

County: Island  
Grant No: SEANWS-2018-IsCoPH-00011

PROJECT TITLE: Island County Marine Resources Committee Operations and Projects

DELIVERABLES FOR TASK NO: 3.4 – Report on outreach activities

PROGRESS REPORT: [ ]

FINAL REPORT [ X ]

PERIOD COVERED: October 2018 – September 2019

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# Island County Marine Resources Committee Outreach: 2018-2019

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## I. Introduction

Outreach is an important aspect of the work of the Island County Marine Resources Committee (MRC). The MRC has been increasing its focus on outreach, including internal outreach to Island County leadership as well as external outreach to the local community. Outreach is an integral component of each MRC project – whether a highly visible restoration project or behind-the-scenes data analysis. By helping the community understand what the MRC does and why, the MRC hopes to increase public interest in learning about and caring for the local marine environment.

The MRC developed an outreach plan in January 2019 to guide outreach work for the year. Several target audiences and strategies were identified. The primary strategies selected were the following:

- ♦ Workshops
- ♦ Presentations
- ♦ Educational Displays
- ♦ Events and Meetings
- ♦ Newsletters and Media

From these five strategies, several activities were identified as opportunities to implement targeted outreach. The activities are detailed in the following sections.

## II. Strategies and Activities

### A. Workshops

#### **SEA LEVEL RISE IN ISLAND COUNTY WORKSHOP, SEPTEMBER 2019**

##### *Background*

Since conducting an Outreach Needs Assessment in 2017, the MRC has identified one of its strengths as hosting community outreach events. The MRC is uniquely placed within the County to serve as a conduit of information both to local residents as well as to County leadership. The MRC hosted a set of forums on aging shoreline structures in 2018. These forums were well-received, and the MRC was encouraged to continue to serve this role in bringing together community members to learn about and discuss important shoreline topics. Based on feedback from the forums and discussions with community members and County staff, the MRC selected sea level rise as the topic for the 2019 workshops.

Island County has been working with Washington Sea Grant as part of the Washington Coastal Resilience Project to increase local and regional capacity to plan for sea level rise and coastal hazards. Through this project, a set of probabilistic sea level rise projections were developed utilizing the latest science, and designed to be used on a community scale. The MRC saw the opportunity to bring this information to the community, to help individuals and communities learn about local projections, and start discussions for planning and adaptation.

### *Objectives*

The workshop was 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 outlined objectives were:

Participants will:

- ♦ Learn about local projections of sea level rise
- ♦ Identify areas of concern and discuss possible strategies for planning and adaptation

### *Publicity*

The MRC developed a flyer which was distributed electronically through the MRC email distribution list as well as the distribution lists of partner organizations and the County Commissioners. Attendees of the MRC's 2018 forum on aging shoreline structures were also invited to attend.

The flyer was also posted on online calendars and through the Island County Environmental Health / Department of Natural Resources Facebook page and shared through social media and distribution lists of partner organizations. The flyer is attached in Appendix A.

### *Registration*

While the workshops were free, participants were requested to register in advance. In the online registration, participants were invited to list the community they lived in and any questions or concerns regarding sea level rise. These questions were asked to help inform program presenters about specific areas and concerns that might be helpful to address during the workshop.

Workshop registration reached capacity within two weeks, and additional registrants were placed on a waiting list, and will be informed if this workshop is offered again in the future. Forty-two people attended the Camano workshop. Eighty-three people attended the Coupeville workshop. Thirty-two people signed up for the waiting list.

### *Agenda*

The flow of the agenda was designed to start with an overview of sea level rise, move into a practical and interactive exploration and discussion of local projections, and shift into a series of presentations on how local community members as well as the County are planning and adapting. Both agendas are attached in Appendix A.

MRC Vice-Chair and Outreach Lead, Barb Bennett, welcomed attendees and gave a brief introduction about the MRC. Following introductions, Dr. Ian Miller from Washington Sea Grant, provided an overview of sea level rise, why it's happening, and how the Washington State sea level rise projections were developed. Dr. Miller also provided a demonstration of the difference between the melting of sea ice vs. land-based ice.

Nicole Faghin from Washington Sea Grant led an exercise where participant groups looked at printed tables of sea level rise projections and noted differences in projection time frames and probabilities. Nicole then led the groups in exploring both printed maps of sea level rise projections as well as electronic maps through the NOAA Sea Level Rise Viewer available on laptops provided at each table. As groups were exploring the printed and electronic maps, several facilitators engaged with groups to help answer questions and spark further discussions. Facilitators included: Island County Department of Natural Resources staff: Lori Clark, Dawn Spilsbury Pucci, Matt Colston, and Anna Toledo; Island County Planning Staff: Meredith Penny; MRC members: Barb Bennett, Elsa Schwartz, and Scott Chase;

Washington Sea Grant staff: Ian Miller, Nicole Faghin, and Bridget Trosin. The exercise instructions and worksheet are attached in Appendix A.

Following the mapping exercise, Nicole facilitated a debrief of the activity to allow participants to share what they had learned and observed in the maps and tables.

The workshop then shifted into a section on local strategies and planning, with presentations from three presenters. Bridget Trosin from Washington Sea Grant presented on the MyCoast app and how participants can use their smartphones to take and submit photos of king tides, which provides a visual record of what sea level rise may look like locally.

Anna Toledo, Island County MRC and Shore Friendly Coordinator, presented on strategies that local community members are currently taking to prepare for and adapt to increasing sea levels and storm surge.

Meredith Penny, Island County Long-Range Planner, presented on the County's upcoming Shoreline Master Program update process.

In addition to the presentations and mapping exercise, participants were also able to peruse a table of resources put together by the MRC, including brochures and materials about shoreline living, soft shore protection, and the work of the MRC.

All agendas, presentations, and handouts are also available online at:  
<https://www.islandcountymrc.org/projects/sea-level-rise-workshop/>

### *Photos*







*Top left: Barbara Bennett welcomes participants to Camano workshop. Top right: Participants explore maps at Camano workshop. Bottom: Participants explore maps at Whidbey workshop.*

### **Evaluation**

Participants were given an evaluation to fill out after each workshop. A copy of the evaluation is available in Appendix A. An online version of the evaluation was also distributed to workshop participants in a follow-up email the following week, which also included resources and copies of the workshop presentations.

Forty-two people attended the Camano workshop. Eighty-three people attended the Coupeville workshop. Seventy people (56%) responded to the evaluation: twenty-four from Camano and forty-six from Whidbey. Full evaluation results are available in Appendix A.

Eighty-nine percent of evaluation respondents strongly agreed this workshop was a valuable use of their time. Eighty-four percent strongly agreed they have a better understanding of sea level rise projections in Island County. Seventy percent strongly agreed they have a better understanding of the local impacts of sea level rise. Fifty-three percent somewhat agreed and thirty-seven percent strongly agreed they have a better understanding of strategies for planning and adaptation.

Participants indicated several follow-up actions they would take as a result of the workshop, including:

- ♦ Sharing this information with neighbors, HOAs, and community boards
- ♦ Utilizing sea level rise projections in building plans
- ♦ Considering home modifications (raising house, selling house)
- ♦ Working closely with the County
- ♦ Using the MyCoast app

Participants indicated they learned several things, including:

- ♦ There are a lot of local resources about this topic
- ♦ Relationship of moon positions and high tides and time of year
- ♦ That sea level rise is real

- ♦ Contributions to sea level rise
- ♦ Pros and cons of different shoreline protection strategies
- ♦ Better understanding of local effects of sea level rise and storm surge
- ♦ The difference between land and sea ice melt
- ♦ Areas that are most likely to be affected by sea level rise
- ♦ How the modeling process works
- ♦ Online resources and MyCoast app

It is clear the workshops were well-received and provided tangible information for the attendees. Participants expressed gratitude for the presenters, content, resources, and workshop structure.

One hundred percent of respondents indicated they would like more educational events like this. Suggested topics for future workshops included: Bluff management, ocean acidification, septic alternatives, disaster planning, and shoreline planning.

### **SHORELINE REAL ESTATE WORKSHOP: UNDERSTANDING BEACH AND BLUFF PROPERTIES, OCTOBER 2018**

The MRC partnered with the Northwest Straits Foundation and Island County Shore Friendly program to host a workshop for realtors on shoreline processes, natural protection options, and vegetation and drainage management in October 2018. The workshop was held both on Camano and Whidbey Islands. There were ten attendees at the Camano workshop and twenty-seven at the Coupeville workshop.

Erica Guttman from WSU Extension spoke about shoreline development considerations and the health of Puget Sound. Jim Johannsson with Coastal Geologic Services presented on coastal processes and alternatives to bulkheads. Lisa Kaufman with the Northwest Straits Foundation and Anna Toledo, MRC Coordinator presented on shoreline regulations, incentives, and the MRC. Kristen Stavros with Windermere Real Estate tied together all the pieces by sharing how to incorporate this shoreline information into a real estate business from a broker's perspective.



*Jim Johannessen talking about bluffs on the field trip portion of the Coupeville realtor workshop. Credit: Anna Toledo*

## **VEGETATION MANAGEMENT WORKSHOP FOR SHORELINE LANDOWNERS, OCTOBER 2018**

The MRC partnered with the Northwest Straits Foundation to host a shoreline vegetation management workshop. The workshop was held on October 17, 2018 on Camano, and drew fifty-four participants. MRC staff, Anna Toledo, provided a welcome, introduction, and overview of the work of the MRC. Lisa Kaufman with the Northwest Straits Foundation presented on shoreline processes. Ben Alexander with Sound Native Plants presented on shoreline vegetation planning, planting, and maintenance. In addition, the MRC, Sound Water Stewards, and WSU Extension Island County Shore Stewards had tables to provide information and resources to attendees.

## **B. Presentations**

### **PRESENTATION TO SOUND WATER STEWARDS, OCTOBER 2018**

MRC staff, Anna Toledo, and MRC Chair, Elsa Schwartz presented, along with Snohomish MRC staff and member, Kathleen Pozarycki and Debbie Hopkins, to Sound Water Stewards on Camano Island about the Port Susan Marine Stewardship Area (MSA). The presentation included information on the history of the MSA, and projects within the Port Susan area.



*Elsa Schwartz (Island MRC), Debbie Hopkins (Snohomish MRC), Kathleen Pozarycki (Snohomish MRC), and Anna Toledo (Island MRC) present about the Port Susan Marine Stewardship Area to the Sound Waters Stewards on Camano Island. Credit: Scott Chase.*

### **MRC CONFERENCE: IGNITE PRESENTATION, NOVEMBER 2018**

MRC staff, Anna Toledo, provided an Ignite presentation at the MRC conference. The presentation highlighted the work of the MRC in bringing together community members at the 2018 MRC forums on aging shoreline structures.

