

COUNTY: Jefferson
Grant No: SEANWS-2023-JeCoWS-00007

PROJECT TITLE: Jefferson County MRC Operations and Projects

TASK NUMBER: 1-MRC Operations

T1.5
Annual Report

PERIOD COVERED: October 1, 2022 – September 31, 2023

DATE SUBMITTED: February 22, 2024



Jefferson County
**Marine
Resources
Committee**



PUGET SOUND
PARTNERSHIP



**Northwest
Straits**
INITIATIVE

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JEFFERSON COUNTY MARINE RESOURCES COMMITTEE



ANNUAL REPORT

2023



Jefferson County
**Marine
Resources
Committee**

ABOUT THE MRC

The Jefferson County Marine Resources Committee (MRC) is a county based advisory group comprised largely of volunteer members appointed by the Jefferson Board of County Commissioners to advise on research, educational, and regulatory measures necessary to protect and restore the marine resources of East Jefferson County. This area includes the marine waters of the eastern Strait of Juan de Fuca, Admiralty Inlet and northern Hood Canal, nearly 200 miles of shoreline from Gardiner to Triton Cove, and the ancestral lands and waters of the Coast Salish Peoples who have inhabited and stewarded this area since time immemorial. In addition to serving the county in an advisory capacity, the MRC engages in hands-on restoration, monitoring, and education outreach projects. The MRC's goal is to promote an ethic of stewardship, implement science-based recommendations, and work in partnership with Tribes, local and state government agencies, nonprofit organizations, and the broader community to restore and protect our corner of the Salish Sea.

The Jefferson County MRC was established in 1999 (Res. No. 45-99) and is one of seven county MRCs affiliated with the Northwest Straits Marine Conservation Initiative. Also part of the Initiative is the Northwest Straits Commission - which provides scientific, technical and financial support to the MRCs - and the Northwest Straits Foundation, the nonprofit arm established to leverage additional financial resources for the MRCs. This report summarizes the Jefferson MRC's work from October 2022 through September 2023.

Prepared by Monica Montgomery, MRC Coordinator

WA Department of Ecology Grant: SEANWS-2021-JeCoWS-00007

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Photos taken by Monica Montgomery unless otherwise noted.



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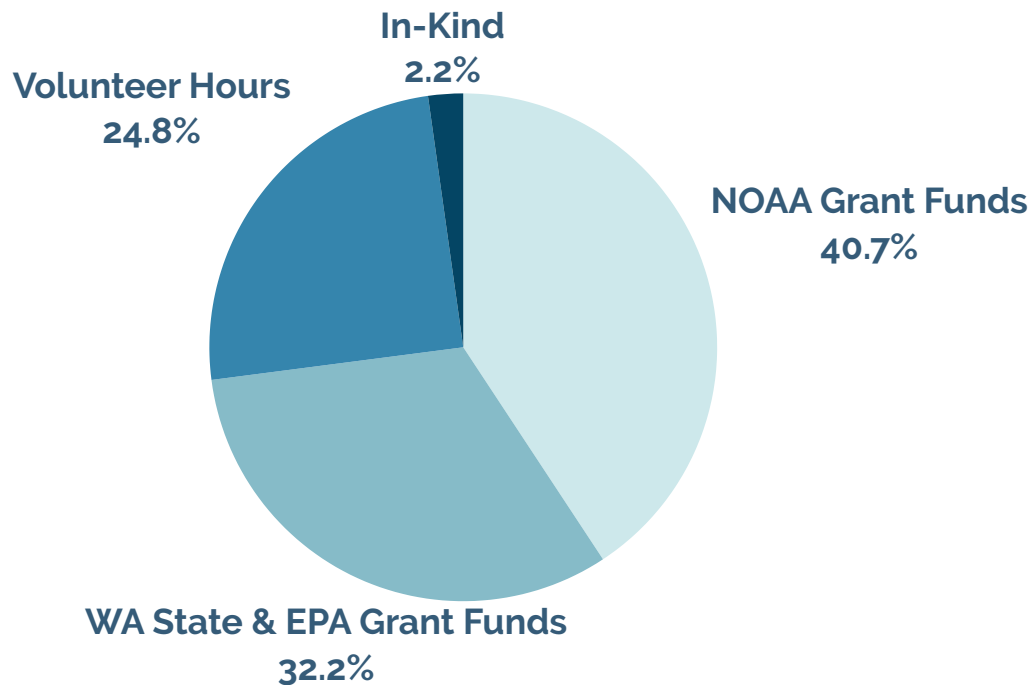
MRC MEMBERSHIP

