



CLALLAM MRC

RESEARCH & MONITORING



PIGEON GUILLEMOT MONITORING

MAIN ACTIVITIES

- Monitor pigeon guillemot colonies weekly as they raise their young in burrows during summer.
- Partner with the Salish Sea Guillemot Network and Olympic Peninsula Audubon Society to engage about 40 citizen scientist volunteers per season.



*A pigeon guillemot taking off with a gummole in its mouth, likely about to deliver the prey to its nesting young.
Photo credit Peggy McClure.*

PURPOSE

We monitor guillemots because their use of coastal bluffs for nesting and subtidal habitat for feeding makes them excellent indicator species of nearshore habitat health.

PROJECT CONTACTS: Ed Bowlby | edbowlby2@gmail.com
Rebecca Mahan | rebecca.mahan@clallamcountywa.gov

OUTCOMES

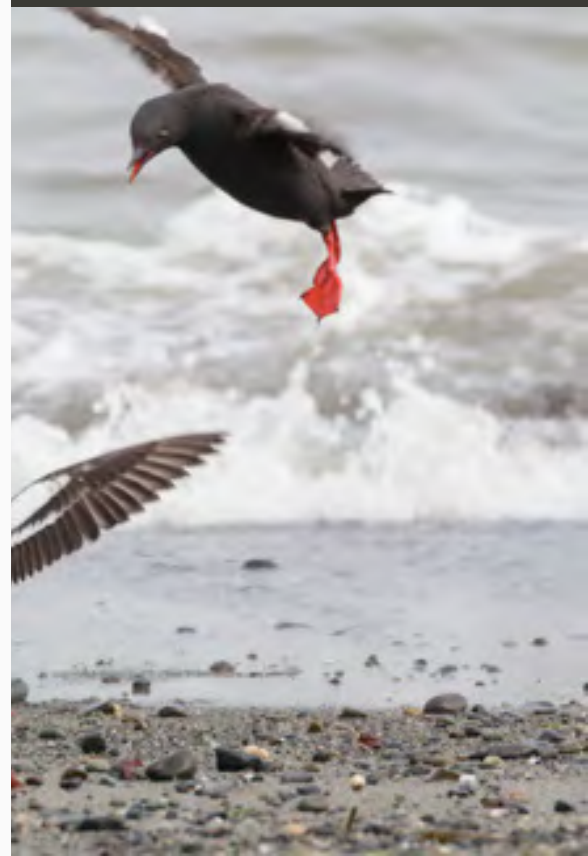
- Changes in guillemot nesting, usage of specific colony sites, and prey delivery habits will continue to be recorded through weekly monitoring during the next nesting seasons.
- The MRC will continue retaining, recruiting and training volunteers to engage in this effort.
- Through the Salish Sea Guillemot Network, the monitoring data may be furnished to researchers to better understand pigeon guillemot nesting, feeding and interaction with their environment.
- Results that we have observed this year are that birds are nesting later and consequently fledging of young Pigeon Guillemots has occurred later in the season.

INFORMATION SHARING & COLLABORATION

This project stands out as a successful long-term monitoring effort for the Clallam MRC thanks to MRC member champions Ed Bowlby and Mary Sue Brancato, strong partnerships with regional organizations, and a large crew of volunteers. Citizen volunteers that have stayed committed to this project year-over-year, finding enjoyment in watching the birds and interest in the long-term health of specific colonies, have been key to its success. The Salish Sea Guillemot Network provides online training and a carefully organized protocol that enables the MRC project lead to train and retain these volunteers.



This project stands out as a successful long-term monitoring effort for the Clallam MRC thanks to MRC member champions Ed Bowlby and Mary Sue Brancato, strong partnerships with regional organizations, and a large crew of volunteers.





MyCoast Langley 2022. Photo credit: Steve Egge

ISLAND MRC

ADVISORY



SETTING THE STAGE FOR POLICY DISCUSSIONS

MAIN ACTIVITIES

- Inventory tasks done by Island County’s MRC on the Comprehensive Plan to date
- Identify strengths, challenges, opportunities and threats in this work
- Describe unexpected events that opened opportunities
- Review a time line of complementary activities that set the stage for advising
- Note lessons learned and areas for improvement



Photo credit: Elsa Schwartz

PURPOSE

“Policy Advising” translates the distilled knowledge accumulated by MRC activities into “actionable” community marine stewardship. MRCs are in an ideal position to connect knowledge with action on behalf of our marine resources.

PROJECT CONTACTS: Kelly Zupich | K.Zupich@islandcountywa.gov
 Barbara Bennett | bennbluw@gmail.com & Jill Lipoti | jill.lipoti@verizon.net



MyCoast Greenbank 2021. Photo credit: Randal Schroder

OUTCOMES

The long-range goal of Island County MRC’s advisory work is to elevate community appreciation of marine resources as a major community asset, to infuse all aspects of county government with consideration of each department’s role in marine stewardship, and to propose for consideration county decisions and projects that will enhance marine quality and residents’ safety and resilience.