### **PRESENTATION AT WHIDBEY ISLAND CONSERVATION DISTRICT OPEN HOUSE, NOVEMBER 2018**

MRC member, Linda Rhodes, presented on “Collaboration for Conservation” at the Whidbey Island Conservation District’s open house event during the first annual Puget Sound Orca Recovery Day organized by the Puget Sound Conservation Districts. The MRC also had a table to provide information to attendees about the work of the MRC.

## **PRESENTATIONS TO BOARD OF ISLAND COUNTY COMMISSIONERS, DECEMBER 2018 AND MARCH 2019**

MRC staff, Anna Toledo, provided two updates to the Board of Island County Commissioners (BICC). The MRC was initially scheduled for quarterly presentations to the BICC, but that was switched to a biannual basis, with the understanding that the Commissioner sitting on the MRC would help convey information between the MRC and BICC. The updates coincided with the MRC's newsletters, and covered project updates as well as emerging topics of interest.

## **PRESENTATION TO SOUND WATER STEWARDS, MARCH 2019**

MRC staff, Anna Toledo, presented to Sound Water Stewards on Whidbey Island about the MRC. The presentation covered the history of the MRC and Northwest Straits Initiative, and current projects the MRC is working on.

## **C. Educational Displays**

### **SOUND WATERS UNIVERSITY, FEBRUARY 2019**

The MRC participated with a poster display and handouts at Sound Waters, a one-day "university" that drew over 600 attendees. The poster explained the importance of upper intertidal habitat for forage fish spawning habitat, how shoreline armoring impacts that habitat, and alternative to hard shoreline armoring.

### **MARINE FOOD WEBS DISPLAY, APRIL 2019**

In conjunction with the release of the "Discover Our Island Shores" film to local schools, MRC member, Kelly Zupich, developed a display on the marine food web that was showcased at the Coupeville Library. The display included images of marine species from the film, and showed how they are connected to each other by placing a string between the predator and the prey. The resulting web highlighted how complex and codependent life is on each other.

A poster explaining the food web was hung next to the display. Viewers were asked to respond to the question "How are you connected to the food web?" Some of the answers are included below:

- ♦ *"I am connected to the food web because I eat food that is in the food web, not nothing but dangerous animals can eat me, meaning I am close to the top of the food chain."*
- ♦ *"I am connected to the food web because humans like me eat salmon, blue mussels, kelp/seaweed and more. That is how I am connected to the food web."*
- ♦ *"By water! We need to stop plastics from entering our waterways."*
- ♦ *"We eat shrimp."*
- ♦ *"I eat salmon! (Wild salmon)"*
- ♦ *"I am at the top of it."*
- ♦ *"We are connected to the food web because we eat other animals such as chicken, cows, pigs, and lamb."*
- ♦ *"I eat plants."*

Kelly also updated the MRC's poster display, which was presented in the library's display case. The poster images are attached in Appendix B.





*Left: Marine food web display at Coupeville Library. Credit: Anna Toledo. Right: Display on the MRC, highlighting the "Discover Our Island Shores" project at the Coupeville Library. Credit: Kelly Zupich.*

## D. Events and Meetings

### **OAK HARBOR KING TIDE VIEWING EVENT, JANUARY 2019**

MRC Vice-Chair, Barb Bennett, shared information about the MRC at a king tide viewing event in Oak Harbor, hosted by Washington Sea Grant. Attendees learned about king tides, how to take pictures of king tides using the MyCoast app, and how the MRC is partnering on the MyCoast app and engaging community members in learning about and caring for the marine environment.

### **SUNLIGHT SHORES PLANTING PARTY, MARCH 2019**

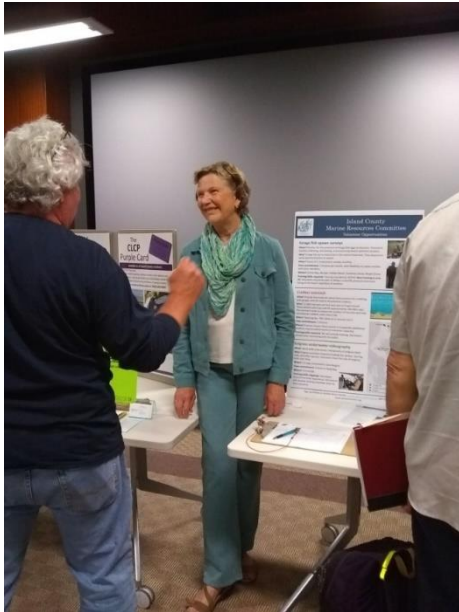
MRC staff and volunteers partnered with the Northwest Straits Foundation and Sunlight Shores community members to plant native vegetation at the Sunlight Shores nearshore restoration site. Eighteen volunteers planted 1,500 pieces of dunegrass, and several other species of native plants: coastal strawberries, coast gumweed, beach pea, seashore lupine, sea plantain, ocean spray, red flowering currant, Nootka rose, and snowberry.



*Volunteers planting native vegetation at Sunlight Shores nearshore restoration site. Credit: Anna Toledo.*

## SOUND WATER STEWARDS VOLUNTEER OPPORTUNITY FAIR, MAY 2019

MRC staff and Vice-Chair hosted a table about volunteer opportunities on MRC projects at the Sound Water Stewards Volunteer Opportunity Fair. Seven new volunteers signed up for projects.



*Barbara Bennett engages volunteers at Sound Waters Stewards Volunteer Opportunity Fair. Credit: Anna Toledo.*

## CATCH MORE CRAB OUTREACH, JULY 2019

The MRC participated in Catch More Crab outreach by distributing 300 educational cards to local retail locations on Whidbey and Camano Islands where crabbing licenses are sold, the Port of South Whidbey, and the Island County Public Health front desk. In addition, five volunteers at the Camano Island State Park boat launch and four volunteers and one staff at the Captain Coupe boat launch in Coupeville interacted with eighty-seven crabbers on July 6<sup>th</sup>, at the beginning of crabbing season. This included handing out crab gauges, rot cord, and informational cards with tips on how to avoid losing crab pots.



*Left: Carol Swain explains the importance of rot cord to a crabber. Credit: Scott Chase. Middle: Crabber education materials. Credit: Kelly Zupich. Right: Deborah Stilwell, Kelly Zupich, Vance Willsey, and Anna Toledo show off crabber education materials. Credit: Jack Buchard.*



## GOVERNOR JAY INSLEE VISIT TO CORNET BAY, JULY 2019

Governor Jay Inslee visited the Cornet Bay nearshore restoration site on July 17. Several project partners and MRC volunteers attended. The Governor was engaged and asked lots of great questions. He was impressed by and appreciative of all the volunteer work that has gone into this project.



*Left: Dawn Spilsbury Pucci and Kes Tautvydas explain juvenile salmon trends at Cornet Bay to Governor Jay Inslee and his grandson. Right: Ruth Richards demonstrates a forage fish survey to Governor Jay Inslee and his grandson. Credit: Anna Toledo*

## FAMILY OUTDOOR DISCOVERY DAY, AUGUST 2019

MRC member, Gwendolyn Hannam, and MRC staff, Anna Toledo participated in Family Outdoor Discovery Day at Fort Casey State Park, hosted by Washington State Parks and Sound Water Stewards. Gwendolyn developed a felt board of a marine ecosystem to engage children in learning about the marine food web. The MRC interacted with over 150 individuals.



*Gwendolyn Hannam invites children to learn about the marine food web at Family Outdoor Discovery Day. Credit: Anna Toledo.*

### **OCEAN ACIDIFICATION TEACHER TRAINING WORKSHOP, AUGUST 2019**

MRC member, Jodi Crimmins, participated in an Ocean Acidification Teacher Training workshop hosted by the Jefferson County MRC and Port Townsend School District. Jodi shared information about the work of the MRC in Island County.

### **OAK HARBOR SCHOOL DISTRICT STEM TEACHER TRAINING, AUGUST 2019**

MRC member, Kelly Zupich, and MRC staff, Anna Toledo presented to three teachers about the “Discover Our Island Shores” film and classroom activity at the Oak Harbor School District STEM Teacher Training event. The presentation covered an overview of the film, and walked teachers through how to implement the classroom activity.

### **MRC MONTHLY MEETINGS, ONGOING**

The MRC meets monthly, and frequently includes educational presentations as part of those meetings, which the public is encouraged and invited to attend. Presentation topics in the 2018-2019 grant year included: pigeon guillemot survey; project identification, prioritization, and monitoring; net pen update; Plastic Free Salish Sea; forage fish in Island County; Island Local Integrating Organization; eelgrass monitoring; Shoreline Master Program update; and communications planning.



*MRC meeting at Camano Island Library. Credit: Anna Toledo.*

### **PARTICIPATION IN PARTNER MEETINGS, ONGOING**

The MRC maintains a connection with related local and regional work through integration with partner organizations. MRC members provide representation on the Island Local Integrating Organization and Island County Salmon Recovery Technical and Citizen Committee. Several Sound Water Stewards sit on the MRC and help foster the connection of the two organizations. MRC members also participate in the Puget Sound Ecosystem Monitoring Program (PSEMP) nearshore, forage fish, seabird, and diseases workgroups.

### **WEBSITE UPDATES, ONGOING**

The MRC website is regularly updated with information on upcoming meetings and events, as well as project reports and past meeting minutes.

## E. Newsletters and Media

### NEWSLETTERS

In an effort to increase communications with the Board of Island County Commissioners (BICC), the MRC initiated a quarterly newsletter to coincide with the quarterly updates to the BICC. Originally, the audience was primarily the Island County Commissioners, however it became clear that the information presented in the newsletters was also useful to others interested in the work of the MRC. The newsletters were distributed electronically to the MRC distribution list, and are available on the MRC website. The MRC developed three newsletters throughout the year. Due the busy summer season, and a shift in providing biannual rather than quarterly updates to the BICC, a summer newsletter was not developed. The newsletters are attached in Appendix C.

### **“MRC DIARIES: PROTECTING AND PRESERVING OUR ISLAND WATERS”**

The MRC worked with MRC technical advisor and videographer, Florian Graner, to develop a film about the marine resources of Island County. Funding for the development of this film was provided through the Northwest Straits Foundation’s MRC Opportunity Fund. The 17-minute version is available here:

<https://vimeo.com/284737115/42a6da3845>. The 7-minute version is available here:

<https://vimeo.com/284664228/f91d8d7287>.

