateral estuary edge. It is important to understand both of these mechanisms, if we are to save and indeed increase the low marsh acreage in river delta estuaries. Chinook salmon smolts need a lot more acres of low marsh to survive. We can deliver that for them. **Fagherazzi and Mariotti's** work showed for the first time that river delta marshes can indeed collapse if sufficient sediment was not delivered to the estuary. This happens even if there is **no sea level rise.** This puts all river delta estuaries in danger of collapse if sediment levels are not maintained. The low marsh/tide flat region is not a place of equilibrium and never can be as the sediment mostly comes from land sources while the wind-waves eroding the lateral estuary edge come from wind in local basins. These build and destroy factors for the estuary are not linked.

Coastal river delta projects along the Atlantic Coast, Gulf Coast, California and around the world have used the recent estuary survival paradigm to halt estuary collapse and indeed to begin rebuilding low marsh acreage that has been lost to tidal flat expansion. We can do the same in Puget Sound. Fix the Skagit River delta estuary by trenching a big channel through the **1937 Skagit River Diversion.** That will increase sediment flow to a badly eroding South Fork estuary. Build wave reducing structures in other Puget Sound river deltas, where the low marsh is also eroding. This would basically be all South facing river deltas. I would start with the Stillaguamish, as the situation there is really terrible and there are so few Chinook salmon left in the Stilly. **Creating low marsh estuary lands on tidal flats adjacent to existing river delta low marshes, should be our prime action to save native Chinook salmon from extinction and prevent the estuaries from collapsing.**

I have enclosed information on geotube use for environmental restoration purposes. One of those was at Mt. St. Helens in Washington. I also drew up simple marsh creation maps in our Puget Sound river deltas. I hope you will consider the new estuary survival paradigm and how we can be use it to protect and expand our river delta estuaries.

Thank you,

Sincerely,

Kurt Zwar

Kurt Zwar
1202 S. 10th St.
Mount Vernon, WA 98274
360 899-9480
maplest327@aol.com

cc:

Kimberly Cauvel
Science and Environment reporter
Skagit Valley Herald

Belinda Rotton
WDFW
Manager
Skagit Wildlife Area

Jeff Breckel
Chair
Salmon Recovery Funding Board

John Stein
Science Chair
Puget Sound Partnership
Salmon Recovery Council

Brendan Brokes
WDFW
Director
North Puget Sound Region 4

**From:** Chris Benham <chris.benham@gmail.com>
**Sent:** Tuesday, September 21, 2021 8:44 PM
**To:** Lundquist, Wyatt (RCO) <wyatt.lundquist@rco.wa.gov>
**Subject:** Point No Point Estuary Restoration Project

External Email

Dear Mr. Lundquist,

My name is Chris Benham and in April 2021, I completed development of our new home located at 8828 NE Point No Point Rd in Hansville. Working closely with Kitsap County, our land-use legal advisory team and local engineers/scientists we developed this home over a 34 month period. It was a massive endeavor with large and real obstacles to overcome that allowed us to build such a wonderful home in one of the most beautiful beaches in Washington State.

I wanted to reach out to you to communicate in earnest ahead of the Zoom meeting several concerns I have of the ongoing project to convert the marsh land adjacent to my new property into a salt water mud flat. Below are several of my concerns, having recently invested a significant amount of resources into overcoming Bio-Habitat impacts, FEMA compliance and elevation requirements, Engineered foundation designs, Oscar II Septic System, Irrigation and stormwater challenges, and GeoTech Investigations into the native loamy soils on which I built upon. We are the newest home to be developed in the area under all of the latest environmental impact regulations.

Here are my concerns after carefully understanding the Mid Sound Fisheries plan for the marsh land transformation:

1. Tidal flow at full and King tide impacts to underlying water tables, saturation of soils and disruption of our extremely valuable engineered foundation.
2. Rising sea levels impact to an area that is already 6 feet below the safe FEMA flood elevation (allowing tidal flows to reach a man made levee 20 ft from ours and others property lines should alone be ground for project dismissal)
3. Impacts to septic systems on our parcel as well as adjacent neighbors in the area - we are not on a county sewer plan and we know of no plans to develop this capability in the future
4. How will impacts be mitigated during the conversion phase of the marsh knowing that it is a world renowned bird sanctuary of 260 species and deer, blue herons, muskrats, river otters and other animals
5. Who will maintain the levee? Will the levee continue to rise as sea levels rise such that our enjoyment of the property and view of Puget Sound shipping channel to the East of us will be disrupted? This would be harmful to our investment, property value and right to enjoyment of the developed property.

6. Having seen examples of completed mud flat salt water estuaries, how will bio-degradation generated odors be mitigated and the visual barron land at low tide be mitigated such that current wildlife, coastal views are not impacted negatively and property values are not harmed?

