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Island County Marine Resources Committee 2016 Annual Report



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October 2015 – September 2016



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About the MRC

The Island County Marine Resources Committee (IC MRC), established in 1999, is an advisory body of volunteers appointed by County Commissioners. The members are from the local community, and represent a wide variety of backgrounds, interests, and expertise, all coming together with the unified goal of protecting and restoring the local marine environment.

The MRC's purpose is to **investigate, research, and identify local marine resources**, and marine resource and habitat issues; **recommend remedial actions** to Island County agencies and authorities; **carry out such recommendations** where so approved; **and build local awareness** of the issues and broad-based community support for the remedies. The MRC conducts monitoring, restoration, and outreach projects, and serves as an advisory body to the County Commissioners.

The MRC receives funding from US EPA through the Puget Sound Partnership and Northwest Straits Commission (NWSC). The table below shows how the 2015-2016 MRC tasks supported the goals of the Northwest Straits Initiative.

Watershed Tour

The MRC participated with Island County Lead Entity, Island Local Integrating Organization, and local project sponsors in a watershed tour with legislative officials to demonstrate completed and proposed restoration projects: Cornet Bay, Ala Spit, Maylor Point, and Oak Harbor Marina.



	Northwest Straits Initiative Goals				
MRC Grant Tasks	Goal 1: Shoreline restoration	Goal 2: Water quality	Goal 3: Habitat and species protection and restoration	Goal 4: Education and engagement	Operational Goal 1: MRC support
Operations					❖
Forage Fish	❖		❖		
Bull Kelp	❖		❖		
Eelgrass	❖		❖		
Seining	❖		❖		
Pigeon Guillemot			❖	❖	
Kelp Harvest Outreach			❖	❖	
Cornet Bay Restoration & Monitoring	❖			❖	

Membership



Credit: Elsa Schwartz

The MRC is a group comprised of volunteers, and relies on the hard work and dedication of its members and other volunteers to carry out its mission and conduct monitoring, restoration, and outreach projects.

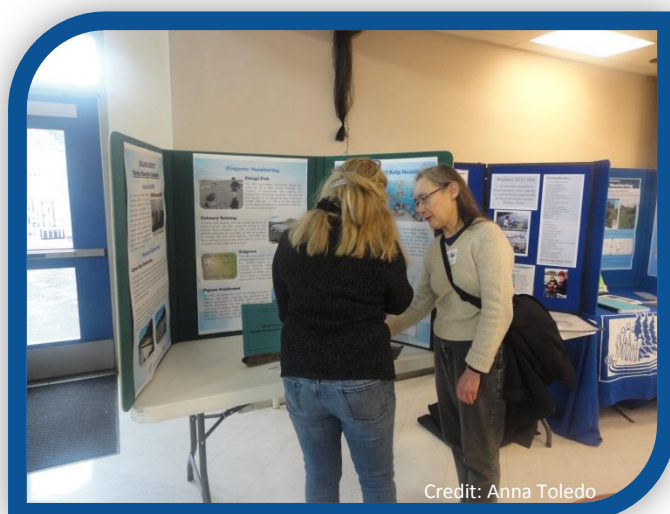
In the 2015-2016 year, the MRC recorded over 2,900 volunteer hours! These hours demonstrate the level of community engagement and support for the work of the MRC.

Member	MRC Project Lead or Liaison/Group Representation
Current Members: September 2016	
Frances Wood, Chair	Pigeon guillemot
Elsa Schwartz, Vice-Chair	Crabber outreach
Ed Adams, NWSC Rep	Phytoremediation
Barbara Bennett	Outreach, Island Local Integrating Organization
Lois Farrington	Forage fish, Sound Water Stewards
Ed Halloran	Port of South Whidbey, crabber outreach
Linda Rhodes	Bull kelp, kelp harvest outreach, Smith & Minor Islands Aquatic Reserve
Ruth Richards	Forage fish, shoreline restoration
Kestutis Tautvydas	Eelgrass, seining
David Thomson	Salmon Technical Advisory Group
Anthony Turpin	Creosote and marine debris removal, outreach
Stan Walsh	Tribal: Swinomish, Sauk-Suiattle; Skagit River System Cooperative
Ex-Officio Members	
Lori Clark (ex-officio)	Island County Department of Natural Resources
Tim Lawrence (ex-officio)	WSU Extension
Richard Hannold (ex-officio)	Island County Commissioners
Non-voting Technical Advisors	
Todd Zackey	Tribal: Tulalip Tribes
Florian Graner	Outreach
Former Members: Served within 2015-2016 grant year	
John Carr	Port of Coupeville
Lenny Corin	Northwest Straits Initiative
Leal Dickson	Bull kelp
Dan Matlock	Forage fish
Helen Price Johnson (ex-officio)	Island County Commissioners

Education and Outreach

The MRC engages in opportunities to educate the public on the importance of protecting and restoring the local marine environment.