The film was shared widely with the Island County Commissioners, MRC distribution list, social media, and through partner organizations. The MRC also submitted the film to the American Fisheries Society and The Wildlife Society’s film festival, and was shown during their annual conference in September.

### **“DISCOVER OUR ISLAND SHORES” FILM, CLASSROOM ACTIVITY, ART CONTEST, MARCH-MAY 2019**

The MRC worked with MRC technical advisor and videographer, Florian Graner, on another film project, to adapt a film previously used in the Olympic Coast and Snohomish County to include a focus on the marine habitats and species around Island County. The development of the film was supported by funding through the Northwest Straits Foundation’s MRC Opportunity Fund. The MRC then distributed the film and an accompanying classroom activity developed by NOAA to schools in Island County’s four school districts.

The MRC also hosted an art contest to accompany the film and classroom activity. Students in grades 4-6 from schools that utilized the film were invited to submit artwork of a marine plant or animal seen in the film, and write a response to the question “What will you do to make a positive impact on the Salish Sea?”

The art contest rules and winning entries are attached in Appendix D.

### **“DISCOVER OUR ISLAND SHORES” FILM SCREENINGS, SEPTEMBER 2019**

The MRC partnered with Sno-Isle Libraries to show the film “Discover Our Island Shores” at Coupeville Library and Oak Harbor Library. Forty-five people attended the Coupeville screening and thirty-two people attended the Oak Harbor film screening. More details about these screenings are included in a separate summary report, attached in Appendix E.

### SOCIAL MEDIA

Island County Environmental Health/Department of Natural Resources started a Facebook page in 2018, which the MRC can post through. The MRC provided regular topics for posting, including the MRC films, art contest, and announcements about workshops and events.

### **LOCAL MEDIA**

The MRC was featured in local newspapers in the following articles:

- ♦ Taking a 'softer' approach to beach erosion: <http://www.whidbeynewstimes.com/news/taking-a-softer-approach-to-beach-erosion/>
- ♦ Maylor Point Restoration Project Completed: [https://issuu.com/whidbeylocal/docs/10.47\\_november\\_22\\_2018-web](https://issuu.com/whidbeylocal/docs/10.47_november_22_2018-web) (page 9)
- ♦ Salmon and recovery efforts grown through natural shoreline restoration, land-based whale watching: <https://medium.com/wagovernor/salmon-and-recovery-efforts-grow-through-natural-shorelines-restoration-land-based-whale-watching-b417f18f14fa>
- ♦ Workshop looks at rising sea level: <http://www.whidbeynewstimes.com/news/workshop-looks-at-rising-sea-level/>

## **III. Appendices**

- A. Sea Level Rise Workshop Materials**
- B. MRC Poster Display**
- C. MRC Newsletters**
- D. Art Contest Rules and Winning Entries**
- E. Film Screenings Summary Report**



# SEA LEVEL RISE IN ISLAND COUNTY FREE WORKSHOP



What do local sea level rise projections mean for your property and your community? How can you be preparing for changes that are affecting our shorelines?

You are invited to join specialists from Washington Sea Grant, Island County, and the Island County Marine Resources Committee to learn about impacts of sea level rise, explore local maps, and discuss strategies for planning and adaptation.

## SATURDAY, SEPTEMBER 28

### CAMANO

9:00am - 12:00pm

Vista Madrona Fire Station

273 N. West Camano Dr, Camano

### WHIDBEY

2:30pm - 5:30pm

Coupeville Rec Hall

901 NW Alexander St, Coupeville



**RSVP requested: [www.surveymonkey.com/r/Z6LVCT2](http://www.surveymonkey.com/r/Z6LVCT2)**



Hosted by Island County Marine Resources Committee  
**WWW.ISLANDCOUNTYMRC.ORG**



**PUGET SOUND  
PARTNERSHIP**



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# Sea Level Rise in Island County

## Workshop Agenda

Saturday, September 28, 2019

9:00am – 12:00pm

Vista Madrona Fire Station  
273 N. West Camano Dr, Camano

### Workshop objectives

Participants will:

- Learn about local projections of sea level rise
- Identify areas of concern and discuss possible strategies for planning and adaptation

**8:45-9:00 Sign-In**

**9:00-9:15 Welcome and Introductions**

Barbara Bennett, Vice-Chair, Island County Marine Resources Committee

**9:15-9:45 Overview of Sea Level Rise in Washington State**

Dr. Ian Miller, Coastal Hazards Specialist, Washington Sea Grant

**9:45-10:45 Utilizing Mapping Tools: Introduction and Exercise**

Nicole Faghin, Coastal Management Specialist, Washington Sea Grant

**10:45-11:00 Break**

**11:00-11:20 Mapping Exercise Debrief**

Nicole Faghin

**11:20-11:50 Local Strategies and Planning**

Bridget Trosin, Coastal Policy Specialist, Washington Sea Grant

Anna Toledo, Coordinator, Island County Marine Resources Committee

Meredith Penny, Long Range Planner, Island County Planning and Community Development

**11:50-12:00 Wrap-Up and Adjourn**



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# Sea Level Rise in Island County

## Workshop Agenda

Saturday, September 28, 2019

2:30pm – 5:30pm

Coupeville Rec Hall  
901 NW Alexander St, Coupeville

### Workshop objectives

Participants will:

- Learn about local projections of sea level rise
- Identify areas of concern and discuss possible strategies for planning and adaptation

**2:15-2:30 Sign-In**

**2:30-2:45 Welcome and Introductions**

Barbara Bennett, Vice-Chair, Island County Marine Resources Committee

**2:45-3:15 Overview of Sea Level Rise in Washington State**

Dr. Ian Miller, Coastal Hazards Specialist, Washington Sea Grant

**3:15-4:15 Utilizing Mapping Tools: Introduction and Exercise**

Nicole Faghin, Coastal Management Specialist, Washington Sea Grant

**4:15-4:30 Break**

**4:30-4:50 Mapping Exercise Debrief**

Nicole Faghin

**4:50-5:20 Local Strategies and Planning**

Bridget Trosin, Coastal Policy Specialist, Washington Sea Grant

Anna Toledo, Coordinator, Island County Marine Resources Committee

Meredith Penny, Long Range Planner, Island County Planning and Community Development

**5:20-5:30 Wrap-Up and Adjourn**



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# Sea Level Rise in Island County – Workshop Exercise

September 28, 2019

## 1. PROJECTIONS TABLES EXERCISE

- a. Look at projections line for 2050
    - i. Compare RCP 4.5 with RCP 8.5
  - b. Compare to projections line for 2100
    - i. Compare RCP 4.5 with RCP 8.5
  - c. Look at the difference between 95%, 50% and 1%
- 

## 2. MAP EXERCISE

- a. Look at NOAA Sea Level Rise Viewer for your assigned area of Island County
- b. Identify areas of vulnerability
  - i. Examine the area for 4 feet of sea level rise
    - 1. Where are there specific areas or neighborhoods that may be impacted? Circle these on the maps at your table.
    - 2. What are some of the features of these areas that may be impacted? List these on your worksheets.
    - 3. What are some options to address the impacts?
  - ii. Compare the area with 6 feet of sea level rise
    - 1. Are there different or more areas that may be impacted? Circle these on the maps at your table.
    - 2. What are some of the features of these areas that may be impacted? List these on your worksheets.
    - 3. What are the causes of the impacts? E.g. erosion, flooding, salt water intrusion?
    - 4. What are some options to address the impacts?

## Sea Level Rise in Island County – Workshop Exercise

September 28, 2019

### Island County Sea Level Rise Average Projections

*RCP 4.5 Sea-level rise projections averaged for Island County in feet based on Miller et al projections.*

	Very Likely 95% probability)	Likely 50% probability)	Unlikely 1% probability)	Mid-Range 17 - 83% probability
<b>2050</b>	0.3	0.7	1.4	0.5 - 1.0
<b>2070</b>	0.5	1.1	2.4	0.7 - 1.5
<b>2100</b>	0.7	1.8	4.4	1.1-2.5

*RCP 8.5 Sea-level Rise Projections Averaged for Island County in Feet based on Miller et al projections*

	Very Likely 95% probability)	Likely 50% probability )	Unlikely 1% probability)	Mid-Range 17 - 83% probability
<b>2050</b>	0.3	0.8	1.5	0.5 - 1.0
<b>2070</b>	0.6	1.3	2.6	0.9 - 1.7
<b>2100</b>	1.0	2.2	5.0	1.5 - 3.0

## Sea Level Rise in Island County - Workshop Exercise

September 28, 2019

Feature or asset that may be impacted?	What is the cause of the impact?	Ideas of how to address impact?

*Materials are for workshop and discussion purposes only.*

**Sea Level Rise in Island County**  
 Saturday, September 28, 2019  
 Workshop Evaluation

Thank you for taking the time to fill out this evaluation. It helps us know how we did and how to better serve you in the future!

**1. Please rate the following statements:**

	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
The workshop was a valuable use of my time.	1	2	3	4
I have a better understanding of sea level rise projections for Island County.	1	2	3	4
I have a better understanding of the local impacts of sea level rise.	1	2	3	4
I have a better understanding of strategies for planning and adaptation.	1	2	3	4

**2. After attending this workshop, will you take any action steps (e.g. behavior changes, planning considerations, adaptations at your property)?**    Yes    No

If yes, what? \_\_\_\_\_

**3. What is one thing you learned?** \_\_\_\_\_

\_\_\_\_\_

**4. What did you like best?** \_\_\_\_\_

\_\_\_\_\_

**5. Do you have suggestions on how we could improve this event in the future?** \_\_\_\_\_

\_\_\_\_\_

**6. Would you like more educational events like this?**    Yes    No

Please tell us other topics you'd like to learn more about: \_\_\_\_\_

**7. Do you need follow-up about a specific item?** If so, please indicate your name, contact information, and the follow-up need below.

\_\_\_\_\_

**Additional comments:**

**Sea Level Rise in Island County**  
**Saturday, September 28, 2019**  
**Workshop Evaluation Responses**

**Both Workshops - Totals**

Workshop participants: 125

Survey respondents: 70

Response rate: 56.00%

**Camano Workshop**

Workshop participants: 42

Survey respondents: 24

Response rate: 57.14%

Question 1: Please rate the following statements:

Answered: 24, Skipped: 0

	STRONGLY DISAGREE	SOMEWHAT DISAGREE	SOMEWHAT AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
	1	2	3	4		
<b>This workshop was a valuable use of my time.</b>	0.00% 0	0.00% 0	8.33% 2	91.67% 22	24	<b>3.92</b>
<b>I have a better understanding of sea level rise projections for Island County.</b>	0.00% 0	0.00% 0	20.83% 5	79.17% 19	24	<b>3.79</b>
<b>I have a better understanding of the local impacts of sea level rise.</b>	0.00% 0	0.00% 0	25.00% 6	75.00% 18	24	<b>3.75</b>
<b>I have a better understanding of strategies for planning and adaptation.</b>	0.00% 0	4.35% 1	52.17% 12	43.48% 10	23	<b>3.39</b>

Question 2: After attending this workshop, will you take any actions steps (e.g. behavior changes, planning considerations, adaptations at your property)?

