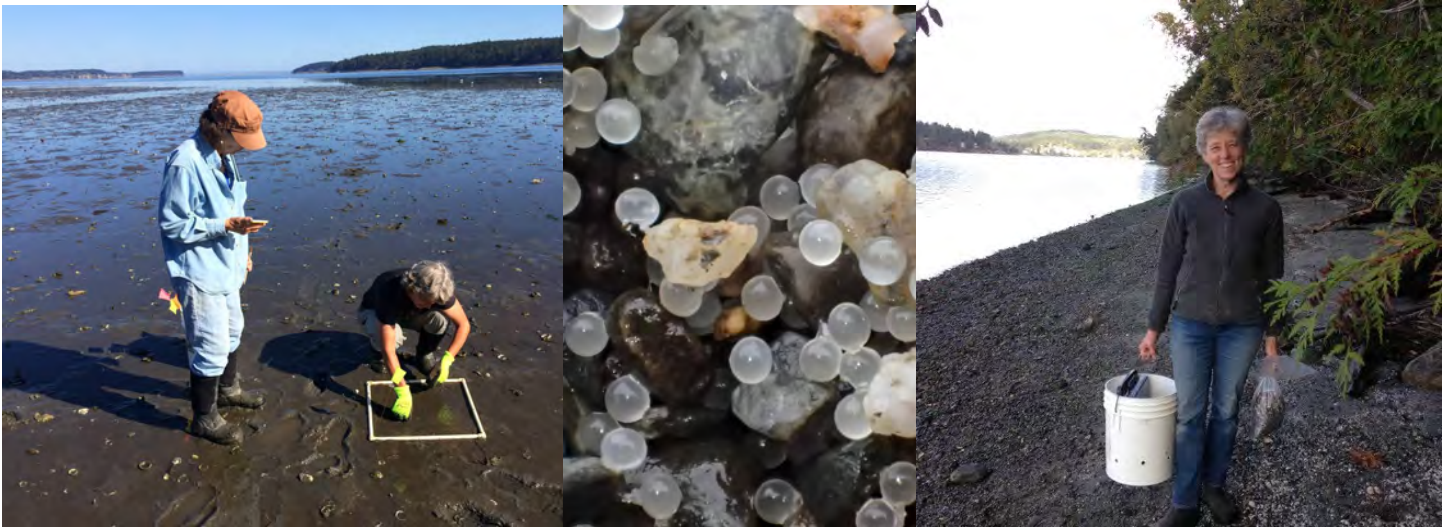


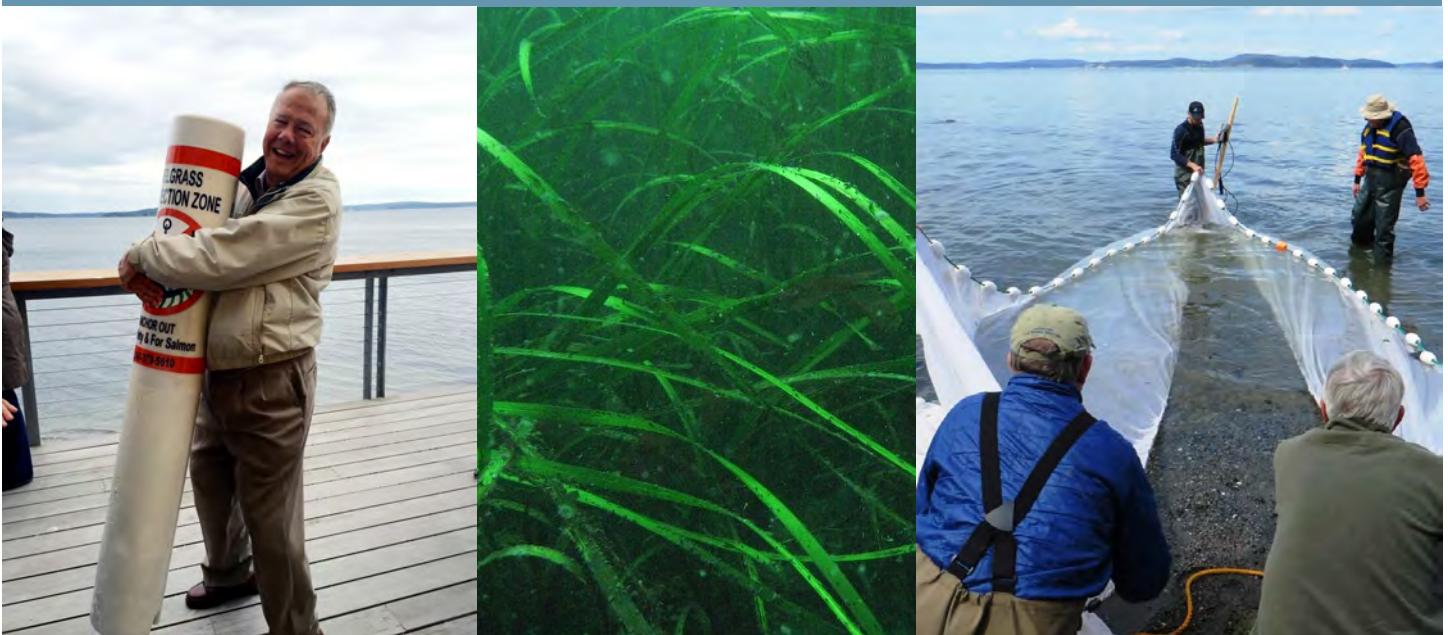


Northwest Straits INITIATIVE

partners in marine conservation



2016 Annual Report



2016 Northwest Straits Commission Members

Nan McKay	Governor's Appointee, Chair
Jamey Selleck	Skagit County MRC, Vice Chair
Ed Adams	Island County MRC
Paul Clappitt	Snohomish County MRC
Alan Clark	Clallam County MRC
Tom Cowan	Governor's Appointee
Phil Green	San Juan County MRC
Jerry Masters	Governor's Appointee
Dale Moses	Jefferson County MRC
Dr. Ron Thom	Governor's Appointee
Sheida Sahandy	Puget Sound Partnership, Governor's Appointee
Doug Stark	Whatcom County MRC
Terry Williams	Tulalip Tribes, Secretary of the Interior Appointee

Alternates

Cecilia Gobin	Alternate for Terry Williams
Marc Daily	Alternate for Sheida Sahandy

Science Advisory Committee

Dr. Ron Thom, Chair
Dr. Tessa Francis
Dr. Tom Mumford
Dr. Milton Love

Commission Staff/Support

Ginny Broadhurst	Executive Director
Nicole Jordan	Program Coordinator
Dr. Lucas Hart	Marine Program Manager
Sasha Horst	Communications Manager
Suzanne Shull	GIS Specialist, in partnership with Padilla Bay National Estuarine Research Reserve
Terry Stevens	Director, Padilla Bay National Estuarine Research Reserve

Cover photos: Top row: Clallam MRC Olympia oyster monitoring-Lucas Hart; Forage fish eggs-Jeff Taylor; Volunteer Ruth Richards in Island County sampling for forage fish in Cornet Bay-Lois Farrington Bottom row: Dale Moses of the Jefferson MRC with a voluntary no anchor zone buoy-Ginny Broadhurst; underwater eelgrass bed in San Juan County-Phil Green; beach seining in Skagit County-Tracy Alker

A Message from our Chair