- Challenge participants to add “advisory roles” to their MRC’s strategic plan
- Equip participants to recognize locally-specific advising opportunities
- Encourage participants to take on this active, important dynamic learning process.

INFORMATION SHARING & COLLABORATION

MRCs build toward an advisory role incrementally through their work as they:

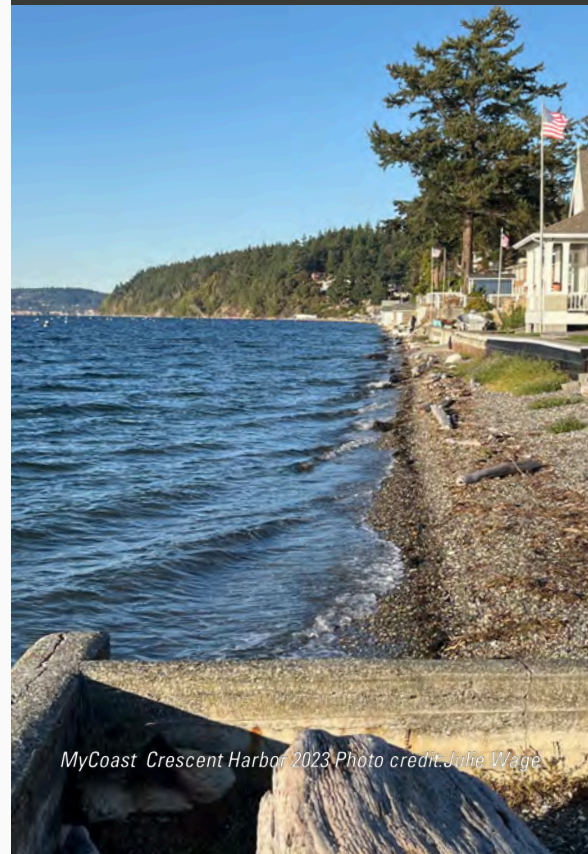
- Research marine issues and identify relevance for local priorities,
- Build relationships for dialogue with decision makers,
- Stay informed on local policy matters and work to understand local issues,
- Stay current on national trends,
- Take advantage of opportunities to analyze issues and make recommendations to advance stewardship of Marine Resources.
- As an example: this attached paper was written in response to a request from the ICBOCC: bit.ly/IslandMRCClimateChangeWhitePaper



MyCoast Camano 2022. Photo credit: Bruce Allison

“This project will help participants strategize to make the most of local policy opportunities, and build an advisory policy role.”

ISLAND MRC



MyCoast Crescent Harbor 2023. Photo credit: Julie Wage

JEFFERSON MRC

Port Townsend Wooden Boat Show 2023. Photo: Rron Thom

CONSERVATION & RESTORATION



Jefferson County
**Marine
Resources
Committee**

VOLUNTARY NO-ANCHOR ZONES

MAIN ACTIVITIES

- **Buoy Maintenance:** A number of marine species such as barnacles, kelp and mussels attach themselves to the buoys and anchor lines, weighing down the buoys. These need to be removed periodically to keep the buoys floating high in the water.
- **Buoy Winter Swap:** Winter conditions along the Port Townsend waterfront require swapping out the summer spar buoys with lighter winter floats each year.
- **Buoy Monitoring:** When nearby, several MRC members will check on the buoys from the shore, ensuring they are in place and functioning properly, and that boaters are compliant within the no-anchor zone.



Troy McKelvey and Gordon King, Jefferson County MRC volunteers, pause for a photo with a No-Anchor Zone buoy ready to be cleaned. Photo: Jefferson MRC.

PURPOSE

Voluntary No-Anchor Zones protect ecologically rich eelgrass and shellfish beds by alerting boaters to their presence using buoys, preventing significant damage from boat anchors.

PROJECT CONTACT: Troy McKelvey | troymckelvey3@gmail.com



OUTCOMES

- High level of boater compliance within the No-Anchor Zones year-round
- Increased awareness of nearshore eelgrass and oyster beds through maintaining informational placards on shore in areas where buoys are stationed

INFORMATION SHARING & COLLABORATION

This project has been highly successful in increasing boater compliance to nearly 100% since its inception in 2004. Project success relies on access to a boat to maintain buoys, and divers to monitor and replace underwater equipment and anchors. Costs include replacement of buoys and anchor line roughly every 5 years, roughly \$580 per buoy and anchor line. Additional costs may include anchors, boat rental/fuel, and a dive team.

“This project has been highly successful in increasing boater compliance to nearly 100% since its inception in 2004.”