MRC members are residents of Jefferson County and represent a range of backgrounds, interests, and expertise, with the unified goal of protecting and restoring our local marine and nearshore environments. In 2023, three MRC members completed their terms - Solenne Walker (District 1), Nam Siu (Marine Science), and Brent Vadopalas (Marine Science Alt) - and one MRC member, Heather Burns (District 3), resigned. At the September 5, 2023 MRC meeting, members decided by consensus to add a new position on the committee to represent local youth, with a starting age of 15-21 years old and serving up to a four year commitment (to be determined at the beginning of their term). New appointments were finalized in October 2023, with Joanie Hendricks transitioning to the District 3 Representative role and the MRC welcoming Brad Bebout (District 1), Timothy Behrenfeld (District 1 Alt), Tim Cross (District 3 Alt), Emily Buckner (Marine Science Rep), and Christopher Kelley (Marine Science Alt).

Jefferson MRC Member Representatives (as of December 2023)

Troy McKelvey, Chair - Recreational Interests
Gordon King, Vice Chair - Commercial Interests
Jeff Taylor, NWS Rep - District 2
Sarah Fiskens, NWS Alt - District 3
Neil Harrington - Jamestown S'Klallam Tribe
Heidi Eisenhour - Jefferson County Commissioner, *ex officio*
Carol Hasse - Port of Port Townsend Commissioner
Judy Surber - City of Port Townsend
Janette Mestre - District 1
Brad Bebout - District 1
Timothy Behrenfeld - District 1 Alt
Brenda Johnson - District 2
Frank Handler - District 2 Alt
Joanie Hendricks - District 3
Tim Cross - District 3 Alt
Emily Buckner - Marine Science Practitioner
Christopher Kelley - Marine Science Practitioner Alt
Roy Clark - Recreational Interests Alt
Betsy Carlson - Environmental Interests
Bryan DeCaterina - Environmental Interests Alt
Vacant - Local Youth

FUNDING & SUPPORT



In 2023, the Jefferson MRC received a total of \$212,800 from Washington State, the U.S. Environmental Protection Agency, and the National Oceanic and Atmospheric Administration through grants administered by NWSC. Additionally, MRC members and community volunteers contributed a total of 1,925 volunteer hours, a value of \$72,438 (@ **\$37.63/hr**). The MRC also received an estimated \$6,840 through in-kind contributions from community partners, including contributions from the Port of Port Townsend and Taylor Shellfish for use of their vessels for no-anchor zones work as well as from the City of Port Townsend for rain garden excavation services. Through grants, volunteer hours and in-kind contributions, the MRC brought an approximated total value of \$291,718 to Jefferson County between October 2022 and September 2023.

1,925

total hours
contributed by
MRC members and
community volunteers

\$291,718

estimated value the
MRC brought to
Jefferson County
between October 2022
and September 2023

MRC OPERATIONS

Operations: In 2023, the MRC funded one staff member, Monica Montgomery as the MRC Coordinator, and four interns, including Amelia Kalagher as the MRC Program Assistant, Isabelle Jones as the Rain Garden Community Coordinator, Alexandra Galiotto as the Crabber Outreach Coordinator, and Nathaniel Ashford as the Storm Surge Monitoring Program Coordinator. In April, with support from the previous MRC Coordinator, Cheryl Lowe, the MRC held an all day retreat for discussing project interests and priorities for the upcoming two-year grant cycle (2023-2025). Also in 2023, the MRC formed a Diversity, Equity, and Inclusion (DEI) subcommittee, led by Nam, to evaluate internal and external practices and to improve the MRC's representation and engagement of communities across East Jefferson County.



Cheryl sharing key takeaways from the day's discussions during the April MRC retreat.

Meetings: Public meetings were offered in a hybrid format and held on the first Tuesday of each month, with the exception of July. Meetings often included a guest speaker or special topic of interest to discuss, as well as project and partner updates. MRC members and staff also engaged in meetings among local and regional partners, including NWSC, the Strait Ecosystem Recovery Network, and Hood Canal Coordinating Council. In May, the MRC's NWSC representative, Jeff, participated in the Puget Sound Day on the Hill in Washington D.C., organized by the Puget Sound Partnership and NW Indian Fisheries Commission, to lend voice in support of reauthorization of the NW Straits Initiative.

