



# Island County Marine Resources Committee

## 2019 Annual Report



# About the MRC

The Island County Marine Resources Committee (MRC), established in 1999, is an advisory body of volunteers appointed by Island 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 Island County MRC is one of seven Marine Resources Committees supported by the Northwest Straits Marine Conservation Initiative (NWSI), with the goal to restore and protect our marine waters. This report represents work conducted from October 2018 through September 2019. The table below shows how the 2018-2019 MRC tasks supported the goals of the Northwest Straits Initiative.

MRC Grant Tasks	Northwest Straits Initiative Goals				
	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
<b>Operations</b>					❖
<b>Forage Fish</b>	❖		❖		
<b>Bull Kelp</b>	❖		❖		
<b>Eelgrass</b>	❖		❖		
<b>Education and Outreach</b>				❖	

Report prepared September 2019 by Anna Toledo, Island County MRC Coordinator.



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Cover page photo credits, clockwise from top left: Anna Toledo, Kelly Zupich, Kelly Zupich, Anna Toledo.

# Membership

The MRC is comprised of thirteen voting members, appointed by the Board of Island County Commissioners, as well as non-voting ex-officio members and technical advisors. The MRC relies on the hard work and dedication of its members and other volunteers to conduct monitoring, restoration, and outreach projects. **In the 2018-2019 year, the MRC recorded 1,495 volunteer hours!** Thank you to our members and volunteers for your dedication to protecting and restoring the marine resources of Island County!



Member	MRC Project Lead or Liaison/Group Representation
<b>Current Members: September 2019</b>	
Elsa Schwartz, Chair	Port Susan MSA, Northwest Straits Commission Representative
Barbara Bennett, Vice-Chair	Outreach, Island Local Integrating Organization
Randy Berthold	Outreach sub-committee
Michael Bianchi	Outreach sub-committee
Scott Chase	Sound Water Stewards, outreach sub-committee
Jodi Crimmins	Schools liaison
Ed Halloran	Port of South Whidbey
Gwendolyn Hannam	Outreach sub-committee
Matt Kukuk	Forage fish, Salmon Recovery Technical and Citizen Committee
Hannah Liss	Outreach sub-committee
Linda Rhodes	Bull kelp, Smith & Minor Islands Aquatic Reserve
Kestutis Tautvydas	Eelgrass
Kelly Zupich	Outreach sub-committee
<b>Ex-Officio Members (non-voting)</b>	
Lori Clark	Island County Department of Natural Resources
Tim Lawrence	WSU Extension – Island County
Janet St. Clair	Board of Island County Commissioners
<b>Technical Advisors (non-voting)</b>	
Florian Graner	Outreach
Tom Leschine	Science
Mark Stamey	Restoration
Todd Zackey	Tribal: Tulalip Tribes

# Operations

The MRC meets on the first Tuesday of every month in either Coupeville or Camano. Meetings are open to the public, and often feature an educational speaker as well as discussion on business topics and project updates.

The MRC website is updated regularly with meeting agendas and minutes, as well as with project updates and local news of interest.

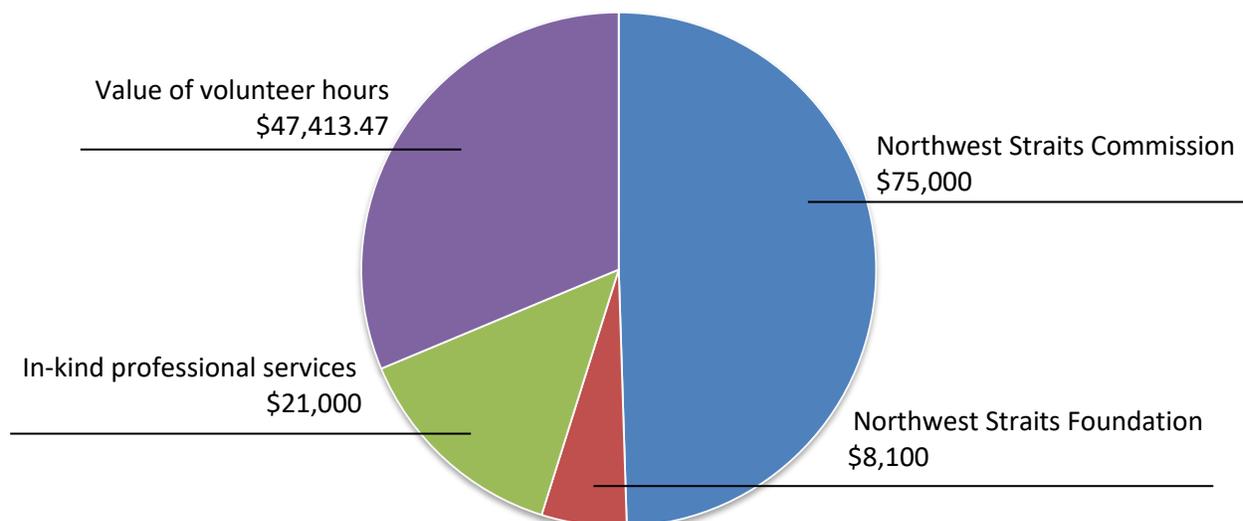
The MRC brings important environmental and economic value to Island County, and engages the local community to preserve and protect our beautiful Island home.

