2024 Southern Resident Killer Whale Vessel Adaptive Management Legislative Report

Washington Department of FISH & WILDLIFE

November 27, 2024

State of Washington
DEPARTMENT OF FISH AND WILDLIFE
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November 27, 2024

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Vice Chair, House Agriculture &
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Dear Chairs,

I am writing to provide you with the Washington Department of Fish and Wildlife's report to the Legislature regarding state vessel regulations aimed at protecting Southern Resident killer whales (SRKW) from the effects of vessel noise and disturbance. The statute requires a report to the relevant committees of the Legislature per language in RCW 77.65.620, which reads as follows:

> The department shall complete an analysis and report to the governor and the legislature on the effectiveness of and any recommendations for changes to the whale watching rules, license fee structure, and approach distance rules by November 30, 2022, and every two years thereafter until 2026. This report must be in compliance with RCW 43.01.036.

This is the second of the three adaptive management reports specified in the statute. It includes an overview of outcomes and updates since the November 2022 report, including changes in the SRKW population, new scientific publications regarding vessel disturbance and noise impacts on SRKW, and progress on the suite of 2022 recommendations and next steps. In addition, the report contains an analysis of compliance with the SRKW vessel rules (RCW 77.15.740) and

commercial whale watching rules (WAC Chapter 220-460), and the results and recommendations from the Orca Regulations Communications Advisory Group (ORCA Group) process, a group convened to advise the Department on strategies and priorities for boater outreach and education regarding regulations intended to protect SRKW from the effects of vessels.

Notably, the Legislature enacted the Department's recommendation of a 1,000-yard vessel setback from SRKW in 2023 legislation (Senate Bill 5371). The effective date of the enhanced setback is January 1, 2025. As such, the Department intends to assess effectiveness of the new approach distance and any additional legislative action needed in the 2026 adaptive management report, and not suggest additional legislation for the 2025 session. Instead, the Department offers one recommendation to support the implementation of Senate Bill 5371:

Recommendation:

- Fund WDFW's 2025-27 Enforcement decision package, which will increase Enforcement's reach and resources across the state, broadly increasing capacity to protect habitat and wildlife including SRKW. This request includes funding for a vessel for use in patrols that will increase on-water Enforcement presence, which is a major deterrent of vessel regulation violations. Funding this request would increase Enforcement's education and outreach capacity both on and off-water.

This recommendation points to a specific 2025-27 operating budget request that was submitted to the Governor's Office in September 2024 for consideration.

The ORCA Group offered a suite of recommendations for boater outreach and education regarding regulations and best practices for recreational boating in waters inhabited by SRKW. Looking to 2025, the Department will continue its intensive education and outreach work through June, when funding for staff capacity (a Community Outreach and Environmental Education Specialist) expires. The Department will continue to implement boater education and outreach contingent on available capacity and resources.

This report is presented in executive summary format, with the more detailed analyses included as appendices. The appendices also include drafted amendments to the rules for commercial whale watching (WAC Chapter 220-460) that are being proposed via Department rulemaking process (#2024-14) to align the rules with the most recent statute changes.

If you have any questions or concerns about this report, please feel free to contact WDFW's Legislative Director Melena Thompson at 360-902-2527.

Sincerely,

Kelly Susewind
Director

cc: Julie Watson, Killer Whale Policy Lead

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Report acknowledgements

Thank you to our contractors, Ross Strategic and Industrial Economics, Incorporated (IEc), who assisted with the analysis and preparation of this report. Additional thanks to Ross Strategic for support of the Orca Regulations Communications Advisory Group (ORCA Group) process and thanks to the ORCA Group members for sharing your time, passion, and experience to inform the Department's boater outreach and education efforts. Finally, thank you to the cross-program team of agency staff who support this adaptive management process.

- Ross Strategic Team: Shelby Thomas, Susan Hayman, & Alec Ege
- Industrial Economics, Inc. Team: Jen Kassakian & Maura Flight
- ORCA Group Members: April Rebollo, David Bain, David Willis, Donna Sandstrom, Erin Gless, Frances Robertson, George Harris, John Boyd, Justine Asohmbom, Stephanie Raymond, Tisa Annette, & Thomas Wooten
- WDFW Vessel Adaptive Management Team: Julie Watson, Aaron Provencio, Ben Anderson, Jessica Stocking, Hannah Anderson, Nate Pamplin, Capt. Alan Myers, Peter Vernie, Heidi Colborn, Melena Thompson, & Amy Dona (AGO)

Suggested citation

Washington Department of Fish and Wildlife. 2024. 2024 Southern Resident Killer Whale Vessel Adaptive Management Legislative Report. Olympia, WA.