Please feel free to bring forth my comments at the meeting, as I am very concerned with the real impact to our small, wonderful community at Point No Point. It would be a real shame, and I am quite concerned that the community's intrinsic enjoyment of their properties will be irrevocably harmed. The bottom line here as I digested the information that Juliana brought to us in several meetings was the close proximity to current developed lands as well as harmful and unnecessary impacts to soil compositions that could undermine engineered foundations, flooding and shallow water table issues and valuable residential septic systems.

Feel free to reach back out via email or mobile phone (below) if you would like to have a further conversation on this topic and our concerns.

Sincerely,

--
Christopher J. Benham
(303) 253-5050

## SALMON RECOVERY FUNDING BOARD SUMMARY MINUTES

**Date:** September 22, 2021

**Place:** Online

**Salmon Recovery Funding Board Members:**

| | | | |
|---|---|---|---|
| **Jeff Breckel, Chair** | Stevenson | **Annette Hoffman** | Designee, Washington Department of Ecology |
| **Kaleen Cottingham** | Olympia | **Stephen Bernath** | Designee, Department of Natural Resources |
| **Jeromy Sullivan** | Kingston | **Brian Cochrane** | Designee, Washington State Conservation Commission |
| **Chris Endresen-Scott** | Conconully | **Jeff Davis (absent)** | Designee, Department of Fish and Wildlife |
| **VACANT** | VACANT | **Susan Kanzler** | Designee, Washington Department of Transportation |

**This summary is to be used with the materials provided in advance of the meeting. The Recreation and Conservation Office (RCO) retains a recording as the formal record of the meeting.**

### Call to order

**Chair Jeff Breckel** called the Salmon Recovery Funding Board (SRFB/board) to order at 9:02 AM. After the chair provided opening remarks, **Julia McNamara**, Board Administrative Assistant, determined quorum. **Members Kanzler** and **Davis** were not present; however, Member Kanzler joined the meeting later from 11:00AM -3:00 PM.

**Wyatt Lundquist,** Board Liaison, covered webinar rules and etiquette which was followed by Chair Breckel's request for a motion to approve the meeting agenda.

**Motion:** Approval of September 21, 2021 meeting agenda
**Moved by:** Member Cottingham
**Seconded by:** Member Endresen-Scott
**Decision:** Approved

Following the agenda approval, Chair Breckel introduced **Kaleen Cottingham**, previous RCO director, as the newest member of the board.

Next, Chair Breckel read a resolution of recognition for **Lorraine Loomis**, a treasured salmon recovery advocate and Chair of the Northwest Indian Fisheries Commission who recently passed. Several board members and attendees gave remarks commending her character and hard work.

**Resolution:** Approval of Resolution of Recognition for Lorraine Loomis, Chair of the Northwest Indian Fisheries Commission
**Moved by:** Member Sullivan
**Seconded by:** Member Cottingham
**Decision:** Approved

### Item 1: Director's Report

**Megan Duffy**, Recreation and Conservation Office (RCO) Director, provided an overview of RCO's activities since the last SRFB meeting in June. Her report included changes in staff, the decisions packages RCO submitted to the Office of Financial Management (OFM) for the 2022 supplemental legislative session, and RCO's equity review.

Reporting on the 2022 supplemental decision packages, Director Duffy noted that one would be submitted for the Governor's Salmon Recovery Office (GSRO) for a fulltime employment (FTE) and another for the Washington Invasive Species Council (WISC) for a half FTE.

Addressing the equity review, Director Duffy stated that $375,000 had been appropriated for the review of several of RCO's grant programs. RCO has contracted with the Vida Agency, and Prevention Institute, and ESRI to accomplish the proviso work. These contractors are building maps in relation to RCO grants and health disparities, completing outreach to underserved communities, and taking a deeper look into RCO's grant application process. This proviso must be complete by June 30, 2022.

Before closing the item, Director Duffy reminded **Chair Breckel** that the June 2021 meeting minutes and the 2022 SRFB meeting dates needed approval.

**Motion:** Approval of June 2021 Meeting Minutes
**Moved by:** Member Endresen-Scott
**Seconded by:** Member Sullivan
**Decision:** Approved

On the topic of the December 2021 meeting of SRFB, the board agreed to keep the meeting on Zoom in recognition of the uncertainties associated with COVID-19 and discussed moving the board retreat to March of 2022.

**Motion:** Approve the 2022 Salmon Recovery Funding Board Meeting Dates
**Moved by:** Member Cottingham
**Seconded by:** Member Endresen-Scott
**Decision:** Approved

### Item 2: Salmon Recovery Management Report

**Governor's Salmon Recovery Office Report**

**Erik Neatherlin**, GSRO Executive Coordinator, and **Tara Galuska**, GSRO Orca Coordinator, provided a briefing on the recent work accomplished by GSRO. Mr. Neatherlin and Ms. Galuska covered the federal affairs and partner activities, the 2023 Salmon Conference, details on orca recovery, and a brief monitoring update.

Mr. Neatherlin said that GSRO staff have been working with the state agencies, partners, the Governor's Office, and Congressional delegation on federal funding and infrastructure requests.