The MRC meets twice per month except during the summer when meetings are held monthly. One meeting each month is dedicated to an educational presentation. In the 2015-2016 year, these presentations have covered a wide range of local and regional topics. The meetings are open to the public, and designed to encourage the local community to learn more about the marine environment and matters affecting the area where they live. The MRC also participated in local events and festivals, including Sound Waters University and Skagit River Salmon Festival.



Credit: Anna Toledo

At Sound Waters University, Linda Rhodes (pictured above) presented on the 2015 bull kelp surveys conducted by Island County MRC as well as the other MRCs.

Anna Toledo joined Courtney Baxter with NWSC to conduct outreach to crabbers at Cornet Bay for the #CatchMoreCrab social marketing campaign, designed to help prevent crab pot loss.

Educational Presentations

2015-2016 meeting topics included:

- 2015 Pigeon Guillemot Survey Report
- Cornet Bay Update
- 2015 Cornet Bay Seining Report
- Using Drones to Monitor Changes in Floating Kelp
- Effectiveness of Phytoremediation for Removing Contaminates from Water
- Whidbey Island Conservation District Projects
- 2015 Eelgrass Report and 2016 Planning
- Admiralty Inlet Geographic Response Plan Update
- DNR Creosote Removal Program
- NAS Whidbey Conservation and Restoration Activities
- Update on Ghost Shrimp Harvest
- ESRP Grant Proposals
- Classification and Management Plan (CAMP) Process
- Sound Water Stewards Update

The MRC also partnered with the Northwest Straits Foundation on their Shoreline Armoring Reduction Project (SHARP) to host a workshop for shoreline landowners on Camano. The workshop drew about 25 attendees. Topics included information on coastal processes, slope stability, alternatives to hard armoring, and how to manage erosion.

Operations

Goal: ✧ To carry out administrative functions in support of the mission, including work plan preparation, developing and preparing grant proposals, programmatic staff support, project monitoring and performance tracking, education programs and grant writing, travel, planning, and participating in training opportunities.

MRC Meetings and Communication – The MRC met regularly to discuss business items as well as invite educational presenters. MRC staff prepared and distributed meeting agendas and minutes. The MRC also held a retreat to identify top priorities and project ideas to provide direction for the MRC's direction and big-picture goals.

Grant Administration – MRC staff wrote regular progress reports, tracked and administered the budget, and ensured projects were supported and reaching their stated goals.

Website – The MRC has maintained a website (www.islandcountymrc.org) containing information on past and upcoming meetings, and current and completed projects. The website was regularly updated with meeting agendas and approved minutes, as well as current news and announcements. The website has undergone an upgrade, which will be launched October 2016.



Credit: Elsa Schwartz

Annual Workplan – The MRC developed a work plan to guide the work and priorities of the MRC for the 2016-2017 year.

Training – MRC members and staff were encouraged to participate in trainings relevant to the MRC's goals and projects. 7 members and 1 staff attended the annual MRC conference. 6 members and 1 staff attended Sound Waters University. 3 members and 1 staff attended the Salish Sea Ecosystem Conference. MRC staff updated an orientation presentation and manual for new members. 5 new members received the orientation presentation and manual.

Representation at NWSC Meetings – Ed Adams served as the Island County MRC Representative to the NWSC, and Frances Wood served as Alternate. The Representative or Alternate attended monthly meetings with the NWSC to maintain connection and collaboration with the NWSC and other MRCs.

Local Integrating Organization – Barbara Bennett and MRC staff participated in Island LIO meetings, and regularly provided updates on the ILIO to the MRC.

Eelgrass

Goal: ✧ Monitor eelgrass in Island County for changes due to disease, human activity, or natural variability.



Eelgrass plays many important roles in the marine ecosystem, including serving as an essential food source as well as habitat for several marine species. The Puget Sound Partnership has identified eelgrass as a Vital Sign, and its recovery as a 2020 Target.

The MRC has been monitoring eelgrass through aerial photography and underwater videography since 2008. Monitoring locations include 3 core sites: Cornet Bay, Penn Cove, and Holmes Harbor. Each year the remaining sites are chosen in consultation with WA DNR.

Data from Cornet Bay suggests damage to eelgrass beds is caused by boating activity, such as propeller strikes and anchor scour. Examples highlighted with red arrows below.

