ANNUAL REPORT 2024

MARINE EDUCATION & RESEARCH SOCIETY

Photo: Inukshuk (BCZ0339). Taken under Marine Mammal License MML-57

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MARINE EDUCATION & RESEARCH SOCIETY

OUR PURPOSE

The Marine Education and Research Society (MERS) is dedicated to promoting conservation and understanding of marine ecosystems through scientific research, environmental education, and marine wildlife response.

OUR GOALS

- Healthy populations of marine species, protected from threats
- Comprehensive knowledge of the ocean that informs decision-making
- People are inspired and empowered to care for the ocean and co-exist with marine life
- There is swift, effective response to incidents that threaten individual animals and their environment

OUR GUIDING PRINCIPLES

- **Research, Education, Response Together** - All are equally important and inform the others.
- **Science-forward** - Our advocacy is informed by solid science, knowledge and our significant experience.
- **Solutions Based** - Our efforts are guided by presenting solutions for change.
- **Whales are Ambassadors for the Ocean** - Knowledge of individual whales can inspire positive change.
- **Marine Mammals Need a Healthy Ecosystem** - We take a holistic approach to conservation.
- **Resourceful and Nimble** - We take action swiftly and address complex issues.
- **Community Building** - Conservation needs many champions; together we create change.

A NOTE FROM THE CHAIR

Dear Supporters,

As 2024 comes to a close, it's an opportunity to reflect on another remarkable year of research, education and response efforts for MERS. This past year has been a time of significant achievements and growth for our organization.

Our team has expanded this year with the addition of two new year-round staff members and three new Board members. We are thrilled to have their energy, enthusiasm and dedication on the team.

Our collaborative research efforts continue to add to knowledge of marine mammal populations in our core research area and beyond. The addition of a new-to-us research vessel has been an exciting milestone for our organization and thanks to your generosity during our "Float Our Boat" campaign, we are now able to safely expand our range and increase our research and response capacity.

Education remains central to our efforts. This past year we reached thousands of people through presentations, workshops and social media campaigns, fostering greater awareness of threats such as vessel strikes, entanglement, climate change and ocean noise.

On behalf of MERS, I extend heartfelt gratitude to our staff, volunteers, donors, and collaborators. Your unwavering dedication fuels our mission and inspires hope for a healthier, more sustainable marine environment.

To my fellow Board members, thank you for your insights and commitment to guiding our work. Together, we are helping to create a legacy of marine stewardship.

I would like to also acknowledge past Board member Jake Etzkorn who stepped down from the Board this year after 7 years of dedicated service. Thank you Jake for generously giving your time and for your continued commitment to MERS' mission.

As we look towards 2025 and all the uncertainty it brings, I am reminded of the resilience of the marine ecosystems we strive to protect. With your continued support, MERS will remain a strong advocate for the ocean and its inhabitants, today and into the future.

Leah Thorpe

Leah Thorpe
Board Chair

SCARRED SURVIVORS

Photo: Azure (BCY0645) photographed for the scar study. Taken under Marine Mammal License MML-57.

2024 marked the third field season of our collaborative study looking at scarring on Humpback Whales using aerial images. Working with colleagues at Ocean Wise Conservation Association, Raincoast Conservation Association, and Bay Cetology to collect data, MERS has been leading the analysis of this project.

Why study scars? Entanglement in fishing gear and vessel strikes are primary human-caused sources of injury and mortality for many baleen whales and threaten their conservation and recovery. However, entanglements and strikes often go unreported, and dead whales often sink or strand in remote locations, making understanding the scope of these issues difficult.

Understanding how many whales have scars and the location and severity of scars on survivors provides insights into the pervasiveness and significance of these threats.

The study also compares this newer aerial method using drones (under research license) for studying entanglement scars to boat-based methods used in the past to inform future research on both Humpbacks and other species of baleen whales. Preliminary data from boat-based scar studies by MERS and Fisheries and Oceans Canada, suggest approximately half the Humpback Whales off the coast of British Columbia have been entangled at least once.