Cover photo by Dante Aubert.

Acknowledging the Indigenous People of the Pacific Northwest

Since time immemorial, Indigenous People have lived in the Pacific Northwest and hunted, fished, and gathered natural resources, traditional foods, and medicinal plants to support their diverse cultures. They were the original occupants and stewards of this land that all Washingtonians enjoy today.

The very survival of the Pacific Northwest Tribes is a testament of resiliency of what they have endured and continue to endure throughout generations on this landscape. Through many historical encounters of massacre, renunciation of religious freedom, systemic racism, cultural assimilation of native children through institutional residential schools, and the fight for their inherent rights and liberties, they have prevailed. Throughout this painful history brought by colonization, abrogated treaties, infringement of civil rights, and the salmon protests of the 1960s, the Northwest Tribes and the Washington Department of Fish and Wildlife (WDFW) have founded a commitment of respect, unity, and alliance informed by the realities of the past.

Today, tribal governments and WDFW work collaboratively to conserve and manage aquatic and terrestrial resources statewide and practice sound science to guide management decisions. The Tribes and WDFW work together to ensure the sustainability of fish, wildlife, ecosystems, and culture for the next seven generations and beyond.

About This Report

This report fulfills two legislative requirements for the Washington State Department of Fish and Wildlife (WDFW, or the Department):

1. *From RCW 77.65.620, subsection 5:* To analyze the effectiveness of and provide recommended changes to the state's commercial whale watching rules, license fee structure, and approach distance rules and provide the second of three mandated reports.
2. *From Section 6 of Senate Bill 5371:* To summarize the work of a work group and the Department that will inform the development of outreach and education strategies to implement updated vessel regulations (as outlined in RCW 77.15.740).

The report is organized into three main sections and has three substantial appendices:

- **Section 1**, Introduction and Background, includes an overview of the Department's 2023-24 adaptive management process, a brief background on the vessel regulations aimed at reducing underwater noise and disturbance of Southern Resident killer whales (SRKW), and updates since fall 2022, including vulnerable SRKW status, best available science, and progress on 2022 recommendations and next steps.
- **Section 2**, Adaptive Management Process Summaries, includes summaries of two adaptive management efforts and related requirements:
    - Findings of the Compliance and Effectiveness Analysis
    - Orca Regulations Communications Advisory (ORCA) Group Process
- **Section 3**, WDFW Recommendations, succinctly lists WDFW's adaptive management recommendation and considerations for the Washington State Legislature.
- **Appendix A**, Department-suggested Revisions to WAC 220-460, contains a copy of the WAC Chapter with the Department's suggested revisions in track changes.
- **Appendix B**, Analysis of Available Compliance and Effectiveness Data, evaluates available data on Commercial Whale Watching Licensing Program and vessel traffic regulation performance and outcomes to identify potential adaptive management opportunities for WDFW. It also considers the potential challenges with implementation of the forthcoming 1,000-yard approach distance limit, and opportunities to address those challenges.
- **Appendix C**, ORCA Group Report, provides a detailed overview of the ORCA Group process, deliberations, and recommendations related to fiscal year 2024-25 communication investments.

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Introduction and Background

In 2022, the Washington Department of Fish and Wildlife (WDFW, or Department) submitted the first of three Washington State Legislature-mandated reports that reflect its adaptive management efforts to protect the region's endangered Southern Resident killer whales (SRKW), including updates to the best available science related to vessel impacts on SRKW foraging behavior and success, and findings on the effectiveness of regulations designed to address underwater noise and disturbance from commercial whale watching (CWW) and recreational vessels.