MRC OPERATIONS

Communications: In March, the MRC Coordinator, along with five MRC Members (Jeff, Troy, Gordon, Neil and Sarah) presented an annual update of the MRC's activities with the Jefferson Board of County Commissioners (BoCC). To share about the MRC's work and connect with the broader community, the MRC tabled several events across East Jefferson County, including Hood Canal Fjordfest, the Connectivity Fair, and Wooden Boat Festival. The MRC also maintains a website (www.jeffersonmrc.org) which was regularly updated to provide current information about completed and ongoing projects, meeting agendas, approved minutes, and upcoming events.



Frank sharing the MRC's work at the Connectivity Fair (left); Cheryl and Nam tabling the Wooden Boat Festival. (right)

Grant Administration: The MRC Coordinator tracked project progress and deliverables; prepared monthly, quarterly and annual grant reports; managed budgets and subcontracts; documented in-kind contributions and volunteer hours; and submitted grant proposals for 2023-2025.

Advisory Actions: In April, the MRC Coordinator and Jeff attended the Puget Sound Lost Shellfish Pot Prevention Plan workshops organized by Natural Resources Consultants, for contributing input on updates to the 2016 Plan. In August-October, the MRC formed a subcommittee led by Gordon to review Jefferson County's Shoreline Master Program (SMP) draft update and submitted comments approved by the MRC majority, as requested by the BoCC. Troy continues to represent the MRC on the North Olympic Development Council's Marine Renewable Energy Steering Committee.

MRC PROJECTS

In addition to serving Jefferson County in an advisory capacity, the MRC engages in hands-on marine stewardship projects with numerous local and regional partners. MRC projects are led by committee members, engage community volunteers in conservation efforts, and support local and regional conservation efforts. These projects include monitoring forage fish spawning beaches, bull kelp populations, and storm surge events; improving water quality by installing and maintaining a network of rain gardens; protecting eelgrass and shellfish habitat by maintaining voluntary no-anchor zones; restoring Olympia oyster populations in priority areas; recovering lost crab pots using submersible remotely operated vehicles (ROVs); and providing environmental education opportunities across East Jefferson County. In 2023, MRC projects engaged a total of 108 volunteers in stewarding our marine and nearshore resources, and served 85 participants through education and outreach activities.

108

volunteers who
contributed to marine
stewardship through
MRC projects

85

participants in
MRC education
and outreach
events

With additional funding in 2023, the Jefferson MRC also directed \$81,200 of grant funds towards the NW Straits Initiative regional derelict vessel removal project. These funds allowed the WA Department of Natural Resources Derelict Vessel Removal Program to remove three vessels in East Jefferson County, including the sailboat that ran aground at Kala Point in early summer and one vessel near the mouth of Chimacum Creek.



Vessel that ran aground at Kala Point, later recovered by DNR with MRC funds.

COMMUNITY SCIENCE: FORAGE FISH SPAWNING SURVEYS

The MRC monitors two forage fish species that spawn intertidally: surf smelt (*Hypomesus pretiosus*) and Pacific sand lance (*Ammodytes hexapterus*). Knowing when and where these species spawn is critical for protecting their spawning habitat and populations, which in turn supports a resilient marine ecosystem. The data collected from these surveys contribute to regional monitoring efforts, with Fort Townsend restoration site data maintained by Point No Point Treaty Council (PNPTC) and index site data contributing to the [WDFW Forage Fish Spawning Database](#). In 2023, the MRC monitored three forage fish spawning sites:

1. Fort Townsend State Park Restoration Site:

The 2022-2023 winter season (October through February) marked the eighth year of monitoring a stretch of beach at Fort Townsend that was restored in 2016. Surveys have documented increased spawning post-restoration and now contribute to long-term monitoring in partnership with PNPTC. Four surveys were conducted in October, January (twice), and February with the help of seven dedicated volunteers. Surf smelt eggs were only detected in the October sample.

2. **Adelma Beach WDFW Index Site:** Monthly monitoring began here in 2016. This year, two volunteers conducted ten surveys, with sand lance eggs detected in December and January. After eight years of monitoring, the MRC will no longer survey Adelma Beach.