When the Northwest Straits Initiative was launched in 1998, it was a call to action for local communities to engage in protecting and conserving marine resources in the region. The model was an experiment—a “bottoms-up” approach. It has proven successful as volunteers stepped up to participate, each bringing his or her own perspective and skills, and contributing thousands of hours annually.

The Commission, our non-profit partner the Northwest Straits Foundation, and the seven Marine Resources Committees that comprise the Initiative have strong and diverse partnerships. Through these partnerships, the Initiative both leverages funding and magnifies its impact.

More than a quarter of the employment in our region is in water-dependent sectors, including recreation, maritime industries and tourism. We know that our work is important to these businesses. Our work is also important to the many residents of the region who value this place—their home—for its incredible variety of marine species, miles of beautiful shoreline and water quality.

Read through the following pages to see some of our recent accomplishments--local actions driven by the people who live here. We're proud of the results we've achieved.

To the many of you who have contributed to this work, a huge thank you. If you have not yet become involved with the Initiative, we hope these stories inspire you to participate!

Nan McKay
Chair, Northwest Straits Commission



Mount Baker from the San Juan Islands. Photo: Simon Geerlofs

Our Mission

The mission of the Northwest Straits Initiative is to protect and restore the marine waters, habitats and species of the Northwest Straits region to achieve ecosystem health and sustainable resource use.

The Initiative complements and supports the work of state, local and tribal governments, and engages an incredible base of knowledgeable volunteers.