As a result of the 2022 report, the Legislature passed Senate Bill 5371 in 2023, which expands the state's efforts to protect SRKW from vessel effects. Effective January 1, 2025, it is unlawful for a vessel to approach or intentionally position itself within 1,000 yards of SRKW in Washington waters; if a vessel is within this range, it should move away at a speed of seven knots or slower or disengage its transmission (when feasible and safe to do so) if within 400 yards.[1]

The Department's 2023-2024 SRKW adaptive management efforts included four streams of work:

1. A review of updates to the SRKW population, the best available science, and the regulation and management of vessel impacts.
2. An analysis of the effectiveness of and compliance in 2022-23 with the Commercial Whale Watching Licensing Program (CWWLP), rules for commercial viewing of SRKW, and broader vessel regulations aimed at reducing impacts of vessel noise and presence on SRKW.
3. Convening the Orca Regulations Communications Advisory Group (ORCA Group) to inform its communications approach for fiscal years 2024 and 2025.
4. Launching a rulemaking process to revise WAC Chapter 220-460 and the rules and requirements related to commercial viewing of SRKW.

Updates Since Fall 2022

The period between November 2022 and November 2024 included changes in the SRKW population and health, new scientific publications focusing on vessel noise and SRKW, and progress in regulatory and management efforts aimed at reducing vessel impacts on SRKW. This section summarizes relevant updates, including the status of recommendations and next steps outlined in the 2022 SRKW Vessel Adaptive Management Report.

SRKW Population Status

As of the Center for Whale Research's July 1, 2024 population census, the SRKW population stood at 73 whales: 25 in J Pod, 15 in K Pod, and 33 in L Pod. This is the same total (73) with a net gain of one member of L Pod and a net loss of one member of K Pod since the 2022 census. In L Pod, L126 (M) and

[1] Exemptions to the speed and distance regulations are described in the bill and include safety considerations and vessels being used for government and Tribal official duties, permitted scientific research, and treaty/commercial fisheries.

L127 (F) were born in June 2023. Two adult males in K pod, K34 and K26, were last seen in 2023 and 2024, respectively, and an adult male in L Pod, L85, was last seen in 2023. In addition, two calves, J60 (M) and L128 (unknown), were born and did not survive. In sum, the population lost three adult males, and the survival of observed calves during this period was two out of four.

Vulnerable SRKW

Motorized CWW license holders are restricted from approaching within one-half nautical mile (NM) of a group of SRKW that "contains a calf of under one year of age or a whale designated as sick or vulnerable by emergency rule" by WDFW (WAC 220-460-110(2); WAC 220-460-010(11)). Young calves can appear at any time during the season/year and be identified without analysis. As in 2022, WDFW contracted Sealife Response, Rehabilitation, and Research (SR^3) in 2023 and 2024 to conduct health assessments based on quantifiable metrics, to aid in designating vulnerable individuals. Individual SRKW determined likely to be in the last third of pregnancy were deemed vulnerable, based on increased food requirements and higher risk of mortality (Raverty et al. 2020). Whales with poor body condition (e.g., thin) were also declared vulnerable, as whales in the lowest 20% of measured body condition have been scientifically demonstrated to have an elevated probability of mortality in the near future relative to healthier individuals of the same sex and age class (Stewart et al. 2021). Whales that had rapidly declined in body condition were also designated vulnerable; this was the case for one individual (J47) in 2024.

