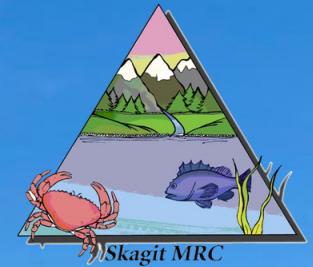


Skagit County

MARINE RESOURCES COMMITTEE



2023 Annual Report



2023 Salish Sea Stewards Class
Photo: Sara Brostrom



This project has been funded wholly or in part by the United States Environmental Protection Agency under Assistance Agreement CE01J65401 to Puget Sound Partnership. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.



MISSION STATEMENT

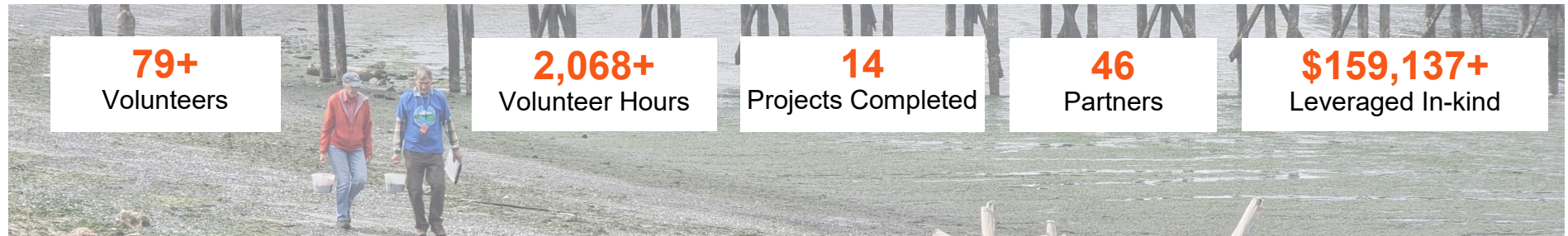
“Skagit Marine Resources Committee acts as a catalyst for the protection and restoration of the marine waters, habitats and species of Skagit County to achieve ecosystem health and sustainable resource use”

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YEAR IN REVIEW: 2023

This report highlights the Skagit Marine Resources Committee's (MRC) accomplishments and demonstrates the multiple collaborations and partnerships, shared resources and in-kind support, and how a solid base of trained volunteers has a greater collective impact in protecting and improving the health of the Salish Sea.



SKAGIT COUNTY MARINE RESOURCES COMMITTEE MEMBERS

MRC members are volunteers appointed by the Board of Skagit County Commissioners as stakeholders of the marine environment representing a broad spectrum of community interests including tribal, government, economic, recreational, conservation, and scientific. The MRC identifies local priorities and carries out projects that help restore and protect the marine environment. Skagit MRC is administered under the Natural Resources Division of Skagit County Public Works.



Kevin Anderson
Port of Anacortes



Lynne Wenberg-
Davidson
Skagit Land Trust



Jude Apple
Padilla Bay NERR



Darla Gay Smith
Sport Fishing



Paul Dinnel
Marine Scientist
(Retired)



Diane Hennebert
City of Anacortes
Stormwater



Pete Haase
Citizen-at-Large



Betsy Stevenson
MRC Chair
Skagit County
Planning Dept.



Catey Ritchie
Swinomish Tribal
Community



Matt Castle
Samish Indian
Nation, DNR



Tracy Alker
Skagit MRC Staff
Skagit County
Public Works



MRC members contributed over

866 Volunteer Hours

DID YOU KNOW?

MRC meetings occur the second Thursday each month from 9am-11am and are open to the public. For more information, contact Tracy Alker at tracya@co.skagit.wa.us

NORTHWEST STRAITS INITIATIVE

Congressionally authorized in 1998, as part of a collaborative grassroots effort to protect and restore the marine environment

Three partner entities established under the Initiative



- Provides MRC base-funding, training and technical support.
- Facilitates regional projects and collaboration for MRCs.

7 Marine Resources Committees



- 7 county-based Marine Resources Committees.
- Grassroots collaboration representing diverse interest groups that serve as advisors to local government.
- Identify and carry out local priority projects that protect and restore marine resources.