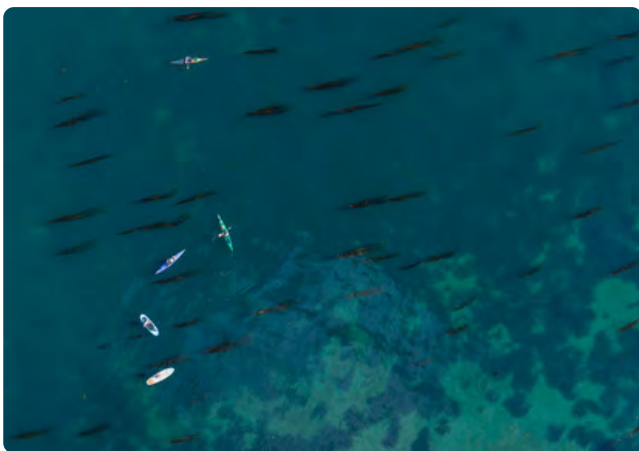
3. **Dabob Bay WDFW Index Site:** Monthly monitoring began here in June 2020. This year, five volunteers conducted twelve surveys, with sand lance eggs detected in November.



Janette, Gregg and Sarah filter beach samples through a series of sieves (left); Forage fish volunteers, nearly caught by the incoming tide, carry supplies in (right)

COMMUNITY SCIENCE: BULL KELP MONITORING

Bull kelp (*Nereocystis luetkeana*) is a large brown algae that is native to the Strait of Juan de Fuca and Puget Sound areas. It often grows in dense “forests” in the rocky subtidal zone and provides vital foraging, nursery and spawning habitat for a variety of species. Declines in parts of south and central Puget Sound have galvanized efforts to assess kelp abundance and distribution statewide, to better inform recovery. For more information, read the [Puget Sound Kelp Conservation and Recovery Plan](#) and [2023 Status Update](#). Jefferson MRC continues to collect data as part of NWSC’s regional bull kelp monitoring project, with 2023 marking the eighth year of surveying the East Kelp Bed at North Beach.



Solenne, Betsy, and MRC intern Amelia, while conducting the linear extent survey (top); Volunteers paddling among the bull kelp at North Beach - drone image by John Gussman (bottom)

With unfavorable paddling weather in June, the MRC conducted just two surveys this year, in July and August. Overall, the bull kelp bed at North Beach appeared to be healthy, though somewhat smaller in size and less dense compared to previous years. The MRC also conducted a linear extent survey to document bull kelp presence across the northern portion of East Jefferson County. Near-continuous bull kelp beds were observed from Beckett Point to Point Wilson, except for a few short segments. Smaller fringing kelp beds were observed at Point Hudson, west of and around Marrowstone Point, and approaching Liplip Point. Little to no floating kelp was observed at Kinney Point or anywhere along the south of Marrowstone Island. Floating kelp beds were observed again along the west side of the Port Townsend Ship Canal. The MRC will continue to monitor kelp beds at North Beach and other areas, as capacity allows.

COMMUNITY SCIENCE: STORM SURGE MONITORING

Local residents have identified data gaps in existing king tide observations in WA State associated with the degree to which storm surge and wave runup contribute to coastal flooding. In effort to address these data gaps, the Jefferson MRC adopted a storm surge monitoring project from Local 20/20, a local nonprofit fostering community resiliency. In 2023, the MRC continued building upon six years of this existing data at the Salmon Club boat ramp in Port Townsend and added a second monitoring site near Chetzemoka Park. The MRC also hired an intern, Nathaniel Ashford, to help organize existing data and develop a searchable database.



Jeff, Barney Burke, and Dave Wilkinson photographing a small storm surge event in Port Townsend (left); Ian Miller, Jonathan Waggoner and Dave using high resolution GPS to map the Salmon Club boat ramp elevation - photo by Jeff Taylor (right).

Monitoring total water levels captures the sum of parameters that contribute to coastal flooding (i.e., tidal elevation, storm surge, wind direction, wind speed, fetch, and wave runup) that are not currently assessed together in forecasts. This involves collecting repeat photos during high storm surge and wave runup events at the same location, using fixed features in photos to provide reference against which the elevation of total water level during these events can be estimated, and coupling these observations with ancillary data on other parameters that contribute to coastal flooding. In addition to monitoring total water levels, the MRC will be developing a written protocol that can be adopted for other locations across the Salish Sea so that other communities can better understand their own coastal flood risks and make more informed decisions at the local level. The overall goal of this project is to improve our understanding of the combination of variables that contribute to coastal flooding.

RAIN GARDENS

Rain running off rooftops, driveways, and roads flows into storm drains that discharge to local streams and bays untreated. This stormwater often carries harmful contaminants such as fertilizers, oils, bacteria from pet waste, and toxicants in rubber car tires that are lethal to coho salmon. Rain gardens are designed to filter and treat stormwater. Concerned about water quality in the marine environment, the MRC began installing rain gardens in 2014. To date, the MRC has co-sponsored the installation of 19 rain gardens across East Jefferson County.