Addressing the 2023 Salmon Conference, Mr. Neatherlin reported that a steering committee is being created and the board members are welcome to join. **Chair Breckel** asked to join.

Providing an update on Orca recovery, Ms. Galuska reported that her main role is to coordinate the implementation of the recommendations of the Orca Task Force. Recent changes that will help Orca include the Department of Ecology's (Ecology) work on a new wastewater permitting to decrease water toxicity, the Washington Department of Fish and Wildlife's (WDFW) greater vessel distance requirement, and GSRO's work on the Statewide Salmon Recovery Strategy.

Finally, Mr. Neatherlin provided a brief monitoring update, detailing that the monitoring framework final draft would be complete by March of 2022.

**Salmon Section Report**

**Marc Duboiski**, Salmon Grants Team Manager, provided an overview of the salmon grant section activities, focusing on the other programs (non-SRFB) the team manages and their recent biennial allocations. Funding details of these programs can be found in the meeting materials.

*General Public Comment: No comment at this time.*

### Item 3: Partner Reports

#### Council of Regions

**Alex Conley**, Council of Region (COR), provided a briefing on COR's activities, which can be found in the meeting materials.

In his verbal report, Mr. Conley highlighted the following:

- Ecology's and Corp of Engineers' streamlined process of the Clean Water Act permitting.
- GSRO's and COR's dialogue and inclusion of regional perspective in the Statewide Salmon Strategy update process.
- The need for maintenance funding for closed SRFB project contracts.
- COR's need for 2022 predicted regional monitoring funds.
- COR's collaboration and meetings focused on Columbia River policy.

#### WA Salmon Coalition

**Suzanna Smith**, Washington Salmon Coalition, provided an overview of the WA Salmon Coalitions (WSC) activities.

This update included:

- Introducing the new lead entity coordinators for the North Pacific Coast, Klickitat, Yakima, Upper Columbia, and WRIA 14.
- The work of lead entities to wrap-up ranked lists and bringing projects into the cleared category.
- A training lead by the Headwaters People concerning diversity, equity, and inclusion.
- The August 26th meeting with RCO Director Duffy on developing better salmon tracking methods, investigating more options for distributing resources, and more efficient vertical coordination.
- The updated Lead Entity reference guide, which will be released in October.
- WSC's letter of support to federal agencies in support of salmon.

#### Regional Fisheries Enhancement Groups

**Lance Winnecka**, South Puget Sound Salmon Enhancement Group, provided an overview of the Regional Fisheries Enhancement Group's (RFEGs) activities. This included:

- RFEG's Salmon and Schools Program development in collaboration with the Office of Superintendent of Public Instruction (OSPI).
- RFEG's 49 applications for RCO grants.
- Projects being slowed down due to permitting, floodplain assessment, and cost increases.

In closing, Mr. Winnecka explained that cost increases allowed through RCO can only do so much.

**BREAK: 10:50 AM- 11:05 AM**

### Item 4: Manual 18 2022 Calendar

**Kat Moore**, Senior Outdoor Grant Manager, provided an overview of the proposed administrative revisions and policy changes to *Salmon Recovery Grants Manual 18: Policies and Project Selection* and asked for approval of the grant calendar.

Addressing the policy changes, Ms. Moore explained that additions would include the Targeted Investment policy and the new riparian buffer requirements.

For administrative changes, the Road Maintenance and Abandonment Plan (RMAP) projects will sunset, a cultural resource map will be required by applicants in PRISM to determine the "Area of Potential Effect", the grant calendar will remain on the same timeline, and Puget Sound Acquisition and Restoration (PSAR) appendix will be updated to reflect any changes in process.

The Review Panel also recommended policy changes to the 2023 Manual 18 to address the cost-benefit evaluation criteria for acquisition of upland areas and the cost and composition of riparian planting.

**Member Cochrane** offered his support for the policy changes regarding the cost-benefit evaluation criteria for the acquisition of uplands.

**Member Cottingham** asked for clarification surrounding the RMAP sunset date.

**Member Bernath** clarified that RMAPs required land managers to update their roads by July 1, 2016, but due to economic recession, this date was extended to October 2021. This was originally extended by the Forest Practices Board.

SRFB members discussed the possibility of extending the Board's policy, but **Director Duffy** clarified that the policy was based on RCW 77.85.130(6) that allowed the SRFB to provide grants for legal obligations *"when expedited action provides a clear benefit to salmon recovery…"* Because the RMAP effort under the Forest Practice Rules is expiring

in October 2021, the actions can no longer be considered "expedited" and therefore the policy cannot continue.

*Public Comment*

**Katie Krueger**, North Pacific Lead Entity Committee Member, provided comment that was not in favor of sunsetting RMAP. She believes funding these could lead to more salmon recovery on timberland.

Because the board expressed concern with landowners' requirements, the cost associated with them and its impact on salmon recovery, **Director Duffy** suggested that RCO review existing statutory requirements and authorities and work with DNR to understand if any RMAP projects have been extended beyond the deadline to determine if a gap exists and if SRFB funds can support efforts.