Answered: 20, Skipped: 4

- ♦ Yes: 50.00%
- ♦ No: 40.00%

Question 2b: If yes, what?



- ♦ Be extra sensitive native growth
- ♦ Contact county for shore review
- ♦ Do not have shoreline property
- ♦ Don't live on shore
- ♦ Work more closely with county experts
- ♦ Lift and fill
- ♦ in process of bulkhead permitting - how to address if county won't allow for additional height?
- ♦ Not needed. I am upland
- ♦ Community soft shore options
- ♦ Watch our bluff as we do and document
- ♦ Not at this time
- ♦ Communicate to rest of HOA
- ♦ I am ahead of the rise just by knowing more. I will share the knowledge with the marina staff here in Oak Harbor and fellow boaters. I will also participate in the King Tide photo project and encourage others to do so as well.
- ♦ Seek \$ to raise house

Question 3: What is one thing you learned?

Answered: 18, Skipped: 6

- ♦ info. available on projections
- ♦ Current aspects to Sea Level Rise
- ♦ That sea level rise is real.
- ♦ No easy answers if one owns shoreline property
- ♦ Area specific change due to change in sea level rise
- ♦ Wave energy increases and can cause more damage when hits hard bulkhead and opposite for soft
- ♦ Number of different agencies
- ♦ Come to meeting more prepared to understand the topics discussed
- ♦ Antarctic contribution to SLR
- ♦ I was a bit pleasantly surprised that sea level rise in Island County will not be as high as I thought
- ♦ So much! More resources, the organizations involved, the app
- ♦ The areas of Camano most affected by rising sea level, grants available to assist removing bulkhead etc.
- ♦ There are a lot of local resources about this topic
- ♦ More about MyCoast app
- ♦ Just how real the situation is!!! The visual impact of melting ice worked.
- ♦ Reasons and not reasons for tidal change.
- ♦ The Resources page is something I will use as part of my personal education in the area of sea level rise.
- ♦ relationship of moon positions and high tides and time of year

Question 4: What did you like best?

Answered: 21, Skipped: 3

- ♦ how to understand projections
- ♦ Dr. Miller's Presentation
- ♦ Learned about "MyCoast" app Dr. Miller's talk
- ♦ Info presented with no pushing of one or more way out there theories
- ♦ Ian's experiment

- ♦ Ian Miller
- ♦ Related agencies
- ♦ The discussion of effects of solar and lunar gravitation
- ♦ Ian
- ♦ Dr. Ian Miller's presentation
- ♦ Everything - great presentation - all speakers important
- ♦ Scenarios that brought it home
- ♦ Variance of information
- ♦ Evaluation of impact using projections
- ♦ Ian's presentation was most informative regarding rising sea level.
- ♦ Miller's talk plus map exercise
- ♦ Maps and computer maps
- ♦ The scope and quality of presentations and presenters. Great snacks too!
- ♦ Presentation on tidal change.
- ♦ Dr. Ian Miller
- ♦ info on app and online resources

Question 5: Do you have suggestions on how we could improve this event in the future?

Answered:11, Skipped: 13

- ♦ increased frequency of programs
- ♦ No
- ♦ Map of agency relationships - who does what and master source
- ♦ No. I think it was well done. Maybe address how air pressure affects water level
- ♦ More presentations to include more members of the community
- ♦ Idk
- ♦ No
- ♦ No, great!
- ♦ I would probably nix the computers at each table. Not much used and a trip hazard. A large scale map of our island really helped.
- ♦ Mapping workshop seemed to be out of control. Maybe it was just my table, but given guide lines/instructions were not followed.
- ♦ No, great information and a variety of resources

Question 6: Would you like more educational events like this?

Answered: 22, Skipped: 2

- ♦ Yes: 100%
- ♦ No: 0%

Question 6b: Please tell us other topics you'd like to learn about:

- ♦ Continuing upgrading your information
- ♦ Storm prep, flooding, etc
- ♦ Keep updating us on sea level rise. I think the impact will come at us quicker then we think. Bluff management. Effect of recent projects to re-claim wetlands.
- ♦ Ocean acidification and the impact on the marine environment

Additional comments:

- ♦ Pls. forward information to "Camano Preparedness Group"
- ♦ Comment from Q1: I don't see a successful strategy

- ♦ Thank you for the treats! :)
- ♦ Agenda and time lines were helpful and followed. I was under the impression that the class was going to be more general and not geared to shore property issues.
- ♦ Thank you!

### **Whidbey Workshop**

Workshop participants: 83

Survey respondents: 46

Response rate: 55.42%

Question 1: Please rate the following statements:

Answered: 46, Skipped: 0

	STRONGLY DISAGREE	SOMEWHAT DISAGREE	SOMEWHAT AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
	1	2	3	4		
<b>This workshop was a valuable use of my time.</b>	0.00% 0	0.00% 0	13.04% 6	86.96% 40	46	<b>3.87</b>
<b>I have a better understanding of sea level rise projections for Island County.</b>	0.00% 0	2.17% 1	10.87% 5	86.96% 40	46	<b>3.85</b>
<b>I have a better understanding of the local impacts of sea level rise.</b>	0.00% 0	4.35% 2	28.26% 13	67.39% 31	46	<b>3.63</b>
<b>I have a better understanding of strategies for planning and adaptation.</b>	2.17% 1	8.70% 4	54.35% 25	34.78% 16	46	<b>3.22</b>

Question 2: After attending this workshop, will you take any actions steps (e.g. behavior changes, planning considerations, adaptations at your property)?

Answered: 42, Skipped: 4

- ♦ Yes: 64.29%
- ♦ No: 33.33%

Question 2b: If yes, what?

- ♦ Not my home, but talk with our Coupeville Town Planner and Council and Planning Commission (I'm on Town Council)
- ♦ Not sure
- ♦ None needed for >100yr

- ♦ Talk to my HOA Mariners Cove
- ♦ Help w/ research thru MyCoast App
- ♦ Possibly - raise home
- ♦ Not certain at this time.
- ♦ Not directly affected by SLR
- ♦ Probably sell my house!
- ♦ educate my community of this information
- ♦ look at bluff drainage on our property
- ♦ Protecting against SLR
- ♦ Discuss with my community concerning threats and potential actions
- ♦ Give input to my community board
- ♦ I will try to work SLR into my building plans - it would be very helpful if County encourages that such as by increasing height limits so that living space is still available for houses that are elevated.
- ♦ Planning considerations
- ♦ Read reports, evaluate seawater intrusion maps
- ♦ Our home is at 200'
- ♦ Support climate change reform
- ♦ No - I live at 380'
- ♦ Support education and lobby for constructive policy
- ♦ Not on our upland property but yes, we will continue and increase our advocacy
- ♦ Our's not beachfront property
- ♦ Planning
- ♦ Community property: talk to others so they are aware of what we can do
- ♦ Educate the 9 households on Mill Beach Lane
- ♦ Not impacted by sea level rise
- ♦ advice for local community club (HOA)
- ♦ not shore based
- ♦ Impact on ground water (salt H2O intrusion)
- ♦ Unsure: My property backs onto Deer Lagoon and it's unclear what options are feasible or effective in our situation.
- ♦ Raise boathome?
- ♦ Knowledge of potential implications for bluff undercutting and sloughing, though it was clear that little research has yet been done on that (all of the models assume static land shapes that are better suited to modelling low bank waterfront than high bank / bluff waterfront).
- ♦ I don't live on shoreline but think there are additional remedies and would cooperate gladly

Question 3: What is one thing you learned?

Answered: 39, Skipped: 7

- ♦ Shoreline protection strategies, pros & cons
- ♦ All contributions to SLR
- ♦ Numerous on-line tools are available for use
- ♦ The complex nature of the problem
- ♦ State and Federal funding
- ♦ My property is not going to be lost to sea level rise in my lifetime.
- ♦ Active planning is happening
- ♦ By the predictions, our home and property will be flooded by 2050
- ♦ improved understanding of data development

- ♦ Better understanding of local effects of sea level increase and storm surge
- ♦ the difference between land and water ice melt
- ♦ good list of resources/contacts
- ♦ Uncertainty surrounding effect of melting in Ant.
- ♦ Resources online and MyCoast
- ♦ That to look at projections to determine planning decisions - they are variable and storm surge
- ♦ Land based ice - impact of global warming
- ♦ All of it
- ♦ This is an existential problem. It challenges nearly all of our values and common practices. How to be pro-active and not re-active is the essential question.
- ♦ about sea level rise
- ♦ How much sea level is project in general terms
- ♦ Even for my property, transportation will be affected
- ♦ Areas that are most likely to be effected by sea level change
- ♦ Largely, what work is happening at various levels. Kudos and thanks to Sea Grant
- ♦ how the modeling process works
- ♦ Risk to services
- ♦ that sea level rise and land rise or sinking is different in areas of Washington State
- ♦ SLR projects - w/storm surge
- ♦ sea level rise projections
- ♦ 220 ft higher if all land ice melted
- ♦ Identity of impact areas and sources for information
- ♦ convergence zone backside sinking for Puget Sound exceeds glacial isostatic rise
- ♦ Excellent resources to be found on-line
- ♦ Exactly what constitutes sea level rise & its role in potential water damage
- ♦ More about SLR dynamics and more specific localized info for Whidbey Island (and my area)
- ♦ New resources
- ♦ SLR is one of several (unreadable). Storm surge
- ♦ Many things, though the predictions of expected increased sea level height at various future years was especially interesting.
- ♦ Difference between glaciers on land and sea
- ♦ The sheer volume of potential sea level rise.

Question 4: What did you like best?