In 2023, the MRC added two new rain gardens to this network. With support from WSU Extension (Bob Simmons) and Native Plant Salvage Foundation (Erica Guttman), the MRC installed one rain garden at the Old Alcohol Plant Inn in Port Hadlock and another near the Swan School in Port Townsend. To help address maintenance needs of existing rain gardens, the MRC hired a Rain Garden Community Coordinator intern, Isabelle Jones, to organize work parties and create educational materials, including [a new project StoryMap](#), for recruiting and educating community members interested in stewarding their neighborhood rain garden. In 2023, the MRC organized eight maintenance work parties and recruited three new rain garden stewards who have adopted the Garfield/Adams and WSU Office rain gardens. In the coming years, the MRC will continue to focus on maintenance and cultivating community stewardship.



Staff and volunteers planting the Old Alcohol Plant Inn rain garden – photo by Bob Simmons (top); Sarah and a student help to install the Swan School rain garden (middle); Frank, MRC rain garden intern Isabelle, and Janette after weeding and mulching the Water and Monroe St. rain garden (bottom).

VOLUNTARY EELGRASS PROTECTION NO-ANCHOR ZONES

Eelgrass (*Zostera marina*) is an underwater flowering plant that provides numerous important ecosystem benefits, including shelter for juvenile salmon and Dungeness crab, substrate for herring eggs, uptake of excess nutrients, and carbon sequestration. Localized eelgrass declines are primarily attributed to anthropogenic causes, one of which is physical damage caused by boat propellers and anchors. In 2004, the MRC established the first voluntary no-anchor zone to protect eelgrass beds along the Port Townsend waterfront. The MRC now maintains 21 buoys that protect over 100 acres of eelgrass and shellfish beds in Port Townsend Bay (along the Port Townsend waterfront and near Port Hadlock) and in Mystery Bay.



In 2023, the MRC conducted maintenance of the Mystery Bay and Port Townsend buoy fields. Monitoring of boater compliance along the Port Townsend waterfront occurred throughout the year, noting 100% compliance, even during the Wooden Boat Festival, the busiest boating weekend of the year.



Troy and Bryan prepare to swap summer spar buoys with winter floats - photo by Gordon King (top left); Gordon diving on the Mystery Bay buoys - photo by Troy McKelvey (top right); Boats anchored outside the Port Townsend no-anchor zone during the Wooden Boat Festival - photo by Brent Vadopalas (bottom)

OLYMPIA OYSTER RESTORATION

The Olympia oyster (*Ostrea lurida*) is the only native oyster of the North American Pacific Coast and once thrived along the Strait of Juan de Fuca and Puget Sound areas. However, due to habitat degradation and overharvesting, these oyster populations are a mere fraction of what they were prior to the arrival of settlers in the mid-1800s. In 2023, the MRC focused its efforts on Discovery Bay and Kilisut Harbor, both identified as priority areas for Olympia oyster restoration ([WDFW 2012](#)).

Discovery Bay: Since 2014, the MRC has partnered with WDFW and the Jamestown S’Klallam Tribe to expand a nearby extant population by spreading clean Pacific oyster shell which provides substrate for larvae to settle on and grow. In 2023, the MRC counted and measured Olympias in a population survey of the North and South Powerlines Sites, calculating an estimated more than 123,000 Olympia oysters. These oysters ranged from 2 to 81mm in size and followed a normal distribution curve, indicating that natural recruitment continues to occur in this area. The MRC also contracted Hood Canal Oyster Company to deliver 1,200 bags (approximately 40 cubic yards) of clean shell, and with the help of community volunteers, distributed new substrate across both sites. No activities were conducted at the Lagoon site this year.



Figure 1. Size class (mm) distribution of Olympia oysters measured during a survey at the Powerlines Site in Discovery Bay on June 5, 2023. The normal distribution curve indicates a healthy population.

OLYMPIA OYSTER RESTORATION

40 cu yds

of clean shell were spread in South Discovery Bay in 2023 to provide substrate for native Olympia oyster larvae to settle on and grow

>123,000

population of Olympia oysters estimated from surveys in 2023, compared to essentially zero when the project began in 2014

Kilisut Harbor: The MRC partnered with Puget Sound Restoration Fund and WDFW to conduct community outreach on Marrowstone Island, organizing a virtual presentation, an in-person presentation coupled with a beach walk, and one-on-one site visits with twelve shoreline property owners.