**TASK:** Determine the statutory requirements of RMAP and look at the RMAP projects that exist to determine if there is a gap that can be supported under SRFB authority.

Before closing the item, Ms. Moore reminded the board that the 2022 grant round calendar needed approval.

| | |
|---|---|
| **Motion:** | Approve the 2022 Grant Round Calendar within Manual 18 |
| **Moved by:** | Member Cottingham |
| **Seconded by:** | Member Sullivan |
| **Decision:** | Approved |

### Item 5: Riparian Guidance for Manual 18 Decision

**Erik Neatherlin**, GSRO Executive Coordinator, provided a briefing on the state-tribal riparian workgroup and how it will be integrated into Manual 18.

**Member Cottingham** recused herself from this topic due to a conflict of interest from her time as RCO Director.

Providing context, Mr. Neatherlin reminded the board that during the 2019 Centennial Accord meeting, the Governor committed to tribal leaders that he would form a state-tribal work group to establish a statewide standard for riparian habitats and recommend an approach to riparian protection. The statewide standard will be based on WDFW two-volume guidance on riparian habitat from 2020. These volumes provide guidance about riparian area width requirement for funded projects.

Based on this guidance and a request from SRFB at the November 2020 meeting, staff created documents with proposed standard width measurements. RCO staff also created

several working groups including a SRFB subcommittee, which collaborated with recovery partners, stakeholders, and tribes to develop language for Manual 18. A summary of that language can be viewed below:

| Proposal |
| --- |
| **Riparian Standard**<br>• 200-yr SPTH<br>• (All applicants are encouraged to meet SPTH riparian standard) |
| **Match Requirements**<br>• 0% = Above SPTH<br>• 15% = Below SPTH |
| **Screening Process for Flagging Project**<br>• Flagged if included on the State's CWA section 303(d) list of temperature impaired streams |
| **Requirements When Project is Flagged**<br>• If on CWA 303(d) list and less than SPTH, requires justification + letter (WDFW biologist/Tribal biologist) |

**Jeannie Abbott**, GSRO Program Coordinator, said that this language applied to projects whose primary intent is riparian planting.

When opened to discussion, **Chair Breckel** asked for clarification on the meaning of "flagged". **Ms. Moore** clarified that if a project is not reaching the site-specific tree height (SPTH) on a CWA section 303(d) listed stream, then it would be noted and flagged in PRISM.

Addressing project match, **Member Kanzler** asked if it would change if the project was a different restoration type but included riparian restoration. The policy applies currently to those projects for which the primary purpose is riparian plantings.

**Director Duffy** reminded the board that this would be a three-year pilot project and match requirements could be adapted over time, and other issues that arise will be further evaluated as well.

*Public Comment: No public comment*

**Motion:** Move to adopt the Manual 18 riparian guidance as a pilot program for three years.
**Moved by:** Member Endresen-Scott
**Seconded by:** Member Sullivan

**Decision:** Approve

**Lunch: 12:07PM-1:30PM**

### Item 6: Targeted Investments Manual 18 Updates

**Katie Pruit**, RCO Policy Specialist, provided an overview of the implementation procedures for the Targeted Investment Policy.

Ms. Pruit reminded the board that the 2022 Targeted Investment priority is Southern Resident Orca Whale recovery, with a funding level of $3.7 million. The process for implementation will be the same as other SRFB grants, but only one project will be submitted per region. After scoring, the final project will be selected in September of 2022.

Ms. Pruit explained that before coming to the board for approval of implementation, RCO staff solicited stakeholder input and integrated it into the Manual18 changes.

*Public Comment:*

**Alex Conley**, Yakima Fish and Wildlife Recovery Board, provided comment in favor of SRFB having the final decision on which project is selected, regardless of the score. He also provided criteria suggestions, which can be found in the meeting materials.

**Suzanna Smith**, WSC, commented in favor of the targeted investment policy, but wanted it to be used as a pilot policy with room for growth in the future.

Following comment, the board requested changes to their role in the funding of projects. Rather than approving the highest scored projects as provided by the Review Panel, the board requested additional considerations to inform funding decisions and clarity that the Review Panel's role is to provide technical findings of fact. They also asked that some work to clarify the scoring criteria, as suggested by Mr. Conley's written comments, be completed. These edits will be brought back to the board at the December 2021 meeting for decision.

**Task:** Integrate language into Appendix J of Manual 18 clarifying that the Salmon Recovery Funding Board's role in project selection and what it may consider in doing so. Minor technical, clarifying changes will be made to the scoring criteria as mentioned in the Yakima Fish and Wildlife Recovery Board's commentary on the topic.

### Item 7: Washington Invasive Species Council: Threat of Aquatic Invasive Species to Salmon Recovery

**Joe Maroney**, WISC Chair, and **Allen Pleus**, WDFW Aquatic Invasive Species Unit, provided an overview of invasive species that threaten salmon recovery.