Answered: 36, Skipped: 10

- ♦ Learning about the app - my husband goes to the shore most days to observe wildlife - he'd be great at gathering photos
- ♦ Ian Miller presentation
- ♦ Selection of topics for presentation and sequence (well planned for public consumption).
- ♦ The mapping portion of the program
- ♦ See above (my property is not going to be lost to sea level rise in my lifetime)
- ♦ Sea level rise discussion & Ian
- ♦ The presentation of ideas of other guests and presenters.
- ♦ Ian Miller's presentation
- ♦ I learned from every presenter
- ♦ understanding sea level rise projections and uncertainty - Ian's presentation
- ♦ Ian's presentation was great.
- ♦ Mapping exercise and Ian Miller presentation

- ♦ The explanation of what sea rise is in climate change
- ♦ Links for future research
- ♦ Maps
- ♦ Ian Miller's talk
- ♦ Great speakers
- ♦ The very last part from the planning staff - very specific ideas for home and property owners
- ♦ Computer maps
- ♦ Dr. Miller's presentation, map exercise
- ♦ Participation/discussion
- ♦ presenters were all efficient and clear
- ♦ Local strategies
- ♦ all the expertise gathered together in one place giving science based information
- ♦ Maps. Possible solutions/remedies
- ♦ websites to use
- ♦ relative sea rise; ie some land is changing; MyCoast App
- ♦ Workshop w/computer
- ♦ seeing all the people
- ♦ coffee + snacks
- ♦ Well prepared presentations
- ♦ Variety of good speakers + handouts, Interactive activity
- ♦ Mapping and info on the recent report on local data
- ♦ Interactive and informative presentations. Hands-on use of paper maps + online mapping/modelling tools.
- ♦ The collective struggle to see how we can mitigate
- ♦ Sea Level Rise Viewer / Maps

Question 5: Do you have suggestions on how we could improve this event in the future?

Answered:16, Skipped: 30

- ♦ I will email Anna
- ♦ No, perfect amount of time
- ♦ No
- ♦ Slides larger font! Always test 25 feet
- ♦ Not really
- ♦ have more computers
- ♦ N/A
- ♦ Details on both mitigation and potential actions to limit Island County impact on climate change
- ♦ We didn't know we needed to RSVP. Would like more info on agenda
- ♦ do it regularly / the two maps (2050, 2100) were almost identical - we wasted time trying to find differences
- ♦ Have a larger space for more attendees
- ♦ Make it user-friendly (Boil down science and technical detail to simply, brief bottom-line impacts)
- ♦ Different table setup or higher screen for viewing
- ♦ doing it again
- ♦ Include information for high bank / bluff property owners (most info was targeted to low bank property owners).
- ♦ What are the legal remedies?



Question 6: Would you like more educational events like this?

Answered: 40, Skipped: 6

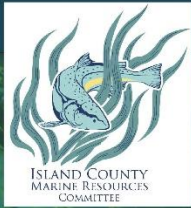
- ♦ Yes: 100%
- ♦ No: 0%

Question 6b: Please tell us other topics you'd like to learn about:

- ♦ Any follow up on this topic
- ♦ Repeat for those unable to attend (fall)
- ♦ Septic alternatives
- ♦ Tsunami threats
- ♦ Tsunami/earthquake/disaster
- ♦ Shoreline planning; development
- ♦ Recycling
- ♦ Earthquakes/tsunami (unreadable) Fire impacts along shore
- ♦ weather change outlooks
- ♦ shoreline protection options
- ♦ How sea level rise will affect feeder bluffs
- ♦ What are commissioners and representatives doing to mitigate and adapt
- ♦ More specific solutions to slow sea level rise and climate change

Additional comments:

- ♦ Please post the resource links as they were not on the agenda pdf that was distributed.
- ♦ I will refer folks to the app but not all have a smartphone.
- ♦ Tell us what Washington Sea Grant actually is.
- ♦ More time talking about armoring options, rip rap removal, permitting etc
- ♦ This was a well attended event. So glad I came.
- ♦ Note from Q1 (better understanding of strategies score1): None of these strategies are applicable or available to the 9 houses on the Mill Beach Water Association (Mill Beach Lane). Need equal emphasis on how to get politicians to deal meaningfully and significantly with climate change. For Mill Beach and Maxwellton Beach, 3' SLR is the end!
- ♦ Thanks
- ♦ Great Event!
- ♦ Compliments to all presenters...well done!! :)
- ♦ Great idea! Thank you - This was helpful
- ♦ Thanks. Robin Charwood
- ♦ Thank you!
- ♦ Thanks!



## About the MRC

The Island County Marine Resources Committee (IC MRC) is a group of volunteers, appointed by the Board of Island County Commissioners, from a variety of disciplines working to protect and restore marine life, habitat, and water quality along the county's shoreline. We accomplish this through monitoring, restoration, and outreach projects.

### Monitoring

We monitor a variety of nearshore species around Island County:

- *Bull kelp* provides important habitat and serves as a food source for a wide variety of marine species.
- *Eelgrass* provides critical habitat for salmon, invertebrates, and other marine life. Pacific herring, which are a food source for salmon, lay their eggs directly on eelgrass leaves.
- *Forage fish* are small fish that play a big role in the marine ecosystem. They are a critical link in the marine food web between tiny plankton and much larger species, such as salmon, seabirds, and orcas.

### Restoration

We work with local partners to identify, implement, and provide monitoring for nearshore restoration projects. At Cornet Bay in Deception Pass State Park, we helped remove a creosote bulkhead and return the beach to a natural condition, improving accessibility for beachgoers, and habitat characteristics for nearshore species.

### Outreach

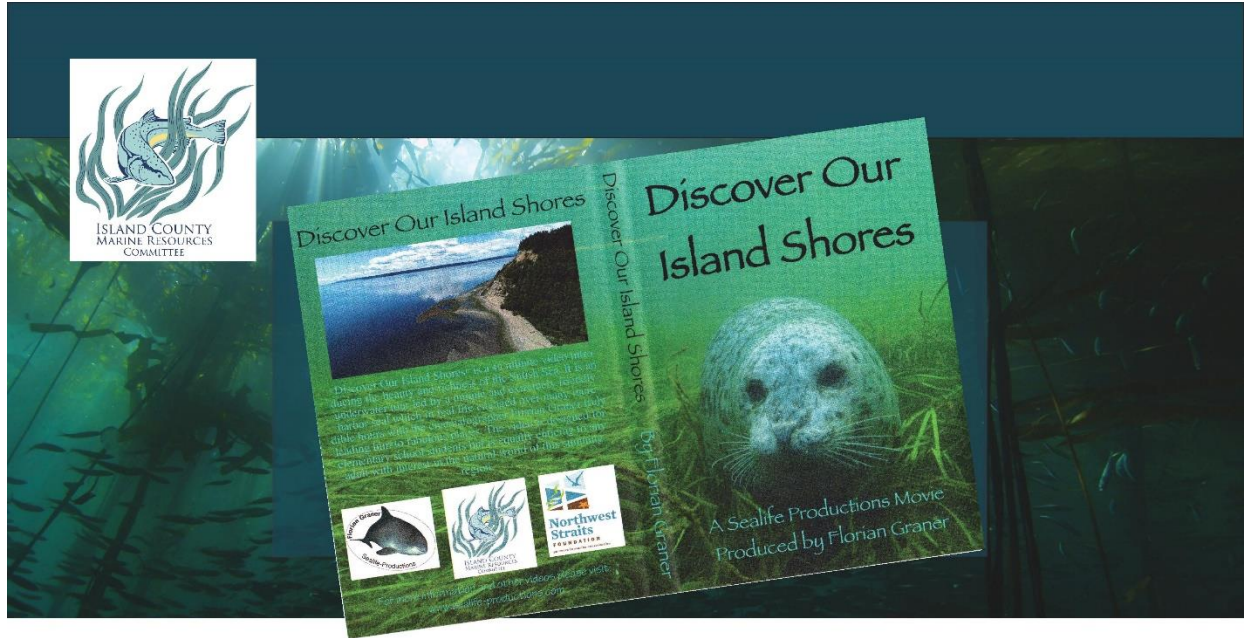
We engage our community on marine topics in a variety of ways. We host educational forums, invite speakers to our monthly meetings, and we are reaching our local schools with the launching of our educational film "Discover Our Island Shores."



This project has been funded wholly or in part by the United States Environmental Protection Agency under Assistance Agreement [CE-0131904]. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

Photographs were donated by Florian Graner, Jill Hein, Linda Rhodes, Mary Jo Adams, Dawn Spitsbury Pucci, Anna Toledo, & Elsa Schwartz





### ***Exciting new video for local students!***

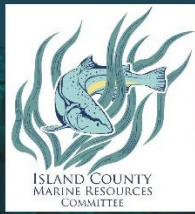
“Discover Our Island Shores” is a 40-minute film that follows a harbor seal through the captivating underwater habitats around Island County and the Salish Sea. Viewers are introduced to habitats such as kelp forests, eelgrass meadows, and estuaries. Along the way, they learn about species large and small: plankton, herring, rockfish, salmon, pigeon guillemots, orcas, and many more.

We are distributing this video to Island County schools along with an accompanying classroom activity about marine food webs. The goal of the film and classroom activity is to instill in students an understanding and appreciation for the marine environment, while also teaching basic biological concepts.

In addition, we are hosting, at participating schools, an art contest for students in grades 4-7. Artwork from finalists will be displayed on the MRC website in May. You can vote for your favorite by visiting our website at: [www.islandcountymrc.org](http://www.islandcountymrc.org)

If you are interested in a copy of this film for your classroom, please contact MRC Coordinator, Anna Toledo, at [a.toledo@co.island.wa.us](mailto:a.toledo@co.island.wa.us) or 360-678-2349.