The MRC will continue to conduct population surveys at the North and South Powerlines Sites, and spread clean shell in Discovery Bay in accordance with project permits. The MRC will also continue community engagement efforts and work with partners to conduct baseline surveys of Olympia oyster populations at various properties along Kilisut Harbor.



Steven Yanoff and Cheryl Lowe counting and measuring Olympia oysters (top); Delivery of clean shell by Hood Canal Oyster Company – photo by Neil Harrington (middle); Neil and Gordon with volunteers after spreading the last half of the 1,200 shell bags delivered to South Discovery Bay (bottom).



ROV LOST CRAB POT REMOVAL



Students working in the field with the ROV (top); A recovered lost pot with Dungeness crab entrapped – photo by Jeff Taylor (middle); Jeff with a truckload of unusable pots headed for the landfill (bottom)

It is estimated that over 12,000 crab pots are lost and become derelict each year in Washington waters of the Salish Sea, killing 180,000 otherwise harvestable Dungeness crabs annually. To expand the [NW Straits Foundation](#)'s derelict crab pot removal program, in 2021, the Jefferson MRC began a partnership with the Sea Dragons, a Port Townsend-based student-run robotics team specializing in underwater remotely operated vehicles (ROVs), to locate and remove lost crab pots.

In 2023, the team focused its efforts on Port Townsend Bay, with contracted side scan sonar surveys by Coastal Sensing & Surveys detecting more than 400 targets. However, during removal operations, the team experienced a nearly 50% probability of successfully relocating a lost pot, as many targets appearing as pots on sonar proved to be other types of marine debris, such as concrete blocks. With 10 on-the-water workdays, the team completed 40 dives and recovered a total of 17 lost pots. [See the project StoryMap for more details.](#)

The MRC will continue working with the Sea Dragons, to provide more opportunities for students to engage in real world conservation efforts, further enhance the ROV's capabilities in recovering pots, and continue removing pots in popular crabbing locations across East Jefferson County.

EDUCATION & OUTREACH

The MRC supports stewardship of marine and nearshore resources by providing science-based information to the public, engaging community members in hands-on learning, and building community support and appreciation for restoration, conservation, and water quality improvement efforts.

In 2023, the MRC reached over 863 community members and visitors through on-the-beach education, classroom workshops, and tabling community events. The MRC offered two on-the-beach education events, “Digging for Dinner” and “Searching for Seaweed,” in partnership with WDFW, to educate recreational harvesters about digging clams, shucking oysters, and harvesting seaweed safely and responsibly. The MRC also hired a Crabber Outreach Coordinator intern, Alexandra (Ally) Galiotto, who helped to organize a Crabbing 101 workshop to provide education on WA crab regulations, co-management efforts, and best practices for properly rigging pots to avoid loss. Ally also conducted dock outreach along MRC members, Troy and Roy, on opening day, and helped the MRC to distribute over 170 crabber education packets at key locations across the county.

To help inform future education and outreach efforts, the MRC Assistant intern, Amelia Kalagher, **created a survey** that the MRC will continue to share to collect input from East Jefferson County residents about their marine interests and concerns.



Nam leading the Searching for Seaweed event (top); Digging for Dinner participants harvesting clams (middle); MRC intern Ally welcoming crabber workshop attendees (bottom)

THANK YOU

Thank you to our Jefferson County Marine Resources Committee members and the many community volunteers who continue to support MRC projects. Your dedication to protecting and restoring the marine and nearshore environment is making a difference in East Jefferson County! We would also like to recognize the ongoing support of our partners, including the Board of Jefferson County Commissioners, Port of Port Townsend, City of Port Townsend, Jamestown S’Klallam Tribe, Point No Point Treaty Council, Taylor Shellfish, WA Department of Fish and Wildlife, WA Department of Natural Resources, Port Townsend Marine Science Center, Coastal Sensing & Survey, Applied Education Foundation, Sea Dragons, John Gussman, Eric Wennstrom, Stewart Pugh, Hood Canal Oyster Company, Native Plant Salvage Foundation, WSU Extension (Master Gardeners, Beach Naturalists, Stream Stewards), and many others. This includes staff time, advice, materials, and general support for MRC projects. The MRC is also grateful to our funders and for support from the Northwest Straits Commission.

How to get involved: Attend monthly MRC meetings 6-8PM the first Tuesday of each month ([sign up here](#) to be added to the notification list). Volunteer on a [project](#). [Sign up](#) for the NW Straits Commission and Foundation newsletters.

How to reach us: Website: www.jeffersonmrc.org Email: jeff.co.mrc@gmail.com