Mr. Pleus noted that species such as European Green Crab, Quagga and Zebra Mussels, and Northern Pike pose some of the greatest threat towards salmon, but other salmon impacting species and diseases exist.

To tackle invasive species, WDFW's Aquatic Invasive Species unit focuses on prevention, early detection, rapid response, infested site management, local/regional coordination, education/outreach, and enforcement.

**Chair Breckel** asked about a citizen's legal ability to kill European Green crab. Mr. Pleus clarified that citizens can legally kill invasive species, but reporting is recommended as people have difficulty with proper species identification and often end up killing a native species.

**Member Bernath** was interested in the success of tackling Northern pike. Mr. Maroney noted that a regional technical forum has been created to assist with the species and he could provide an overview of their work at a future SRFB meeting.

### Item 8: Carbon Credits Policy and Discussion

Before the start of the agenda item, **Member Cottingham** recused herself.

**Ben Donatelle**, RCO Policy Specialist, provided an overview of the Carbon Credits and Payments for Ecosystem Service policy. This policy would enable RCO grantees to enroll RCO-funded projects in carbon offset and other payment for ecosystem services programs. This policy has already been adopted by the Recreation and Conservation Funding Board (RCFB) for their projects, and RCO is proposing a similar policy for the SRFB.

After Mr. Donatelle's presentation, **Chair Breckel** remarked that oftentimes an RCFB project may provide match with a SRFB grant. Without the carbon credits policy in place through SRFB, Chair Breckel wanted to know if the RCFB project would be eligible to enroll regardless. Mr. Donatelle clarified that the project would not be eligible.

**Member Bernath** said that under RCO's potential policy, smaller landowners would struggle and the board should seek avenues to make it easier.

Overall, the board directed Mr. Donatelle to continue the policy development to bring back to the board at their December 2021 meeting.

**TASK:** Bring back the Carbon Credit Policy development to SRFB for review and consideration at the December 2021 meeting.

### Item 9: Partner Reports

**Conservation Commission**

**Member Brian Cochrane** provided a brief overview of the Conservation Commission's work.

He explained that the executive director would be leaving the Commission on October 15, 2021.

Next, he reported the decision packages that would be submitted to OFM concerning the Conservation Commission, including:

- Conservation equity and engagement for $500,000 to complete an equity assessment of all programs and support conservation districts that will be help underserved communities.
- No more than $2 million in funding for the Sustainable Farms and Fields program.
- No more than $2 million for the Farmland Protection and Affordability Investment program.

**Department of Ecology**

**Member Annette Hoffman** provided a brief overview of the work being done at the Department of Ecology.

Addressing new staff, Ecology is hiring FTEs to address the work needed due to the Climate Commitment Act.

Next, she reported the decision packages being submitted to OFM for the 2022 supplemental legislative session.

These packages include:

- Funding for improved compliance of the Shoreline Management Act to ensure compliance with no net loss standards and to include grants for local jurisdictions and compliance staff.
- Funding for the Centennial Clean Water Fund for the riparian funding incentives.
- Funding for a pilot project to map the channel migration zones to identify GIS mapping methodology in the riparian areas across Washington.

**Department of Natural Resources**

**Member Stephen Bernath** provided an update on the work of the Department of Natural Resources.

Speaking on the 2021 legislative session, he noted DNR's success in securing substantial funding for forest health and wildlife. In the next month, there will be a new Deputy of Forest health and practices and more fulltime firefighters versus seasonal positions.

Looking forward to the 2022 supplemental legislative session, DNR will submit several decision packages, including:

- Funding to pilot a not-yet adopted salmon strategy to focus on WRIA 7. Part of this funding will go towards hiring a salmon coordinator to complete the inventory of small salmon culverts.
- Funding and authority to support a potential avoided conversion policy that would support a stakeholder group and advisory group for one year.
- Funding for the small landowners dealing with carbon credits.
- Lidar request package to complete the statewide need and an update.

Member Bernath also highlighted the fire season, explaining that some lands were closed due to weather conditions that could have led to wildfires.

Lastly, Member Bernath announced that he is retiring next month, and **Katrina Lassiter** will be DNR's new SRFB designee.

**Department of Fish and Wildlife**

**Member Jeff Davis** was excused from the meeting and unavailable for an update.

**Department of Transportation**

**Member Susan Kanzler** departed from the meeting at 3:00 and was unavailable for an update.

### RECESS at 3:34PM

The meeting was recessed at 3:34PM to resume the following day at 9AM.

## SALMON RECOVERY FUNDING BOARD SUMMARY MINUTES

**Date:** September 23, 2021

**Place:** Online

**Salmon Recovery Funding Board Members:**

| | | | |
|---|---|---|---|
| **Jeff Breckel, Chair** | Stevenson | **Annette Hoffman** | Designee, Washington Department of Ecology |
| **Kaleen Cottingham** | Olympia | **Stephen Bernath** | Designee, Department of Natural Resources |
| **Jeromy Sullivan** | Kingston | **Brian Cochrane** | Designee, Washington State Conservation Commission |
| **Chris Endresen-Scott** | Conconully | **Jeff Davis (Absent)** | Designee, Department of Fish and Wildlife |
| | | **Susan Kanzler (Absent)** | Designee, Washington Department of Transportation |

**This summary is to be used with the materials provided in advance of the meeting. The Recreation and Conservation Office (RCO) retains a recording as the formal record of the meeting.**

### Call to Order

**Chair Jeff Breckel** opened the meeting at 9:05AM and requested that **Julia McNamara**, Board Administrative Assistant, call roll and determine quorum. **Members Jeff Davis** and **Susan Kanzler** were absent.