In November 2024, MERS team members traveled to the 25th Biennial Conference on the Biology of Marine Mammals in Perth, Australia to present some preliminary findings from this work. We anticipate completing research manuscripts in 2026. Stay tuned!

MEGAPTERA

Giving MERS “Big Wings”

In mid-2024, we were thrilled to welcome a new team member to MERS, Megaptera. Megaptera is a new-to-us Hurricane 733 rigid hull inflatable. The name comes from the genus name for Humpback Whales that means “big wings” in Latin. Like wings, this new MERS vessel helps us travel further and continue to expand our research and response work.

Due to careful financial management over the years, we were able to move quickly to purchase the vessel when it became available. It was exactly what we were looking for! However, there were considerable costs to getting the vessel set up for our work. The outpouring of support through our Fall #FloatOurBoat campaign helped secure the remaining needed funds.

Megaptera will allow our growing team to increase research and data collection capacity, expand the area we work in, improve staff safety, and enhance our ability to assist with wildlife response efforts. Already this Fall, we were able to use Megaptera to begin collaboration on an eDNA project and undertake our own drone-based research (under our research license).

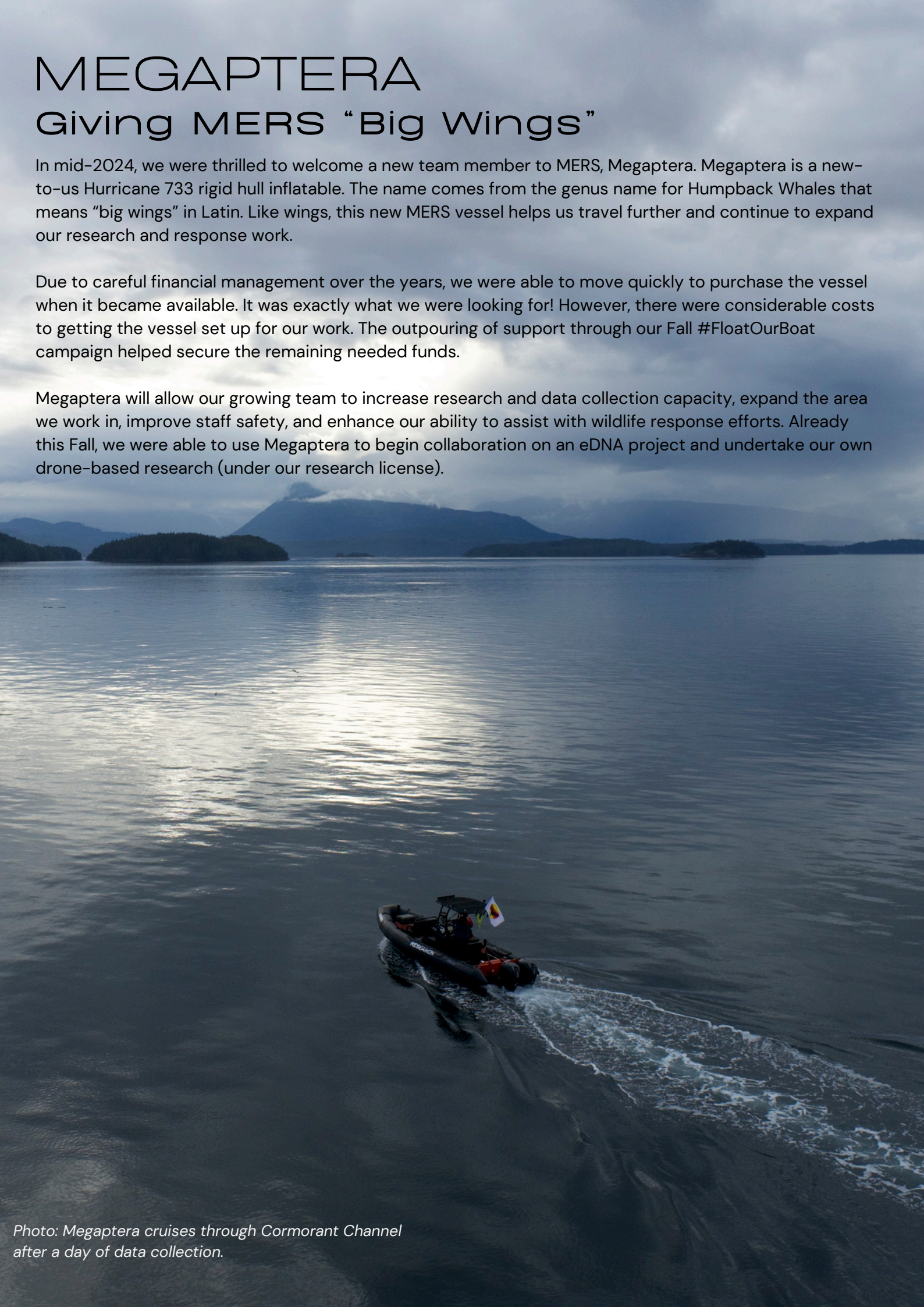

Photo: Megaptera cruises through Cormorant Channel after a day of data collection.

INSIGHTS INTO BOATER BEHAVIOR

For the past two years, Ali Gladwell had the opportunity to combine her Master's work at the University of Victoria with being a MERS Research Associate to study how boaters behave when in the area with Humpback Whales or Killer Whales (Orca) near northeast Vancouver Island. Supported by MERS, over the two field seasons, she spent 475 hours collecting data about boater behaviour.

This study found relatively good compliance with Canada's Marine Mammal Regulations, with compliance rates higher than in other areas of the coast. Boater compliance varied by whale species, with 88% for adhering to the minimum avoidance distances for Humpbacks and 74% for Killer Whales. Compliance dropped to 68% for adhering to the regulated minimum avoidance distance when Humpbacks are resting or with a calf. Recreational and ecotourism vessels had similar compliance rates.

The study also found interesting boater behaviour patterns. Boaters were more likely to stay further from whales when more vessels were nearby. VHF radio communication about whales increased the likelihood of more boats being present. There was also an association between time and the likelihood of boats being progressively closer to a whale.

Ali defended her Masters thesis in September 2024. She is now digging further into the data to look at possible explanations and trade-offs for boater behaviour and compliance. She will then submit her research to a peer-reviewed journal.

By identifying what drives compliance and using this knowledge in directing boater education efforts, we can create safer spaces for both whales and people.

Photo: Masters student Ali Gladwell and Research Assistant Ayla Barton collect data on boater behaviour near Blackfish Sound.

STUDYING GIANTS:
From Blackfish Sound to the Entire North Pacific

Our long-term study of Humpback Whales continued in 2024. Two hundred and twenty nine whales were documented, by our team and data contributors, in our study area from the upper Salish Sea to Bella Bella and northwest Vancouver Island This included nineteen first-year calves. This is the largest number of calves we have ever documented in our study area.

This ongoing population monitoring has led to our leadership of the Canadian Pacific Humpback Collaboration. The CPHC brings together those who catalogue Humpback Whales off the coast of British Columbia in order to maintain a centralized catalogue and database of individual whales. This collective dataset enables the understanding of the whales' habitat use, behaviours, population size and structure, life histories, and the impacts of threats like vessel strike and entanglement. In 2024, MERS furthered the capacity of the CPHC by revamping the database to ensure smoother collaboration and leading a workshop to progress various research topics.

MERS' Humpback data set, along with those from collaborators in the CPHC, were included in an international study published in 2024. Titled "Bellwethers of change: population modelling of North Pacific humpback whales from 2002 through 2021 reveals shift from recovery to climate response", the study led to a population estimate for Humpbacks across the WHOLE North Pacific and insights into how increased oceanic temperatures impacted recovery. The lead author is Ted Cheeseman.

Results indicated there was a long period of population recovery between 2002-2013, but that it was followed by a 20% decline. This translates to "an estimated population decline approaching 7,000 individuals across the North Pacific in just 9 years (2012–2021)."