- Nonprofit arm to leverage additional financial resources to support the work of the initiative.
- Manages large regional projects like derelict fishing gear removal and nearshore restoration.

2023 SKAGIT MRC FUNDING SOURCES



PUGET SOUND
PARTNERSHIP

= \$29,000



DEPARTMENT OF
ECOLOGY
State of Washington

= \$65,000



= \$131,360



Clean Water Funds
(In-Kind)

= \$66,280

TOTAL FUNDING

= \$291,640



Beach Seining Demonstration
Photo: Darla Gay Smith

Did You Know?

This event is planned, coordinated, and carried out almost entirely by a team of amazing volunteers. This event wouldn't happen without them!

Fidalgo Bay Day

MRC Budget: \$2,500

MRC Project Lead: Darla Gay Smith

Partners: Samish Indian Nation & Friends of Skagit Beaches & the other 40 participating organizations and businesses

Fidalgo Bay Day is Skagit MRC's signature annual educational event since 2004, featuring interactive environmental educational booths, a beach seining demonstration, a touch tank with living marine creatures, kid friendly craft tables, face painting, and complimentary samples of fresh local seafood. The event is hosted at the Samish Indian Nation's Fidalgo Bay Resort. In 2023, Samish Indian Nation Chairman, Tom Wooten presented an inspirational welcome and song with Samish drummers. Corra the Selkie inspired kids and families to take action in protecting the marine environment.

63

Volunteers

900

Volunteer Hours

42

**Organizations
& Businesses**

350+

**Community
Attendees**



Shannon Point Marine Center's Touch Tank
Photo: Kathy Carroll



2023 Salish Sea Stewards
European Green Crab Class
Photo: Sara Brostrom

Did You Know?

The Salish Sea Stewards Advisory Committee helps guide and support the program. Members include Salish Sea Steward volunteers, Padilla Bay staff, MRC members and MRC staff.



2023 Salish Sea Stewards
Bowman Bay Restoration Class
Photo: Sara Brostrom



Salish Sea Stewards

MRC Budget: \$41,000

MRC Project Lead: Darla Gay Smith

Partner: Padilla Bay National Estuarine Research Reserve (PBNERR)

40 hours of FREE training to community members interested in learning about the marine environment and the different volunteer opportunities with local environmental organizations. Program participants pledge 40 volunteer hours.

Classes, including hands-on field training, are taught by local experts on a variety of topics impacting the Salish Sea.

Salish Sea Steward alumni are kept informed and engaged through social educational events and volunteer opportunities in the electronic news bulletin, "TheWAVE" and Facebook.

31

Presenters

14

Organizations

11

Classes

44

Training Hours

26

New volunteers

300+

**Total
Volunteers**

47,000+

Volunteer Hours since 2014



2023 Salish Sea Stewards
Photo: Sara Brostrom



Conway Middle School
Fidalgo Bay Beach Seining
Photo: Annie England



Sedro-Woolley 6th Grade
Bay View Mudflat Safari
Photo: Annie England

Did You Know?

Volunteer support is a critical aspect of the Kids on the Beach program. Volunteers are trained on data collection methods and working with students.

Kids on the Beach

MRC Budget: \$13,000

MRC Project Leads: Jude Apple & Pete Haase

Partner: Padilla Bay National Estuarine Research Reserve (PBNERR)

The Kids on the Beach program is designed to engage middle-school students in a variety of hands-on authentic marine research in the classroom and on the beach that generates useful scientific data.

2023 Spring Program: 75 6th grade students from Sedro-Woolley engaged in mudflat investigations at Bay View State Park.

2023 Fall Program: 40 8th grade students from Conway Middle School participated in forage fish egg sampling and beach seining for fish abundance and diversity at the Fidalgo Bay Resort.

115

6th & 8th Grade Students

2

Schools

12

Volunteers

53

Volunteer Hours



Conway Middle School Student
Forage Fish Eggs
Photo: Annie England



Did You Know?

Skagit MRC member Pete Haase was instrumental in getting the project rolling and helped train students on the protocols

Photo: The Salish Sea School

Forage Fish Internship

MRC Budget: \$2,000

MRC Project Lead: Pete Haase

Partner: The Salish Sea School

Three interns, grades 7th-12th participated in forage fish research to explore careers in marine science and learn more about the entire marine ecosystem, including the importance of forage fish.