About the Northwest Straits Commission

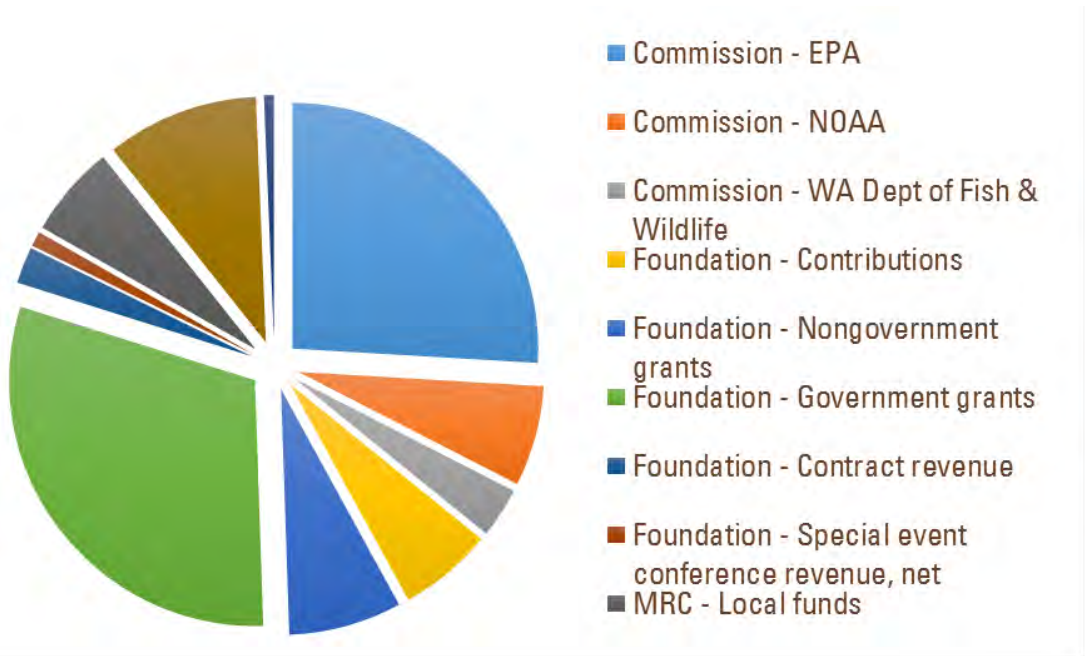
The Northwest Straits Commission (Commission) serves as a regional coordinating body, providing focus and guidance to ensure progress toward the Initiative goals, and directing funding to the MRCs. The Commission facilitates regional coordination among the MRCs and connects MRC work to regional planning processes such as the Puget Sound Action Agenda. The Commission’s focus is protecting marine habitats, water quality and species diversity through stewardship actions, restoration projects and education.

Finances

The Commission and Marine Resources Committees are supported by grant funding that leverages in-kind support, local funds and a significant number of volunteer hours. This base support also allows our partner non-profit, the Northwest Straits Foundation, to leverage additional funds.

- ◆ In 2016, MRC members and other project volunteers contributed over 10,000 hours in support of MRC work.
- ◆ MRCs received more than \$200,000 in local support, both in-kind and direct funding.
- ◆ The Northwest Straits Foundation leveraged more than \$1.4 million to support a variety of Puget Sound projects.

Sources of Initiative Support



Northwest Straits Initiative Environmental Goals

From the 2014-2017 Strategic Plan:

Goal 1: Accelerate the rate of shoreline and nearshore habitat protection and restoration with the goal of a net gain of functional habitat. Work in harmony with regional planning efforts that have identified projects that increase shoreline connectivity and complexity. Design restoration projects, where feasible, to help mitigate the effects of sea level rise and changing ocean conditions.

Goal 2: Support water quality monitoring efforts and take measures to protect and improve water quality.

Goal 3: Protect and restore marine species and habitats to improve ecosystem health.

Goal 4: Educate local residents about the health of the Northwest Straits marine waters and habitat and provide opportunities for engagement. Raise attention to and take action on emerging and urgent issues related to the health of the region's marine waters and habitat.



Left to right: Franchesca Perez and Lincoln Loehr collecting forage fish samples in Snohomish County; Anna Toledo and Ruth Richards planting at the Cornet Bay restoration site in Island County. Photos: Snohomish MRC, Jim Somers

Northwest Straits Commission – 2016 Highlights

Forage Fish Program

In 2016, the Commission hosted two additional forage fish survey workshops that trained citizen science volunteers how to document surf smelt and sand lance (forage fish) beach spawning locations and identify forage fish eggs. In close partnership with the Washington Department of Fish and Wildlife (WDFW), we have now trained over one hundred volunteers at seven training events since 2014.

