



# Whatcom Marine Resources Committee (MRC) 2025 Bull Kelp Final Report

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Whatcom County Public Works—Natural Resources

Reporting Period: October 2024-September 2025



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## Abstract

Bull kelp (*Nereocystis lueketeana*) is the largest species of brown algae native to our region.

This fast growing seaweed can grow up to 100 feet in a single year and is an important component of the rocky intertidal ecosystem of the Salish Sea. Bull kelp sequesters carbon, oxygenates the marine environment, protects against storm surge and shoreline erosion, and provides critical nutrients and habitat for a number of species in the Salish Sea. Animals critical to the food web, including herring and salmon, use bull kelp forests for protection and food during certain life stages.

Working in collaboration with the Northwest Straits Initiative, the Whatcom MRC monitors four floating bull kelp beds in Whatcom County at least once annually during the July – September growing season. This project supports a regional kelp monitoring program, and provides a better understanding of kelp distribution, bed sizes, and kelp health within the Salish Sea.

Using handheld GPS units and kayaks, volunteers mapped kelp bed perimeters and collected additional data including water temperature and bed depth measurements to provide valuable information on the status of bull kelp in our region. In 2025, four bull kelp surveys were completed in Whatcom County including one survey at Cherry Point/ Gulf Road, Aiston Preserve, Point Whitehorn, and Southwest Lummi Island. As compared to the 2024 kelp data, bull kelp bed acreage decreased slightly at all of the locations surveyed in 2025.

All kelp data are shared with the Northwest Straits Commission for comparison with similar information collected by other MRCs. Kelp data collected during these surveys are a key part of the Washington State Floating Kelp Indicator that informs science and management actions in our region.

## Project Goals

The goal of this project is to provide information on the status of floating kelp communities in Whatcom County. This project aims to support a regional kelp monitoring program, providing a better understanding of kelp distribution, bed sizes, and health within the Salish Sea.

For this reporting period of October 2024-September 2025, the primary goal was to complete at least one kelp survey at four locations throughout Whatcom County including Aiston Preserve (Lummi Island), Cherry Point/Gulf Road, Southwest Lummi Island, and Point Whitehorn.

## Project Engagement

The MRC planned, coordinated, and recruited volunteers to assist with the bull kelp monitoring surveys. The MRC relied on community volunteers to assist with bull kelp monitoring surveys. Additionally, the Northwest Straits Commission played an integral role in preparing MRCs for the kelp monitoring season and assisting with data analysis and management.

## Partners

**Northwest Straits Commission (NWSC):** Launched regional surveys of bull kelp beds using kayak-based survey protocols developed in 2014. The NWSC assisted the MRC with planning and preparation for the kelp surveys and assisted in data management and communication of results. The NWSC added the kelp survey data to Sound IQ, making the data easily accessible and useful to a variety of users. The NWSC, along with the National Oceanic and Atmospheric Administration (NOAA), the Washington Department of Natural Resources (DNR), and various other organizations, helped lead the collaborative multi-year development of the Puget Sound Kelp Conservation and Recovery Plan.

## Participants

Volunteers are a vital component of bull kelp monitoring surveys. Throughout the reporting period, seven volunteers participated across four kelp surveys, contributing over 65 hours of volunteer time to the project. Two volunteers assisted at Aiston Preserve, two at Cherry Point, three at Southwest Lummi Island, and one at Point Whitehorn. The full volunteer list is included in Appendix A.



Volunteers assist with bull kelp surveys in Whatcom County. Photo credits: Dana Flerchinger, MRC staff.

## Methods

Using handheld GPS units and kayaks, MRC staff and volunteers mapped the perimeter of bull kelp beds and collected additional data including water temperature and bed depth to provide valuable information on the status of bull kelp along shorelines throughout Whatcom County. The bull kelp survey protocols are shown in Appendix B. To provide more consistency with the surveys, shoreline segments, which run perpendicular to shore, were developed in 2023. The shoreline segments set specific spatial locations that are returned to each year for the surveys.

The data collected from the surveys was shared with the NWSC to compare to similar information collected by other MRCs and to integrate into the Washington State Floating Kelp Indicator to inform science and management actions in our region. The survey locations and dates are outlined below. A map detailing survey locations is shown on the following page.

Location	Survey Date	Number of Volunteers
Aiston Preserve	August 8th, 2025	2
Cherry Point/ Gulf Road	August 9th, 2025	2
Southwest Lummi Island	August 9th, 2025	3
Point Whitehorn	August 22nd, 2025	1

Table 1: Summary of kelp survey locations, dates, and volunteers for the 2025 kelp monitoring season.

# Whatcom MRC Kelp Bed Survey Locations



Figure 1: Whatcom MRC kelp bed survey locations.

## Results

During the reporting season, four bull kelp monitoring surveys took place at Aiston Preserve (1 survey), Cherry Point/Gulf Road (1 survey), Southwest Lummi Island (1 survey), and Point Whitehorn (1 survey).

## Data Summary

Summaries of each of the surveys and the corresponding kelp bed perimeter tracks are outlined on the following pages.

## Aiston Preserve, Lummi Island: August 8th, 2025

The Aiston Preserve is located on the southeast flank of Lummi Mountain that previously supported a gravel mine, known as the Lummi Island Quarry. The site has been undergoing restoration of 20 acres of upland area and 500 linear feet of shoreline that were impacted by years of gravel mining. In 2021, the overwater structures including a pier, a loading ramp, and pilings left from mining activities, were removed.

In 2023, shoreline restoration was completed and 800 trees were planted in areas previously occupied by the mine. Aiston Preserve opened to the public on July 15th, 2023. The surveys at this location provide insight on how this particular kelp bed is impacted by restoration efforts. The Aiston Preserve kelp bed is surveyed once per year. This year, surveyors noted that many of the kelp blades in the main bed appeared tattered and short. Lots of kelp was also observed to the north of the main bed.



Aiston Preserve survey photos. Photo credits: Dana Flerchinger, MRC staff.

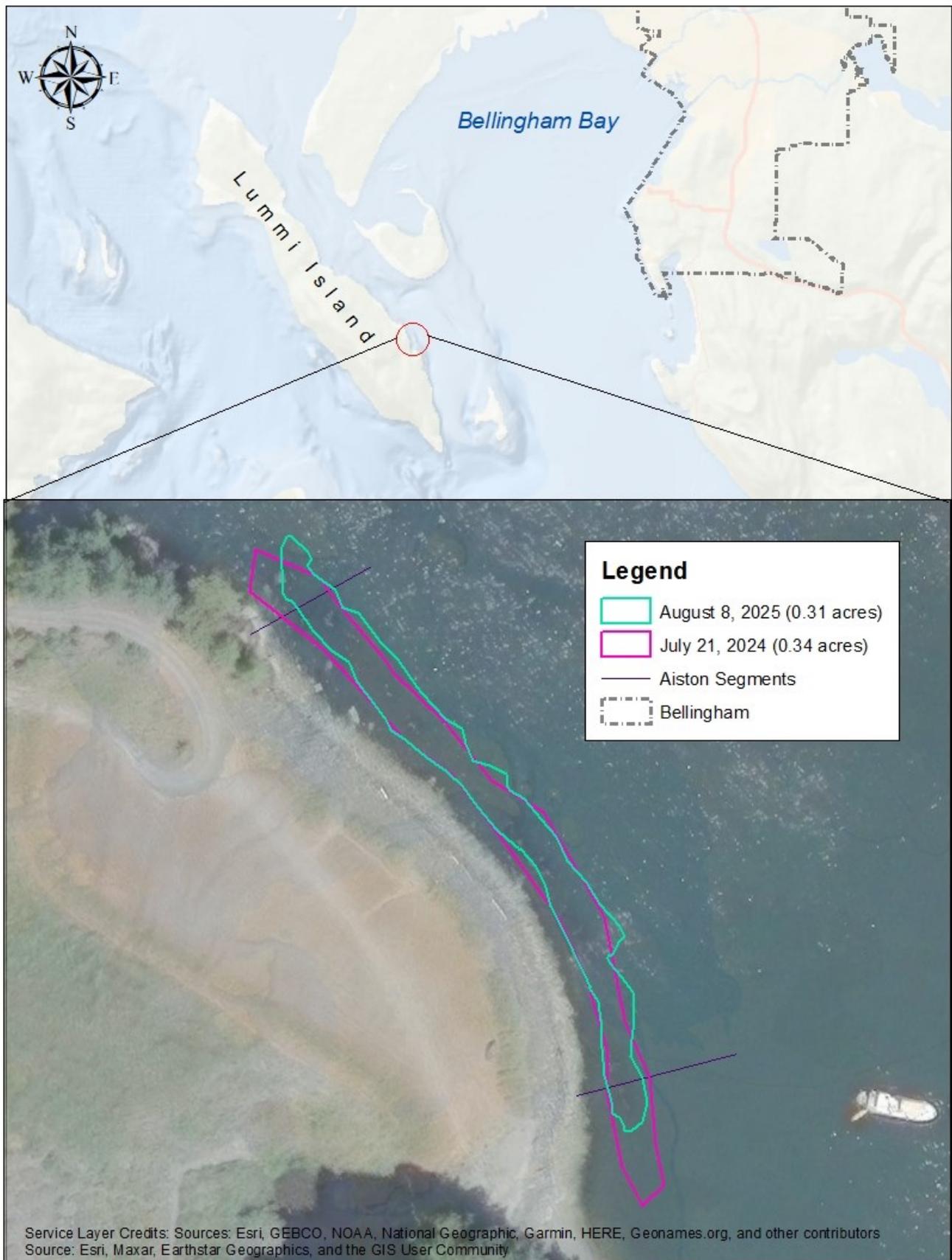
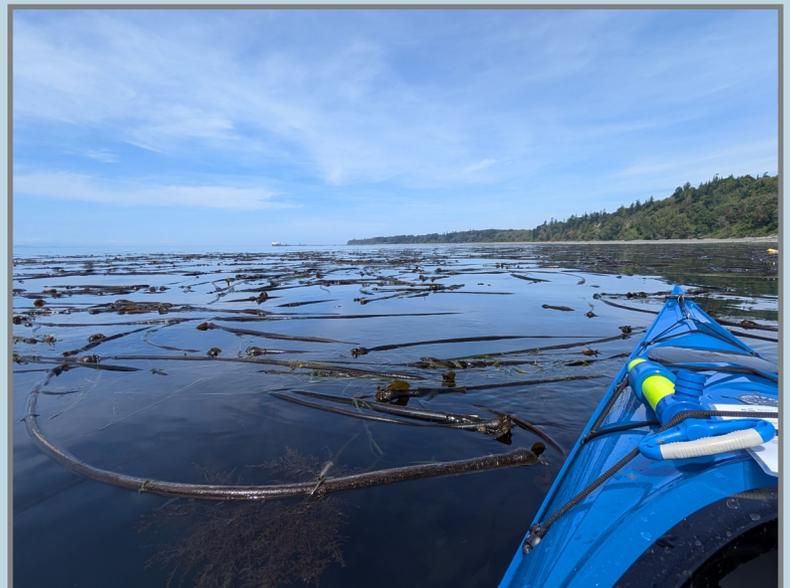
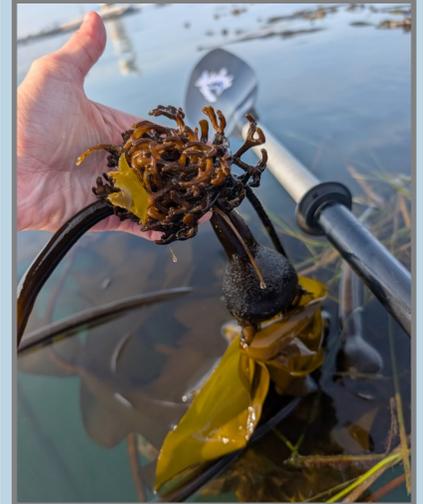


Figure 2: Aiston Preserve bull kelp survey perimeter tracks. The bed was slightly smaller in size in 2025 (shown in teal, 0.31 acres) as compared to 2024 (shown in pink, 0.34 acres).

## Cherry Point/Gulf Road: August 9th, 2025

The Cherry Point kelp bed is located along the Gulf Road shoreline in Ferndale within the Cherry Point Aquatic Reserve between the Petrogas Terminal and the BP Refinery Pier. The MRC began surveying this site in 2017, and it is generally surveyed twice a year, depending on weather and tidal conditions. Due to the amount of data the MRC has collected from this site, DNR is using the MRC's data to help inform the development of the [Floating Kelp Indicator](#) of the Puget Sound Vital Signs. In 2025, one survey was conducted on August 9th. The second survey was canceled due to windy conditions. The kelp bed appeared healthy with lots of marine life observed utilizing the habitat.



Cherry Point/Gulf Rd. survey photos. Photo credits: Dana Flerchinger, MRC staff.

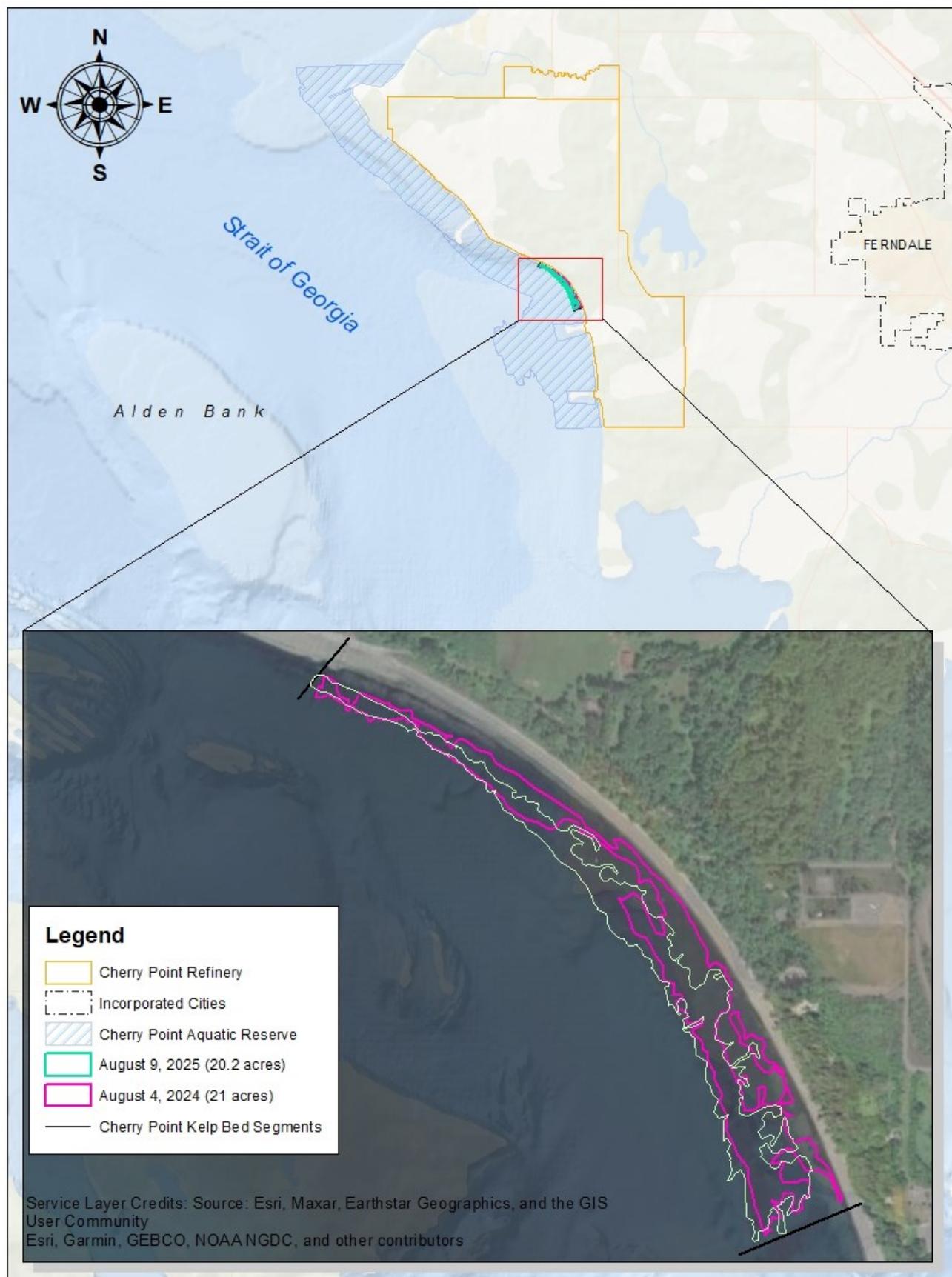
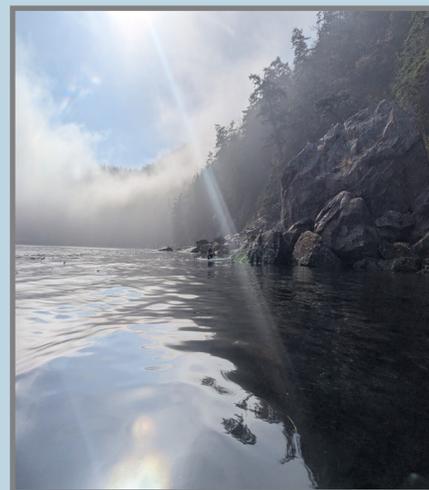


Figure 3: Cherry Point/Gulf Rd. bull kelp survey perimeter tracks. The area of the bed was slightly smaller in 2025 (shown in green, 20.2 acres) as compared to 2024 (shown in pink, 21 acres).

## Southwest Lummi Island: August 9th, 2025

The MRC has been monitoring the kelp bed off of Southwest Lummi Island since 2016.

To reach this site, volunteers leave from the Aiston Preserve and camp at a DNR managed campground on the island to survey the bed at a +1' outgoing tide. This year, the kelp bed appeared healthy, with sparse kelp extending past the north and south of the bed defined by the shoreline segments. Volunteers also noted that there was lots of kelp present on the paddle from the monitoring site and the campground. Due to the amount of data the MRC has collected from this site, DNR is using the MRC's data to help inform the development of the [Floating Kelp Indicator](#) of the Puget Sound Vital Signs.



Southwest Lummi Island survey photos. Photo credits: Eleanor Hines, volunteer and former MRC member.

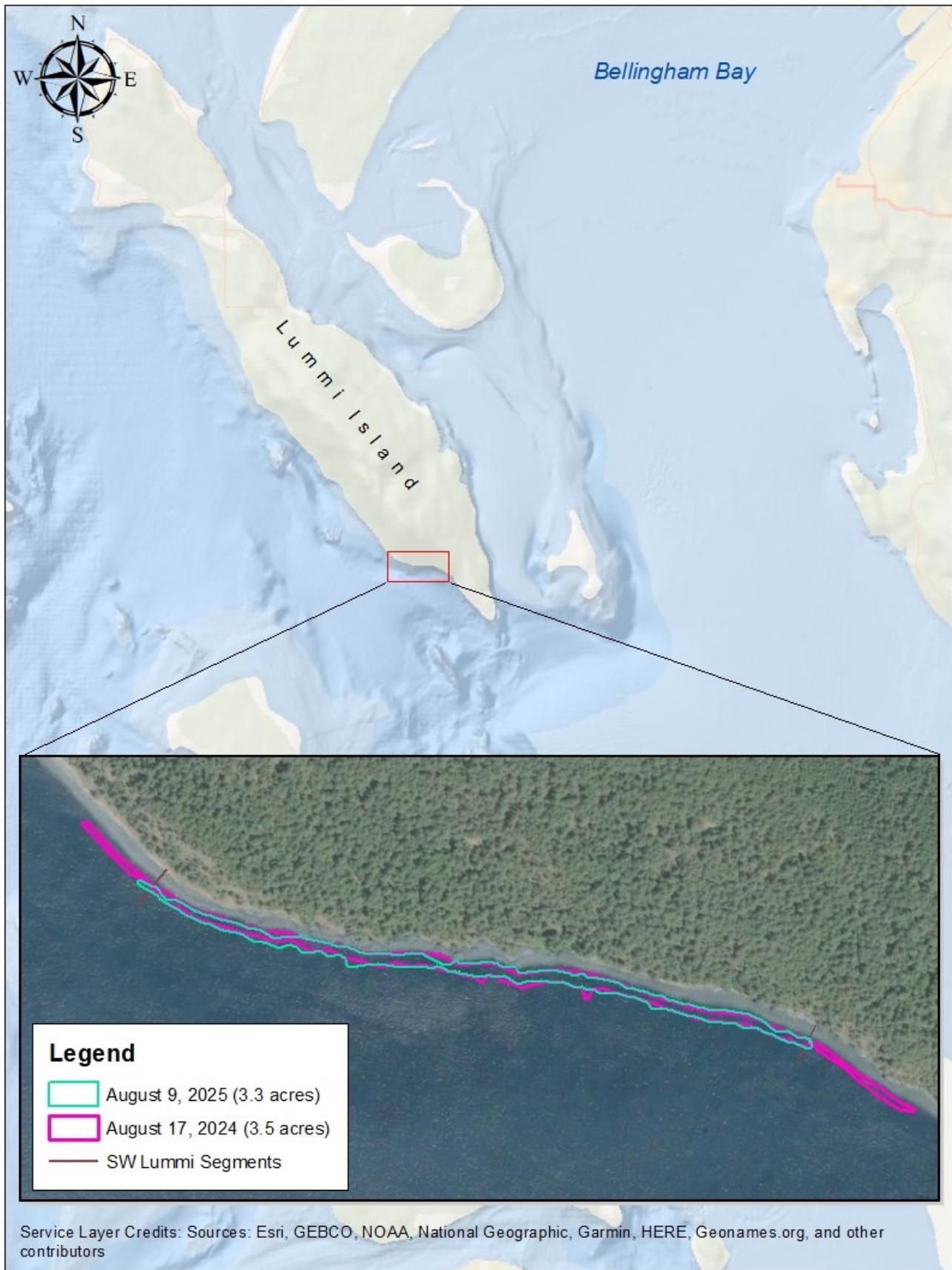


Figure 4: Southwest Lummi Island bull kelp survey perimeter tracks. The area of the bed decreased slightly in 2025 (shown in teal, 3.3 acres) as compared to 2024 (shown in pink, 3.5 acres).

## Point Whitehorn: August 22nd, 2025

The MRC has been monitoring the kelp bed off Point Whitehorn since 2016, though it has not been monitored every year due to the weather and safety concerns. This kelp bed is the trickiest to monitor due to the large swells and waves that can contribute to challenging kelp viewing conditions and safety concerns for kayakers. Volunteers launch from Birch Bay State Park and paddle about a mile to get to the site. In 2025, large kelp beds to both the north and south of the main kelp bed were noted, but not surveyed due to time constraints. The bed located to the north of the main bed appeared to be slightly larger than the main bed, while the south bed appeared to be slightly smaller and less dense than the main bed.