**Wyatt Lundquist**, Board Liaison, covered webinar etiquette.

**Motion:** Approve September 23, 2021 agenda with the amendment of moving the retreat discussion to December 2021 Salmon Recovery Funding Board Meeting.
**Moved by:** Member Endresen-Scott
**Seconded by:** Member Cottingham
**Decision:** Approved as amended

## Item 10: 2021 Grant Round

### Overview

**Marc Duboiski**, RCO Salmon Grants Team Manager, provided an overview of the 2021 Grant Round. He explained the timeline, which runs from February to September, starting with site visits and application completion and ending with the funding meeting where the board approves project funding by region.

During the grant round process, 125 projects were submitted, including 22 conditioned projects and one project of concern. Overall, 105 projects would be fully funded. The total cost of these projects is $39.2 million, which includes $19.2 million in match and $20 million in SRFB state and federal funding.

**Chair Breckel** asked why projects with that were solely for cost increases were included within the funded projects and Mr. Duboiski clarified that cost increases over $100,000 are encouraged to go through the next grant cycle. The annual statewide cost increase fund is set each year at $500,000.

### Slideshow of Featured Projects

Several Recreation and Conservation Office (RCO) Salmon Outdoor Grants Managers provided overviews of featured projects within different regions in Washington.

- **Elizabeth Butler** presented project 21-1195: Toppenish Passage and Screening Assessment.
- **Brandon Carmon** presented project 21-1035: MF Newaukum Centralia Alpha Fish Passage Construction.
- **Josh Lambert** presented project 21-1034: Riparian Enhancement and Knotweed Control 2021
- **Alice Rubin** presented project 21-1005: Cougar Creek Fish Passage Restoration Asotin County Conservation District.
- **Amee Bahr** presented project 21-1130: Grays River Conservation Area
- **Marc Duboiski** presented 21-1175: Mystery & War Creeks Reach Wood Restoration
- **Marc Duboiski** and **Jenny Baker**, WDFW, presented project 21-1187: Island Unit/Deepwater Phase 2 Preliminary Design.

### Review Panel Comments

**Tom Slocum**, Salmon Recovery Funding Board Review Panel Chair, provided an overview of review panel observations and noteworthy projects from the 2021 grant round.

Mr. Slocum highlighted the success of the PRISM evaluation portal and virtual project presentations; the panel's concern with the lack of large, high-benefit project submissions; and the lack of consistency in riparian planting costs across projects.

Addressing upland acreage in acquisition proposals, Mr. Slocum suggested RCO require a better process for quantifying land to best evaluate how the property will help salmon.

The review panel's last suggestion was to remind applicants of the importance of identifying SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) project objectives.

Closing, Mr. Slocum highlighted several noteworthy projects that can be found in the meeting materials.

During board discussion, **Chair Breckel** asked how the board would play a role in implementing the review panel's suggestions. **Director Duffy** explained that RCO will work with the Technical Panel and stakeholders to develop potential policies for the upland acreage and riparian planting recommendations for board consideration, and the other suggestions could be discussed at the SRFB retreat.

**Task:** Add two SRFB Review Panel suggested grant round improvements to the SRFB list of potential items for discussion during its retreat. These topics are strengthening resolve for high-benefit projects and the issue of differing criteria for SRFB applications supported by other RCO salmon funding.

**Member Endresen-Scott** addressed the politics surrounding larger-scale projects and asked the review panel for their ideas to address this issue. Mr. Slocum suggested getting active support from the local governments.

**BREAK:** 10:35AM-10:45AM

**Member Sullivan** stepped away during the break and returned at 10:57AM

**Project of Concern**

Project 21-1053: Point No Point Estuary Restoration Preliminary Design submitted by the Mid-Puget Sound Fish Enhancement Group. The intent of this project is to create a preliminary design to restore tidal exchange into a 23-acre freshwater marsh.

**Review Panel**

**Mr. Slocum** provided an overview of why this project is likely to fail, highlighting that similar projects in the past failed.

According to the 2018 ESRP Point No Point project 18-2076, a feasibility study showed negative impacts to drainage and the possibility of a water table if the project were to go forward with the restoration of tidal influence. This project also received opposition from the people who live directly adjacent to the project.

If the board chooses to move the project forward, the review panel suggested the following additions and/or alternatives:

1. Kitsap County or another entity initiates a buy-out program to remove development adjacent to the marsh.
2. Kitsap County commits to funding for flood protection and groundwater pumping infrastructure, plus permanent operation, and management costs.