The study found that this decline is likely correlated to the marine heat wave of 2014 to 2016 (known as "The Blob") and that it "altered the course of species recovery, with enduring effects."

Results from this new research confirm the need for continued protection for Humpbacks across the North Pacific and to recognize their role as an indicator species for ecosystem health. MERS and other CPHC members will continue to document the Humpback Whales in Canadian Pacific waters and monitor trends as a warming ocean environment makes the future uncertain for this species.

Photo: Yahtzee (BCZ0376) ©Jackie Hildering

AMPLIFYING THE MESSAGE FOR POSITIVE CHANGE

2024 marked the ninth year of offering our Marine Mammal Naturalist Courses. Since 2015, through fourteen separate courses, over 709 participants have joined us for these multi-day intensives about the biology, natural history, and conservation of the most common marine mammals in BC. The courses are aimed at those working as whale watch naturalists, kayak guides, park staff, or others interested in helping with marine conservation through gaining a deeper knowledge of BC's marine mammals.

The goal is to inform and inspire marine mammal conservation by creating ambassadors that will amplify messaging to their large audiences about BC's marine mammals and reducing human-caused threats. By empowering others with knowledge and educational approaches aimed at conservation, we can have a much larger impact.

In this vein of amplifying our message for maximum impact, we were also thrilled to have our Communications and Education Director, Jackie Hildering, be chosen to deliver the keynote address at the 2024 joint conference of the Canadian Network for Ocean Education (CaNOE) and Northwest Aquatic and Marine Educators (NAME). Jackie inspired over 110 professional ocean educators in her talk "Where the Whales Are" in which she addressed the importance of speaking for the ocean and how to motivate positive change in a changing world.