TROY MCKELVEY



Jefferson MRC volunteer Cheryl Lowe and MRC member Nam Siu tabling at the 2023 Wooden Boat Festival. Photo Monica Montgomery



Gordon King, Jefferson County MRC volunteer, removes algae and invertebrate overgrowth from a No-Anchor Zone buoy. Photo: Jefferson MRC



SAN JUAN MRC

OUTREACH, MONITORING & RESTORATION



SAN JUAN COUNTY
Marine Resources
Committee

DERELICT VESSEL PREVENTION PROGRAM

MAIN ACTIVITIES

- Conduct marine patrols to identify vessels of concern and record vessel information.
- Tag vessels of concern with a notice requesting owners to contact the County's Derelict Vessel Program.
- Enter vessel of concern information into long term database for tracking.
- Work with the community and local law enforcement to report vessels of concern and assist with identifying and contacting vessel owners to share concerns, options, public assistance programs available to them and potential consequences of non-action.
- When contact with vessel owners is not successful, or no action is taken to remedy concerns, prioritize at risk vessels for removal by the County's Derelict Vessel Program.
- Conduct outreach activities highlighting the environmental threats, social/economic conditions contributing to derelict or abandoned vessels, spotting and reporting derelict vessels, prevention tips and awareness of public assistance programs and overall information on the MRC and County DV programs with county residents and the boating community.

PURPOSE

The MRC and County partner to reduce the hazards posed to the marine environment through prevention and removal of derelict vessels in County waters.

PROJECT CONTACTS: Sam Whitridge, MRC staff | samw@sanjuancountywa.gov
Kari Koski, Derelict Vessel Coordinator | karik@sanjuancountywa.gov



OUTCOMES

- Up to date knowledge of vessels of concern in popular moorage sites in San Juan County.
- Continuation of long-term monitoring program and database of at-risk vessels enabling tracking and reporting.
- Increase in vessel owners taking responsibility to prevent vessels becoming derelict and/or removing already derelict vessels themselves or with assistance from DNR's VTIP and the County's Derelict Vessel Program.
- Prioritized list of vessels of concern for removal by County's Derelict Vessel Program before they become hazardous.
- Increased community awareness of the risks of derelict vessels to the County's marine environment, participation with identifying and reporting vessels of concern and vessel owners, contribution to community solutions reducing the social/economic barriers contributing to derelict or abandoned vessels.

INFORMATION SHARING & COLLABORATION

- A derelict vessel staff coordinator working with MRC volunteers is essential for prevention efforts to be successful.
- Prevention is the goal but doesn't pay. It takes considerable staff time working with vessels owners to take responsibility. However, there isn't a state reimbursement program for prevention. Let's collectively explore options for counties to use the state WAC to impose additional county specific vessel registration fees to fund county DV prevention programs!
- Vessel Turn-in Events working with partners are a cost-effective way to remove vessels before they become derelict and make it affordable to use vessel salvage & recycle contractors.

Vessel Turn-in Events working with partners are a cost-effective way to remove vessels before they become derelict and make it affordable to use vessel salvage & recycle contractors.

SAN JUAN MRC



SKAGIT MRC

CONSERVATION & RESTORATION

Bowman Bay Shoreline Restoration. Lynne Wenberg.



SKAGIT SHORELINE NEEDS ASSESSMENT PROJECT

MAIN ACTIVITIES

- Design and develop a Skagit Geodatabase compatible with SoundIQ and interactive web-based displays for status of MRC restoration and protection projects
- Develop a Skagit Nearshore Inventory Resource List – useful datasets from authoritative resources available for ongoing use
- Identify a list of Prioritized Skagit Shoreline Focus Areas
- Provide a list of Top Priority Skagit MRC Projects and Recommended Action Plans for future consideration



Weaverling Spit Restoration. Lynne Wenberg

PURPOSE

This effort will build upon previous MRC shoreline assessments by providing an updated analytical framework to identify high priority shoreline protection and restoration projects for the future.

PROJECT CONTACTS: Tracy Alker | tracya@co.skagit.wa.us
Lynne Wenberg-Davidson | lwenberg9@gmail.com



Forage Fish Survey, Fidalgo Bay, Anacortes, NWSC

OUTCOMES

This project will better enable the Skagit MRC to respond more quickly and effectively as resources are available to:

- Select, fund and manage high priority marine-based restoration and protection projects (large and small)
- Perform science-based analytical studies / research using updated Skagit unique data to better understand nearshore conditions, concerns and possible solutions / improvements
- Better communicate Skagit MRC projects via interactive web-based visualizations to the public, including project descriptions, current status, and other graphics
- Build a foundational Skagit geodatabase that is easily updateable as new relevant marine-based information emerges

INFORMATION SHARING & COLLABORATION

This effort will be key to developing a more robust, collaborative (transparent), effective and science-based prioritization process for identifying critical MRC work. This will help the MRC to more quickly respond to and pursue top priority shoreline projects as resources become available (funds, people, timing). This project also provides a foundation of analytical processes and authoritative datasets unique to Skagit to continue building upon and to be adaptable to MRC needs in the future. Lastly, the capability to more easily share and maintain visibility of current MRC efforts is beneficial for the public education and critical to ongoing community support.