**Counter Position by Project Sponsor and Region**

**Juliana Tadano**, Nearshore Project Manager at Mid-Puget Sound Fish Enhancement Group, provided her support for the project and reasoning behind it.

This project has a coastal sediment processes and tidal prism for a self-sustaining barrier and embayment reconnection. In the marsh, this would connect a freshwater stream and increase species diversity. To determine the feasibility and effects on nearby housing, geotechnical and hydrolytic modeling are necessary, which could be funded by SRFB.

She also noted that there was ample outreach to the surrounding community to let them know what was happening with the project. This included five meetings with 44 participants. There were concerns from the neighbors, but the project sponsors will continue outreach to keep the neighbors included.

Following Ms. Tadano, **Amber Moore**, Puget Sound Partnership, **Chairman Forsman, Suquamish Tribe**, and **Tom Ostrom**, Suquamish Tribe, also provided words of support for the project.

*Public Comment:*

**Dave Herrera**, Skokomish tribe and fisheries and wildlife policy representative, provided comment in support of the project.

**Dawn Spilsbury Pucci,** Island Lead Entity, provided comment in support of the project.

**Andrew Nelson**, Kitsap county, provided comment in support of the project

**Christine Brinton**, homeowner, commented in opposition to the project.

**Jessica Cote**, Blue Coast Engineering, provided comment in support of the project.

After public comment, **Chair Breckel** opened the floor to discussion. While Members felt some hesitation over the project, they ultimately believed the Project of Concern label should be removed and that the project should be funded.

### Item 11: 2021 Grant Round Overview by Regions

**Hood Canal Coordinating Council**

**Alicia Olivas**, Hood Canal Lead Entity Coordinator, provided an overview of the Hood Canal Coordinating Council's work.

This year, the Hood Canal Coordinating Council submitted eight projects for SRFB funding, which spanned widely across their land jurisdiction.

In addition to the projects listed, Ms. Olivas addressed some larger ongoing project areas that were funded by SRFB. These included:

- Snow Creek and Salmon Creek Watershed
- Lower Big Quilcene River Floodplain
- Dosewallips River Floodplain
- Duckabush River Estuary
- Mainstem Skokomish River

During discussion, **Member Bernath** asked for clarification of funding on the Duckabush River Estuary project where a bridge is being replaced with involvement by the Washington Department of Transportation (WDOT). Ms. Olivas clarified that WDOT is contracted but is not providing funding for the project.

**Lower Columbia Fish Recovery Board**

**Steve Manlow**, Executive Coordinator of the Lower Columbia Fish Recovery Board (LCFRB), provided an update.

In the 2021 grant round, LCFRB had a single monitoring proposal and 23 habitat project applications requesting a total of $6.8 million, but only 10 projects could receive $4 million in funding. The projects funded would target key limiting factors in watersheds with multiple ESA listed species and phase projects.

Looking forward to the next grant round, LCFRBs intends to make more effective habitat investments by tackling different strategies. These strategies will include addressing climate change, examining species trajectory, roles of restoration work relative to land use, and sponsor and community capacity for different projects.

**Northeast Washington Salmon Recovery Region**

**Mike Lithgow, Northeast** Washington Salmon Recovery Region Kalispel Tribe-Pend Oreille Lead Entity, provided thanks to everyone involved in the SRFB process this year.

**Puget Sound Partnership**

**Amber Moore,** Salmon Recovery Manager, provided some of the Puget Sound Partnership's accomplishments.

From the 2021-2023 Puget Sound Acquisition and Restoration Program, Ms. Moore stated that three projects were funded out of the eight submitted.

She said that PSP is working on updates to their Puget Sound Salmon Recovery plan and the new content will surround estuaries, population growth, stormwater, climate change, instream flow, water quality, and monitoring.

Before closing, she highlighted two projects in the works- The Dungeness and River's Edge Floodplain Restoration. Both projects involve levee setbacks, which will result in significant reclaimed and restored floodplain.

**Chair Breckel** asked about the PSP recovery plan and if the National Marines Fisheries (Fisheries) will have to readopt the plan. Ms. Moore replied that Fisheries will be asked to review it, but there is no need for a readoption. **Member Cottingham** asked about the Steelhead plan status and Ms. Moore explained that it was completed a few weeks ago and is supported by NOAA.

**Snake River Salmon Recovery Board**

**John Foltz**, Board Director, provided an overview on the work done by the Snake River Salmon Recovery Board.

In his overview he highlighted the 2021 grant round, the results of two projects, and thoughts on the emergency response.

From the 2021 grant round, they had 13 projects proposed for funding, with their top ranked project being a monitoring project. They are also working on implementing 42 habitat and restoration projects within their region.

The two projects that he highlighted were the Tucannon River Habitat Programmatic and the Asotin IMW.

Closing, Mr. Foltz suggested having emergency funding for projects funded by board. This funding would address fires, flooding, and other emergencies.