The 2016 training also marked a shift in how MRC volunteers contribute to forage fish spawning surveys. In addition to continuing restoration-related monitoring, Marine Resources Committees (MRCs) have adopted "index sites" as part of WDFW's Puget Sound-wide forage fish survey project. The adoption of index sites has connected citizen volunteers directly to a state agency priority project. Volunteers collect samples each month at their index sites to determine when forage fish lay their eggs. Regular sampling at specific beach locations improves our ability to understand the life of forage fish and how to protect them. MRC data is integrated into WDFW data, which is gathered less frequently but from a larger number of beaches throughout Puget Sound. The datasets are incorporated into WDFW's online forage fish map and together, are used to make important decisions about how to manage and protect forage fish habitat.

Information about our Forage Fish Program can be found at www.nwstraits.org/our-work/forage-fish/



Top to bottom.: Forage fish egg identification in Whatcom County lab; Clallam MRC members collecting forage fish egg samples ; forage fish eggs under a microscope Photos: Lucas Hart, Helle Andersen, Jamey Selleck



Photo: Florian Graner

Kelp Recovery

Kelp is critical habitat for many marine species. It provides shelter, serves as a source of food and absorbs carbon at a rate higher than some of the most productive forests.

In 2014, the Commission wrote "A boat-based survey protocol for Bull Kelp in Puget Sound," which was launched in 2015 as a regional bull kelp (*Nereocystis*) survey designed to track changes in kelp abundance.

The third consecutive season of volunteer bull kelp surveys in Puget Sound was completed in 2016. All seven MRCs participated and recorded data at 26 individual kelp beds, logging over 100 individual bed

perimeters. Each perimeter represented surveys completed at different months, different tidal heights and by different surveyors; allowing a better understanding of how kelp changes from month to month. The kelp project and survey data was made publicly available through the SoundIQ map database, an online Kelp Story Map, a presentation at the Salish Sea Ecosystem Conference, and a short video produced by the Northwest Straits Foundation. The season wrapped up with a workshop in November to discuss results, project goals and next steps for 2017.

Learn more about our work on Kelp Protection and Recovery at www.nwstraits.org/our-work//kelp-recovery.



Kelp data layers from 2016 surveys in Island County. Map prepared by Suzanne Shull.

Olympia Oyster Restoration

Tiny Olympia oysters used to flourish in the waters of Puget Sound, but overharvesting and pollution brought them to near extinction. Marine Resources Committees, in partnership with multiple organizations, are working to restore native Olympia oyster populations in their historic range in the Northwest Straits region.

In 2016, MRCs in four counties carried out citizen science projects to enhance habitat, increase the size of Olympia oyster populations, and monitor the success

of their work. Several previously-seeded sites are now showing natural reproduction and increasing population of oysters. These projects are key contributors to reestablishing populations at WDFW-designated priority restoration sites.

Information about our Olympia oyster restoration work can be found at www.nwstraits.org/our-work/olympia-oyster-restoration/



Olympia oyster restoration in Discovery Bay. Photo: Cheryl Lowe

SoundIQ

SoundIQ is the Northwest Straits Commission's web-based application to share data collected by MRCs and the Commission in an easily-accessible map format. MRC data on SoundIQ can be viewed in combination with complementary data from other sources.

Learn more about SoundIQ at www.nwstraits.org/our-work/soundiq/.

Ocean Acidification

The Northwest Straits Commission provides current information to local communities on the science of ocean acidification, its impacts on fisheries and shellfisheries, and what can be done locally to address these impacts.

In 2016, the Commission hosted or participated in five community events on ocean health, with an emphasis on ocean acidification. Commission-led events in Jefferson and Skagit counties brought together researchers, local leaders and shellfish growers. To date, the Commission has hosted 19 community events, attended by more than 1,000 local residents.