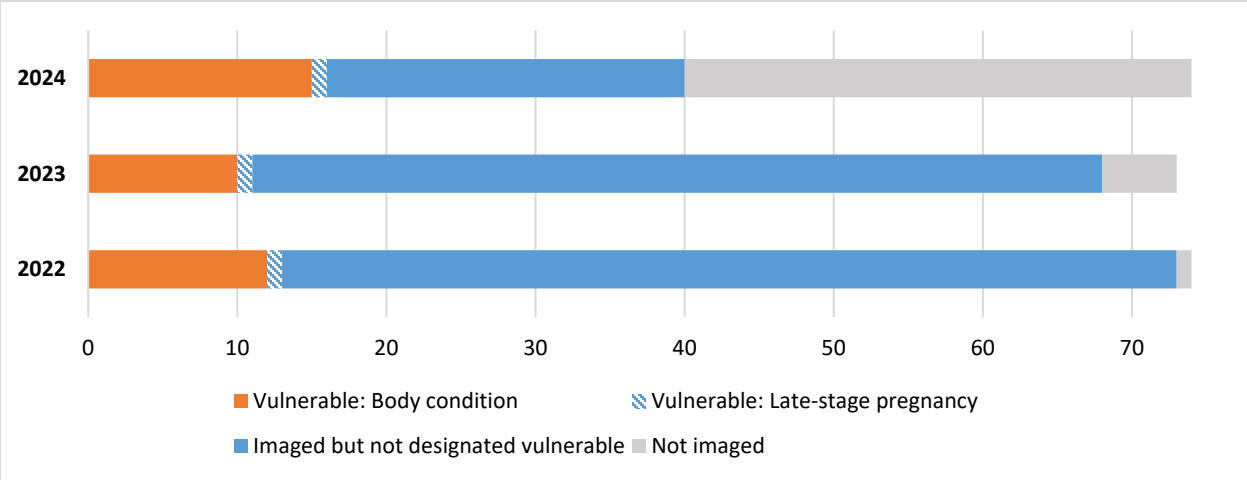
In 2021, SR^3 communicated concerns about two whales in particularly poor health and three late-stage pregnancies, and WDFW issued emergency rules declaring the five whales vulnerable as the information became available. The contracted spring assessments began in 2022 and continued through spring of 2024, resulting in emergency rules each year to increase protections for vulnerable whales (Table 1). The current list of vulnerable whales is available on the Department's CWW website.

Table 1. Southern Resident killer whales (SRKW) deemed vulnerable by Washington Department of Fish and Wildlife, based on analysis of drone imagery conducted by SR^3, to increase protections through the CWWLP, 2022-2024.

	2022	2023	2024
SRKW imaged	73/74	68/73	40/74
Body condition	12	10	15
Late-stage pregnancy	1	1	1
Total designated vulnerable	13	11	16

Here is the same information presented in a bar chart:

Figure 1. Vulnerable SRKW Designations 2022-2024.



The Washington State Legislature's adoption of a 1,000-yard vessel setback from SRKW explicitly included CWW vessels, and so, as of January 1, 2025, CWW vessels will remain 1,000 yards from SRKW year-round. One thousand yards is roughly equivalent to one-half NM (1012.69 yards), and thus, the full population of SRKW effectively has the same protections as designated "vulnerable whales" year-round, beginning Jan. 1, 2025. As such, WDFW expects that 2024 was the last year that vulnerable whale designations will be made. Thus, this 2024 adaptive management report provides an opportunity for a holistic examination of the effect of the protections for calves under one year old and designated vulnerable whales described in WAC 220-460-110.

During this time, there were a total of 45 vulnerable designations, and 9 calves under the age of one year old, which provided additional protections for 37 individual whales. Of the 28 individual whales that received vulnerable designations, 17 were female (three juveniles, two sub-adults, ten adults, and two post-reproductive adults) and 11 were male (eight sub-adults and three adults).

Twelve whales were designated vulnerable multiple years over the four-year period (Table 2): eight J Pod whales and four L Pod whales, seven of which were female, and four of those having a mix of body condition and pregnancy/calf-presence related protections.

Table 2. SRKW designated vulnerable multiple times, 2021-2024.

Identifier	Age class (at time of designation)	Sex	Number of times designated 2021-2024	Reason for designation 2021*	Reason for designation 2022*	Reason for designation 2023*	Reason for designation 2024*
J16	post-reproductive	F	2			BC	BC
J36	adult	F	4	P	BC	P	BC

Identifier	Age class (at time of designation)	Sex	Number of times designated 2021-2024	Reason for designation 2021*	Reason for designation 2022*	Reason for designation 2023*	Reason for designation 2024*
J37	adult	F	2	P	(J59 calf present)		BC
J53	juvenile	F	2			BC	BC
J56	juvenile	F	3	BC	BC	BC	
L90	adult	F	2		BC	BC	(L128 calf present in September 2024)
L94	adult	F	2		BC	(L127 calf present)	BC
J39	adult	M	2			BC	BC
J44	sub-adult	M	3		BC	BC	BC
J49	sub-adult	M	3		BC	BC	BC
L110	sub-adult	M	2		BC	BC	
L117	sub-adult	M	2		BC	BC	

* Reason for Designation: BC = Body Condition, P = Pregnancy

In 2022 and 2023, nine pregnancies were identified that did not lead to vulnerable designations based on the timing of the images (seven pregnancies, two resulting in live calves), the pregnancy being early stage (one pregnancy resulting in a calf that did not survive), or confirmation that the pregnancy had terminated (one pregnancy) by the time the Department issued designations.

- *Images more than 6 months old:* K27 was assessed to be in the last six months of pregnancy as of September 2021, but that pregnancy would have ended by late-June 2022 when the designations were issued. Likewise, K12, K16, K43, and L72 lost pregnancies while K20 and L94 were seen with calves between the time they were imaged and the time vulnerable designations were issued.
- *Early-stage pregnancy:* One pregnancy identified in 2023 (J46) was assessed to be in the earlier stages of pregnancy, and the calf (J60) born that December did not survive.
- *Pregnancy termination confirmed:* J22 was imaged and assessed to be in late-stage pregnancy in April of 2023 but re-imaged and determined to no longer be pregnant in June of 2023.

Overall, of the six calves born to mothers that would have been in late-stage pregnancy in summer 2021 or later, one mother (J37) received vulnerable designation for late-stage pregnancy. The others were either not imaged (L90) or were not in late-stage pregnancy during the July-September period where the vulnerable designation would offer additional protections. As a reminder, no commercial viewing of SRKW was permitted closer than one-half NM outside of the July-September period, so vulnerable designations that restricted commercial viewing to one-half NM were only issued when they had a relevant management purpose.

The vulnerable designations for SRKW highlight the vulnerability of the entire population and the precariousness of successful pregnancies and calf survival. While designations of vulnerable whales will no longer provide a management value, the Department is hopeful that the 1,000-yard setback for all vessels, not just CWW vessels, from all SRKW will provide valuable protection and improved foraging opportunity for the entire population, including calves, pregnant females with increased dietary needs, and whales in poor body condition.

Updates to Best Available Science on Vessel Noise and Disturbance of SRKW

Scientific studies published since preparation of the 2022 Vessel Adaptive Management Report confirm negative impacts of vessels on SRKW communication and foraging. Passive acoustic monitoring found that vessel noise significantly impacted the communication and echolocation abilities of SRKW, with vessel noise having a greater effect than wind noise, especially near shipping lanes[2]. Noise from large vessels caused significant loss of echolocation and communication range in SRKW critical habitats, with more than 50% loss in key foraging locations, especially at greater foraging depths[3]. Small vessels also contributed to echolocation range loss, with increased impacts on weekends.

Females have been shown to have reduced foraging success relative to males[4]; specifically, while male SRKW have reduced success in attempted prey captures, females reduce capture attempts[5]. Additionally, high levels of noise decreased dive depth and success during deep dives, likely reducing capture of adult Chinook salmon[6].

Progress on 2022 SRKW Vessel Adaptive Management Report Recommendations

In the 2022 adaptive management report, the Department made a series of interrelated recommendations. Many of the recommendations were implemented by the legislature via Senate Bill 5371, and others are in-process. The Department's 2022 recommendations, and the status of each, are summarized below.

[2] Burnham, R. E., Vagle, S., Thupaki, P., & Thornton, S. J. (2023). Implications of wind and vessel noise on the sound fields experienced by southern resident killer whales (Orcinus orca) in the Salish Sea. Endangered Species Research, 50, 31–46. https://doi.org/10.3354/esr01217

[3] Thornton, S.J., Toews, S., Burnham, R., Konrad, C.M., Stredulinsky, E., Gavrilchuk, K., Thupaki, P., and Vagle, S. 2022. Areas of elevated risk for vessel-related physical and acoustic impacts in Southern Resident Killer Whale (Orcinus orca) critical habitat. DFO Can. Sci. Advis. Sec. Res. Doc. 2022/058. vi + 47 p.

[4] Tennessen, J.B., M.M. Holt, B.M. Wright, M.B. Hanson, C.K. Emmons, D.A. Giles, J.T. Hogan, S.J. Thornton, and V.B. Deecke. 2023. Divergent foraging strategies between populations of sympatric matrilineal killer whales. Behavioral Ecology 34(3):373-386.

[5] Tennessen, J. B., Holt, M. M., Wright, B. M., Hanson, M. B., Emmons, C. K., Giles, D. A., Hogan, J. T., Thornton, S. J., & Deecke, V. B. (2024). Males miss and females forgo: Auditory masking from vessel noise impairs foraging efficiency and success in killer whales. Global Change Biology, 30, e17490. https://doi.org/10.1111/gcb.17490

[6] Tennessen, J. B., Holt, M. M., Wright, B. M., Hanson, M. B., Emmons, C. K., Giles, D. A., Hogan, J. T., Thornton, S. J., & Deecke, V. B. (2024). Males miss and females forgo: Auditory masking from vessel noise impairs foraging efficiency and success in killer whales. Global Change Biology, 30, e17490. https://doi.org/10.1111/gcb.17490

- **General restrictions for vessels operating around SRKW (RCW 77.15.740)**
    - *What WDFW recommended in the 2022 report:* 1,000-yard buffer around SRKW
    - *What happened:* The 1,000-yard buffer was adopted via Senate Bill 5371 in 2023 with a delayed effective date of January 1, 2025.
- **Commercial Whale Watching License (RCW 77.65.615 and RCW 77.15.815)**
    - *What WDFW recommended in the 2022 report:*
        - Distinguishing marine paddle tour licensing from motorized CWW licensing
        - Simplification & general reduction of fees
        - Improvements to the enforcement options to better align with how WDFW enforces other wildlife-related violations
    - *What happened:* These changes were implemented via Senate Bill 5371 in 2023. The Department conducted rulemaking in 2023-2024 (#P2023-15) to update WAC Chapter 220-460 to reflect the changes to the license types. Additionally, WDFW reimbursed the difference in license fees to individuals and businesses that purchased 2023 licenses prior to the new fee structure that went into effect July 23, 2023.
- **Commercial Whale Watching Rules (WAC 220-460)**
    - *What WDFW recommended in the 2022 report:* The Department proposed simplifying the rules and requirements in WAC Chapter 220-460 to align with changes to the RCW via a Department rulemaking process. The potential changes included:
        - Modifying the reporting structure and process to simplify where possible and increase effectiveness, efficiency, and compliance; and
        - Simplifying or removing several sections that would not be applicable, including approach time windows and limits on number of boats within one-half NM of SRKW, if all vessels are held to a 1,000-yard vessel setback from SRKW.
    - *What happened:* The Department proposes these changes in the current rulemaking effort (#2024-14), which was timed to align with the delayed implementation of the 1,000-yard vessel setback from SRKW that takes effect in 2025. Notably, the Washington State Legislature specified some requirements for CWW in Senate Bill 5371, which limited the scope of the revisions to WAC Chapter 220-460. Specifically, the Legislature codified the requirement for CWW to report to WhaleReport but made submitting logs of SRKW encounters to the Department optional, and so the draft rules reflect that change. The proposed revisions to WAC Chapter 220-460 are included in Appendix A.

Progress on 2022 SRKW Vessel Adaptive Management Report Next Steps

In addition to its recommendations, the Department outlined several next steps in the 2022 report. Some of these next steps depended on whether the Legislature adopted the recommendations into statute, and others included longer-term areas of focus that persist for the next reporting period. Progress on the 2022 next steps is summarized below:

- **Rulemaking and reimbursements following Senate Bill 5371:** In 2023-2024, WDFW conducted rulemaking (#P2023-15) to revise the CWW licensing rules and rules for commercial viewing of

SRKW in WAC 220-460 to align with the changes in RCW 77.65.615 and RCW 77.15.815. Due to the changes in the license fee structure, the Department issued reimbursements totaling $59,400 for 175 licenses, all but one of which were done through reversing credit card transactions.