Bowman Bay Shoreline Restoration, Lynne Wenberg

“This assessment tool will help the MRC to more quickly respond to and pursue top priority shoreline projects as resources become available (funds, people, timing).”

LYNNE WENBERG-DAVIDSON





Edmonds' Kelp Forests:

A Vital Resource for Marine Life and Climate

► Edmonds is fortunate to be home to floating bull kelp, and our local kelp habitat is considered a critical and protected area by the state. Our community is on the northern edge of kelp die-offs occurring in Puget Sound. The Snohomish Marine Resources Committee monitors the health of our marine vegetation and believes that action can be taken to protect our kelp beds. **We have an opportunity to protect a critical local resource** that provides habitat, improves water quality, and supports culturally and economically important species, including salmon and shellfish.

The Benefits of Our Marine Vegetation

Able to produce and store more food energy per square foot than a rainforest, kelp forests are an extremely productive component of the food web, **essential to many species including shellfish and salmon to orca and shore birds.** Recreational, tribal, and commercial fisheries depend on healthy marine vegetation to feed their catch.

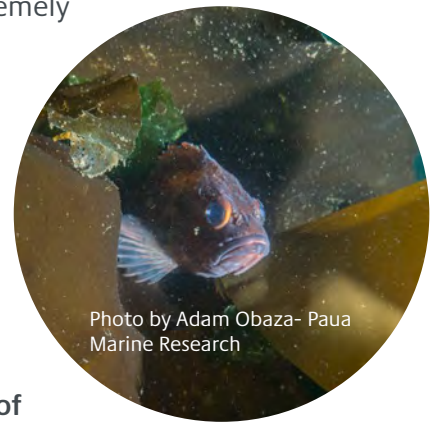
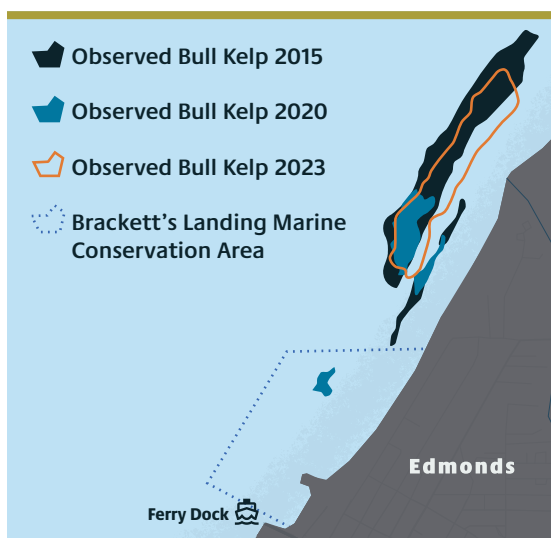


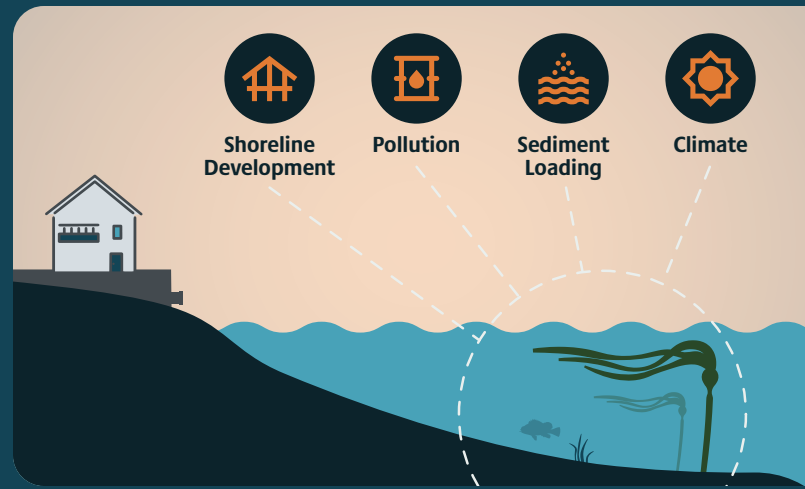
Photo by Adam Obaza- Paua Marine Research

Kelp forests are an important part of our climate change response. Kelp beds can dampen wave action and reduce the rate of erosion from sea level rise. Kelp is exceptionally fast-growing and absorbs carbon dioxide to fuel that growth. In fact, the scientific community is currently researching the long-term carbon storage potential of kelp to mitigate climate change. Kelp and other marine vegetation, such as eelgrass, **help reduce ocean acidification and increase ocean water oxygen levels.** Marine vegetation improves marine water quality by reducing nutrient loading from stormwater, wastewater, and agricultural run-off. The habitat kelp and eelgrass provide will be important as salmon and other species adapt to climate change.



Bull kelp faces a variety of environmental stressors

Each year, bull kelp dies off in the winter and grows back starting in February. To successfully grow, kelp needs a rocky attachment point and clean, cold water. **Shoreline development, sediment loading in our local waters, and pollution make it difficult for kelp to thrive.** Commercial and recreational boating activities can damage kelp. Kelp is threatened by warming ocean temperatures.