Accomplishments

- ✧ Conducted submerged video monitoring at 10 locations
- ✧ Completed aerial photography of entire Whidbey Island coast and portions of Camano Island
- ✧ Presented on monitoring project to PSEMP Nearshore Workgroup



What's Next?

2017 sites will be chosen in consultation with the MRC and WA DNR. The use of multi-beam sonar to record and track size of eelgrass beds will be explored.

Forage Fish

- Goals:**
- ✧ Survey specific beach sites that contribute to a comprehensive understanding of where and when forage fish spawning occurs in WRIA 6.
 - ✧ Integrate forage fish beach spawning assessments into shoreline protection and restoration projects in Island County.



Forage fish are a key element of the marine food web, as a vital food source for salmon, seabirds, and marine mammals.

The MRC has been involved in forage fish spawning studies since its inception in 1999, working with contractors and WDFW staff to explore forage fish habitat and spawning behavior. This year marks the start of the MRC organizing citizen scientist volunteers to conduct forage fish spawn surveys around Island County beaches.

The MRC also partnered with WDFW to assist in conducting surveys at index sites – locations with public access and a known history of spawning presence.

Survey samples taken at Ala Spit, a restoration site which included bulkhead removal as well as beach nourishment, showed presence of sand lance eggs 3 months after completion of the restoration work.

Accomplishments

- ✧ Conducted monthly or bimonthly surveys at 4 restoration sites.
- ✧ Conducted monthly surveys at 4 WDFW index sites.
- ✧ Initiated use of vortex method for condensing bulk samples of beach sediment.

What's Next?

The forage fish team will continue to recruit and train volunteers to conduct surveys at sites in conjunction with completed or planned restoration work, as well as collaborate with WDFW to survey at index sites to add to the regional knowledge of where forage fish are spawning.

Pigeon Guillemot

- Goals:** ✧ Monitor pigeon guillemots for population numbers, type of prey delivered to young, and breeding success.
 ✧ Monitor guillemot populations during non-breeding season.



Credit: Emily Bishop

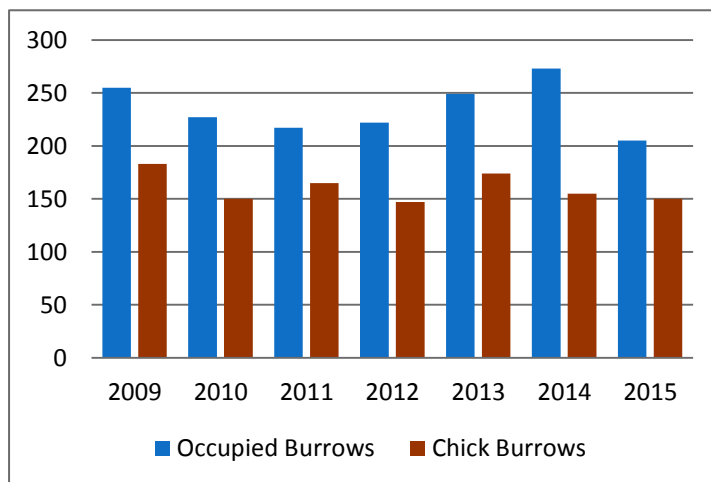
Pigeon guillemots are one of the few seabirds regularly breeding in Puget Sound. Monitoring their population numbers, prey type, and breeding success can help indicate changing conditions in the birds' environment.

The MRC, in partnership with the Whidbey Audubon Society, has been studying the populations of pigeon guillemots on Whidbey Island since 2008, and has established a robust baseline dataset.

The chart below shows the number of occupied burrows and burrows with chicks from 2009-2015.

Accomplishments

- ✧ Conducted in-depth surveys of 2 pigeon guillemot communities
- ✧ Conducted surveys during winter non-breeding season
- ✧ Conducted training for new volunteer group in Sequim
- ✧ Presented on study at PSEMP Seabird Workgroup, Whidbey Audubon Society, and Sound Waters University



What's Next?

An in-depth analysis and discussion of multi-year data will be published in *Northwestern Naturalist* in winter 2016. Plans for 2017 include expanding the survey to Camano Island, and assisting Clallam County MRC in initiating a survey group.

Seining

Goal: ✧ Monitor for juvenile salmon and other species' use of nearshore habitat in Cornet Bay through beach seining.