- **Intensifying education and outreach to boaters:** The Department received an appropriation to implement education and outreach efforts associated with Senate Bill 5371, including funding for 0.3 FTE staff capacity to conduct and oversee the additional outreach work during the 2024-25 biennium. WDFW identified additional funding to enable the hiring of a Community Outreach and Environmental Education Specialist 3 as a full-time project position for the 2023-25 biennium. The funding for this position expires after June 2025, which will reduce the Department's capacity to implement ORCA Group recommendations. The Department's enhanced communication, education, and outreach work is described in Appendix C.
- **Regulatory harmonization across jurisdictions:** WDFW has continued to coordinate closely with the National Oceanic and Atmospheric Administration (NOAA), Transport Canada, and Fisheries and Oceans Canada (DFO). In this reporting period, DFO announced and began the process for consultation to consider adjustments to approach distances for killer whales in British Columbia in the Marine Mammal Regulations of the Fisheries Act. WDFW collaborated with other agencies to submit a multi-agency comment letter to DFO during the initial 2024 public comment period. In this letter, WDFW and its partner agencies urged DFO to prioritize regulatory harmonization in its rulemaking, encouraging the adoption of a 1,000-meter setback/avoidance distance to complement Washington State's 1,000-yard vessel setback.
- **Regulatory harmonization across orca ecotypes:** This remains an ongoing area of interest for the Department in the upcoming reporting period. Washington's Senate Bill 5371 established the 1,000-yard buffer for SRKW, while federal protections for Bigg's killer whales remain at 200 yards. Per consultation with the ORCA Group (described in Appendix C), there is general consensus that, without specialized training, practice, and/or camera equipment, it is very difficult to identify orca ecotypes at 1,000 yards or more. However, rather than recommending the same 1,000-yard setback from all orcas, WDFW has adopted messaging to boaters that, "if you see an orca and aren't sure, assume it's a Southern Resident and stay at least 1,000 yards away." This will be an ongoing area of interest in terms of communication and compliance as the 1,000-yard setback goes into effect, and we expect to address it again in the 2026 report.
- **Geographic vessel restrictions such as slow-down or restricted activity zones:** This topic continues to be of interest, but due to the delay of the implementation of the 1,000-yard buffer to 2025, WDFW cannot yet report on whether additional vessel restrictions might be needed. The Quiet Sound program implemented a voluntary commercial shipping slowdown trial in 2022, 2023, and 2024, and preliminary results from the trial show promise. Slow-down or restricted activity zones remain a valuable potential tool for reducing vessel impacts on SRKW.
- **Compliance and penalties:** Enforcement strategies remain an important area of consideration into the next reporting period. With the substantial change of the vessel buffer around SRKW, the Department is again entering a period where education and outreach will be the predominant tool of WDFW Enforcement officers as they support boater education about the

new 1,000-yard buffer distance. In the 2022 report, the Department proposed enhancements to the penalties for CWW and paddle tour operators, and those changes to RCW 77.15.815 were adopted into law in Senate Bill 5371. During this reporting period, the Department intended to consider whether stronger penalties for recreational boaters were needed in order to decrease vessel impacts on SRKW. However, the Legislature included language in Senate Bill 5371 adding a new conditional restriction on enforcement of the vessel regulations. Specifically, per RCW 77.15.740(4)(d), an officer "may not issue an infraction to the operator of a vessel that is within 400 yards of a southern resident orca who has immediately disengaged the transmission of the vessel." The 2026 adaptive management report will likely examine whether this restriction on enforcement has a negative impact on compliance and/or enforceability.

Adaptive Management Process Summaries

Summary of Findings of the Compliance and Effectiveness Analysis

The Department contracted Industrial Economics, Incorporated (IEc) to evaluate economic impacts of the CWWLP and compliance with the CWWLP and vessel regulations. This analysis evaluates available data on CWWLP and vessel traffic regulation performance and outcomes to identify potential adaptive management opportunities for WDFW. It also considers the potential challenges with implementation of the forthcoming 1,000-yard approach distance limit, and opportunities to address those challenges. The results of this analysis are summarized as responses to a series of questions.

What is the current profile of the licensed industry and how has it changed over time?

The analysis finds that there have not been substantial changes in the size and composition of the industry since implementation of the CWWLP from 2021 to 2024. Licensing Program data indicate that the number of businesses licensed each year has been relatively stable since implementation of the program in 2021, fluctuating from a low of 34 in 2021 to a high of 39 in 2024 (WDFW License and Training Data). While the data appear to indicate a net increase in the total number of licensed businesses over this period, as well as some change in the composition of the industry by business type (e.g., fewer kayak-only businesses in more recent years), some of these changes are attributable to how WDFW has changed its tracking of vessel types associated with each business license over time. Beginning in 2024, WDFW began issuing distinct licenses to motorized/sailing businesses and paddle tour businesses. As a result, businesses that operate both types of vessels hold two individual business licenses, where they held only a single license in prior years. This change therefore influenced the total count of licenses beginning in 2024. These changes may also reflect several other potential factors including new businesses entering or leaving the industry, businesses changing name or structure, and possibly businesses obtaining licenses in early years and determining that their operations ultimately do not require licensing.