What actions are being taken to protect our marine vegetation?





Kelp is considered an essential fish habitat by the National Marine Fisheries Service because **endangered species such as rockfish, certain listed salmon species, and abalone depend on kelp.** The Southern Resident Killer Whales are indirectly dependent on healthy marine vegetation due to their fish diet and preference for Chinook salmon. In 2022, Washington state passed SB 5619 (RCW 79.135.440), which directed the Department of Natural Resources to develop a Statewide Kelp and Eelgrass Health and Conservation Plan. **Washington state is committed to conserving and restoring 10,000 acres of kelp and eelgrass.** Snohomish County is home to the first kelp and eelgrass protection zone in the state, which conserves 2,300 acres of habitat at the mouth of Snohomish River. While kelp conservation work continues at the state level, **action is needed by local governments to protect their own critical kelp and eelgrass beds.**



Snohomish County
Marine Resources
Committee

What actions are needed at a local level?

There are key actions that local governments can take to support the effort to protect our local marine vegetation.

-  Support and provide funding for education, monitoring and restoration of kelp and eelgrass beds along our shoreline.
-  Evaluate Shoreline Master Plans and Climate Action Plans for opportunities to protect kelp and eelgrass.
-  Stay up to date on the implementation of the [Kelp and Eelgrass Health and Conservation Plan](#). Interested parties can join a [listserv](#) to receive updates: dnr.wa.gov/kelp-and-eelgrass-plan
-  Collaborate with other regional partners, such as the Marine Resources Committee and Tribal Nations, to identify coordinated actions and success measures to support marine vegetation habitat as part of natural resources co-management.



LEARN MORE AT THE SNOHOMISH MRC WEBSITE:
snocomrc.org

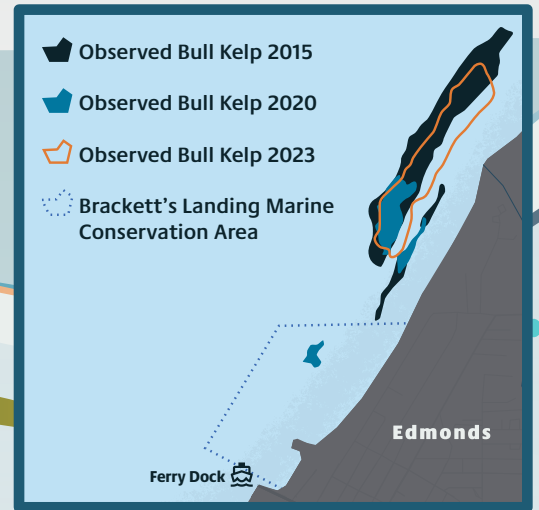
References

Puget Sound Kelp Conservation and Recovery Plan (2020): nwstraits.org/media/3222/pugetsoundkelpconservationandrecoveryplan.pdf
Puget Sound Kelp Conservation and Recovery Plan: Status Update (2023): nwstraits.org/media/3483/kelp-plan-status-update_2023oct.pdf
Kelp Policy Recommendations (2023): nwstraits.org/media/3514/kelp-policy-advisory-group-recommendations.pdf
Snohomish Marine Resources Committee: snocomrc.org/projects/marine-vegetation-monitoring/

This fact sheet was prepared by Snohomish County MRC using Federal funds under award NA23NMF4690358 from National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the NOAA or the U.S. Department of Commerce.

Our Underwater Forests:

Edmonds is home to floating kelp beds, just off our shoreline!



Bull kelp are the trees of an underwater forest.

And just as trees do, kelp habitat provides many benefits to animals, marine ecosystems, and humans.

Habitat

As trees are home for squirrels, birds, bears and other animals, kelp provides a refuge for young salmon, rockfish, shellfish, and other species.

Water Quality

Kelp helps reduce pollution in our water, keeping it clean and safe for humans and marine life.

Climate

Kelp forests are part of how we can respond to climate change. Kelp absorbs and stores carbon, helping to protect us from the effects of climate change.

Community

When we lose kelp habitat, we lose the creatures with it—that includes endangered orca, salmon, crab and shellfish. These species are culturally important to local tribal, recreational, and commercial communities. We're connected to kelp, whether we are preparing food, crabbing, fishing, kayaking, canoeing, diving, or simply enjoying the beauty of where we live.

Up to twelve acres of kelp have been found off of Edmonds

Actions you can take...

Edmonds is fortunate to be home to floating bull kelp, and our local kelp habitat is considered a critical and protected area by the state. Kelp beds are declining from south to north in Puget Sound, and our local bull kelp bed is just north of where these die-offs have occurred. Kelp is experiencing many different stressors, and fortunately, there are actions we can all take at home and on the water to help give kelp the conditions it needs to survive!

Any water going down our storm drains goes directly into our streams and the Puget Sound. There are simple actions we can take to help keep our water clean and our kelp healthy.

...at home...



Plant rain gardens—they can help keep our water clear of harmful sediment.



Use car washes instead of washing at home! When you wash cars at home, soap, oil, and harmful chemicals go into the Sound.



Avoid using chemicals to remove moss from roofs and weeds from lawns. The same chemicals that kill moss, weeds, and insects harm our kelp and salmon.



Pick up pet waste—pet waste is one of the leading pollutants of our water.



...and on the water



Avoid floating kelp beds when boating, anchoring, or fishing.



Set crab pots outside of floating kelp beds.



Don't take it home with you—leave kelp where it grows.



Snohomish County
Marine Resources
Committee



**LEARN MORE ABOUT KELP,
SHARE, AND CONNECT
WITH GROUPS WHO CARE!**

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WHATCOM MRC

*Kayakers using designated tracks to reduce damage to eelgrass beds in Wildcat Cove.
Photo credit: Dylan Trainer, NWSF Intern*

RESEARCH & MONITORING

EDUCATION & OUTREACH



EELGRASS PRESERVATION AT WILDCAT COVE

IN PARTNERSHIP WITH NW STRAITS COMMISSION & NW STRAITS FOUNDATION

MAIN ACTIVITIES

1. A Social Marketing Campaign conducted by Peak Sustainability (Peak) and Shew Design

- Peak conducted observations, interviews, and surveys with boaters in Wildcat Cove to determine messaging that would be utilized to inform marketing materials.
- Shew Design created marketing materials including signage to display at the launch, rack cards to hand out at Park kiosks, and social media content for the NWSC to post.

2. Eelgrass Surveys within Wildcat Cove

- In August of 2023, WA DNR conducted a boat-based eelgrass survey in Wildcat Cove to quantify eelgrass meadows and to gather bathymetry data for Wildcat Cove.
- David Wallin at WWU conducted 4 aerial drone surveys during July and August of 2023 to quantify and photo document changes to eelgrass beds at low tide before and after the opening of crabbing season.

3. Outreach and Education

- In 2024, the NWSF secured funding to support 2 interns to help with a variety of projects, including the Wildcat Cove eelgrass preservation efforts.
- The interns engaged with boaters and cove users to encourage best practices (launching at higher tides, sticking to a single track) to reduce impacts to the eelgrass beds within Wildcat Cove. The interns also collected data about boat launch usage to inform potential future work in Wildcat Cove.

PURPOSE

The purpose of this project was to protect and preserve eelgrass meadows surrounding a popular boat launch within Wildcat Cove located in Larrabee State Park.

OUTCOMES

- An increase in launch user awareness about the presence and fragility of eelgrass meadows
- An increase in the number of folks launching at higher tides or keeping their vehicles to a single lane when launching at a higher tide is not possible.
- A reduction in damage to eelgrass beds in Wildcat Cove, particularly near the boat launch.

INFORMATION SHARING & COLLABORATION

The local community was much more receptive to the MRC's messaging and presence in the cove than expected. A majority of the cove users that the interns spoke with were familiar with the benefits of eelgrass and were interested in learning more about what they could do to best protect these habitats. Simply placing cones to direct the boat launch traffic to a single lane was very successful in preventing vehicles from spanning out over the eelgrass bed. The cones had to be moved as the tidal stage shifted, but it could be beneficial in the future to designate a more permanent system for directing vehicles to a single lane.



Social marketing signage created by Shew Design and displayed at the Wildcat Cove boat launch.

“Simply placing cones to direct the boat launch traffic to a single lane was very successful in preventing vehicles from spanning out over the eelgrass bed.”

DANA FLERCHINGER



NWSF interns, Dylan Trainer and Alex Haase, encouraging boat launch users to use a single path when launching. Photo credit: Dana Flerchinger

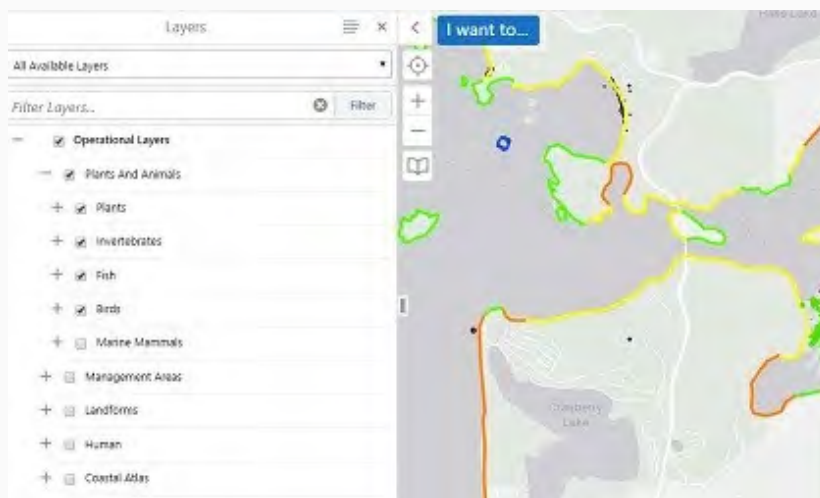
NW STRAITS COMMISSION

ADVISORY - SOUND IQ EXPERIENCE BUILDER



MAIN ACTIVITIES

- The Commission is currently working towards migrating SoundIQ from a City of Bellingham hosted platform to an Ecology's ArcGIS Experience Builder app
- Ensure all layers have compliant metadata Meet accessibility requirements for online maps
- Revisit and streamline visualizations of the archived data on SoundIQ.