## What's a food web?

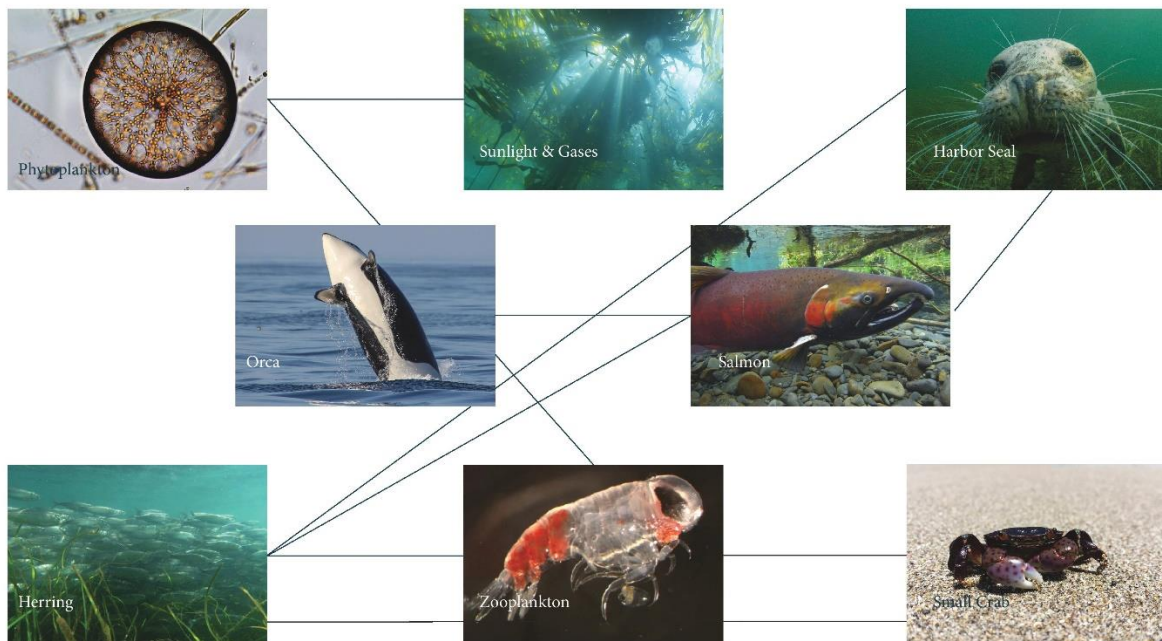
### About food webs

A food web is a model of how energy flows throughout an ecosystem. That is, what do organisms eat, and what are they eaten by?

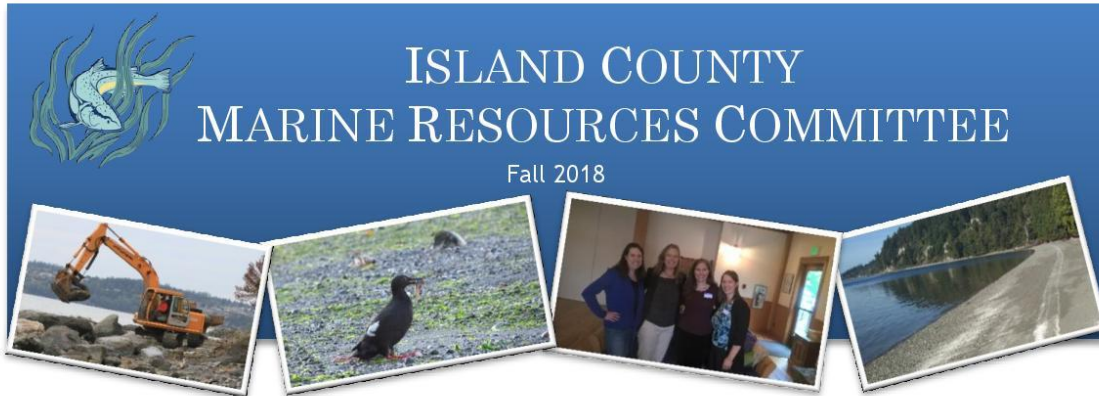
We have created an example food web on the wall utilizing some of the plants and animals seen in the “Discover Our Island Shores” film. Sunlight, gases, and nutrients are at the center of our food web. Phytoplankton rely on sunlight, gases, and nutrients to grow. Zooplankton are tiny animals that eat phytoplankton. One animal that eats zooplankton are small crabs. Smelt, in turn eat both zooplankton and small crabs.

A food web shows the complex and intertwined relationships of organisms within an ecosystem. As you look at the example food web on the wall, ask yourself these questions:

- What might happen if there were a decrease in phytoplankton? Herring?
- How does energy flow in this system from sunlight up to orcas?
- If we want to protect a particular organism, why should we consider other organisms within the food web?







### A Sense of Place: New Films Foster Stewardship of Island County's Marine Resources

Island County Marine Resources Committee (MRC), in collaboration with Florian Graner, videographer and MRC technical advisor, is launching two new videos highlighting local marine resources. One to be showcased through the County and website, and the other to be used in partnership with Island County schools for grades 4-7.

These films will help residents and visitors better understand stewardship to sustain marine resources that draw people to Island County for vacations and year-round living.

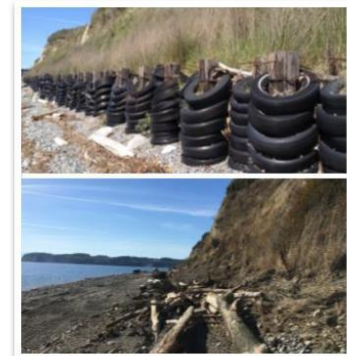


*Kelly Zupich, MRC member and Whidbey Coordinator for Sound Water Stewards describes shoreline ecosystems in new video.*

### Restoring Our Shorelines, Protecting Our Sound

At Maylor Point in Oak Harbor, test installations of various types of shoreline armor have blocked natural processes for decades. In October, in collaboration with the Northwest Straits Foundation and the US Navy, these structures were removed to free 1,500 ft of shoreline. Sand movement now nourishes beaches, supports forage fish spawning, and strengthens the marine food web for salmon and orca recovery.

Softening or removing shoreline armor may be more effective than hard armoring with rocks or walls. Learn more at: [nwstraitsfoundation.org/project/shoreline-armor-reduction-program-2/](http://nwstraitsfoundation.org/project/shoreline-armor-reduction-program-2/)



*Maylor Point before and after restoration.*

### Realtors and Residents Learn About Their Shorelines

Realtors on Camano and Whidbey Islands participated in an all-day workshop on shoreline processes, impacts of hard armor, and utilizing native vegetation. Said one participant, "I don't know a single realtor in Island County who would not benefit from this workshop. I hope you are able to offer it regularly."

In a related workshop, homeowners on Camano learned about shoreline vegetation management to stabilize slopes, manage views, and work in harmony with their shoreline.



*Jim Johannessen presents during workshop.*

## IN OUR REGION



Robert Pittman, NOAA

### Orca Task Force

Puget Sound's iconic Orcas are endangered. Recovery depends in part on restoring Puget Sound's marine food web: shoreline and intertidal habitats for forage fish spawning, protective eelgrass for young salmon, bull kelp beds to shelter multiple other species, and consistent water quality. IC MRC and other county initiatives are doing our part for Orca recovery by focusing on marine resources. More information about the recommendations for the governor's task force is available at:

[www.governor.wa.gov/issues/issues/energy-environment/southern-resident-killer-whale-recovery-and-task-force](http://www.governor.wa.gov/issues/issues/energy-environment/southern-resident-killer-whale-recovery-and-task-force)



File photo, Komo News

### Fin Fish Net Pens

Island County's Shoreline Management Program (SMP) will be set to begin review in the upcoming year. The question of when, where, and which species of fish might be allowed in future finfish aquaculture in Island County will be a topic of importance.

Following collapse of an Atlantic salmon net pen in 2018, Gov. Inslee signed [House Bill 2957](#) which prohibits new commercial non-native finfish aquaculture in state waters, and phases out remaining Atlantic salmon net pens by 2022. Existing operations continue, and the question of raising other species remains.

More information about the state's guidance for commercial marine net pens is available at: [ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Aquaculture/State-guidance-for-net-pens](http://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Aquaculture/State-guidance-for-net-pens)



Josh Bourma

### Pinto Abalone Status Review

Pinto abalone are a type of marine snail which live in rocky reef habitat. Washington Department of Fish and Wildlife is soliciting information and public comment on a proposal to list pinto abalone as a state endangered species. More information about the status review and public comment opportunities are available at: [wdfw.wa.gov/conservation/pinto\\_abalone/](http://wdfw.wa.gov/conservation/pinto_abalone/)



### Climate Report Released

The Fourth National Climate Assessment has been released, including chapters on impacts in the Northwest and to coastal communities, and economic effects. The report is available at: [nca2018.globalchange.gov/](http://nca2018.globalchange.gov/)



**PUGET SOUND  
PARTNERSHIP**

Prepared by Barbara Bennett and Anna Toledo. This project has been funded wholly or in part by the United States Environmental Protection Agency under Assistance Agreement [CE-01J31901]. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.



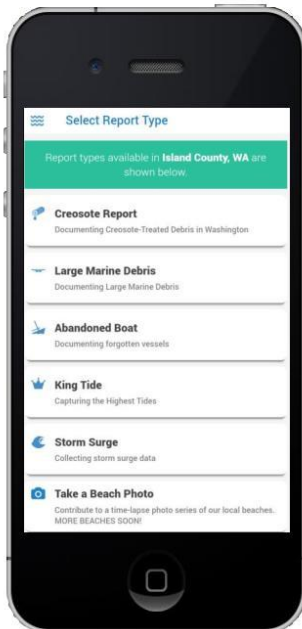


### Students to Embark on Virtual Underwater Journey

We are teaming up with local schools to present a film that brings students on an underwater adventure to explore the unique plants and animals in our local waters. "Discover Our Island Shores," created by Florian Graner, will be presented in elementary and middle school classrooms around Island County, with an accompanying curriculum to teach students about the marine food web. Students will also be invited to participate in an art contest inspired by themes from the film. Artwork will be displayed on the MRC website.



*Credit: Florian Graner*



### MyCoast App

MRC members participated in a king tide viewing party, hosted by Washington Sea Grant, to offer the opportunity for community members to learn about king tides and sea level rise, and to share ways to engage in the topic. One of these ways is through the [MyCoast app](#).

On the app, users can report creosote debris, large marine debris, and abandoned vessels. Users can also take pictures of king tides, storm surge, and add to a series of photos at select beaches to document beach change. Camano Island State Park Boat Launch and Utsalady Point Boat Ramp are two sites available for beach change photos in the app, and the MRC will continue to add additional sites.

### Shoreline Homeowner Resources

Two new resources are available through the Island County Shore Friendly program to help shoreline homeowners learn how to protect their homes while protecting Puget Sound:

- ❖ [Cost-benefit analysis of environmentally-friendly shoreline protection options](#)
- ❖ [Video on the benefits of natural and restored beaches](#)

*Photos in header (L to R): Camano Island State Park beach photo in MyCoast app; credit: Elsa Schwartz. Forage fish in bull kelp bed; credit: Florian Graner. Forage fish surveying; credit: Nick Lyle. Sunlight Shores restored beach; credit: Anna Toledo.*

## In Our Region



*Credit: Josh Bouma*

### Pinto Abalone Status Review

Washington Department of Fish and Wildlife (WDFW) has conducted a [preliminary status report](#) on pinto abalone in Washington State, and recommends the species be listed as endangered in the state of Washington. Pinto abalone feed on kelp, and have a preference for habitats where bull kelp is found. Kelp beds on the western side of Whidbey facing the Strait of Juan de Fuca are included in WDFW's potential range of abalone observations.