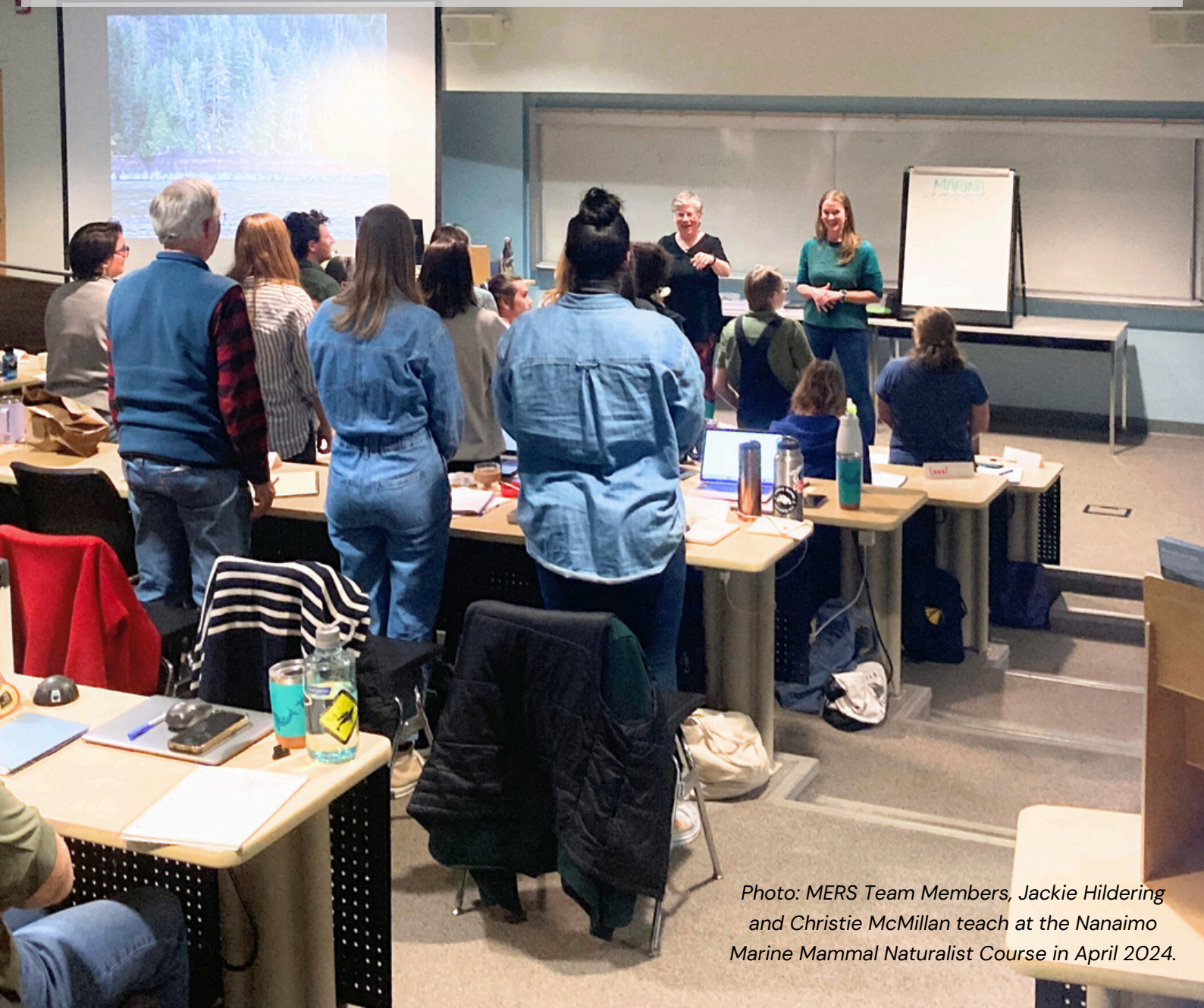

Photo: MERS Team Members, Jackie Hildering and Christie McMillan teach at the Nanaimo Marine Mammal Naturalist Course in April 2024.

BETTER EDUCATION FOR BOATERS

Photo: Quartz (BCX1472)
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How do we best reach boaters to encourage safer vessel operation around marine mammals?

This was the question that the MERS team pondered as we embarked on a project throughout 2023/24 to understand what boaters know, where they may struggle, and how we can better our education efforts regarding whale-safe boating.

To answer our questions, we designed a survey specifically for recreational boaters. Ocean Wise and Cetus Research and Conservation Society collaborated in administering the survey, encouraging participation coast-wide. By the time the survey wrapped up in February 2024, nearly 4,000 boaters had responded!

The survey found that the majority could identify the Whale Warning Flag, understand the Marine Mammal Regulations related to swim with, drone use, and reporting requirements, and correctly identify strategies to reduce disturbance around marine mammals.

We were also heartened to see that the “See a Blow? Go Slow!” campaign had high familiarity and impact, with two-thirds of the respondents indicating that it had increased their knowledge about boater safe around marine mammals.

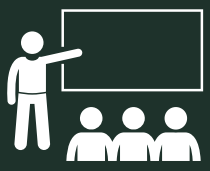
However, we also found an area where boaters are struggling. Survey findings showed that half of the respondents could NOT correctly identify the legal avoidance distance for various scenarios involving cetaceans.

These findings are now being applied in our upcoming online boater course. This easy-to-access, free course will allow recreational boaters in British Columbia to learn about ways to become a whale-safe boater, for the sake of the whales and their own safety. Designed with input from an advisory committee from multiple organizations and agencies, the course will be live in time for the 2025 boating season.

MORE MERS BY THE NUMBERS 2024 Edition

Line Transect Surveys Lines Run

38



Attendees at MERS Presentations and Webinars

>1,900

Individual Humpbacks Now in the MERS Catalogue

776

Media Pieces Featuring MERS

>65

Visitors to our Office

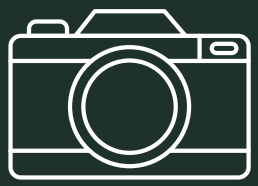
1,546

Graduate Students

3

Workshops with First Nations

4



Humpback Whale Photos Processed (so far) ...

>12,000

Emotional Support Dogs Available at MERS Courses

1

OUR TEAM IN 2024

BOARD

Leah Thorpe (Chair)
Angela Danyluk (Vice Chair - *as of June 2024*)
Jake Etzkorn (Vice Chair - *until June 2024*)
Don Gordon (Treasurer)
Wendy Kotorynski (Secretary - *as of June 2024*)
Anita Blakely (Secretary - *until June 2024*)
Rhona Govender (Member at Large)
Emily Wisden- Seaweed (Member at Large)

STAFF

Caitlin Birdsall (Executive Director)
Nicole Doe (Director of Operations, CPHC Coordinator)
Jackie Hildering (Director of Education/ Communications, Researcher)
Christie McMillan (Science Lead)
Felicia Vachon (Research Coordinator)
Marieke Knierim (Office and Outreach Coordinator)
Callyn Holder (Research and Education Assistant)
Effie Korpershoek (Communications Assistant; *March-November 2024*)

SEASONAL

Jaime Rae
Maeve Corcoran
Eden Perry

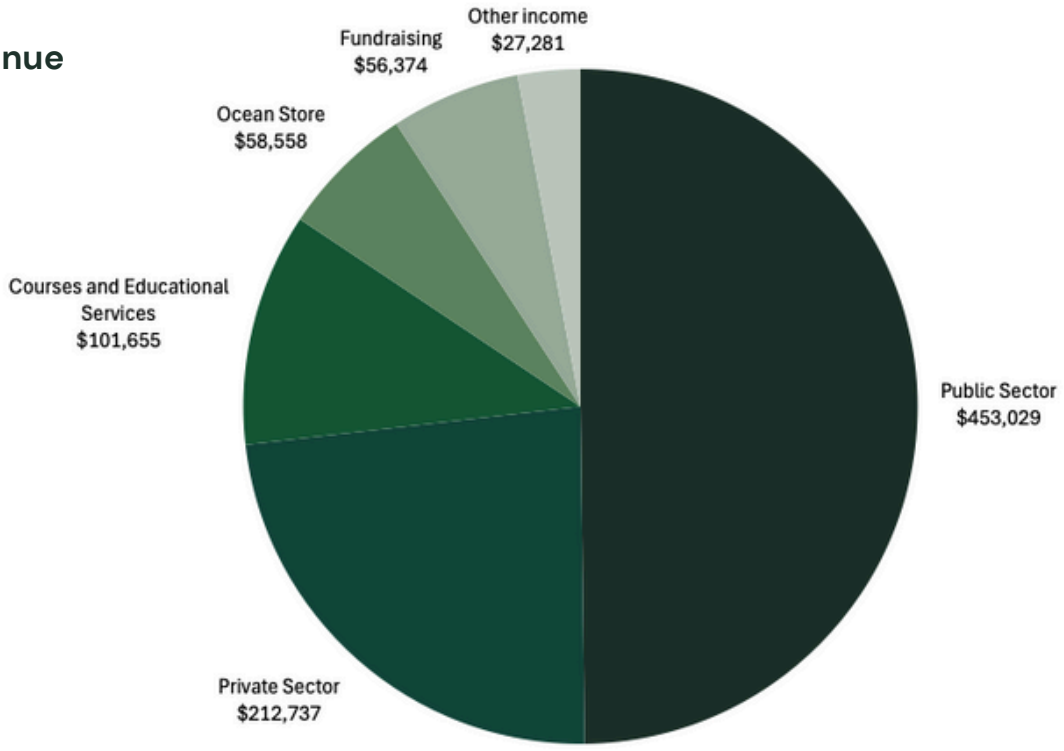
RESEARCH ASSOCIATES

Tasli Shaw
Mark Sawyer
Ashley Hoyland
Ali Gladwell
Joan Moreaux
Amy Migneault

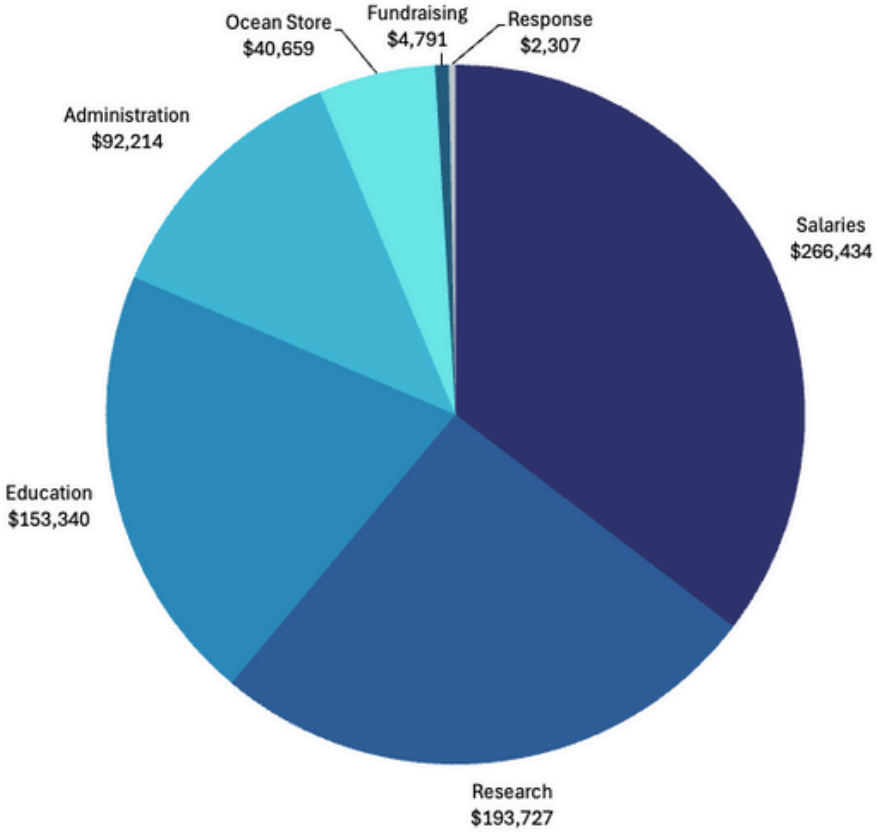
FINANCIAL SNAP SHOT

2023-24 Fiscal

Revenue



Expenses



ACKNOWLEDGEMENTS

Our supporters, partners and collaborators make this work possible.

An Ocean of Gratitude to all our Donors, Volunteers, Humpback Sponsors, Auction Sponsors, Fundraising Trip Partners, and those that support MERS through attending events and shopping at our Ocean Store.

2024 Grants