PURPOSE

The purpose of SoundIQ is to archive and make Northwest Straits Initiative geospatial data easily accessible and useful to a variety of users.



OUTCOMES

The new SoundIQ will:

- Move away from the current City of Bellingham hosted platform, which does not have capacity to support SoundIQ in the future
- Refresh the user base and increase awareness and use of the system
- Improve accessibility for both data managers and users
- Formulate with NW Straits staff what new communications piece needs are for outreach to target users

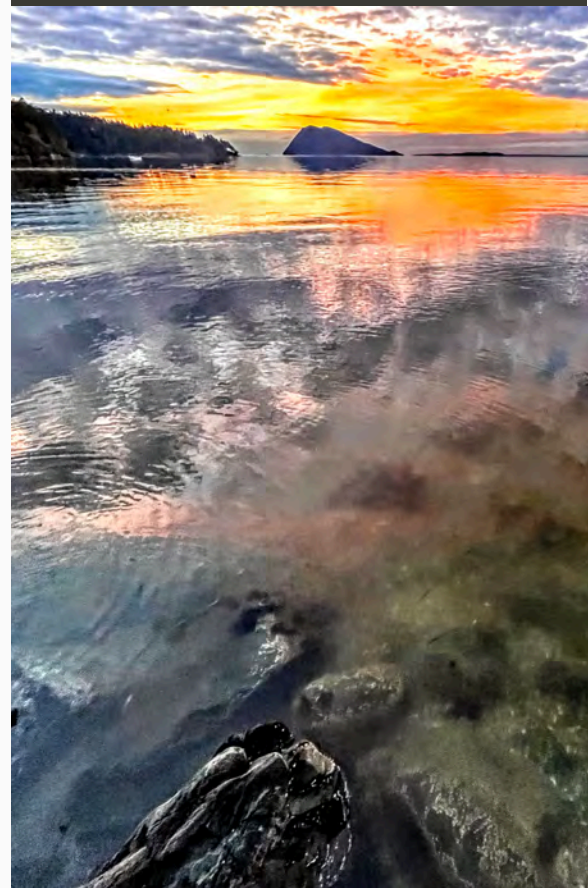
INFORMATION SHARING & COLLABORATION

SoundIQ was developed as a way for MRCs to share data from their projects to local and regional users, in order to ensure that the results of their work are both useful and used.

The new SoundIQ format brings the system in line with the newer technology available and allows Commission and Ecology staff to fully manage the system.

Updating SoundIQ is an opportunity for MRCs to consider how and when they make use of the system, what new or different data would be beneficial to display in the system, and what outreach would help to reach target audiences that are interested in your project data.

The new SoundIQ format brings the system in line with the newer technology available and allows Commission and Ecology staff to fully manage the system.



Passport to Marine Adventure

Northwest Straits Foundation

Kieran Bresnahan, Salish Sea Assistant, Kieran@nwstraitsfoundation.org

What is the Passport to Marine Adventure?

Welcome to the Salish Sea! The Northwest Straits Foundation is excited to launch its exclusive Passport to Marine Adventure travel game. It's fun and free for the whole family. As spring and summer call us outdoors, the Passport provides an engaging way to explore the beautiful shores and bays of the Salish Sea.

Purpose

The Passport is a fun and easy-to-use app that educates and connects the community to the important work done by the NW Straits Initiative. MRCs highlight the top conservation sites in the Passport.