Through grants, volunteer hours, and donated professional services, the MRC has brought a total value of **\$151,513.47** to Island County in 2018-2019.

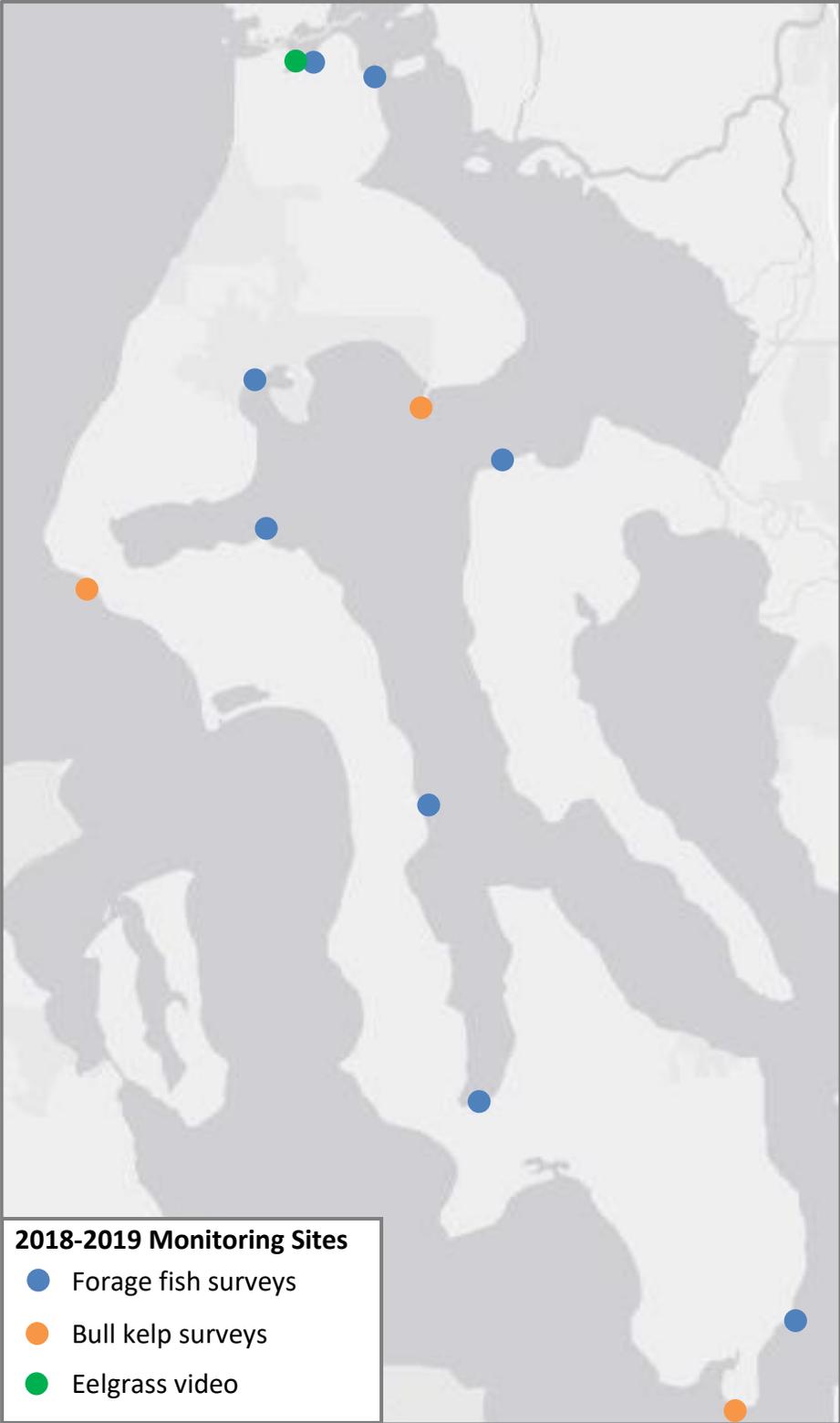
## Accomplishments

- Scheduled, organized, and held 12 MRC meetings.
- Developed 2019-2021 work plan and grant proposal.
- Presented proposed MRC projects to the Board of Island County Commissioners.
- Developed and received funding for two applications through the Northwest Straits Foundation MRC Opportunity Fund.
- Attended monthly Northwest Straits Commission meetings and seasonal MRC staff meetings.
- Participated in Island Local Integrating Organization technical committee meetings.

## Funding Sources



# Monitoring: Where We Work



# Monitoring: Forage Fish

Forage fish are small schooling fish that are a key component in the marine food web, as a vital food source for salmon, seabirds, and marine mammals. Surf smelt and Pacific sand lance, two species of forage fish, lay their eggs on sandy-gravelly beaches around Puget Sound.

The MRC conducts forage fish spawn surveys at selected beaches in conjunction with completed, planned, and proposed shoreline restoration work. The MRC also partners with Washington Department of Fish and Wildlife (WDFW) to assist in conducting surveys at index sites – locations with public access and a known history of spawning presence.

This year brought about some changes to the project structure, as several new volunteers joined the project while previous volunteers stepped down. The newly trained volunteers have formed into teams assigned to each survey site, allowing for more scheduling flexibility. Volunteers collect and condense beach sediment samples, which are then transported to WDFW for analysis.

## Accomplishments

- Conducted surveys at two existing restoration sites: Ala Spit and Cornet Bay
- Initiated surveys at prospective restoration site: Hidden Beach
- Conducted surveys at five index sites: Freeland Park, Glendale, Long Point, Maple Grove, and Windjammer.
- Eleven new volunteers received training by WDFW.
- Established volunteer teams with newly trained volunteers
- Forage fish eggs were found at Freeland Park and Long Point.



# Monitoring: Bull Kelp

Bull kelp forests provide habitat and food to a wide variety of species in the marine environment, including the endangered rockfish, bocaccio.

The MRC initiated boat-based bull kelp surveys in 2015 in coordination with the Northwest Straits Initiative and other MRCs. Volunteers monitor 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 during the summer months at three sites around Island County: Polnell Point, Ebey's Landing, and Possession Point

In addition to the kayak surveys, aerial images in both visible light and near infra-red were captured and georeferenced. The aerial images from 2018 were analyzed to estimate the amount of shoreline with associated bull kelp to be about 17.3 miles, approximately 9% of Island County's shoreline.

Volunteers also collected temperature information using temperature loggers at varying depths and tested a method for quantifying bulb density.



## Accomplishments

- Conducted kayak surveys at three beds around Island County during the summer growing season.
- Collected 1,986 aerial images of Island County shoreline with visible light and near infra-red technology.
- Deployed temperature loggers at three sites to measure temperatures across multiple depths.
- Collected images of plants and animals within kelp beds.
- Developed method of quantifying bulb density using infrared camera.

## Key Observations

- Beds were larger earlier in the season than in previous years of monitoring.
- An abundance of juvenile herring was observed throughout the summer in the Ebey's Landing bed.
- Surface temperatures exceeded 17°C at all beds at least once during the survey period, which marks a potential threshold temperature for detrimental effects on bull kelp.

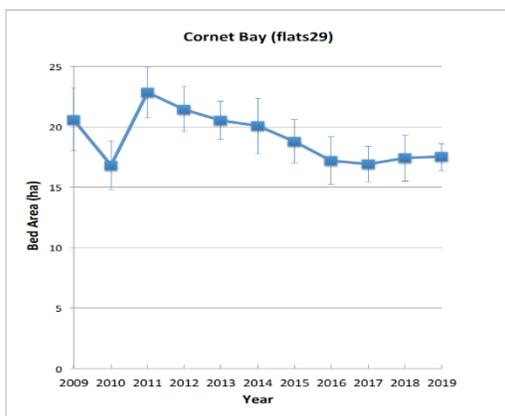
# Monitoring: Eelgrass

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 MRC has partnered with Sound Water Stewards to monitor eelgrass through aerial photography and underwater videography since 2008.

Underwater video is captured and analyzed to estimate eelgrass bed areas. Aerial images are used to overlay with underwater data and to make observations of potential concerns or impacts. Sonar images were also collected from 2016-2018 and compared with aerial and underwater data.

One of the three core sites sampled every year, Cornet Bay, showed a downward trend for several years, prompting the team to focus on this site for 2019 data collection. As shown in the figure below, the downward trend from 2011-2016 has leveled off in 2017-2019.



After ten years of data collection, the volunteer team will discontinue the underwater videography. The MRC would like to extend an enormous “thank you” to the dedicated team of volunteers who have given countless hours of their time and expertise to this project.

## Accomplishments

- Captured underwater videography at Cornet Bay.
- Completed aerial photography for shoreline of Whidbey and Camano Islands.
- Analyzed and reported on 2018 and 2019 monitoring data.
- Collected ten years of eelgrass data since the project initiation.

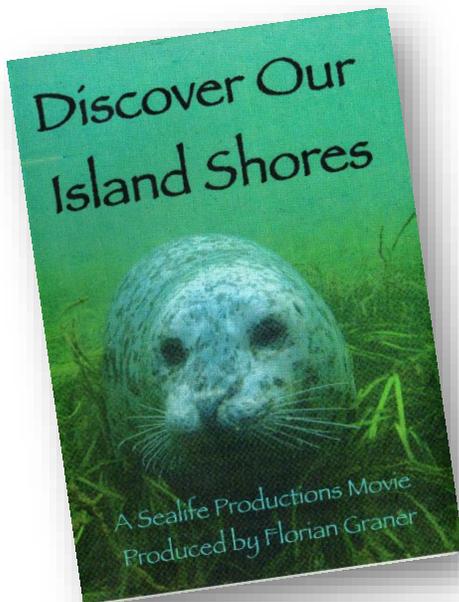
## Key Observations

- The documented downward trend of eelgrass bed area at Cornet Bay from 2011-2016 has stopped in recent years.
- The two other core sites, Monroe Landing and Freeland Park, show stable eelgrass bed areas.
- After recording several years of stable bed size at Freeland Park, an initial observed loss in 2006 can likely be attributed to a storm event, after which the eelgrass recovered by 2009.
- Sonar images were collected in 2016-2018, and while the method has good potential, it also exhibits some limitations in precision and accuracy.

# Education and Outreach: “Discover Our Island Shores” film screenings

The MRC worked with local filmmaker and MRC technical advisor, Florian Graner, to adapt an educational film about the Salish Sea to include a focus on the marine habitats and species around Island County.

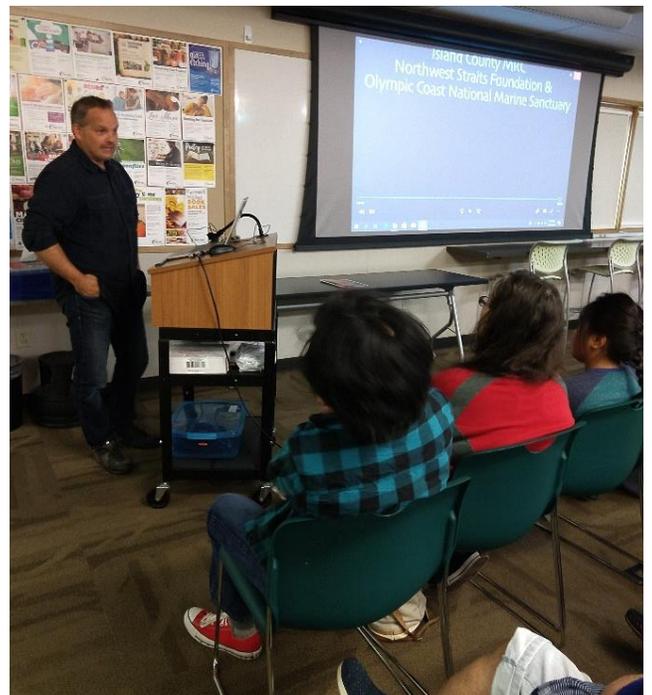
This film, entitled “Discover Our Island Shores” follows a harbor seal through the underwater habitats of the Salish Sea and around Whidbey and Camano Islands to introduce viewers to the beautiful and complex local marine ecosystem. Along the way, they learn about the variety of species that inhabit local waters, such as plankton, herring, salmon, orcas, and many more.



The development of the film and its distribution to local schools was funded through the Northwest Straits Foundation’s MRC Opportunity Fund. The MRC wanted to expand its reach beyond school-aged students, to include local community members, and consequently planned two film screenings in partnership with Sno-Isle Libraries.

## Accomplishments

- Showcased “Discover Our Island Shores” film at Coupeville Library and Oak Harbor Library to 77 viewers.
- 78% of viewers indicated their understanding of local marine habitats and species was greatly increased after watching the film.
- 82% of viewers indicated their appreciation for local marine habitats and species was greatly increased after watching the film.
- Filmmaker, Florian Graner, answered audience questions following the Coupeville screening.