**Upper Columbia Salmon Recovery Board**

**Tracy Bowerman,** Upper Columbia Salmon Recovery Board Lead Entity, provided an overview.

From the grant round, 10 projects could receive full funding and one project could be partially funded.

Next, she noted that staff had worked hard to collect ecological data to see where restoration work would have the greatest impact in their region, and they have also done work on barrier prioritization.

Despite all this work, she noted that Chinook and Steelhead levels continue to decline. These declines are due to poor ocean conditions, harvest, hydro, and hatchery. The Upper Columbia Recovery Plan looks at all these issues and has a recovery work group discussing these topics.

**Coast Salmon Partnership**

**Mara Zimmerman**, Executive Director of the Coast Salmon Partnership, gave an overview of their work.

Ms. Zimmerman explained that Coast Salmon Partnership has a Washington Coast Sustainable Salmon Plan. The plan goal is to prevent additional ESA listing of Washington coast salmon.

Within the 2021 grant round, there would be three projects that could be funded for the North Pacific Coast Lead Entity, four projects for the Quinault Indian Nation Lead Entity, the Chehalis Basin Lead Entity has five projects, and the Willapa Bay Lead Entity has two projects.

Looking forward, they want focus on large river restoration, a pilot watershed restoration, fish barriers, and climate change.

**Yakima Basin Fish and Wildlife Recovery Board**

**Alex Conley**, Chair, provided an overview of the Yakima Basin Fish and Wildlife Recovery Board.

He noted that this board works from the 2009 Yakima Steelhead Recovery Plan and the Yakima Bull Trout Action Plan.

For the Yakima Lead Entity, there were seven projects that could be funded.

Looking forward, they intend to look more at big floodplain projects, Federal irrigation Projects, Fish Passage projects, instream flow negotiations, irrigation system improvements, mainstem Columbia action, and monitoring.

Closing, Mr. Conley suggested giving the regions more time to speak.

### Item 12: 2021 Grant Round, Board Funding Decisions

**Marc Duboiski** presented the funding decisions.

**Middle Columbia River Salmon Recovery Region**

**Motion:** Move to approve $1,876,000 for the Middle Columbia Salmon Recovery Board Regions shown in Attachment 6 of the 2021 Funding Report, dated September 2021. This amount includes $562,800 of funding for projects in the Klickitat County Lead Entity.
**Moved by:** Member Endresen-Scott
**Seconded by:** Member Cottingham
**Decision:** Approved

**Washington Coast Salmon Partnership Region**

**Motion:** Move to approve $1,914,000 for projects and project alternates on the Coastal Region ranked lists, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.
**Moved by:** Member Cottingham
**Seconded by:** Member Sullivan
**Decision:** Approved

**Upper Columbia Salmon Recovery Region**

**Motion:** Move to approve $2,062,000 for projects and project alternates on the Upper Columbia Region ranked lists, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.
**Moved by:** Member Endresen-Scott
**Seconded by:** Member Cottingham
**Decision:** Approved

**Snake River Salmon Recovery Region**

**Motion:** Move to approve $1,688,000 for projects and project alternates on the Snake River Region ranked lists, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.
**Moved by:** Member Sullivan
**Seconded by:** Member Endresen-Scott
**Decision:** Approved

**Puget Sound Salmon Recovery Region**

**Motion:** Move to approve $6,824,487 in SRFB funds for projects and project alternates on the Puget Sound Region ranked lists, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.
**Moved by:** Member Cottingham
**Seconded by:** Member Sullivan
**Decision:** Approved

**Northeast Washington Salmon Recovery Region**

**Motion:** Move to approve $380,000 for projects on the Northeast Region ranked list, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.
**Moved by:** Member Sullivan
**Seconded by:** Member Cottingham
**Decision:** Approved

**Lower Columbia Salmon Recovery Region**

**Motion:** Move to approve $4,000,000 for projects and project alternates on the Lower Columbia Region ranked list, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021. This amount includes $108,000 of funding for projects in the Klickitat County Lead Entity.
**Moved by:** Member Endresen-Scott
**Seconded by:** Member Sullivan

**Decision:** Approved

**Hood Canal Salmon Recovery Region**

**Motion:** Move to approve $1,255,512 in SRFB funds for projects and project alternates on the Hood Canal Region, ranked list, as shown in Attachment 6 of the 2021 Salmon Recovery Grant Funding Report, dated September 2021.
**Moved by:** Member Sullivan
**Seconded by:** Member Endresen-Scott
**Decision:** Approved

Before closing the meeting, a resolution was read on behalf of **Member Stephen Bernath**, who has served on the SRFB for many years.

**Motion:** Adopt a resolution of recognition for Member Stephen Bernath
**Moved by:** Member Endresen Scott
**Seconded by:** Member Cottingham
**Decision:** Approved

**ADJOURN: Meeting adjourned at 1:12pm.**

The meeting adjourned at 1:12 PM.

The next meeting will be December 1-2, 2021 online. Subject to change considering COVID.

Approved by: