

Skagit County **MARINE RESOURCES COMMITTEE**

2015 Annual Report
October 1, 2014 — September 30, 2015

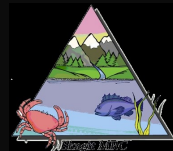


Photo: Rick Haley

A Message From the Skagit County Marine Resources Committee Chair



Jay Lind
Skagit MRC Chair

"The Skagit Marine Resource Committee strives to engage the public and foster stewardship through the Salish Sea Stewards / Beach Naturalists training program, shoreline landowner workshops and our annual Fidalgo Bay Day event. The graduates from the Salish Sea Stewards program have become valuable volunteers and play a critical role in the monitoring required for our beach restoration projects at Bowman Bay, March's Point and Shannon Point. We have also been working hard to restore and enhance our native shellfish populations by seeding Olympia oysters in Fidalgo Bay and planting pinto abalone around Allen, Burrows and Cypress Islands. The Skagit Marine Resources Committee has accomplished a lot of amazing work over the years and I look forward to continuing and expanding our efforts for many years to come"

Inside This Report

Overview

Skagit County Marine Resources Committee	1
2015 Skagit County MRC Members	1
Northwest Straits Initiative	1
Northwest Straits Commission	1
Northwest Straits Foundation	1

Funding

Financial History	2
Northwest Straits Initiative Funding Diagram	2
Northwest Straits Foundation Funding Support Chart	2
2015 Skagit MRC Funding Sources Chart	2
Northwest Straits Commission Funding Chart	2

2015 Skagit MRC Projects

2015 Skagit MRC Project Budget Table	3
Northwest Straits Initiative Benchmarks	3

Education and Outreach

Fidalgo Bay Day	4,5
Shoreline Landowner Workshops	5,6
Salish Sea Stewards	6,7
Beach Naturalists	7
Oil Spill Response and Preparedness Workshop	8
Ocean Health Forum	8
Skagit MRC Representation at Special Events	8

Marine Habitat Restoration

Bowman Bay Nearshore Restoration	9
Shannon Point Nearshore Restoration	4,5
Nearshore Restoration Monitoring	4,5

Sound IQ	9
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Marine Life Restoration

Pinto Abalone Restoration	13,14
Olympia Oyster Restoration	14

Annual Workplan	15
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Acknowledgements	16
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SKAGIT COUNTY MARINE RESOURCES COMMITTEE



Established in 1999, the Skagit County Marine Resources Committee (MRC) is one of seven citizen-based advisory committees formed under the congressionally authorized Northwest Straits Marine Conservation Initiative (NWSI). The three primary goals of the Skagit MRC include: 1) Restore the health of the local marine waters, habitats, and shorelines to sustainable levels; 2) Collect high quality data and promote its use and dissemination; and 3) Promote stewardship and understanding of Skagit County marine resources through education and outreach. The Skagit MRC works in collaboration with an expanding list of partners and volunteers for a greater collective impact.

Skagit MRC members are appointed by the Skagit County Board of Commissioners and represent diverse interest groups including: local government, tribes, Ports, environmental groups, marine scientists, industry, and sport and commercial fishing. Coordination and administrative support for the Skagit MRC is provided by the Water Resources Section of the Skagit County Public Works Department and is partly funded through the Clean Water Program. The Committee meets the second Thursday of each month from 9:00 a.m. to 11:00 a.m. Meetings rotate between Anacortes and Mount Vernon.

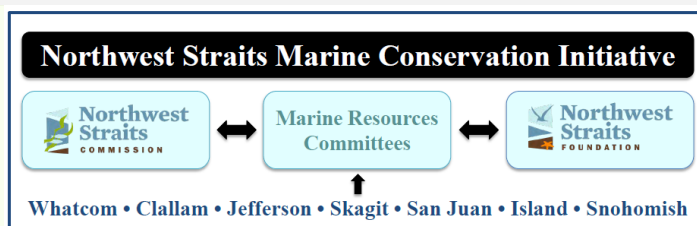
From October 1, 2014 to September 30, 2015 Skagit MRC members contributed over 1,166 volunteer service hours towards MRC operations and projects and non MRC volunteers contributed over 1,101 hours of volunteer services for a combined **2,267 volunteer service hours!**

To learn more: www.skagitmrc.org

MRC Member	Interest Group
Tracy Alker (Staff Support)	Skagit County Public Works
Julie Barber	Swinomish Tribe
Nate Biletznikoff	Shell Puget Sound Refinery
Morty Cohen	Concerned Citizen
Paul Dinnel	Marine Scientist
Jay Lind (Chair)	Sports & Commercial Fishing
Liz Lovelett	City Of Anacortes
Kari Odden	Skagit Land Trust
Jamey Selleck (Vice Chair & NWSC Rep)	Marine Ecologist
Betsy Stevenson	Skagit County Planning Dept
Sara Tchang	Port of Anacortes
Todd Woodard	Samish Indian Nation

Northwest Straits Marine Conservation Initiative

The United States Congress authorized the Northwest Straits Marine Conservation Initiative (NWSI) in 1998 to restore and protect marine resources of the Northwest Straits. The Initiative is a coordinated effort that combines sound science with grassroots consensus building to protect and restore marine waters, species and habitats of the Northwest Straits.



Northwest Straits Commission (NWSC):

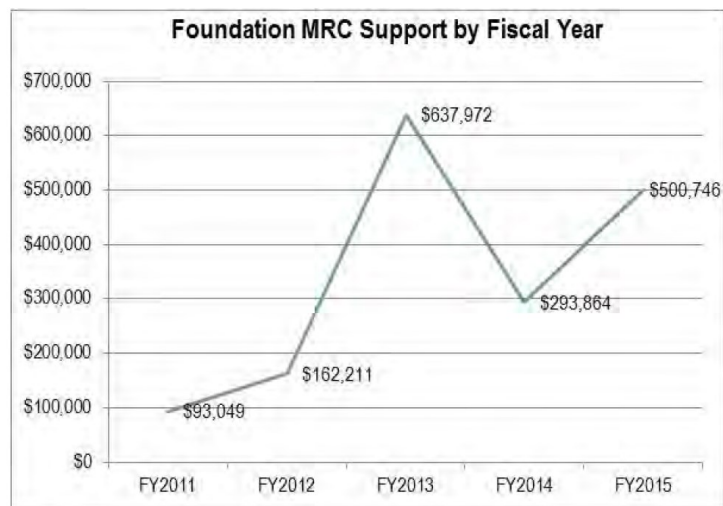
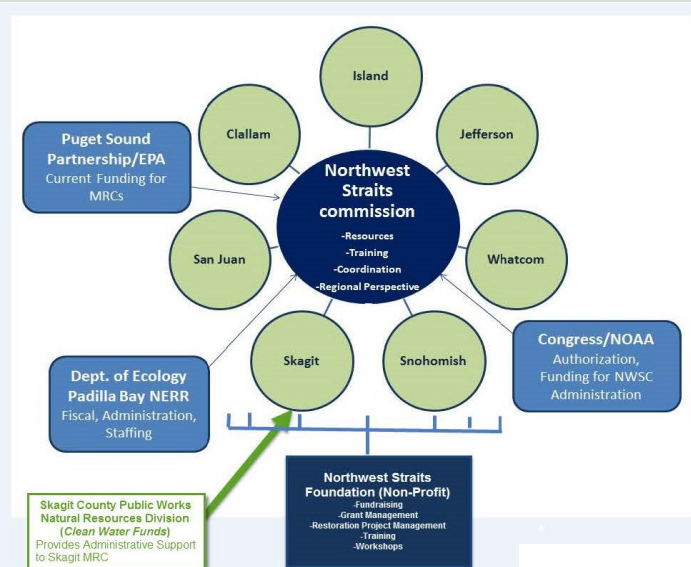
Serves as a "board of directors" for the NWSI. The NWSC is comprised of five gubernatorial representatives, one tribal representative appointed by the Secretary of the Interior, and one representative from each of the seven Marine Resources Committees (MRCs). The NWSC provides base funding for the operations and action projects of the MRCs. The NWSC also provides technical assistance, tools, resources, training and coordination among MRCs, and integrates work with a regional focus. The NWSC has four full time staff. The NWSC holds an annual training conference each year for all MRC members. To learn more: www.nwstraits.org.

Northwest Straits Foundation (NWSF):

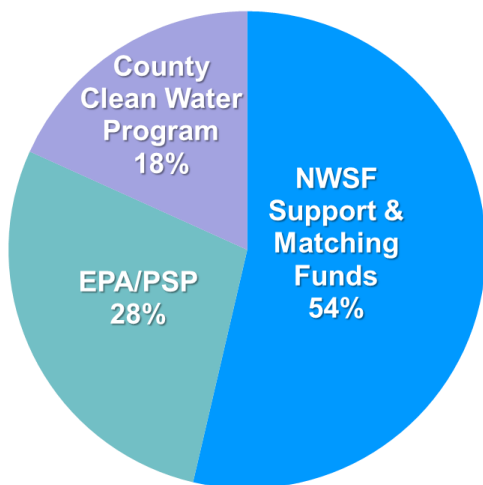
Serves as the non-profit extension of the Initiative. The NWSF works with the MRCs to identify and pursue additional funding from public and private sources to help leverage support for MRC priority projects and supplement the core federal support for MRCs, manages the state-wide derelict fishing gear removal program, manages large restoration projects, and restoration-related workshops and training. To learn more: www.nwstraitsfoundation.org.

Financial History

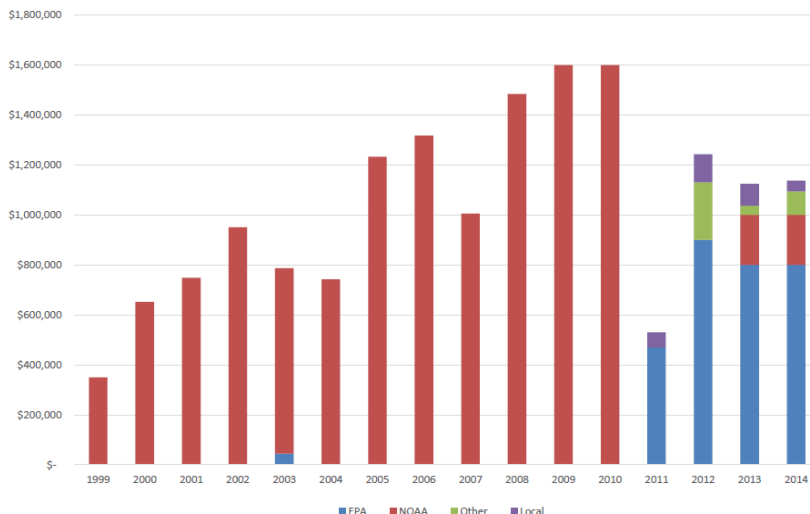
Up until 2012, the NWSI received funding through an annual federal appropriations bill. This funding was directed to the NWSC through the National Oceanic and Atmospheric Administration (NOAA) and allocated to each MRC through an annual grant that enables them to carry out their activities. Grant amounts ranged from \$10,000 - \$150,000. Unfortunately, these earmark accounts are no longer available. Since 2013, the NWSC received approximately \$70,000 grant funding annually for each of the MRCs from the United States Environmental Protection Agency through the Puget Sound Partnership. Skagit MRC operations/administration is also supported by the Skagit County Public Works Clean Water funds. Several MRC projects are also supported under other various grants and funding administered by the Northwest Straits Foundation (NWSF) including the Skagit Restoration Initiative (SRI) funds. SRI funds are part of a Natural Resources Damages Settlement payment from Kimberly-Clark for the former Scott Paper Mill Site in Anacortes. Starting in 2009, the NWSF received \$500,000 over a 5 year period for restoration projects in Fidalgo and Padilla Bays. The Skagit MRC selects and prioritizes projects and provides oversight into how the SRI funds are managed. Per recommendation of the Skagit MRC, project proposals for SRI funding require a 1:1 match. Some of the projects funded with SRI funds include: East March's Point groin removal, Fidalgo Bay Underwater Surveys, W. March's Point Beach Nourishment, Weaverling Spit Restoration, Olympia Oyster Restoration, Padilla Bay Tidelands Purchase, NW March's Point Beach Nourishment, and Fidalgo Bay Nearshore Monitoring.



Skagit MRC 2015 Funding Sources



Northwest Straits Commission funding



SKAGIT MRC PROJECTS

The Skagit County Marine Resources Committee (MRC) selects projects based on specific local prioritized needs guided by sound science, the Skagit MRC Five Year Strategic Plan, Performance Benchmarks set by the Northwest Straits Marine Conservation Initiative (NWSI), and the Puget Sound Partnership's Action Agenda. Most of the projects and activities in this report were federally funded wholly or in part by the United States Environmental Protection Agency via the Puget Sound Partnership grant agreement SEANWS-2014-SkCoPW-00003 administered through the Northwest Straits Commission. The WA Department of Ecology is the fiscal agency.

Projects	MRC Project Lead	2015 NWSC Grant (EPA/PSP)	Other Funding	NWSI Performance Benchmarks (Primary)	NWSI Performance Benchmarks
Operations	Tracy Alker	\$13,500	\$47,382 Clean Water Funds		<p>■ Marine Habitats <i>Protect and re-store marine, coastal and near-shore habitats, prevent loss and achieve a net gain of healthy habitat.</i></p> <p>■ Marine Life <i>Protect and re-store marine populations to healthy sustainable levels.</i></p> <p>■ Marine Water Quality <i>Protect marine water quality of the Northwest Straits region, and restore the health of marine waters.</i></p> <p>■ Sound Science <i>Collect high quality data and promote its use and dissemination.</i></p> <p>■ Education/ Outreach <i>Promote stewardship and understanding of Northwest Straits' marine resources through education and outreach.</i></p>
Fidalgo Bay Day	Kari Odden	\$2,500	~\$2,626 Donations and In-kind support leveraged from 10 businesses and organizations	■	
Shoreline Landowner Workshop	Betsy Stevenson	\$11,000	NWSF received WDFW & Natural Resources & Nearshore Grant funding for a social marketing consultant & an additional workshop and site visits in 2016	■	
Salish Sea Stewards /Beach Naturalists	Morty Cohen	\$18,000	-	■	
Oil Spill Response & Preparedness Workshop	Tracy Alker/ Jay Lind	\$0	NWSF attained a \$60,00 grant from DNR to conduct oil spill workshops in six MRC counties. (Two workshops in each county)	■	
Ocean Health Forum	Tracy Alker/ Jay Lind	\$0	NWSC attained funding through NOAA to host Ocean Health Forum in all seven MRC counties.	■	
Skagit MRC Representation at Special Events	Tracy Alker/ Volunteers	Funding from MRC Operations budget for MRC display/ game updates	-	■	
Bowman Bay Nearshore Restoration	Jay Lind	\$10,000	\$51,820 NWSF grant from EPA/ ESRP	■	
Shannon Point Nearshore Restoration	Paul Dinnel	\$0	\$160,000 NWSF grant from DNR for construction. Seeking additional funding for construction. Ecology and USFWS grant for permitting and final design.	■	
Nearshore Restoration Monitoring	Jamey Selleck	\$2,400	\$15,000 SRI funds for monitoring in Fidalgo Bay for next 3 years. Samish Indian Nation received a grant for beach seining in Fidalgo Bay	■	
Sound IQ	Betsy Stevenson	\$3,000	-	■	
Pinto Abalone Restoration	Paul Dinnel	\$12,600	WDFW & DNR funding for additional abalone hatchery management and outplanting	■	
Native Oyster Restoration	Paul Dinnel	\$0	SRI funds, \$2,000	■	
Total		\$73,000			

FIDALGO BAY DAY

Skagit MRC 's twelfth annual Fidalgo Bay Day event took place Saturday, August 29, 2015 at the Samish Indian Nation's Fidalgo Bay Resort. The purpose of this free educational event is to help increase public awareness of the marine environment and foster environmental stewardship. Visitors learn about the marine ecosystem and the plants and animals that live there. They also learn steps they can take to protect the waters of Fidalgo Bay and the larger Salish Sea.

Despite having to cancel some of the activities due to the bad weather and power outage, the event was a huge success. We had over 250 visitors this year! The opening ceremony was led by the Samish tribal member Rosie Cayou-James. This year's event was dedicated in memory of former MRC member Ric Boge. A certificate was presented to the Boge family in recognition of the wonderful work Ric did as a steward of the Salish Sea. For the third year, the Skagit MRC collaborated with Friends of Skagit Beaches to combine Fidalgo Bay Day and National Estuaries Day into a shared event with both indoor and outdoor activities. Some of the fun activities included:

- Interactive displays and games from many participating organizations with similar goals. Skagit MRC games included: the Forage Fish Food Web Bean Bag Toss Game and the Stormwater Putt Putt Game. We also had a hands-on ocean acidification science activity and marine invertebrate and seaweed identification card hand-outs. Our display also included interactive nearshore restoration posters.
- Educational videos: "Maiden of Deception Pass" and the Northwest Straits Foundation's Derelict Gear Video (videos were *canceled due to power outage*)
- Children's art activities : button making, fish prints, face painting, eelgrass mobile
- Marine life touch tank from the Shannon Point Marine Center
- Beach seining demonstration with marine biologist, Dan Pentilla
- Guided beach walks to look for forage fish eggs
- Canoe rides in a beautiful longboat by the Samish Tribe (*canceled in 2015 due to strong winds*)
- Free samples of grilled shellfish and seafood chowders and a no-host traditional tribal salmon BBQ lunch

This event was made possible through the support, teamwork and collaboration of our many partners, 19 participating organizations and 50 volunteers who contributed over 400 hours of volunteer services. Many thanks to our event planners and leaders including: MRC member Kari Odden who did a fantastic job of planning and coordinating this year's event. And the "behind the scenes" planning team: Tracy Alker, Catherine Buchalski, Adam Lorio, Sue Ehler, Lin Folsom, Wayne Huseby, Bob Weathers, Betty Carteret. **THANK YOU!!!**

Project Profile

MRC Budget: \$2,500
NWSC grant from the EPA/PSP

MRC Project Lead: Kari Odden

Other Funding: \$48
Clean Water Funds.
Over \$2,000 donated food, supplies, services

Partners:

- * Samish Indian Nation
- * Coastal Volunteer Partnership
- * Friends of Skagit Beaches
- * Shannon Point Marine Center
- * Many others.....

Goals:

- * Increase awareness of the marine environment
- * Foster stewardship
- * Celebrate Fidalgo Bay

Accomplishments:

- * Over 250 visitors
- * 19 participating organizations
- * Over 50 volunteers
- * Over 400 volunteer hours



Opening Ceremony



Making fish prints during the power outage



Getting a close encounter with marine critters in the touch tank

Fidalgo Bay Day continued from page 6.....



Beach Seining Demonstration

A special thanks also goes to: Mary Ann's Kitchen, Adrift, and Johnny Picassos for providing free samples of local chowders, Taylor Shellfish for providing free samples of oysters and clams, Gere-A-Deli for donating free brownies, the Anacortes Boys and Girls club for lending their popcorn machine so that we could offer free bags of popcorn, the Northwest Straits Foundation for purchasing lunches for our volunteer event planners and presenters, and the Samish Indian Nation for providing the facility, opening ceremony, and the delicious traditional no-host barbequed salmon lunch. To see the full Fidalgo Bay Day report go to the Skagit MRC website: www.skagitmrc.org.



**Paul Dinnel
Preparing
Shellfish**

SHORELINE LANDOWNER WORKSHOPS

Recent data and mapping show that 27% of Puget Sound's shorelines are armored and there has been a trend of installing one mile of new armoring each year. In order to reverse that trend, the NWSF and several Marine Resources Committees are working together to educate shoreline property owners across the region and provide them with the information and tools necessary to make different management decisions regarding erosion on their properties. It is anticipated that long-term outcomes will be achieved as property owners make informed decisions for management of their shoreline properties and implement those choices over time. This will result in preservation and restoration of nearshore sediment source supply and important nearshore habitats that serve a variety of species, including shellfish and other marine invertebrates, endangered salmonids, surf smelt, sand lance, eulachon, and the species that depend upon them within the marine food web.

In 2015, Skagit MRC partnered with the NWSF to host a workshop to educate shoreline landowners on shoreline processes, the potential impact of bulkheads on nearshore ecology, alternatives to bulkheads for protecting and enhancing properties, and how to better manage their land through use of native vegetation and improved and appropriate drainage.



Project Profile

MRC Budget: \$11,000 NWSC grant from the EPA/PSP

Other Funding: NWSF grant from WDFW & Natural Resources / Nearshore

Partners:

- * Northwest Straits Foundation

Goals:

- * Provide at least one shoreline landowner workshop to bring awareness of the impacts of shoreline armoring and identify alternative solutions

Accomplishments:

- * Provided a free 3 hour workshop to shoreline landowners
- * 55 shoreline landowners attended the workshop
- * 4 site visits on Samish Island from a coastal geologist
- * 4 site visits on Guemes Island from a coastal geologist

Shoreline Landowner Workshops continued from page 5.....



Weaverling Spit Beach Enhancement

The workshop was held on Saturday, March 14, 2015 at the Samish Indian Nation's Fidalgo Bay Resort. The three hour workshop taught by Jim Johannessen of Coastal Geologic Services, included classroom and field elements that focused on shoreline processes and erosion – the issue repeatedly identified as the greatest concern by shoreline property owners. The workshop provided an excellent overview of marine shoreline processes, habitat values of the shoreline areas and examples of various enhancement and protection projects that address erosion, as well as provided specific examples of alternative soft shore protection methods and their application and performance over time. The outdoor portion of the class provided an excellent opportunity to point out the recent shoreline restoration work at Weaverling Spit by the Samish Indian Nation in partnership with Skagit MRC. The project site included soft shore stabilization design alternatives and an opportunity to see the impacts of hardshore armoring.

As a follow-up to the workshop, property owners were invited to apply to receive a free site visit from a qualified professional to obtain site specific management recommendations regarding erosion concerns. Several site visits were held on Samish Island and Guemes Island along one stretch of shoreline where multiple property owners were represented. These groups had a strong interest in trying to remove armoring or improve habitat where feasible. Unfortunately, most have minimal setbacks so their options were limited.

SALISH SEA STEWARDS

The Salish Sea Stewards volunteer training program was first initiated by the Skagit MRC in 2014. The purpose of the training was to help increase awareness of the marine environment, foster stewardship, and build a strong base of citizen scientists to support Skagit MRC and other partner organizations. In 2015, Skagit MRC continued to build on and enhance the Salish Sea Stewards program. Skagit MRC contracted with the Padilla Bay Foundation to hire a volunteer coordinator for the newly established Coastal Volunteer Partnership (CVP) to recruit, train, and coordinate volunteers. The CVP is a collaborative partnership between the Padilla Bay Foundation, Padilla Bay National Estuarine Research Reserve, the Friends of Skagit Beaches and the Skagit County Marine Resources Committee who share similar goals and needs for volunteers.

In 2015, 25 new volunteers completed the 40 hour Salish Sea Stewards training program that consisted of classroom and field training for citizen scientists.



*Salish Sea Stewards
Class of 2015*

Project Profile

MRC Budget: \$18,000 NWSC grant from the EPA/PSP

Partners:

- * Coastal Volunteer Partnership

Goals:

- * Increase public awareness of the marine environment, foster stewardship, and build a strong base of citizen scientists to support Skagit MRC and partner projects.

Accomplishments:

- * 40 hours of free professional training for citizen scientists
- * Trained 25 new volunteers
- * Over 950 hours of volunteer service

Salish Sea Stewards continued from page 8.....

The classes were taught by qualified experts and covered marine science related topics, current issues impacting the Salish Sea, and priorities of the Skagit MRC and the NWSC. Volunteers who completed the training program were asked to commit at least 50 hours of volunteer services within one year. Within a five month period, the 25 new Salish Sea Stewards contributed a combined total of over 950 hours of volunteer service toward MRC and partner projects. Over 445 hours of volunteer services were contributed just towards Skagit MRC projects alone (not including Fidalgo Bay Day).



BEACH NATURALISTS

Most people are unaware that some of their recreational activities at the beach can result in the destruction of habitat and mortality of the intertidal organisms. Much research has shown that a deeper understanding of biology, habitat and human impacts moves people to make healthier choices in their behavior in natural settings. Skagit MRC recognized the need to have trained beach naturalists at the beach to educate visitors about local intertidal marine life and what they can do to reduce recreational impacts.

In 2015, Skagit MRC contracted with the Coastal Volunteer Partnership at Padilla Bay to train and coordinate Beach Naturalists and schedule several interpretive programs at Sunset Beach, Washington Park in Anacortes throughout the summer.

A team of six Beach Naturalists completed the three hour interpretive training and contributed over 70 volunteer hours. They shared their passion for the marine environment with over 200 visitors through a series of nine interpretive programs at the beach during low tides. The programs were tailored to engage citizens of all ages and promote personal connections to the marine environment that will hopefully last a lifetime.

A "Naturalist Display Table" was assembled for the interpretive programs which included: a Beach Naturalist banner, reference ID cards and books for algae and invertebrates, a shell display, a marine debris display, and other related educational materials. In addition, the Shannon Point Marine Center brought their touch tank aquarium to two of the interpretive programs.

Beach goers seemed very excited to have knowledgeable Naturalists present at the beach. Many expressed interest in future interpretive programs.



Project Profile

MRC Budget: Part of the Salish Sea Stewards \$18,000 budget

Partners:

- * Coastal Volunteer Partnership
- * City of Anacortes
- * Shannon Point Marine Center

Goals:

- * Increase public awareness about intertidal habitats and marine life
- * Educate beach goers on how to reduce recreational impacts and become better stewards of the marine environment

Accomplishments:

- * 3 hour interpretive training
- * 6 trained Beach Naturalists
- * 9 interpretive programs at Washington Park
- * 70 volunteer service hours
- * 200 contacts with beach visitors

OIL SPILL RESPONSE & PREPAREDNESS WORKSHOP

Skagit MRC and the Northwest Straits Foundation co-hosted the Oil Spill Response & Preparedness workshop on February 25, 2015 at the Padilla Bay Research Reserve. The workshop was designed especially for elected officials, emergency managers, and other public officials involved in emergency preparedness and response coordination. The purpose was to provide an overview of Washington State oil spill prevention, preparedness and response framework; clarify roles and responsibilities of federal, tribal, state, and local officials and managers and potential responsible parties during oil spill response; and understand oil by rail safety issues. Over 20 people attended the workshop including four MRC members. Jay Lind (MRC Chair and NWSF board member) provided opening remarks on behalf of the Skagit MRC and NWSF. Presenters at the workshop included representatives from the WA Department of Ecology, the US Coast Guard, the WA Department of Fish and Wildlife, the BP Refinery, and the Burlington Northern Santa Fe Railway. The workshop was Federally funded through a grant awarded to the Foundation.



OCEAN HEALTH FORUM

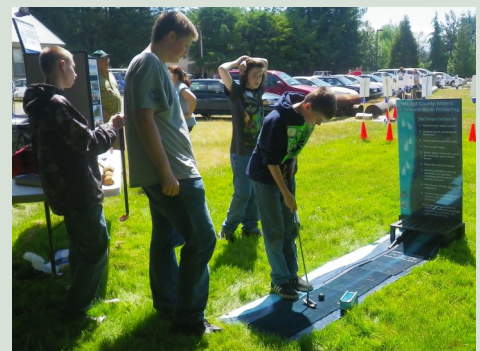
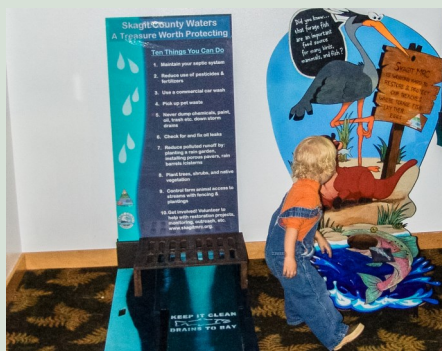
Skagit MRC and the NWSC co-sponsored the Ocean Health Forum on June 11, 2015. The forum was free and open to the public. The main focus was on ocean acidification and how it is impacting us locally. MRC Chair Jay Lind was the moderator for the event and MRC member Christine Woodward served on the panel. Presenters included: Dr. Brooke Love, the Shannon Point Marine Center "How are Changes in Ocean Chemistry Affecting Sea Life in Puget Sound?"; Christine Woodward, Samish Indian Nation and the Skagit MRC "Effects of Ocean Acidification on a Coast Salish People"; Bill Dewey, Taylor Shellfish Farms "How is Ocean Acidification impacting the Local Shellfish Industry?"; and Ginny Broadhurst, Northwest Straits Commission "Ocean Acidification: What's Being Done Here in Puget Sound?" A question and answer period followed the presentations. Around 18 people attended the event.



SKAGIT MRC REPRESENTATION AT SPECIAL EVENTS

The Skagit MRC display was updated with new project posters and two fun games: forage fish food web bean bag toss game and the stormwater puttputt game. The games are a great way to initiate conversations about the issues impacting the Salish Sea, the work of Skagit MRC, and what individuals can do to help.

Volunteers hosted the Skagit MRC display and games at several events including: the MRC Conference, the Padilla Bay Watershed Homeowners Workshop, the Friends of Skagit Beaches Shoreline Academy, the Anacortes Waterfront Festival, the Mount Vernon High School Science Night, the Clean Samish Initiative Open House Celebration, Shoreline Landowner Workshop, NWSI Derelict Gear Removal Celebration, Fidalgo Bay Day, and Skagit River Salmon Festival.



BOWMAN BAY NEARSHORE RESTORATION



Bowman Bay is a pocket beach located in the Whidbey basin at Deception Pass State Park. The site was armored with riprap to protect a fish hatchery that operated from approximately 1947 until it was torn down in 1972. The presence of the riprap caused the nearshore habitat to become degraded and void of large woody debris, overhanging vegetation, and a significant wrack line where kelp and other debris are deposited on the shore above the mean high tide line.

Skagit MRC partnered with the Northwest Straits Foundation (NWSF) and Washington State Parks, in a coordinated effort, to remove approximately 540 feet (1,600 tons) of shoreline armoring and restore 0.6 acres of shoreline. Armor removal will directly benefit the nearshore ecosystem processes as well as improve sediment transport processes, improve forage fish spawning habitat, improve nearshore habitat for shellfish and other invertebrates, juvenile salmon and bull trout, and restore resilience to the system, allowing for lateral shifts in sea grass beds in response to sea level rise. In addition, removing this armoring will improve access to the beach for kayakers and other park visitors. Riparian planting of the upper beach area will enhance nearshore habitat for birds, salmon, bull trout and forage fish.

The 2014-2015 MRC grant funding was used to pay for the final project design and planting plan, construction bidding process, permitting, and plants. The construction costs were covered through additional grant funding received by the NWSF including the Estuary and Salmon Restoration Program (ESRP) and the WDFW Marine and Nearshore Grant Program. In addition, the NWSF received a \$15,000 education and outreach grant for this project which will include: interpretive signage, a ribbon cutting ceremony, and low-tide beach walks, website development, video, outreach materials, and volunteer planting parties, etc.

Construction was completed in November 2015. All riprap was removed except for what was required to maintain support of the pier footings. The voids from the riprap were filled and graded with beach nourishment materials suitable for forage fish spawning. The existing trail was moved further landward and was curved to allow for a variety of vegetation to be planted. The Skagit Fisheries Enhancement Group (SFEG) completed the planting design and coordinated a planting party with school groups and volunteers following construction.

Since 2014, trained volunteers have been collecting baseline monitoring data. Post-construction monitoring will continue for at least three years following construction to identify changes that result from the project.

Project Profile

MRC Budget: \$10,000 NWSC grant from the *EPA/PSP*

Other Funding: \$51,820 NWSF grant from the EPA/ESRP – Construction & \$15,000 for Education & Outreach

Partners:

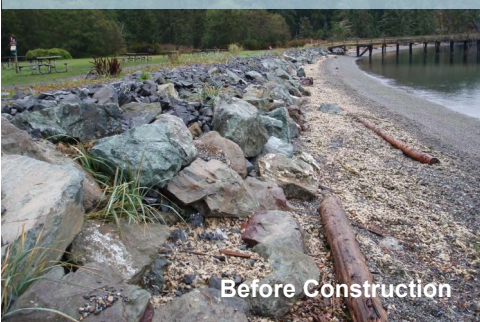
- * Northwest Straits Foundation
- * State Parks
- * Skagit Fisheries Enhancement Group
- * Coastal Volunteer Partnership

Goals:

- * Remove 540 feet of riprap and restore ~0.6 acres of nearshore habitat
- * Improve feeder bluff functioning and sediment processes
- * Restore forage fish spawning habitat
- * Enhance nearshore habitat for salmon and bull trout and forage fish
- * Improve public access
- * Install interpretive signage for education and outreach opportunities

Accomplishments:

- * Feasibility Study, Final Project Design & Planting Plan
- * Permits, Bidding Process & Construction Complete
- * Purchased and Planted Plants
- * Monitoring & Outreach Plans
- * Nearshore Baseline Monitoring



Before Construction



During Construction



After Construction

SHANNON POINT NEARSHORE RESTORATION

The nearshore habitat and processes along the southwest shoreline of Shannon Point are currently degraded and impeded by riprap that was originally placed there to protect the railroad that was never used. Removing over 2,500 cubic yards of riprap along 770 linear feet of shoreline would restore approximately 15,250 ft² of beach/intertidal habitat, improve feeder bluff functioning and restore spawning habitat for two forage fish species, Pacific sand lance and surf smelt and improve nearshore habitat for shellfish and other invertebrates. Forage fish are important prey for salmon and many marine fishes, birds, and mammals.

Skagit MRC partnered with the Northwest Straits Foundation to complete a feasibility study and project design for the Shannon Point Nearshore Restoration project. The Foundation was the project manager and provided technical expertise. Coastal Geologic Services completed the feasibility study and project design in 2014. The study determined that removal by barge would provide the most cost efficient method with the least short-term impact. The preferred alternative identified in the study was to remove all of the riprap and leave the railroad causeway in place to erode naturally. Although the study indicated that the erosion would not impact adjacent properties and despite extensive community outreach, the residents of the adjacent property were still very concerned that their properties might be impacted. Community support is extremely important to the Skagit MRC and the Foundation, so the project design has been modified to address the concerns of the adjacent properties. The Skagit MRC and the Northwest Straits Foundation plan to move forward with this project in 2016, pending funding.

A monitoring plan for pre and post construction has been completed. Elements of the monitoring plan include forage fish surveys, beach profiles, nearshore fish use, photo points to document sediment changes and wrack line changes. Volunteers have been collecting pre-construction monitoring data since 2014. To date, no forage fish eggs have been observed.



Project Profile

2015 MRC Budget: \$0

- * 2013-2014 MRC Budget: \$13,000 NWSC grant from the EPA/PSP for the feasibility study/project design

Other Funding:

- * \$14,000 NWSF—Ecology Coastal Protection Funding for the Feasibility study/design
- * \$160,000 from WDNR for construction
- * Currently seeking additional funding for final design permits, and construction

Partners:

- * NWSF
- * WWU
- * City of Anacortes
- * Skagit Conservation District

Goals:

- * Remove 2,500 cubic yards of riprap along 770 linear feet of shoreline
- * Restore ~15,250 square feet of nearshore habitat
- * Improve feeder bluff functioning
- * Restore forage fish spawning habitat
- * Improve nearshore fish use

Accomplishments:

- * Feasibility Study
- * 60% Project Design
- * Cultural/Historical Review
- * Endangered Species Act Review
- * Monitoring & Outreach Plans
- * Nearshore Monitoring

NEARSHORE RESTORATION MONITORING



Skagit MRC partnered with the Northwest Straits Foundation (NWSF) to conduct physical and biological monitoring of nearshore restoration sites pre and post construction with the help of trained volunteers. The nearshore monitoring sites included: Bowman Bay, Shannon Point, and NW March's Point. The purpose of the monitoring is to determine if restoration actions improved the physical processes and function of the site as well as the habitat diversity as compared to pre-project conditions.

Monitoring efforts in Skagit County has been a highly successful and collaborative effort. The MRC and NWSF worked closely with partners to develop protocols, monitoring plans and Quality Assurance Project Plan (QAPP) for each nearshore restoration site. Monitoring parameters include: photo points; beach profile surveys, sediment sampling, forage fish spawning surveys, nearshore fish use (beach seining), beach wrack analysis (organic marine debris), large woody debris/insect fallout surveys, and vegetation and percent shade calculations.

Citizen volunteers have played a critical role in successful implementation of monitoring plans and establishing baseline data. The MRC and NWSF worked collaboratively with other partners to provide monitoring training for volunteers. In 2015 volunteers contributed more than 798 hours conducting monitoring activities, project coordination, construction and maintenance of field equipment, and data entry. Quality assurance and control was conducted periodically to ensure protocols were being followed.

Baseline data was collected in 2015 and is currently being compiled and analyzed for all of the nearshore restoration sites. Preliminary beach seining results indicate a diversity of fish species caught at all nearshore restoration sites. No forage fish spawning activity has been observed at the Bowman Bay and Shannon Point restoration sites prior to construction. However, the NW March's Point beach enhancement site that was completed in the fall of 2014 is now experiencing a return of surf smelt spawning. Spawning activity had ceased to exist prior to restoration, but beginning in July 2015 forage fish eggs were found. Beach seining activities, to monitor status and trends of nearshore fish use throughout Fidalgo Bay, are being conducted by the Samish Indian Nation and their team of volunteers.

Project Profile

MRC Budget: \$2,400 NWSC grant from the EPA/PSP

Other Funding: NWSF funding for staff time

Partners:

- * Northwest Straits Foundation
- * Coastal Volunteer Partnership
- * Samish Indian Nation
- * WDFW
- * RE-Sources
- * WDNR

Goals:

- * Monitor nearshore habitat restoration sites to help establish baseline conditions before restoration and assess changes that result from the project and fill data gaps in status and trends throughout Fidalgo Bay

Accomplishments:

- * 51 volunteers received beach seining training
- * 10 volunteers received forage fish egg ID lab training
- * 30 volunteers received intertidal monitoring training
- * 5 volunteers received training in beach wrack/large woody debris/insect fallout surveys
- * Over 798 volunteer service hours for nearshore monitoring
- * Established baseline conditions at Bowman Bay and Shannon Point prior
- * Forage Fish spawning activity observed at NW March's Point beach enhancement site
- * Monitoring nearshore fish use throughout Fidalgo Bay is currently being lead by the Samish Indian Nation



SOUND IQ

Sound IQ serves as an important tool and clearing house for the MRCs to share and access nearshore data and reports online (<http://www.iqmap.org/SoundIQ>).

Sound IQ is comprised of three different modules:

1. Map Module (displays geographic data);
2. Search Research Results Module (records search including: beach access, boat launch, points of interest, shellfish beaches, etc); and
3. Beach Report Module (displays additional details about the location along with photos).

The Sound IQ project was initiated by the Island County Marine Resources Committee and has since expanded to include all other county MRCs in the Northwest Straits region. The expansion to a larger regional project was made possible with funding from the Northwest Straits Commission (NWSC) to continue the contract with the City of Bellingham to maintain the Sound IQ program, and for a GIS Specialist to sort through and post the data with some help from the NWSC intern.

Skagit MRC participated in the expansion of the online data sharing system in 2015 with help from the Skagit County Water Resource's intern. The intern created an inventory of existing MRC reports, datasets, and maps. Most of the reports have been posted on Sound IQ, but the datasets will take more time. Skagit MRC will continue to post data and reports as it comes in.

Project Profile

MRC Budget: \$3,000

Other Funding: NWSC support

Partners:

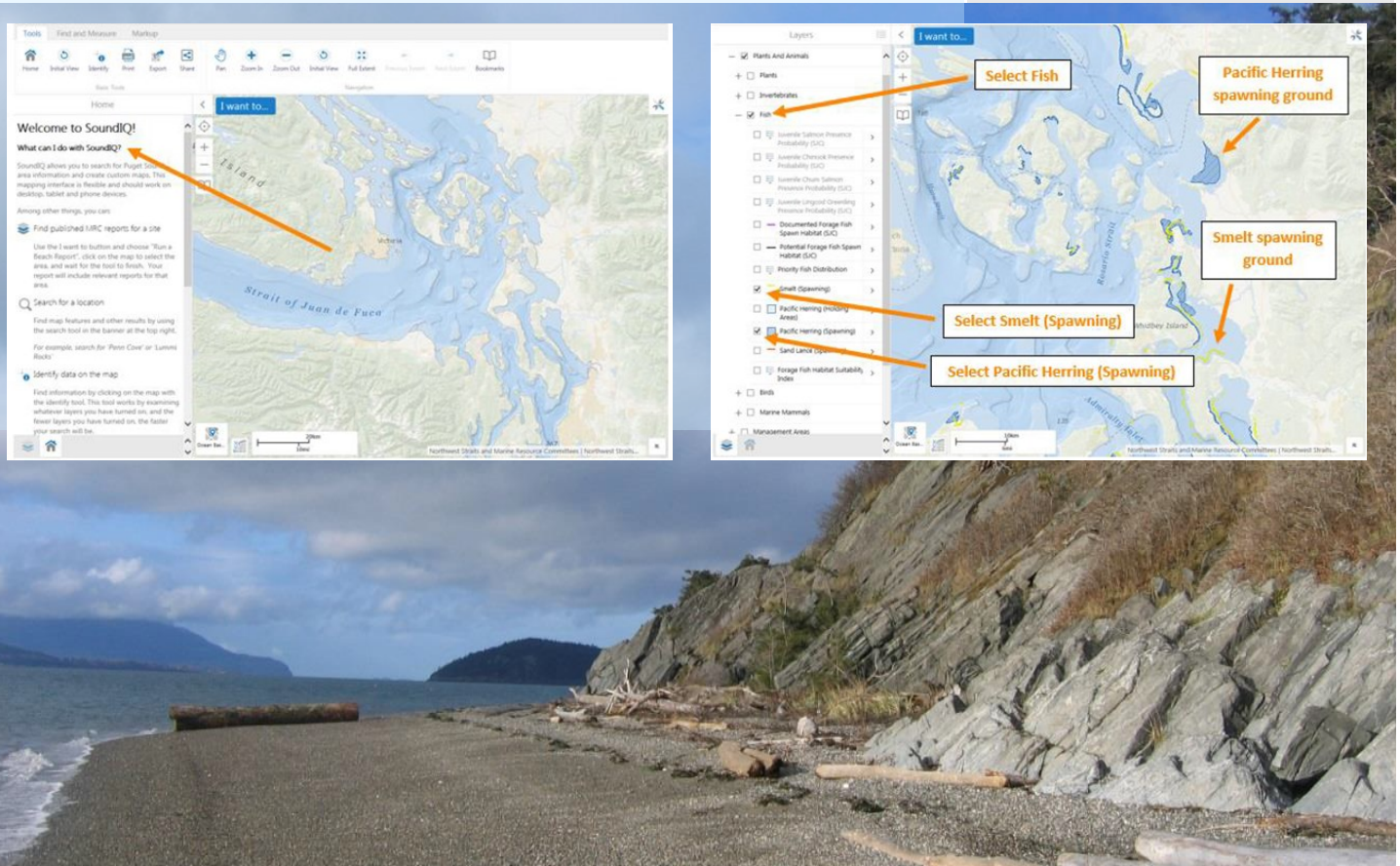
- * NWSC
- * Ecology
- * City of Anacortes

Goals:

- * Post Skagit MRC's nearshore data and reports to expand Sound IQ, a clearing house for the MRCs to share and access data

Accomplishments:

- * Created an inventory of existing MRC reports, datasets, and maps
- * Some of the reports have been posted on Sound IQ. The datasets will take more time.



PINTO ABALONE RESTORATION



Since 1969, worldwide abalone populations have declined by more than 50% with many species now recognized as threatened, endangered, or a species of concern. The pinto (northern) abalone, *Haliotis kamtschatkana*, is a species indigenous to Washington waters. They are considered functionally extinct by the state of Washington because the current number and distribution of reproductive wild abalone is too low to maintain a sustainable population. Abalone are broadcast spawners, meaning they release sperm and eggs into the water column, so there must be other abalone in close proximity for successful fertilization. It is believed that the remaining Puget Sound pinto abalone population are too few and too widely spaced to facilitate the reproduction necessary for the population to recover on its own.

Pinto abalone restoration is one of the main goals identified in the [Washington Shellfish Initiative](#) that was established in 2011. The pinto abalone recovery project is a long-term collaboration between state and federal agencies, Non Government Organizations (NGOs), universities, and tribes lead by the Puget Sound Restoration Fund (PSRF). As part of this ongoing collaborative effort, a total of approximately 6,500 genetically diverse hatchery-reared juvenile abalone have been introduced to six sites within the San Juan Archipelago between 2009 and 2014.

In 2015, Skagit MRC partnered with the PSRF and WDFW to monitor growth, density, and survivorship of the nearly 1,500 juvenile abalone that were introduced at four locations in Skagit County around Burrows and Allan Islands in March 2014. An additional 2,300 genetically diverse juvenile abalone seed were outplanted at four established sites around Burrows and Allan Islands and two new sites at Cypress Island in the early spring of 2015. Approximately 400 of those juvenile abalone were uniquely tagged with numbered, colored bee tags at the new Cypress Island outplant sites. In addition, divers surveyed the 50 abalone that were tagged in 2013 with Passive Integrated Transponders (PIT) and outplanted onto the Shannon Point Marine Center seawater intake reef system. The purpose of the PIT survey was to collect data on long term tag recovery and survival along with continued testing of several different underwater tag readers. These data will provide valuable insight on growth, survivorship and movement of introduced abalone.

The goal of this project was to collect monitoring data to measure the success of the most recent pinto abalone restoration

Project Profile

MRC Budget: \$12,600 NWSC grant from the EPA/PSP

Other Funding: WDFW funding was used to support hatchery work. WDNR helped fund the outplanting of juvenile pinto abalone at two restoration sites at Cypress Island

Partners:

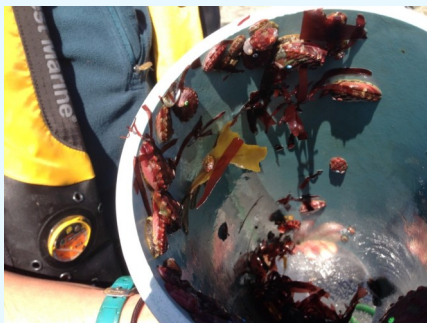
- * Puget Sound Restoration Fund
- * WDFW
- * Shannon Point Marine Center

Goals:

- * Collect monitoring data to measure the success of the most recent pinto abalone restoration efforts
- * Conduct an additional juvenile outplant to increase the genetic diversity and build a sustainable pinto abalone population around six abalone outplant sites in Skagit County

Accomplishments:

- * Collected monitoring data
- * Outplanted over 2,300 additional juvenile pinto abalone at six restoration sites
- * Approximately 400 juvenile pinto abalone were uniquely tagged and released
- * Preliminary data indicate that abalone are growing larger in size and density



Pinto Abalone Restoration continued from page 13.....

efforts and conduct an additional juvenile outplant to increase the genetic diversity and build a sustainable pinto abalone population around six abalone outplant sites in Skagit County. To date, a total number of 8,512 individuals from 65 unique genetic families have now been introduced to eight different outplant sites throughout the San Juan Archipelago since 2009. However, there is still much work to be done to build a sustainable pinto abalone population in Skagit County.



OLYMPIA OYSTER RESTORATION



The Olympia or native oyster, *Ostrea lurida*, is native to the Pacific Coast of North America and was once abundant in Puget Sound prior to the arrival of European settlers. Over harvesting in the late 1800s, combined with severe pollution in the first half of the 20th century from pulp and paper mills, drove many Puget Sound stocks to near extinction. Native oysters and oyster beds are considered valuable to the marine ecosystem because they provide habitat for many marine species and as filter feeders they help purify the water and maintain water quality in the estuaries in which they are found.

Since 2002, Skagit MRC has been working in cooperation with the Puget Sound Restoration Fund and other partners, to establish several native oyster beds in Fidalgo Bay near Anacortes, Washington. To date, over 1.5 million Olympia oyster seed has been planted throughout Fidalgo Bay and Pacific oyster shell were deployed to enhance habitat for native oyster settlement. One of the goals of the Washington Shellfish Initiative is to enhance 100 acres of native oyster habitat at 19 locations in Puget Sound by 2020. Oyster restoration recently expanded to four new sites in Skagit County: north of the Fidalgo Bay trestle, two test areas in Skagit Bay (Swinomish Tribe is the lead) and one area of Padilla Bay with permission and assistance from the Padilla Bay National Estuarine Research Reserve.

Citizen scientists help deploy and monitor around 20 cultch bags of Pacific oyster shell throughout Fidalgo Bay each year. The cultch bags are collected and monitored for the spread of native oysters from natural spawning and the survival and growth of oyster seedlings. Monitoring results show an increasing success of natural oyster settlement over the years. Skagit MRC plans to continue native oyster restoration work in 2016.

Project Profile

2015 MRC Budget: \$0

Other Funding:

- * \$2,000 SRI funding for native oyster seeding at Cap Sante in 2016 or 2017, depending on seed availability

Partners:

- * NWSF
- * Samish & Swinomish Tribes
- * CVP
- * PSRF
- * WDNR
- * WDFW

Goals: Establish a sustainable Olympia oyster population in Skagit County waters

Accomplishments:

- * Since 2002, planted over 1.5 million Olympia oyster seed throughout Fidalgo Bay
- * Expanded oyster restoration to four new locations
- * In 2015, 20 cultch bags deployed. Monitoring results indicate increasing success of natural oyster settlement



Skagit County Marine Resources Committee Annual Workplan (Oct 2015– Sept 2016)

TASK	Project Lead	Budget	OBJECTIVES	PRODUCTS	BENCH-MARKS
Operations	Tracy Alker	\$19,229	<ul style="list-style-type: none"> Schedule and hold monthly meetings, prepare and distribute agendas and minutes, invite speakers on topics of interest, and participate in NWSC meetings and report back to the Skagit MRC. Grant administration and proposal preparation, prepare reports, track and administer budget, update the workplan and MRC website and draft the annual report. Participate in the annual NWSC/MRC conference and in the development and discussions of the Puget Sound Partnership Local Integrating Organization. 	<ul style="list-style-type: none"> Progress reports Meeting agendas & minutes Website address and site contents Match tracking spreadsheet Workplan Annual report 	NA
Fidalgo Bay Day	Pete Haase	\$3,500	<ul style="list-style-type: none"> Work with multiple partners to plan and coordinate the FBD event to increase public awareness of the marine environment. 	<ul style="list-style-type: none"> Progress reports Summary report Photos 	<ul style="list-style-type: none"> Education Outreach
Shoreline Landowner Workshop	Betsy Stevenson	NWSF grant funding	<ul style="list-style-type: none"> Partner with the NWSF to provide at least one half-day workshop to shoreline landowners to educate them about shoreline processes, the potential impacts of shoreline armoring on nearshore ecosystems. Conduct at least five site visits by a qualified professional to address specific concerns of property owners. Provide technical assistance 	<ul style="list-style-type: none"> Progress reports Workshop agenda & roster Summary report Workshop evaluation 	<ul style="list-style-type: none"> Education Outreach
Salish Sea Stewards/ Beach Naturalists	Morty Cohen	\$18,000	<ul style="list-style-type: none"> Recruit, train and coordinate at least 20 new volunteers. Program graduates will contribute at least 50 hours of volunteer service on MRC or partner projects following the training within one year. Conduct an evaluation of the program Schedule at least 3 Beach Naturalist interpretive programs at Washington Park in Anacortes 	<ul style="list-style-type: none"> Progress reports Training curriculum Training roster and evaluation Summary report 	<ul style="list-style-type: none"> Education Outreach
Bowman Bay Nearshore Restoration	Jay Lind	NWSF grant funding	<ul style="list-style-type: none"> Partner with NWSF and State Parks to remove 560' of riprap and plant native plants along the Bowman Bay Deception Pass State Park shoreline to restore nearshore processes and forage fish spawning habitat and enhance nearshore habitat for salmon and bull trout. 	<ul style="list-style-type: none"> Progress reports Project design 	<ul style="list-style-type: none"> Marine Habitats
Pinto Abalone Restoration	Paul Dinnel	\$18,900	<ul style="list-style-type: none"> Collect monitoring data to measure the success of the most recent pinto abalone restoration efforts and conduct an additional juvenile outplant to increase the genetic diversity and build a sustainable pinto abalone population around Burrows and Allan Islands in Skagit County. 	<ul style="list-style-type: none"> Progress reports Monitoring plan, protocols, data Project photos Summary report 	<ul style="list-style-type: none"> Marine Life
Nearshore Restoration Monitoring	Jamey Selleck	\$10,871	<ul style="list-style-type: none"> Train volunteers in habitat monitoring data collection to establish baseline conditions at restoration sites prior to construction. Assess the changes in conditions from pre-project to post restoration. Fill in status and trends data gaps. Make recommendations for future projects or management actions based on monitoring results. 	<ul style="list-style-type: none"> Progress reports Monitoring plan Monitoring maps QAPPs Monitoring data 	<ul style="list-style-type: none"> Sound Science Marine Habitats
Native Oyster Restoration	Paul Dinnel	\$2,500	<ul style="list-style-type: none"> Purchase genetically diverse Olympia oyster seed from PSRF. Deploy four bags of native oyster seed and monitoring sensors in the recently restored channel/marsh system at Secret Harbor. Deploy native oyster seed at Cap Sante. Monitor growth, survival, natural reproduction, and distribution 	<ul style="list-style-type: none"> Progress reports Monitoring plan, protocols, and QAPP Final project report 	<ul style="list-style-type: none"> Marine Life

ACKNOWLEDGEMENTS

Board of County Commissioners

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Lisa Janicki, Commissioner
Ron Wesen, Commissioner

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Partner Organizations

City of Anacortes
Coastal Volunteer Partnership
Deception Pass State Park
Environmental Science Center
Fidalgo Bay Aquatic Reserve Citizen Advisory Committee
Friday Harbor Whale Museum
Friends of Skagit Beaches
Northwest Straits Commission
Northwest Straits Foundation
Orca Network
Pacific Biodiversity Institute
Padilla Bay Estuarine Research Reserve
Padilla Bay Foundation
Port of Anacortes
Puget Sound Restoration Fund
RE sources
Salish Sea Biological
Samish Indian Nation
Skagit Conservation Education Alliance

Shannon Point Marine Center
Shell Refinery
Skagit Conservation District
Skagit Fisheries Enhancement Group
Skagit Land Trust
Skagit Valley College
Swinomish Tribe
Taylor Shellfish
Tesoro Refinery
Washington Environmental Council
WA Department of Ecology
WA Department of Natural Resources
WSU Beach Watchers

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Mary Ann's Kitchen
Penguin Coffee
Cayou /Bailey Family