Pinto abalone are currently listed as a Species of Concern by the US National Marine Fisheries Service, and are listed as an endangered species in Canada. Public comment on this proposal will be accepted through March 25, 2019. More information is available at: [wdfw.wa.gov/conservation/pinto\\_abalone/](http://wdfw.wa.gov/conservation/pinto_abalone/)

## Mark Your Calendars!

**What:** Sunlight Shores Restoration Planting Party

**When:** Tuesday, March 19: 9:30am-12:30pm

**Where:** Sunlight Shores Country Club: 2705 Evening Glory Court, Clinton

**Details:** Bring gloves and garden tools for planting. A potluck lunch will follow the work party.



**What:** MRC Educational Display

**When:** April 1-30

**Where:** Coupeville Library: 788 NW Alexander St, Coupeville

**Details:** Learn about the MRC and see what we're up to by visiting our display during Whidbey Earth and Ocean Month

**What:** Forage Fish Survey Training

**When:** TBD

**Details:** Would you like to be a part of the MRC forage fish survey team? We are seeking new volunteers to receive training from Washington Department of Fish and Wildlife and commit to volunteering with the MRC 2-6 hours per month to help add to the local and regional knowledge of where forage fish spawn. If you're interested in volunteering, contact Anna Toledo.



**Coming Up:** Stay tuned for more information about our summer educational forums!

For more info on any of these events, please contact Anna Toledo: [a.toledo@co.island.wa.us](mailto:a.toledo@co.island.wa.us), 360-678-2349.



Prepared by Barbara Bennett and Anna Toledo. This project has been funded wholly or in part by the United States Environmental Protection Agency under Assistance Agreement [CE-01J31901]. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.





### Summer Monitoring

Volunteers are at the core of our work! A dedicated team of volunteers has finished a 10-year study of eelgrass, including collecting and analyzing underwater video from ninety sites and aerial images of eelgrass beds around Island County. Eelgrass provides habitat and shelter for several species, including juvenile salmon. The MRC would like to extend a special thanks to this dedicated team of volunteers!

A new team of enthusiastic volunteers has been monitoring forage fish spawning to learn more about where and when surf smelt and sand lance spawn, particularly in conjunction with nearshore restoration work. These small fish are a vital link in the food web that support salmon and orcas.

Our volunteers have also been monitoring three bull kelp beds to measure changes in size over time. Kelp forests provide important habitat and serve as a food source for several marine species. Our kelp project lead, Linda Rhodes, will present an update on the team's work at the October MRC meeting, and summary reports for all projects will be available on the [MRC website](#) this fall.



Aerial monitoring of eelgrass beds.  
Credit: Gregg Ridder



Linda Rhodes monitoring bull kelp bed.  
Credit: Kelly Zupich



Creosote-treated debris. Credit:  
Northwest Straits Commission

### Help Keep Puget Sound Clean!

Local residents serve as the eyes and ears on the beach to identify and record shoreline conditions. A regional phone app, called [MyCoast](#), allows anyone with a smartphone to snap a photo to share with state resource managers. These reports are used to help prioritize creosote clean-up efforts, as well document other beach events, such as king tides and reports of marine debris.

To help engage local community members in this effort, the MRC is hosting a presentation by Chris Robertson from Washington Department of Natural Resources on how to identify and report instances of creosote-treated wood on the beach. At this workshop, participants will learn techniques to identify creosote and become familiar with the MyCoast app reporting tool.

Photos in header (L to R): 1. Volunteers on Camano teach recreational crabbers techniques to avoid losing their crab pots through the "Catch More Crab" campaign. 2. Children learn about the marine food web at Family Outdoor Discovery Day. 3. New forage fish volunteers learn how to process survey samples. 4. Bull kelp bed; credit: Rich Yukubousky.

## Mark Your Calendars!

**What:** [Film Screening: "Discover Our Island Shores"](#)

**When:** Saturday, September 28<sup>th</sup>, 2:00pm-3:00pm

**Where:** Oak Harbor Library: 1000 SE Regatta Dr, Oak Harbor

**Details:** "Discover Our Island Shores," filmed by local videographer, Dr. Florian Graner, follows a harbor seal through awe-inspiring underwater habitats in the Salish Sea and around Whidbey and Camano Islands. Bring your whole family to enjoy this film!



**What:** [Workshop: Creosote Removal - How YOU Can Help Keep Our Beaches Clean!](#)

**When:** Saturday, October 12<sup>th</sup>

**Where:** [Camano \(9:00am-11:00am\):](#) Utsalady Ladies Aid: 78 Utsalady Rd, Camano

[Whidbey \(2:00pm-4:00pm\):](#) Pacific Rim Institute: 180 Parker Rd, Coupeville

**Details:** You can be part of the solution to get creosote off our beaches! Learn about the Washington Department of Natural Resources creosote removal program, how to identify creosote-treated debris, and how to report your findings through the MyCoast phone application.



**What:** [Orca Recovery Day](#)

**When:** Saturday, October 19<sup>th</sup>

**Where:** Multiple locations

**Details:** The MRC is partnering with Whidbey Island Conservation District on the Puget Sound Conservation Districts' efforts to educate and inspire landowners to take actions to benefit orca recovery. Events throughout the day include shoreline restoration planting, noxious weed removal, and rain garden renovation. Find details about each event at: [www.whidbeycd.org/orca.html](http://www.whidbeycd.org/orca.html)



**Interested in learning about sea level rise?** Our sea level rise workshops are FULL! Given the level of interest we're hearing from the community, we may be able to offer this workshop again in the future. If you would like to be notified if this workshop is offered again in the future, please fill in your contact information through this link: [www.surveymonkey.com/r/6S5BNJ8](http://www.surveymonkey.com/r/6S5BNJ8)



Want to learn more about the MRC and local marine protection and restoration efforts? Join us for our monthly meetings on the first Tuesday of every month from 3:00pm-5:00pm. Meetings are held in Coupeville or Camano. [Agendas and meeting locations](#) are available on our website: [www.islandcountymrc.org](http://www.islandcountymrc.org)



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## ISLAND COUNTY MARINE RESOURCES COMMITTEE

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

Island County Department of Natural Resources  
PO Box 5000, Coupeville, WA 98239-5000

### Discover Our Island Shores Art Contest

#### Theme

The theme of the art contest is "Discover Our Island Shores." The Island County Marine Resources Committee (MRC) is working with Island County schools to present an engaging film on the marine plants and animals around our local shores.

Artwork should depict a marine plant or animal seen in the film "Discover Our Island Shores." In addition to the artwork, students will answer the question: *"What will you do to make a positive impact on the Salish Sea?"*

#### Eligibility

This contest is open to students in grades 4-5 and 6-7 in Island County classrooms participating in the "Discover Our Island Shores" classroom film screenings.

#### Categories

Entries will be accepted in the following categories:

- 4-5<sup>th</sup> grade
- 6-7<sup>th</sup> grade

#### Online Display

The top five entries from each category will be displayed through the Island County MRC website: <https://www.islandcountymrc.org/>. Online voting will be open to the public to choose the winners of the people's choice awards.

#### Prize

Prizes will be given for the top entry in each of the following categories:

- 4-5<sup>th</sup> grade overall
- 4-5<sup>th</sup> grade people's choice
- 6-7<sup>th</sup> grade overall
- 6-7<sup>th</sup> grade people's choice

Winners will be announced in late May. Winners will receive a certificate, a copy of the book "Explore the Salish Sea," and will have their artwork highlighted on the MRC website.

#### Contest Rules

1. Submit your artwork on an 8.5" x 11" paper. Artwork should depict a marine plant or animal seen in the film "Discover Our Island Shores."
2. On the back of the paper, write your name, home telephone number, school, grade, and teacher name.
3. On the back of the paper, also write your response (no more than 100 words) to the question: "What will you do to make a positive impact on the Salish Sea?"
4. **Students:** Submit your entry to your teacher by Friday, April 19, 2019, or other date as directed by your teacher.
5. **Teachers:** Submit all compiled entries from your students to Anna Toledo by Monday, April 29, 2019 (contact information listed on the back).
6. We will be unable to return any artwork that is submitted.

**Contact Information**

Anna Toledo

Marine Resources Committee Coordinator

[a.toledo@co.island.wa.us](mailto:a.toledo@co.island.wa.us)

360-678-2349

Mailing address:

Island County Public Health

PO Box 5000

Coupeville, WA 98239-5000

Physical address:

504 Haller St

Coupeville, WA 98239



**"Discover Our Island Shores" art contest: Grade 4, Runner-Up**



**What will you do to make a positive impact on the Salish Sea?**

*"The positive impact I will make on the Salish Sea is to recycle more often. I hate to see animals with plastic stuck around their necks, and probably you too, so everyone needs to try harder at putting plastic, paper, and aluminum in the recycle bin. If I put recyclable things in the trash, most of it will be floating around in the Salish Sea. I also might use the appropriate food waste for compost. But mostly, recycling is what I will do to make a positive impact on the Salish Sea."*

*- MaKenna Crisman, Grade 4*



**"Discover Our Island Shores" art contest: Grade 4, First Place**



**What will you do to make a positive impact on the Salish Sea?**

*"There are many ways that I will try to make a positive impact on the Salish Sea. I will try to pick up trash that I see so that we don't have junk out in the ocean. My family and I really enjoy walking on the beach, and we see wrappers, bottles, cans, and plastic. Next time I go to the beach, I will bring a bag to pick up trash. I won't fish because then we will be killing all of those poor sea creatures! Animals are part of our ecosystem! They deserve to live!"*