Habitat Stewardship Program for Species at Risk
Canada Nature Fund for Aquatic Species at Risk
Boater Safety Contribution Program - Transport Canada
North Island Marine Mammal Stewardship Association Conservation Fund
Clayoquot Biosphere Trust (for Humpbacks of Clayoquot and Barkley Sound project)
Eco Canada

Corporate and Foundation Support >$500

Sandpiper Foundation
Quiet Heart Foundation
Anonymous Foundation
Orca Spirit Adventures
Campbell River Whale Watching
MacKay Whale Watching
Eagle Wing Tours
Alway-Connor Foundation
Paddler's Inn
Two Otters Science & Nature Co.
Organic & Sustainable Trading Canada
Humpback Inn
Art by Di
Seasmoke Whale Watching
Bough & Antler Northwest Goods
Schwab Charitable Fund made possible by the generosity of Kevin Campion and Iris Dougherty
Bear and Pear Productions
Burgundy Legacy Foundation
Jaime's Whaling Station (for Humpbacks of Clayoquot and Barkley Sound project)
Engaged for Good™ (EngageHR)
United Way of Southern Vancouver Island
Grey Wolf Expeditions
Faigen Family Fund through the Jewish Community Foundation
Wortley Foundation Fund through the Victoria Foundation

And the many individual donors whose generosity fuels our work.

WE THANK YOU FOR YOUR ONGOING SUPPORT OF MERS

MERS

The Marine Education and Research Society is a Canadian Registered Charity: 857599112RR0001

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