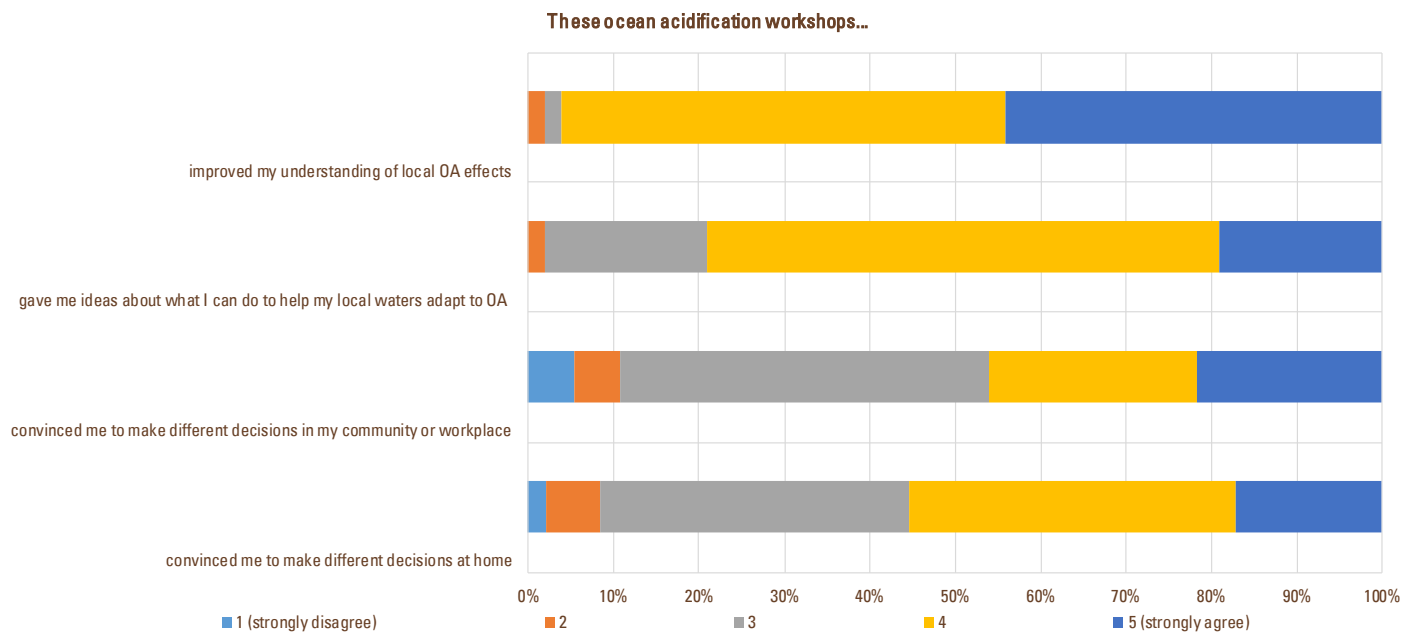
The Commission also supports the work of MRCs in carrying out projects aimed at reducing the local impacts of ocean acidification, including native oyster restoration, eelgrass protection, and filtration of stormwater through the use of rain gardens.



Ocean acidification forum speakers Freeman Anthony, Jude Apple and Brooke Love. Photo: Sasha Horst

Finally, the Commission contributes statewide by holding a seat on the Washington Marine Resources Advisory Council, convened to maintain a coordinated focus on the issue of ocean acidification.

Learn more about our work on Ocean Acidification at www.nwstraits.org/our-work/ocean-acidification.



Outreach and Communications

The Commission co-hosted the 18th annual MRC conference in Port Townsend on November 4-5. This event brought together approximately 150 participants who represented seven MRCs, the Commission, Foundation and project partners, to share information and learn about key issues facing our marine waters. Each year, this event also serves as an important forum for fostering collaboration among the MRCs.

The Northwest Straits Commission communicates our work to a variety of audiences through a website, monthly newsletter and social media presence.

Join our mailing list or find an event near you at www.nwstraits.org/get-involved/.



2016 Marine Resources Committee conference ; speakers Rob Williams and Michael Jasny. Photos: Sasha Horst

Catch More Crab

In partnership with the Northwest Straits Foundation and local Marine Resources Committees, the Commission is promoting best crabbing strategies through the Catch More Crab social marketing campaign. The project uses a two-pronged approach to ensure fewer lost pots and in turn, a better crab catch.

In 2016, volunteers and staff conducted outreach to crabbers at boat launches throughout Puget Sound while also using social media to connect new recreational crabbers with seasoned crabbers who were knowledgeable in best practices. In total, over 1,300 direct engagements were made with crabbers, with many more reached through social media.

Information about our Catch More Crab campaign can be found at nwstraits.org/our-work/tchmorecrab/



Courtney Baxter promoting recreational crabbing best practices in Skagit County. Photo: Jay Lind

Marine Resources Committees

Investing in Local Communities

Marine Resources Committees receive support from the Northwest Straits Commission to identify and carry out marine conservation projects of local importance. They leverage their grant funds with volunteer hours as well as in-kind and financial support from local government, state and federal grants and private dollars.

In 2016, over 10,000 volunteer hours were contributed by MRC members and other community volunteers in support of MRC projects.



Olympia oyster restoration project team in Clallam County. Photo: Ed Bowlby

Clallam Marine Resources Committee

For more information: www.clallamcountymrc.org

1– Primary Goal 2 - Secondary Goal

2016 Projects	Nearshore Habitat Protection and Restoration	Water Quality	Protect and Restore Marine Species	Educate Local Residents
Marine Debris – Participated in three cleanup events, enlisting over 150 volunteers and removing more than 1,300 pounds of debris.	2			1
Oil Spill Response – Trained 53 volunteers in HAZWOPER and 44 in oiled wildlife response.				2
Geographic Response Plan Update – Identified georeferenced data that may contribute to update of Strait Geographic Response Plan.				1
Olympia oyster Restoration – Monitored previous oyster plantings, noting one site area increased by 10% and the other had 15% population increase. Identified new site and established test plot.	2	2	1	
Kelp Monitoring – Conducted surveys of four kelp beds in Freshwater Bay and identified a future site in Clallam Bay.			1	
Pigeon Guillemot Survey – Team of 14 volunteers surveyed 5 colonies during summer 2016.			1	
Education and outreach – Hosted 5 presentations, 3 internships, and hosted an educational booth at the Dungeness River Festival, reaching 2,500 participants.				1
Forage fish – Conducted forage fish spawn surveys at two sites.			1	2



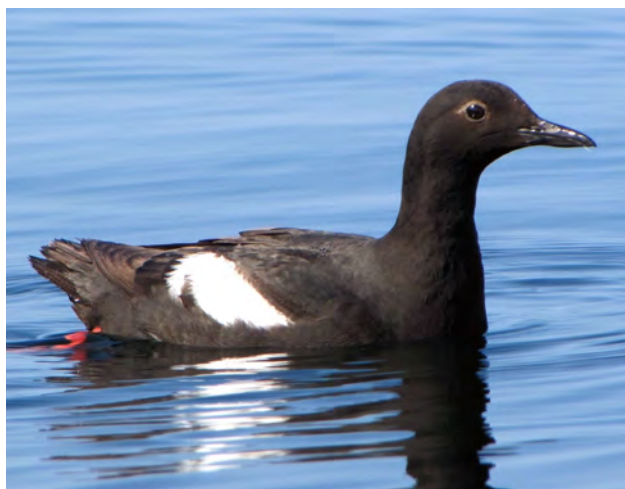
Volunteer training for Oiled Wildlife/Hazardous Waste Operations and Emergency Response. Photos: Cathy Lear

Island Marine Resources Committee

For more information: www.islandcountymrc.org

1– Primary Goal 2 - Secondary Goal

2016 Projects	Nearshore Habitat Protection and Restoration	Water Quality	Protect and Restore Marine Species	Educate Local Residents
Forage fish – Conducted surveys at 4 restoration sites and 4 index sites.			1	
Bull kelp surveys – Conducted surveys at 5 sites, trained new volunteers, and explored use of aerial imaging for monitoring.			1	
Eelgrass monitoring – Performed underwater video monitoring at 10 locations, aerial photography of Whidbey and part of Camano islands.			1	
Seining – Trained 34 volunteers and conducted 8th year of seining at Cornet Bay restoration site. Ten total seines completed.			1	2
Pigeon guillemot – Conducted in-depth surveys at 2 communities and trained volunteer group in Clallam County.				2
Kelp harvest outreach – Installed kiosk at Libbey Beach on sustainable harvest and kelp habitat.				1
Cornet Bay restoration and monitoring – conducted post-restoration monitoring and coordinated native vegetation planting party and 4 follow up weeding events.	2			
Education and outreach – hosted 14 educational presentations on marine topics, participated in local events and festivals including Sound Waters University.				1



L to R: Pigeon guillemot in Island County. Island MRC training volunteers in Clallam County. Photos: Lenny Corin, Ed Bowlby

Jefferson Marine Resources Committee

For more information: www.jeffersonmrc.org

1– Primary Goal 2 - Secondary Goal

2016 Projects	Nearshore Habitat Protection and Restoration	Water Quality	Protect and Restore Marine Species	Educate Local Residents
Fort Townsend State Park shoreline restoration – Partnered with Northwest Straits Foundation and Washington State Parks to improve beach access, removing 1,700 cubic yards of fill and restoring 0.2 acres; 17 volunteers conducted pre-/post-construction monitoring; coordinated local community engagement/outreach for the project.	1			
Eelgrass and Shellfish voluntary no anchor zones – Continued protection of 52 acres of eelgrass beds in Port Townsend, and protection of 92.5 acres including shellfish harvest areas in Port Hadlock and Mystery Bay.			1	2
Rain gardens – Completed prioritization of future project sites and installed two new rain gardens.		1		2
Olympia oyster restoration – Monitored Discovery Bay project and added clean cultch for additional substrate; tested feasibility at a new Quilcene Bay restoration site.		2	1	
Bull kelp surveys – Six volunteers conducted kayak-based surveys at North Beach during 2016 growing season.			1	
Shoreline landowner outreach – Aired 2 local radio programs on shoreline armoring and restoration, supported Northwest Straits Foundation project conducting 13 landowner site visits and assisted with designs for armor removal on three properties.	2			1
Diggin' for Dinner – Hosted family program on safe and sustainable clam harvest and water quality with 55 participants.		2		1
Forage fish – Four trained volunteers began monitoring at a forage fish index site in Discovery Bay.			1	2



Above: Bull kelp survey volunteers readying their kayaks.

Below: Olympia oyster team on the beach in Discovery Bay. Photos: Cheryl Lowe



San Juan Marine Resources Committee

For more information: www.islandcountymrc.org

1– Primary Goal 2 - Secondary Goal

2016 Projects

Nearshore Habitat Protection and Restoration	Water Quality	Protect and Restore Marine Species	Educate Local Residents
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Marine Stewardship Area – Developed three-year workplan to carry out Marine Stewardship Area Plan, focused on the six top strategies identified in the Plan.

1

Bull kelp surveys – Two volunteers monitored three kelp beds by kayak during summer growing season.

2

Education and outreach – Launched a social media campaign using Facebook to target local audiences within the San Juan Islands. Began planning for marine education area at Orcas ferry landing site.

1

1

Marine Managers' Workshop – Engaged planning team to develop workshop agenda for event scheduled in 2017 to address environmental and socioeconomic impacts of vessel-related spills to Salish Sea communities.

1

2

Deer Harbor monitoring – Partnered with Northwest Straits Foundation to conduct post-restoration monitoring following bridge replacement at Deer Harbor restoration site.

1

2



San Juan MRC at the Orcas Landing marine education site. Photo: San Juan MRC

Skagit Marine Resources Committee

For more information: www.skagitmrc.org

1– Primary Goal 2 - Secondary Goal

2016 Projects	Nearshore Habitat Protection and Restoration	Water Quality	Protect and Restore Marine Species	Educate Local Residents
Salish Sea Stewards – Graduated the program’s third class, with over 10,000 volunteer hours contributed to date on marine projects.			2	1
Pinto abalone restoration and monitoring – Outplanted an additional 1,200 pinto abalone and monitored previously-planted juvenile abalone at two sites.		2	1	
Olympia oyster restoration and monitoring – 14th year of Fidalgo Bay restoration and monitoring; population increased from 50,000 to 4.8 million.		2	1	
Fidalgo Bay Day – Hosted the 13 th annual event, drawing hundreds of visitors and engaging volunteers and local businesses/organizations.				1
Bowman Bay restoration – Partnered with Northwest Straits Foundation on restoration project to remove 540 feet of armoring, restoring 0.6 acres of nearshore habitat. Volunteers conducted pre- and post-construction monitoring and installed native plantings and interpretive signage.	1			
Forage fish – Trained volunteers began sampling at two index sites.			1	2



L to R: Bowman Bay restoration site; young visitors at 2016 Fidalgo Bay Day. Photos: Caroline Gibson, Tracy Alker



Top to bottom: MRC member Traci Sanderson surveying bull kelp; Howarth Park nearshore restoration post-construction Photos: Kathleen Pozarycki, Phil Bloch



Snohomish Marine Resources Committee

For more information: www.snocomrc.org

1– Primary Goal 2 - Secondary Goal

2016 Projects	Nearshore Habitat Protection and Restoration	Water Quality	Protect and Restore Marine Species	Educate Local Residents
Nearshore restoration project – Removed bulkhead at Howarth Park and planted 800 native plants. Placed 22,156 tons of beach nourishment at five sites along railway impacted shorelines. Restored 2.4 acres and 0.85 miles of shoreline.	1			
Bull kelp surveys – Volunteers surveyed ten kelp beds covering 13 acres.			1	
Community involvement – Promoted awareness and information on marine stewardship and related issues at three major community events.				1
Long-term nearshore beach restoration maintenance and management study – Hosted community and stakeholder workshops to engage community support for stewardship and ongoing maintenance of beach nourishment sites.	2			1
Nearshore marine culverts assessment – Collaborating with NOAA to develop preliminary assessment of marine culverts within railroad-impounded nearshore to identify nourishment sites and prioritize culvert upgrades.	1			
Caged mussel study – Sponsored three locations to deploy caged mussels to monitor levels of stormwater pollution in cooperation with WA Dept of Fish & Wildlife.		1		2
Forage fish spawning surveys – Volunteers collected samples at 17 locations. Eggs were found at 13 locations.			1	
Recreational crabber outreach – Directly engaged more than 600 recreational crabbers on opening weekend to promote best practices for reducing the number of lost pots.			2	1
Storm surge monitoring – Collaborated with USGS to train volunteers on proper use of MyCoast app for nearshore data collection. Twenty-five reports collected in first quarter of use.	2			1
Oil spill preparedness – Collaborated with Dept of Emergency Management to explore gaps in oil spill preparedness and participated in the 2016 tabletop spill drill.				1