Point Whitehorn survey photos. Photo credits: Dana Flerchinger, MRC staff

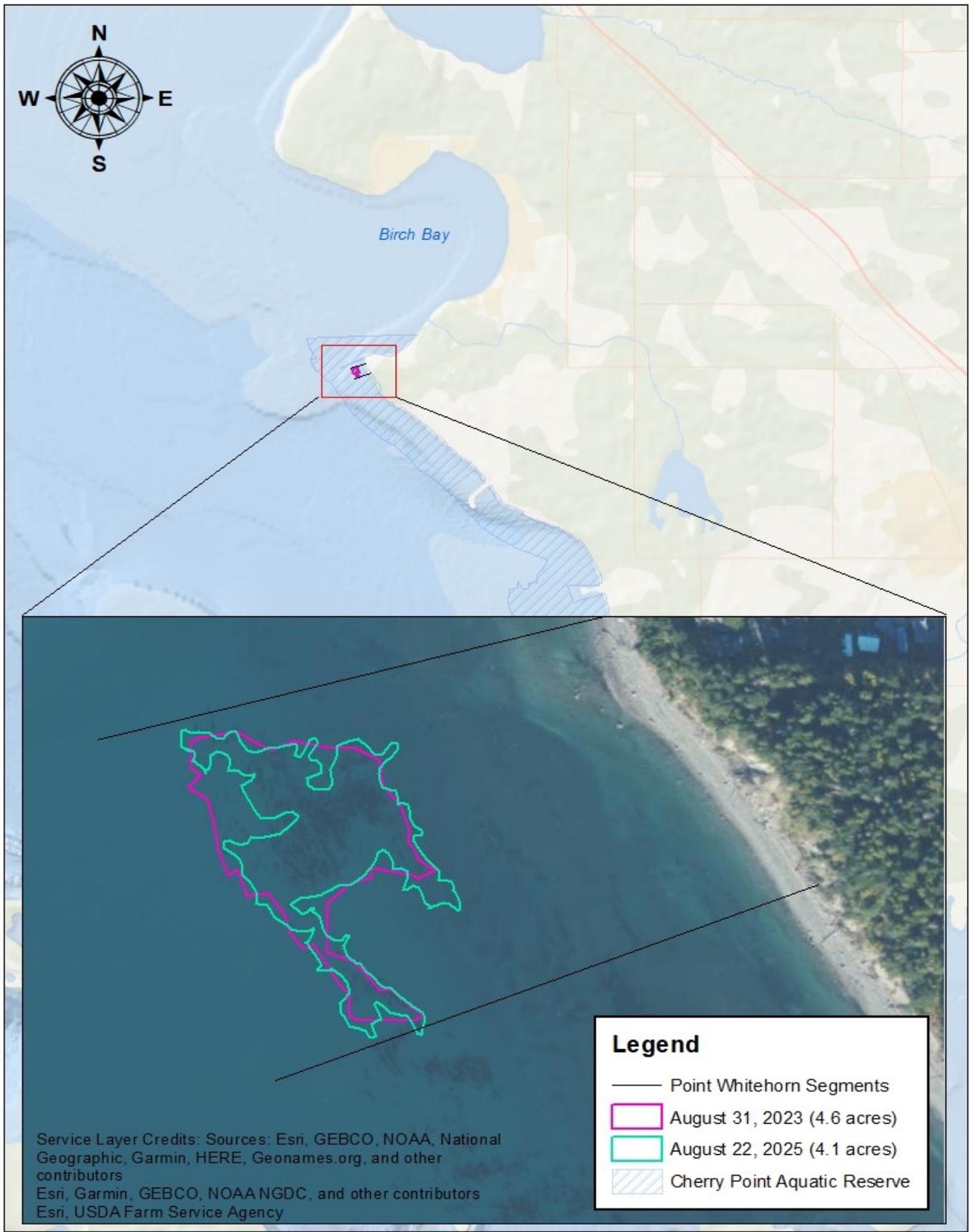


Figure 5: Point Whitehorn bull kelp survey perimeter tracks. The area of the bed decreased in 2025 (shown in teal, 4.1 acres) as compared to 2023 (shown in pink, 4.6 acres).

## Outcomes

During the 2025 kelp monitoring season, the MRC completed at least one bull kelp survey at Aiston Preserve, Cherry Point/Gulf Road, Southwest Lummi Island, and Point Whitehorn. Due to windy weather conditions, the second survey at Cherry Point did not occur.

## Outputs

Over the course of the monitoring season:

- 4 bull kelp surveys took place at 4 sites throughout Whatcom County
- 27.9 acres of kelp were documented
- 7 volunteers participated
- Over 65 volunteer hours were contributed



Survey photos from Cherry Point (left) and Aiston Preserve (right). Photo credits: Dana Flerchinger, MRC staff.

## Results in Context

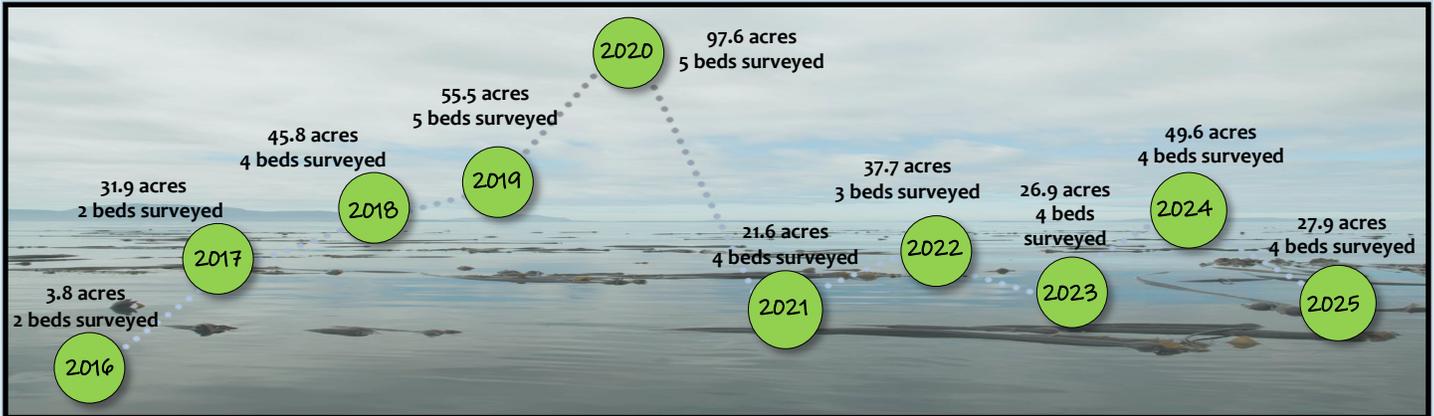


Figure 6: MRC kelp survey information from 2016-2025 including the number of surveys completed and the total bull kelp bed acreage surveyed per year.