- Riley White, Grade 4

**"Discover Our Island Shores" art contest: Grade 5, Runner-Up**



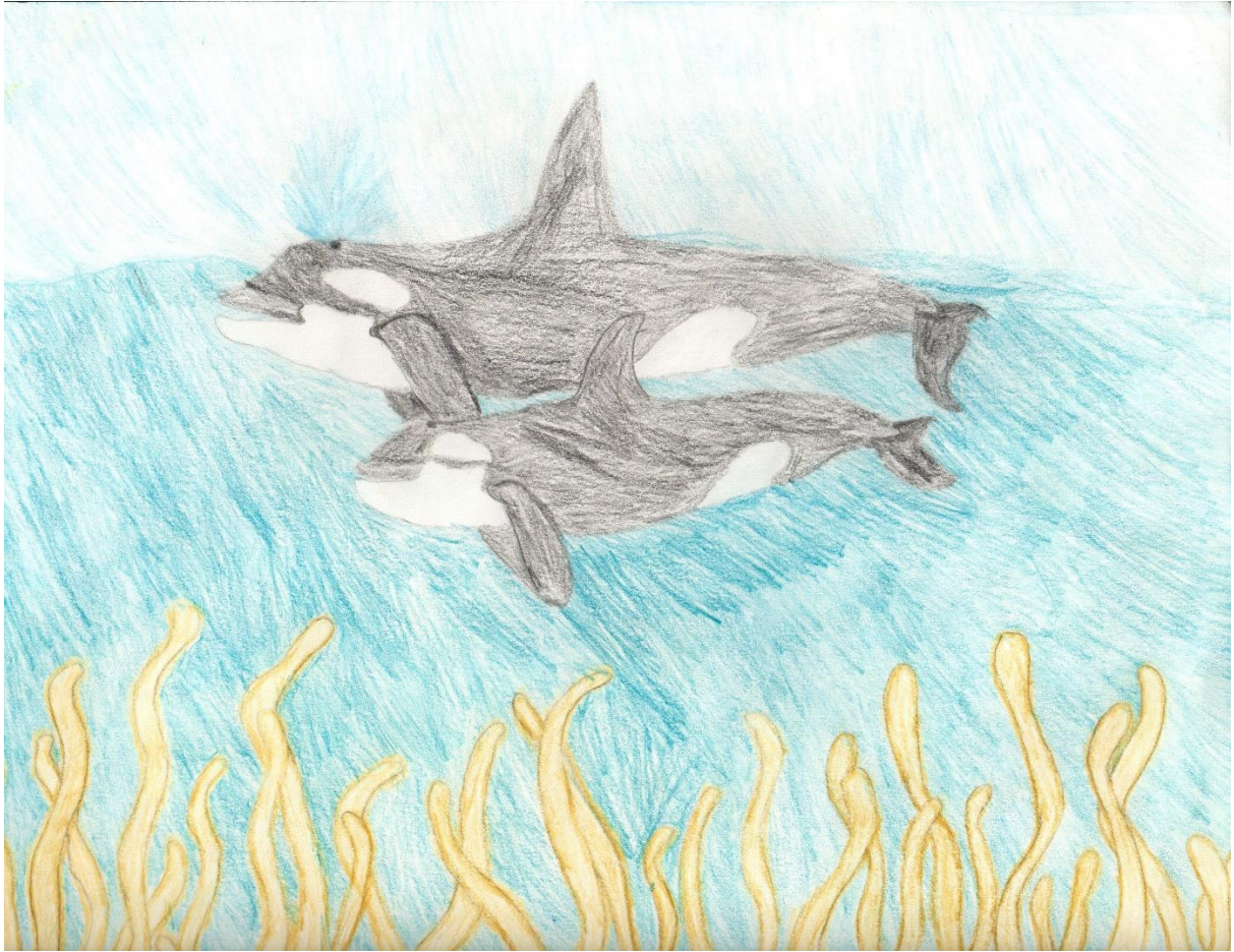
**What will you do to make a positive impact on the Salish Sea?**

*"I will make a positive impact on the Salish Sea by recycling all of my plastic so that it doesn't end up in the Salish Sea."*

- Caroline Eckardt, Grade 5



**“Discover Our Island Shores” art contest: Grade 5, First Place**



**What will you do to make a positive impact on the Salish Sea?**

*"Research has shown that resident orca whales are endangered because of changes in their habitat, including a decline in their food supply. I can't supply the whales with more fish, but I can help keep the Salish Sea clean by picking up litter. Perhaps with a cleaner environment, the seals and fish that make up the orcas' diet can thrive. I hope that the Salish Sea will be healthy and beautiful for many, many years to come."*

- Jasmine Bakker, Grade 5

**"Discover Our Island Shores" art contest: Grade 6, Runner-Up**



**What will you do to make a positive impact on the Salish Sea?**

*"Reusable plastic bags and helping poor seals stuck in fish nets."*

- Lily Doyle, Grade 6

**“Discover Our Island Shores” art contest: Grade 6, First Place**



**What will you do to make a positive impact on the Salish Sea?**

*"To make a positive impact on the Salish Sea I will learn about it and use that information to make a positive impact on the Salish Sea. I will also make sure to recycle whenever possible and not litter. Also, if I find litter I will pick it up and dispose of it properly so it will not get into the water."*

- Carlie Kuschnerait, Grade 6



# “Discover Our Island Shores” film screening events

## BACKGROUND

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. 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 therefore planned two film screenings.

The MRC partnered with Sno-Isle Libraries to show the film at Coupeville Library and Oak Harbor Library in September 2019. The goal of showing the film to an expanded audience was to engage local residents in learning about and developing a connection to the local marine ecosystem.

## PUBLICITY

The film was publicized on the Sno-Isle Libraries and MRC websites as well as several online calendars. A poster was developed by the Sno-Isle Libraries graphics team in collaboration with the MRC, which was posted at physical locations around Whidbey Island, including County buildings, community boards, and libraries. The poster was shared electronically through the MRC email listserv, partner listservs, and social media. A copy of the poster is available in Appendix A.

## EVENTS

The first film screening was held on Saturday, September 14 at Coupeville Library. Forty-five people attended the event. Following an introduction by Debbie LaGasse from the Coupeville Library, Anna Toledo, MRC Coordinator, offered a welcome and introduction to the MRC. After the screening, filmmaker Florian Graner answered audience questions about the film.

The second film screening was held on Saturday, September 28 at Oak Harbor Library. Thirty-two people attended the event. Nancy Luenn from Oak Harbor Library provided a welcome to the library. MRC member, Kelly Zupich, provided an introduction to the MRC. After the screening, Kelly answered audience questions about the MRC and ways to protect and care for local marine resources. A table with information on the MRC and resources on marine conservation efforts was available for attendees.

## EVALUATION

The objective in sharing this film was to increase the audience’s understanding of and appreciation for local marine habitats and species. Audience members were asked to fill out a brief evaluation after the film to gauge a change in understanding of and appreciation for local marine habitats and species. The evaluation asked three questions, with the following responses:

1. After watching this film, how has your understanding of our local marine habitats and species changed?
  - No change: 4.55%
  - Slightly increased: 9.09%
  - Somewhat increased: 9.09%
  - Greatly increased: 77.27%
  
2. After watching this film, how has your appreciation for our local marine habitats and species changed?
  - No change: 4.55%
  - Slightly increased: 4.55%
  - Somewhat increased: 9.09%
  - Greatly increased: 81.82%
  
3. How are you connected to the marine food web? (Open ended)
  - Salmon and other fish on my diet (plus some seaweeds)
  - Eating salmon
  - I love nature...every aspect!
  - Keeping beaches clean, using less plastic.
  - We're all connected!
  - Sort of at the top - we need it.
  - Top Dog
  - Top
  - I spend a lot of time photographing it.
  - Just a resident
  - They all rely on each other.
  - I eat lots of salmon and some shrimp. I try to keep contaminants out of the water - organic yard and garden, avoid plastics.
  - Love to eat seafood!
  - Salmon
  - I eat sea plants and try not to pollute the Sound
  - I eat!!!
  - Everything's connected!
  - Concerned about the future of sea life

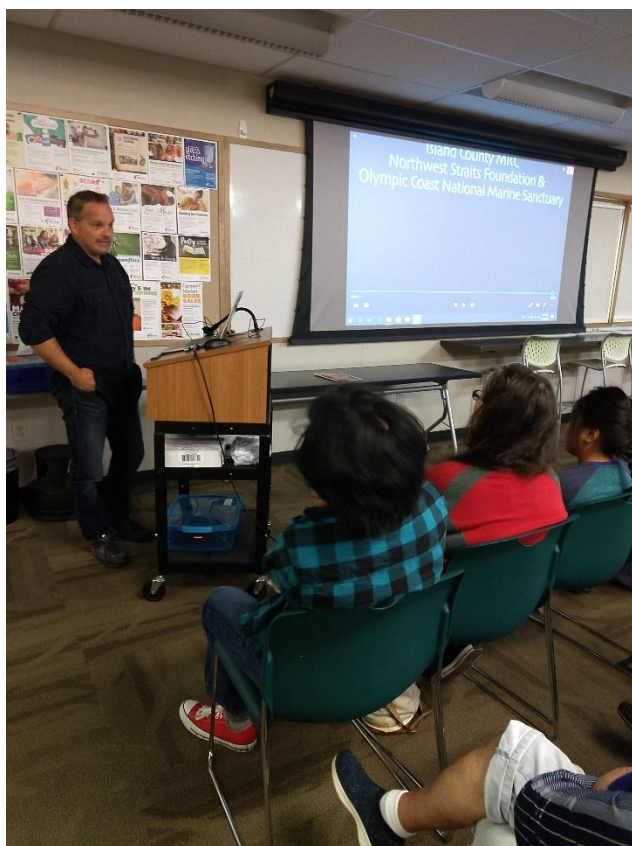
It is clear that this film was impactful and successfully raised understanding of and appreciation for local marine habitats and species. Several audience members expressed an appreciation for the focus on the local environment. Many viewers mentioned that they recognized areas shown in the film.

Sno-Isle Libraries has expressed interest in partnering with the MRC to offer these screenings in the future, and perhaps at additional locations. Given the overwhelmingly positive response from the public and partner organizations, the MRC will consider ways to continue to promote this film within the local community.

## PHOTOS



*An audience packs the Coupeville Library meeting room to watch “Discover Our Island Shores.”*



*Filmmaker Florian Graner answers audience questions following a screening of “Discover Our Island Shores.”*

APPENDIX A: PROMOTIONAL POSTER



# Discover Our Island Shores

A FILM ABOUT WHIDBEY & CAMANO ISLANDS



**"Discover Our Island Shores"** follows a harbor seal through awe-inspiring underwater habitats in the Salish Sea around Whidbey and Camano Islands.

Photos and film produced by Dr. Florian Graner.

*Family-friendly film for ages 8 up.*

*Supported by Island County Marine Resources Committee, Northwest Straits Initiative, Puget Sound Partnership and U.S. Environmental Protection Agency.*

**SATURDAY, SEPT. 14**  
1 p.m.  
**COUPEVILLE LIBRARY**  
788 NW Alexander St. • 360-678-4911

**SATURDAY, SEPT. 28**  
2 p.m.  
**OAK HARBOR LIBRARY**  
1000 SE Regatta Dr. • 360-675-5115



Accommodations for people with disabilities will be provided upon request.  
Please contact your library with two weeks advance notice.

This event/activity is NOT sponsored by the school district and the district assumes no responsibility for the conduct/safety of the event/activity. The district does not sponsor/guarantee any of the information in these materials. Parents/guardians must review the information and decide on its appropriateness for their family as an individual decision.

sno-isle.org