Whatcom Marine Resources Committee

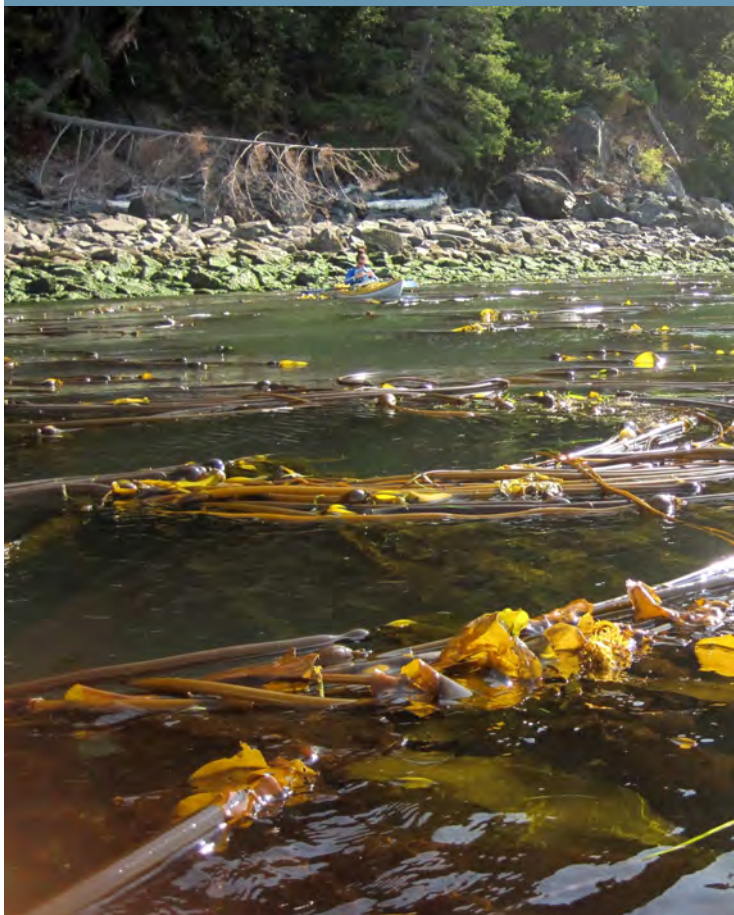
For more information: www.whatcomcountymrc.org

1– Primary Goal 2 - Secondary Goal

2016 Projects	Nearshore Habitat Protection and Restoration	Water Quality	Protect and Restore Marine Species	Educate Local Residents
Community outreach – Hosted 6 public speaker series events, developed 3 panel kiosk for interpretive trail in Birch Bay, participated in Whatcom Water Weeks and other local events.				1
Chuckanut clam surveys – Partnered with local science education program to teach 100+ elementary students how to perform clam population surveys in the Bay.			2	1
Bull kelp surveys – Surveyed 2 sites and collected DNA samples to contribute to a kelp population genetic study in Puget Sound.			1	
North Chuckanut Bay pollution identification and correction – Conducted 21 sampling events at freshwater and marine sites to characterize fecal coliform levels.	2	1		2
Mussel watch – Deployed and retrieved mussel cages at two sites and expanded the monitoring area as part of a regional program.		1		2
Forage fish – Trained volunteers conducted surveys and identified eggs at two index sites.			1	2



Clockwise from top: Forage fish volunteers filtering samples; Barb Francis and Eleanor Hines preparing to take water quality samples in Chuckanut Bay; surveying bull kelp beds. Photos: Pete Haase, Rachel Benbrook

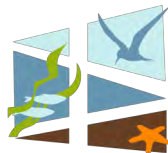




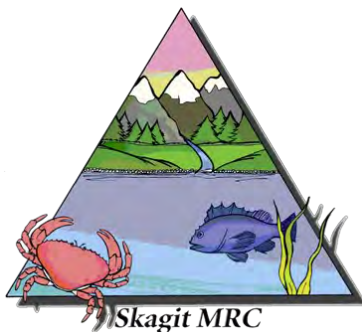
partners in marine conservation



Jefferson County
**Marine
Resources
Committee**



**Northwest
Straits**
INITIATIVE



Skagit MRC



ISLAND COUNTY
MARINE RESOURCES
COMMITTEE

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