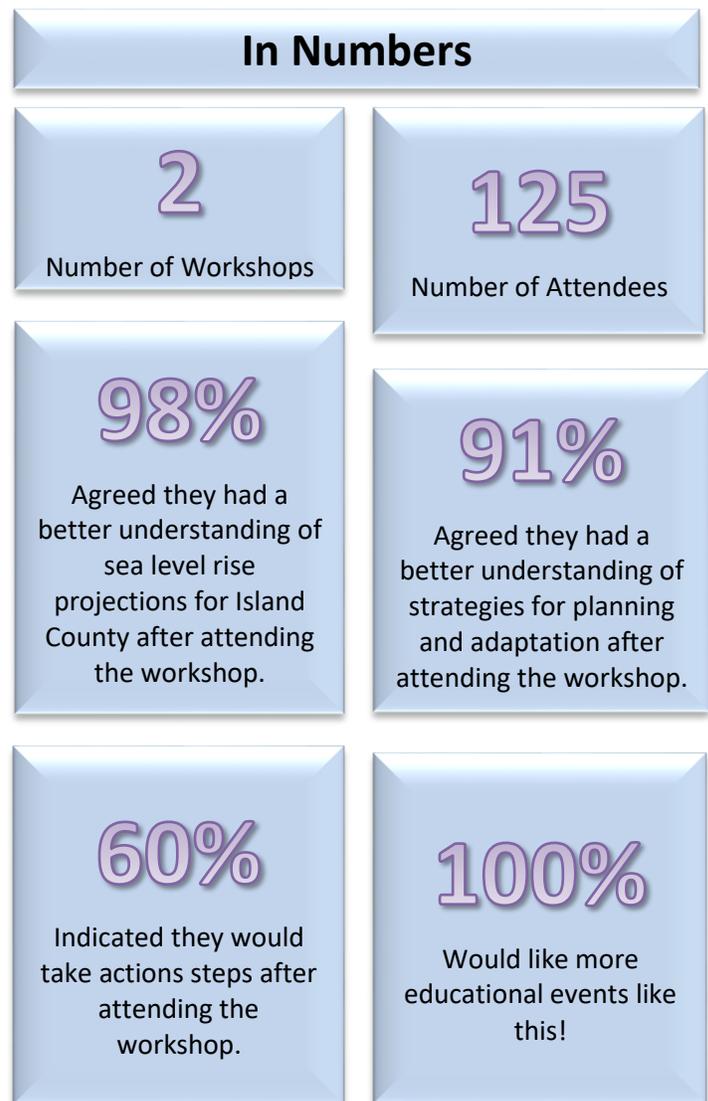
# Education and Outreach: Sea Level Rise Workshops

Following a set of successful workshops on aging shoreline structures in 2018, the MRC planned a second set of workshops in 2019 to build on that foundation and continue to serve the role of bringing community members together to learn about and discuss important shoreline topics.

The MRC invited speakers from Washington Sea Grant and Island County Planning to present at two community workshops on sea level rise. The workshops were designed to provide participants with information on sea level rise, offer the opportunity to explore sea level rise projections, and foster discussions on planning and adaptation.

The MRC offered one workshop on Camano and one on Whidbey. Registration numbers reached capacity, and several individuals signed up for a waiting list.

The workshop included an overview of sea level rise, an interactive exercise where participants explored projection tables and printed and electronic maps, and presentations on local strategies and planning.



# Education and Outreach: Meetings, Events, and Outreach Tools

The MRC engaged in several outreach efforts throughout the year. Outreach is an integral part of each MRC project. By helping the community understand what the MRC does and why, the goal is to increase public interest in learning about and caring for the local marine environment.



## Accomplishments

- Partnered on shoreline management workshops for realtors on Camano and Whidbey Islands.
- Partnered on shoreline vegetation management workshop for homeowners on Camano.
- Developed an MRC newsletter, distributed three times throughout the year.
- Hosted a visit from Governor Jay Inslee at Cornet Bay nearshore restoration site.
- Developed a display on marine food webs.
- Interacted with 87 crabbers and distributed 300 educational cards to provide tips on how to avoid losing crab pots.
- Developed and distributed the film “Discover Our Island Shores” to local schools with an accompanying classroom activity.
- Hosted an art contest for students to depict a marine species.
- Interacted with 150 individuals at Family Outdoor Discovery Day, teaching kids and adults about the marine food web.
- Provided presentations for: Sound Water Stewards, Whidbey Island Conservation District, MRC Conference, and Board of Island County Commissioners.



[www.islandcountymrc.org](http://www.islandcountymrc.org)

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