The MRC began monitoring bull kelp beds throughout Whatcom County in 2016. Since then, depending on the number of sites that were able to be surveyed per year, kelp acreage has fluctuated across the sites by year. As compared to the 2024 kelp data, the MRC saw slight decreases in bull kelp bed acreage at all kelp beds surveyed in 2025. It is important to note that only one survey was conducted at Cherry Point in 2025 while two were conducted in 2024. This accounts for the major difference in kelp bed acreage shown in Figure 6 in 2024 vs. 2025. This bed is by far the largest of the 4 beds that are surveyed in Whatcom County.

Kelp data collected during these surveys are a key part of the Washington State Floating Kelp Indicator that informs science and management actions in our region.

## Project Highlights

As a result of doing this project, we now have a better pulse on the health of kelp in Whatcom County. Over the years of monitoring, it appears that our beds are more or less stable, though natural variation exists with some years yielding larger or smaller bed perimeters, healthier or less healthy looking kelp, and can vary in timing. Tying our local data into regional datasets helps us to better understand what larger scale trends may be occurring. One of our sites is a restoration site, and continues to grow each year, indicating the removal of over water structures and other restoration efforts likely benefited the kelp habitat.

Kelp provides important biogenic habitat that is worth protecting because of all the ecosystem benefits and services it provides. Kelp helps support the salmon and orca we all care about, yet we are only just starting to really understand kelp in Puget Sound. When we started this project, there was barely any data on the location and abundance of kelp beds. Our MRC had to refer back to maps over 100 years old to determine the locations of historical beds in Whatcom County. Through this project, we have been able to gain a much better understanding of the health and abundance of our Whatcom County kelp beds. We always share with volunteers that these surveys in part started because folks realized kelp beds were disappearing from South Puget Sound, but lacked the data to support it. We want to make sure we protect our kelp beds before it's too late, and this project is one great way to do just that.

- Eleanor Hines, Kelp Project Lead and Former MRC Member

## Project Highlights– Survey Volunteers

“Having lead kelp surveys over the years, it’s always exciting to see the faces of volunteer paddlers light up as they observe the kelp bed in a new and different way striking a new level of curiosity for not just kelp, but all of the critters that inhabit the kelp beds. Volunteers often comment on how they enjoy getting out on the water and paddling for a purpose- to gather kelp data and personally play a role in protecting the nearshore environment they love to paddle on. Volunteers often walk away learning something new- from identifying a new species or seeing a critter or kelp do something they hadn’t noticed before.”

-Eleanor Hines, kelp project lead and volunteer since 2015

“I’m honored to be able to participate in the kelp surveys. As a kayaker, swimmer, and lover of the Salish Sea, it means a lot to me to contribute a small part to the health of this vital ecosystem that brings me so much joy. Since I don’t have a science background, it’s also fun to learn a bit more from Eleanor each year about how and why we measure as well as the other factoids she shares along the way.”

-Rachel Krinsky, kelp volunteer

“Participating in the kayak kelp surveys makes me feel more connected to my community and to the region I call home. It is so rewarding to have the opportunity to apply an activity I already love towards volunteer work that contributes to the health of the marine environment. It is fascinating to see how the kelp beds change over time. During the surveys, I love being able to learn from experts and other volunteers about the ecology of kelp beds and about other interesting sustainability projects in the region. My favorite part of the work is how it helps me see my "backyard" through a different lens; it helps me slow down and appreciate the interconnectedness of the human world and the natural world, the challenges of that relationship, and the hope that stems from efforts to foster healthy marine environments.”

- Sarah Stanley, kelp volunteer

## Lessons Learned and Next Steps

Based on the 2025 survey season, the MRC will continue to plan more backup dates to account for windy conditions. Many of our sites are strongly impacted by even light winds, so having more days available in case of cancelations would be helpful. Surveys in 2025 had to be postponed until the start of August due to weather issues.

The [WA Project Inventory](#) is now available. This is a site for kelp surveyors to add, update, or view others' kelp project information. Whatcom MRC staff will update their MRC's kayak project information.



Volunteers in a bull kelp bed. Photo credit: Dana Flerchinger, MRC staff.

## Appendices

- Appendix A: List of Volunteers
- Appendix B: Bull Kelp Monitoring Protocols