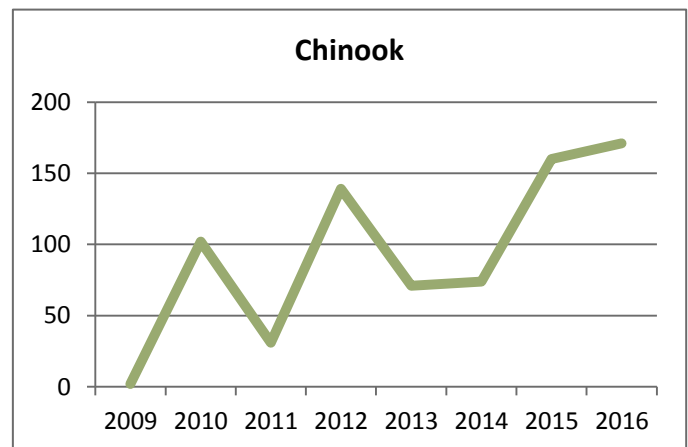
Restoration work at Cornet Bay in 2012 included removal of creosote bulkhead and contaminated fill, beach nourishment, native plantings, and re-grading of the beach to natural slope conditions.

The MRC, in partnership with Sound Water Stewards (formerly WSU Beach Watchers), has been seining at Cornet Bay since 2009 to track how juvenile salmonids and other species utilize the nearshore habitat. Seining has been conducted 4 years pre-restoration and 4 years post-restoration.

The chart below shows the total count of juvenile Chinook salmon tallied during beach seines at Cornet Bay from 2009-2016.

Accomplishments

- ✧ 34 volunteers received training
- ✧ Conducted 10 beach seines at Cornet Bay
- ✧ Developed initial analysis of beach seine data from 2009-2016, 4 years pre- and post-restoration at Cornet Bay
- ✧ Invited public to attend two beach seines to learn about seining and Cornet Bay restoration work



What's Next?

The MRC will develop or collaborate to develop a thorough multi-year data analysis using data from beach seining at Cornet Bay that explores the use of nearshore habitat by salmonids, identifies gaps in current understanding, and informs locations to monitor in the future.

Bull Kelp

Goal: ✧ Monitor size and density of selected bull kelp beds in Island County.



Credit: Linda Rhodes

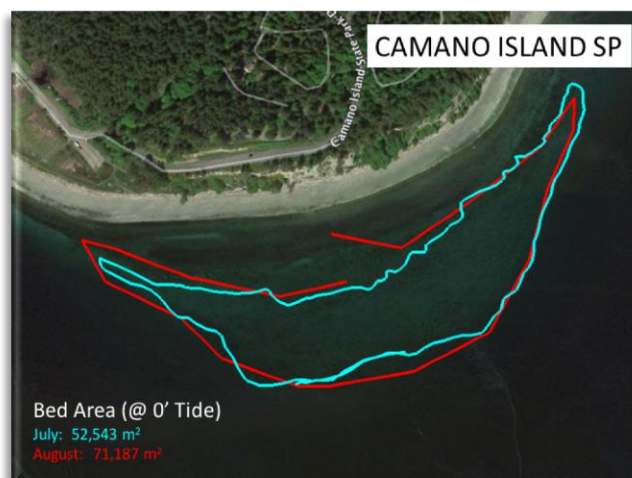
Bull kelp forests provide important habitat, and are significant primary producers in Puget Sound. Reported declines in bull kelp abundance have prompted the development of a bull kelp survey project.

The MRC initiated boat-based bull kelp surveys in 2015 in coordination with the Northwest Straits Initiative and other MRCs. Volunteers monitored the size of bull kelp beds using GPS units while paddling a kayak around the perimeter of the bed.

Kelp bed perimeters from GPS data were tracked monthly, when possible, during the summer months. The figure below shows the bed areas at Camano Island State Park in July and August 2016 overlaid on an aerial image to compare bed areas between months.

Accomplishments

- ✧ Conducted boat-based surveys at 5 sites around Whidbey and Camano Islands
- ✧ 2 new volunteers received on-the-water training
- ✧ Explored use of aerial imaging for monitoring
- ✧ Presented 2015 survey results at MRC Conference and Sound Waters University
- ✧ Developed report of 2016 results and feedback on monitoring project



What's Next?

The MRC will continue to explore the viability of aerial imaging to identify and monitor kelp beds. Beds identified through aerial imagery can be surveyed by boat to address specific scientific questions.

Kelp Harvest Outreach

Goal: ✧ Provide educational information to kelp harvesters and interested public about the ecological importance of kelp forests and sustainable kelp harvesting.



Credit: Linda Rhodes

The MRC coordinated with Whidbey Watershed Stewards (WWS) and Washington Department of Natural Resources (WA DNR) to conduct kelp harvest assessments and harvester education at Libbey Beach County Park. In 2015, it was estimated that harvesters could have collected nearly a quarter of the total macroalgal biomass during the 8-week study period. Harvesters also expressed interest in signage demonstrating sustainable harvesting practices.

The MRC worked with WWS and Island County Parks to install a kiosk (pictured below) at the Park where educational information can be posted and updated.

Accomplishments

- ✧ Installed kiosk at Libbey Beach County Park to hold information on sustainable kelp harvest and the importance of kelp forests
- ✧ Collaborated with Washington Department of Natural Resources and Smith and Minor Islands Aquatic Reserve Citizen Stewardship Committee to review bilingual educational brochure on sustainable kelp and seaweed harvest.



Credit: Rick Baker

What's Next?

The MRC will continue to coordinate with Whidbey Watershed Stewards to keep updated information on the kiosk. The 2017 harvester survey will include a question about whether the harvester read the information on the kiosk.

Cornet Bay

- Goal:** ✧ Improve spawning habitat for forage fish and nearshore habitat for salmon and forage fish.
 ✧ Create and implement a monitoring plan to track the marine environment at Cornet Bay in conjunction with the restoration work at the site.



Cornet Bay was identified by the MRC as a priority restoration project in 2006, and has progressed in a phased approach with several partner organizations to restore the shoreline to a natural beach condition. In 2012, 1.24 acres of beach and upland were restored.

In late 2015, the Northwest Straits Foundation (NWSF) led the effort to remove fill and re-grade the beach in an area of Cornet Bay south of the 2012 restoration work (shown below).

The MRC partnered to assist with beach monitoring and native vegetation planting and maintenance.

Accomplishments

- ✧ Cornet Bay QAPP and Monitoring Plan developed.
- ✧ Coordinated with NWSF to conduct beach monitoring, including insect fallout, large woody debris, and beach wrack surveys.
- ✧ Beach seines, eelgrass monitoring, and forage fish spawn surveys were conducted at Cornet Bay in coordination with existing MRC monitoring work.
- ✧ Coordinated with NWSF and Skagit Fisheries Enhancement Group on 1 native vegetation planting party, and 4 weeding parties.



What's Next?

The MRC will continue to collaborate with NWSF and Washington State Parks to ensure the restored beach continues to flourish as a beautiful recreational area as well as an ecologically healthy environment.

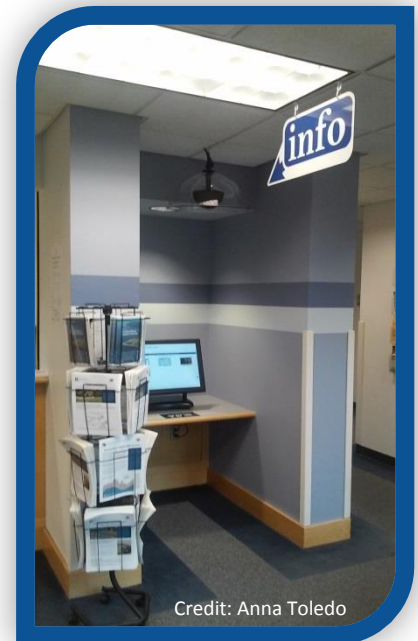
On the Horizon

In addition to the continuation and development of existing projects as highlighted throughout this report, the MRC is looking forward to focusing on the following work in the 2016-2017 year.

Outreach

The MRC has a strong history of citizen science monitoring projects. In addition to using these monitoring projects to provide information to decision-makers and regional organizations, the MRC plans to utilize existing monitoring work as an outreach platform to engage the public on local marine topics. The MRC will conduct an assessment of outreach needs and opportunities, and develop a plan to develop and implement outreach materials and avenues to engage the community.

The outreach needs assessment will define outreach goals, messaging, target audiences, distribution methods, and evaluation techniques. Potential distribution methods include hosting educational videos online and at an interactive kiosk on the Island County campus (pictured to the right). Physical outreach materials, such as brochures, posters, and displays, can be available on-site where MRC monitoring projects are conducted.



Credit: Anna Toledo

Explore Restoration Opportunities

The MRC applied for funding through the Estuary and Salmon Restoration Program (ESRP) Small Grants Program to support a feasibility study for restoration work at the Oak Harbor Marina and adjacent shoreline. The project would conduct a comprehensive assessment of the feasibility and habitat benefit of several elements of impact at the site, including armoring reduction, stormwater improvement, and shading reduction.



Credit: Dawn Pucci

The proposal was recommended for funding in the ESRP Preliminary Investment Plan which is contingent on funding levels in the 2017-2019 state capital bond budget.

The MRC will continue to explore opportunities for partnership on restoration projects, including support through monitoring, outreach, and community engagement.