The project focused on surf smelt spawning trends along the Fidalgo Bay RV Park beach at three locations with varying degrees of shade. Students rotated between different data collection activities. Results: egg presence was consistently higher in the fully shaded site compared to the other two sites that were less shaded.

3

7th, 8th, 12th
Grade Students

3

Sample Sites

3

Data Collection
Activities



Photo: The Salish Sea School

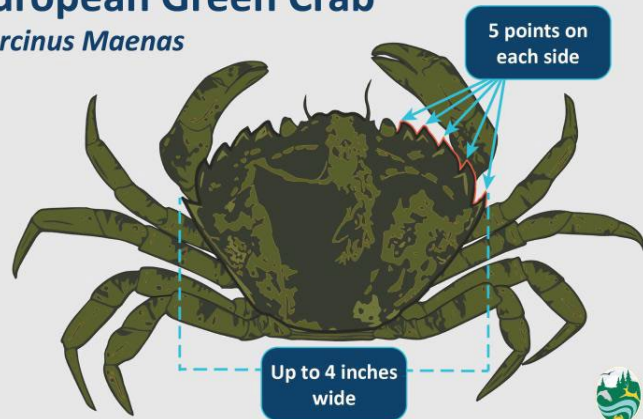


Photo: Leah Robinson

2023 NWSC/WCC Crew Trapping EGC at Samish

European Green Crab

Carcinus Maenas



Did You Know?

The best way to identify EGC is by the five spines on either side of their eyes. Color is not a good way to identify these crabs, as they can be green, red, brown or orange.



Photo: Jeff Adams, Padilla Bay

European Green Crab Outreach

MRC Budget: \$2,000

MRC Project Lead: Lynne Wenberg-Davidson

Partners: Northwest Straits Commission (NWSC), Washington Dept of Fish and Wildlife (WDFW), Washington SeaGrant, PBNERR, Samish Indian Nation, Taylor Shellfish, Washington Dept of Natural Resources (WDNR), and the Swinomish Indian Tribal Community.

The invasive European Green Crab (EGC) poses a threat to native crabs, clams, and oysters and can negatively impact nearshore ecosystems. MRC volunteers help monitor EGCs at various sites throughout Skagit County. EGCs were first detected in Padilla Bay in 2016, and Samish Bay in 2019.

As part of a collaborative effort to increase awareness of the EGC issue, Skagit MRC mailed EGC outreach packets to 505 shoreline landowners along Chuckanut, Edison, Samish and Padilla Bays where there has been an increased detection of EGC.

EGC outreach materials were also distributed at community events like Fidalgo Bay Day and Festival of Family Farms at Taylor Shellfish in Bow. In addition, the MRC created a EGC plinko game to help increase engagement at these special events.

If you think you have found a green crab or molt within Skagit County, please take a photo and report it using the form on this web page: <https://wdfw.wa.gov/greencrab>. Do not kill or remove any suspected EGC from the beach. Under state law it is illegal to possess a live or dead EGC.

505

EGC Outreach Letters Mailed

9

Partners

9

Volunteer Hours



NWSC staff demonstrating EGC Plinko Game at Fidalgo Bay Day

Mt. Erie School Rain Garden

MRC Budget: \$0

MRC Project Lead: Diane Hennebert

Partners: Northwest Straits Foundation (NWSF), City of Anacortes, Mt. Erie Elementary School

A collaborative project funded by the HF Sinclair Corp Refinery in Anacortes through a grant awarded to the NWSF in 2022. MRC member Diane Hennebert was the Project Lead. The City constructed the rain garden and installed interpretive signage. Mt. Erie Elementary School students and refinery volunteers helped plant the rain garden.

In 2023, MRC member Diane Hennebert developed the rain garden curriculum with the Skagit Watershed Council's Drain Ranger Program that included hands-on stormwater science activities for students and a demonstration of how rain gardens work. It was presented to two classes at the school. Received lots of positive feedback!



Mt. Erie School Rain Garden
Photo: Diane Hennebert

Did You Know?

Rain gardens filter out pollutants and help prevent rainstorm runoff from carrying pollutants into our waterways. They also provide important habitat for pollinators.

School rain gardens can be used as educational tools in schools to teach students about stormwater issues.



MRC member Diane Hennebert
Demonstrates How Rain Gardens
Work

Photo: Holli Watne



Students compared runoff results of three models with varying levels of stormwater treatment with pollutants that might be found on school grounds.



15
Attendees

2023 Shore Friendly Workshop at Seafarers Park, Anacortes
Photo: NWSF

Shore Friendly Workshop

MRC Budget: \$5,000

MRC Project Lead: Betsy Stevenson

Partner: Northwest Straits Foundation (NWSF)

Shore Friendly is a program that helps educate private shoreline landowners about coastal processes and protecting their property while reducing shoreline armoring. The program offers technical site visits to assist landowners in coming up with solutions for managing erosion concerns while protecting and restoring natural beach habitat on their own property.

In 2023, Skagit MRC partnered with the NWSF to cohost a Shore Friendly workshop for shoreline landowners in Skagit County on **Saturday, April 29** at Seafarers Park. The workshop focused on coastal processes, climate change/sea level rise, home relocation, and adaptations. Around 15 people were in attendance. Presentations were well-received and were followed by a beach walk. Many attendees recently experienced flooding during the January 2023 high tides and heavy rains and were interested in potential options.

Miscellaneous Collaborations

- **Culturally Responsive Elementary Science Teaching (CREST) WWU/Pacific Education Institute project**– MRC signed a letter of collaboration to provide support at teacher workshops and classroom field trips.
- **NWSC Derelict Vessel Work Group/Removal**— 3 MRC members participated. Identified and removed 2 derelict vessels in Skagit waters in 2023.
- **Senator Patty Murray's Visit to Lone Tree**– MRC shared project information in collaboration with Swinomish Indian Tribal Community and NWSC during visit with Senator Patty Murray.
- **Festival of Family Farms Event**– MRC hosted an outreach booth at this event to share project information in collaboration with partners: Taylor Shellfish, Skagit County Clean Water Initiative, and Northwest Straits Commission.

8
Volunteers

40+
Volunteer Hours



MRC Booth-Festival of Family Farms

Senator Patty Murray's Visit to Lone Tree

MRC Member Pete Haase discussed the MRC's Kids on the Beach program and our collaborative partnerships with Senator Patty Murray



Photo: NWSC



DID YOU KNOW?
Approximately 10,700 crab pots are lost annually. Most common cause is user error. Pots can fish up to 2.2 years! Over 142,000 harvestable crabs lost per year!

Photo: K. Antonellis

Derelict Crab Pot Removal

MRC Budget: \$41,000

MRC Project Lead: Darla Gay Smith

Partner: Northwest Straits Foundation (NWSF)

SW Samish Bay is an area known for high rates of crab pot loss. Conducted side scan sonar surveys and dive recovery operations to remove 216 derelict crab pots. 71% were commercial crab pots. High boat traffic is the most common cause of derelict pots in Samish Bay. Currents and depth are other factors. The next step is to work with commercial fleets and vessel traffic industry on a solution.

10

Recreational Crabber Outreach Posters Distributed

200

Recreational Crabber Outreach Rack Cards Distributed

9

Businesses Distributed Rack Cards

216

Derelict Crab Pots Removed

71%

Commercial Crab Pots

92%

Derelict Pots Returned, Recycled, or Reused

Clayton Beach Restoration

MRC Budget: \$50,000

MRC Project Lead: Paul Dinnel

Partners: Northwest Straits Foundation, State Parks, Whatcom MRC

This is part of a larger multi-phase/year project with multiple funding sources and partners with the NWSF as the Project Manager. The first phase of this collaborative project is to complete a feasibility study and conceptual design to restore 1,300 linear feet of shoreline and 9 acres of nearshore habitat along Clayton Beach. MRC members have been involved in site-visits, meetings with partners and elected officials, project planning and developing monitoring plans. MRC members will continue to be involved in monitoring, outreach, and community engagement activities as this project unfolds.



DID YOU KNOW?
Clayton Beach is highlighted as a priority restoration action in WRIA 1.

Clayton Beach nearshore habitat is degraded and impeded by riprap, pilings, and debris.