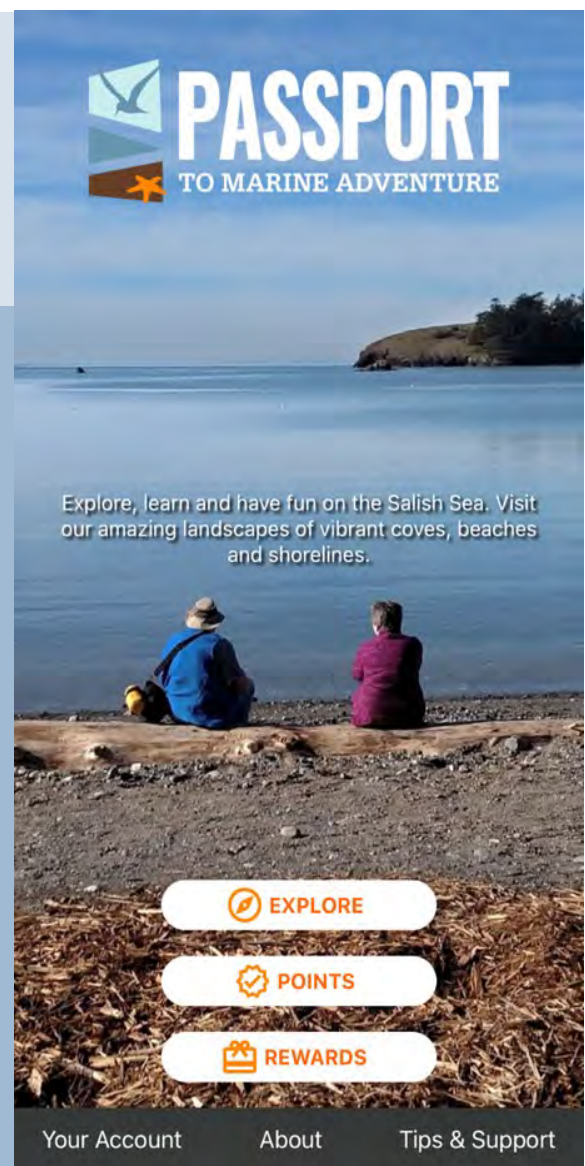
Main activities

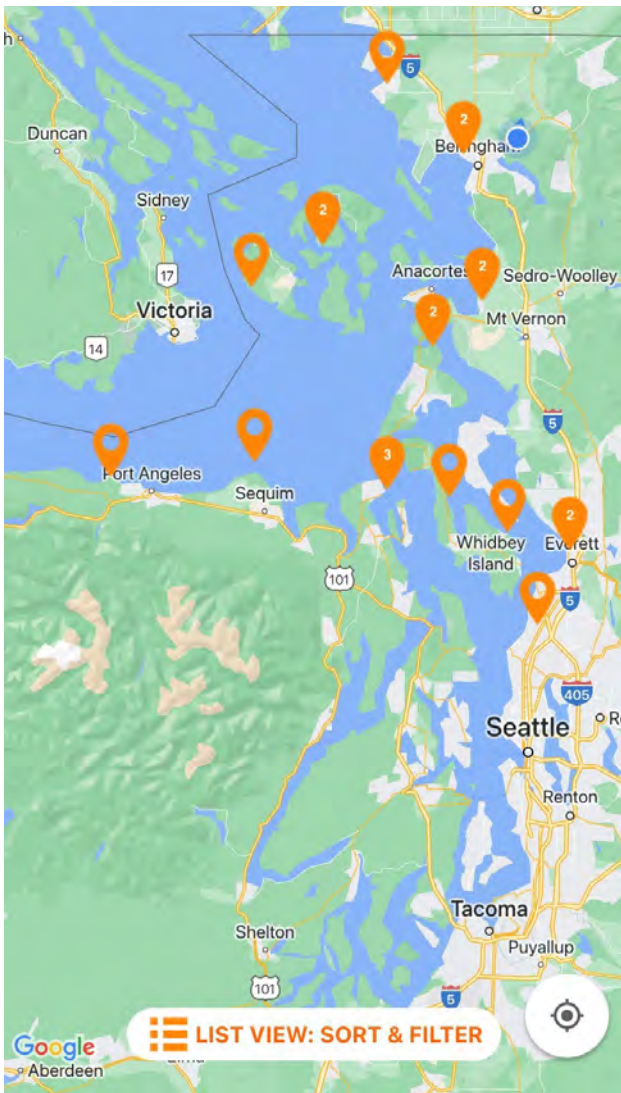
The Passport to Marine Adventure has three main activities:

- Exploring new sites.
- Learning new things.
- Getting outdoors.

Each exploration site has a page on the app where it explains the connection to NW Straits Initiative, provides educational content, and shares details on the site. Users can collect 10 points at each exploration site.

Reward Sites: Local businesses where you can redeem points for rewards. Our goal is to have at least 3 rewards sites per county, ideally around the exploration sites. Reward sites must align with the NW Straits Initiative vision.





Passport to Marine Adventure sites are located throughout the Northwest Straits region. You can explore sites in Whatcom, Skagit, Jefferson, Island, San Juan, Snohomish and Clallam

Outcomes

- Greater public awareness of the work done by the NW Straits Initiative
- Larger community involvement on NW Straits Initiative projects
- Users will have a heightened sense of stewardship for the Salish Sea

The Passport to Marine Adventure app rewards you for exploring the special places in the Salish Sea. It's simple: grab your family or friends; pick a location on our easy-to-use app; and chart a course for adventure. Along your journey, you'll learn about marine wildlife, coastal habitat and the Salish Sea. You'll see breathtaking vistas and be inspired by this unique place we call home.



Exploration site example: Bowman Bay, Skagit County. Photo by Jessie Page