Photo: Tracy Alker



Photo: Josh Bouma, PSRF

Pinto Abalone Restoration

MRC Budget: \$21,000

MRC Project Lead: Paul Dinnel

Partners: Puget Sound Restoration Fund (PSRF), WA Department of Fish & Wildlife (WDFW), Seattle Aquarium, and Samish Indian Nation

Pinto Abalone Recovery is an ongoing collaborative effort between multiple partners. Skagit MRC has been involved in the pinto abalone recovery effort since 2014. The long-term goal is to rebuild a sustainable spawning population in Skagit County waters.

Since 2009, more than 19,500 hatchery-reared, genetically diverse, juvenile abalone have been introduced to 8 rocky reef sites in Skagit County waters. In 2023, 2 new sites established and 1,631 abalone outplanted to those new sites to increase densities. 11 new broodstock collected for hatchery production.

2

New outplant sites established in Skagit waters

1,631

Juvenile abalone outplanted to 2 new sites

19,500

Juvenile abalone outplanted to 10 sites since 2009

11

New broodstock collected

FUN FACT:

Pinto abalone (*Haliotis kamtschatkana*) is the only known species of abalone indigenous to the Salish Sea and is an important part of a healthy diverse marine ecosystem and a highly valued resource. Pinto abalone are currently listed as Endangered in Washington State waters and cannot recover without our help!



Photo: Josh Bouma, PSRF



Photo: Josh Bouma, PSRF



Volunteer Plant Maintenance at Bowman Bay
Photo: NWSF

Bowman Bay Plant Maintenance

MRC Budget: \$5,760

MRC Project Lead: Lynne Wenberg-Davidson

Partner: Northwest Straits Foundation (\$10,260 matching funds)

Shoreline plant maintenance at Bowman Bay is part of a larger collaborative restoration project of the Skagit MRC, NWSF, Deception Pass State Park, and Skagit Fisheries Enhancement Group that began in 2015. The project removed 540 feet of rock armoring, regraded the beach to match the natural contour, added beach nourishment material suitable for forage fish spawning, and enhanced the riparian area with native vegetation.

In 2023, Skagit MRC partnered with the NWSF to enhance and maintain the shoreline vegetation with additional planting, weeding, watering, compost and mulch. Weekly watering during the hot summer months made a huge difference in plant survivability.



State Parks Water Truck
Photo: NWSF

DID YOU KNOW?

Shoreline vegetation provides good habitat for insects, which are important prey for juvenile salmon, and protects the beach from erosion.



52 Volunteers	130+ volunteers Hours
175 Native Plantings	50yd³ Mulch & Compost

DID YOU KNOW?

The Olympia oyster, *Ostrea lurida*, is the only oyster native to the Pacific Coast of North America.

They were driven to near extinction in the late 1800s from over harvesting and severe water pollution.

Fun Fact: Just one Olympia oyster can filter up to 12 gallons of water a day! 3 million oysters can filter 36 million gallons a day!!



Photo: PSRF

Olympia Oyster Bay-wide Monitoring

MRC Budget: \$7,500

MRC Project Lead: Paul Dinnel

Partner: Puget Sound Restoration Fund (PSRF)

Since 2002, Skagit MRC has been working collaboratively with many partners and community volunteers to establish a sustainable Olympia oyster population in Fidalgo Bay.

Survival rate, growth, and natural recruitment have been deemed high and additional natural recruitment has been seen in Fidalgo Bay at areas outside the seed planting sites! Fidalgo Bay oysters are now used as broodstock to seed other restoration areas.

MRC volunteers conduct small scale oyster population surveys in Fidalgo Bay each year. Large-scale bay-wide native oyster population surveys take place every 5 years. The most recent bay-wide survey took place in 2023, conducted by the MRC in collaboration with PSRF and community volunteers.

The Olympia oyster population in Fidalgo Bay increased from around 50,000 in 2002 to an estimated 5.5 million oysters in 2023.

The next bay-wide survey will take place in 2028, depending on available funding.

2002
50,000
Olympia Oysters

2018
3 Million
Olympia Oysters

2023
5.5 Million+
Olympia Oysters



Scooping Sand to Look for Forage Fish Eggs
Photo: Pete Haase

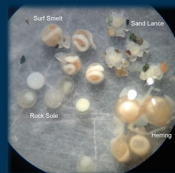


Surf Smelt Eggs Photo: Pete Haase

Did You Know?

Forage fish are an important food source for marine birds, salmon, mammals, and people.

Surf Smelt and Sand Lance beach spawning habitats are impacted by hard shore armoring and lack of shade.



Forage Fish Surveys

MRC Budget: \$0

MRC Project Lead: Pete Haase

Partners: WA Department of Fish & Wildlife (WDFW) & Northwest Straits Commission (NWSC), Northwest Straits Foundation (NWSF), Swinomish Indian Tribal Community

Forage fish surveys are 100% volunteer driven. This project wouldn't happen without volunteers.

3 WDFW Index Survey Sites: WDFW hosted training for MRC volunteers. Data collected to examine annual variations and potential trends in the forage fish spawning population. Eggs are processed and analyzed by WDFW.

- Ship Harbor/Guemes Channel
- NE Similk Bay
- SW Samish Island

2 Shoreline Restoration Survey Sites: Data collected monthly to analyze effectiveness of shoreline restoration projects on the forage fish spawning population. Data maintained by NWSF.

- Bowman Bay
- Kukutali Preserve

3 Fidalgo Bay Aquatic Reserve Survey Sites -WA Department of Natural Resources project, not an MRC project, but these surveys are supported and led by trained MRC volunteers.

Forage Fish Outreach/Education: Volunteers provide outreach during surveys. They also get requests to assist school groups with forage fish surveys.

247+

Volunteer Hours

8

Survey Sites

131

Samples

3,191

Eggs processed

2

School Groups Participated in a Forage Fish Survey





Bull Kelp Kayak Survey Team
Photo: Lynne Wenberg-Davidson

Did You Know?

An estimated 80% of the historic kelp beds in south Puget Sound have disappeared as far north as Snohomish County.

What Impacts Kelp?

- Pollution
- Shoreline development
- Climate change/Warming water temperatures
- Invasive seaweeds

Kelp Benefits

- Critical habitat for marine birds, marine mammals, fish, shellfish, etc.
- Important food source for sea urchins, abalone, kelp crabs, other invertebrates, fish, humans, etc.
- Reduces wave action/protects shorelines
- Produces oxygen
- Absorbs nutrients
- Reduces ocean acidification



Bull Kelp Kayak Survey
Photo: Ron Larsen

Bull Kelp Kayak Surveys

MRC Budget: \$0

MRC Project Lead: Lynne Wenberg-Davidson

Partners: Northwest Straits Commission (NWSC) & WA Department of Natural Resources (WDNR)

Skagit MRC volunteers have been involved in bull kelp kayak surveys since 2017. This project is 100% volunteer driven.

3 teams of experienced kayak volunteers survey 4 kelp beds each year from June-September.

- **Coffin Rocks** (appears to be increasing)
- **Shannon Point East** (no apparent trend)
- **Shannon Point West** (no apparent trend)
- **Biz Point** (appears to be increasing)

The NWSC developed the survey protocol and provides training and technical support to the MRCs. They also maintain the kelp data which is shared with planners and researchers.

The NWSC and MRCs are also involved in the development of the Kelp Recovery Plan: www.nwstraits.org/our-work/kelp-recovery

4
Kelp Beds
Surveyed

9
Volunteers

40+
Volunteer
Hours

THANK YOU!

The Skagit MRC relies heavily on the technical, financial, and administrative support of the Northwest Straits Commission, Northwest Straits Foundation, Puget Sound Partnership, U.S. Environmental Protection Agency, Skagit County Public Works Clean Water program and the Skagit County Board of Commissioners. The Skagit MRC's work is driven by our dedicated MRC members, the collaboration and shared resources of many partner organizations, and the hard work of our amazing volunteers. The MRC acknowledges that the land and waters where our work resides are the ancestral homelands of the Coast Salish people and have been since time immemorial. We would like to express our deepest gratitude to the Samish Indian Nation and the Swinomish Indian Tribal Community for their partnership and in-kind staff support for our MRC projects. Thanks to all of you for making a difference!!