During the 2023 whale watching season, Soundwatch observed a total of 44 unique businesses engaged in commercial whale watching (The Whale Museum 2024a). The difference between the number of business licenses issued in 2023 (35) and the number of unique companies that Soundwatch observed whale watching that year (44) could reflect that a portion of Soundwatch's observations occurred in Canadian waters, may indicate that unlicensed businesses are engaged in commercial whale watching, or may be due to differences in how Soundwatch identifies a vessel as engaged in "commercial whale watching."

Is the industry incurring significant costs as a result of the program that threaten the viability of the industry?

Industry representatives generally report that they have stopped viewing SRKW, even within the allowable viewing periods.[7] While some individual businesses report that costs were incurred as a result of Licensing Program implementation, these costs have not affected the viability of the industry.

At the time the CWWLP was implemented, WDFW anticipated administrative costs of the program for license holders would include costs of the license itself, and staff time required to complete required training, and to fulfill both the WDFW and Whale Report Alert System (WRAS) reporting requirements. The *Final Analysis of the Economic Viability of Commercial Whale Watching License Holders* considered the costs associated with the regulatory options specifically.[8] With respect to costs of business licensing incurred as a result of the program, industry representatives identified that WDFW deferrals of fees and reimbursement of past licensing costs have substantially reduced these costs to the industry. Some representatives indicated that the time spent on the application itself was somewhat onerous given the "clunkiness" of the system; however, they did not identify it as a substantial cost.[9] The costs associated with Operator and Paddle Guide licensing and training differ across businesses, driven primarily by the number of staff that must be licensed. Although these costs do not appear to be substantial for the industry as a whole, they can be a meaningful cost for individual businesses. No industry representative interviewed felt that the requirements to report SRKW interactions to WDFW or WRAS were a substantial cost.

Are Commercial Whale Watching and Paddle Tour License holders complying with key license-holder specific regulatory requirements and if not, what is preventing full compliance?

All licensed CWW vessels are required to have fitted aboard an Automatic Identification System (AIS) unit that transmits the vessel's position, course, speed, and other information to other vessels, coastal authorities, and to publicly available databases, and the unit must be in operation any time that vessel is engaged in commercial whale watching (WAC 220-460-140). Prior to this regulation being enforced,

[7] Interviews with Commercial Whale Watch Business License holders in September 2024.

[8] Because the application and costs of the license itself were not part of the same rulemaking process, they were not considered in the viability analysis.

[9] Interviews with Commercial Whale Watch Business License holders in September 2024.

WDFW, through NOAA Section 6 grant program, offered funding support to any commercial operators who needed to install AIS due to WDFW's new regulations. Specifically, businesses were offered up to $1,000 per AIS unit installed on a vessel upon confirmation it was installed and functional. WDFW issued grants to support installation of AIS to eleven companies, for nineteen units at a total of $16,456.13 (WDFW 2022).

IEc was able to confirm that all but one vessel associated with a CWW Business License in 2023 or 2024 had an operational AIS unit on board. Upon registration of individual vessels under an active business license, license holders must provide details specific to the vessel's AIS unit including the class type, name, and Maritime Mobile Service Identity (MMSI). While several MMSI numbers were misreported in the CWWLP vessel registry, most could be identified based on the vessel's name to confirm that the unit was installed and active. A single vessel that had misreported its MMSI number had a name too common to be identified definitively within the AIS look-up (i.e., shipfinder.com). This does not necessarily mean that the vessel does not have a properly installed AIS unit on board, but points to a need for WDFW to confirm MMSI numbers as entered.

An assessment of whether an AIS unit is installed and functional does not confirm it is being used as required. A review of 2023 AIS transmissions from the licensed CWW fleet showed gaps in the track data, known as "AIS transmission gaps." While these breaks could indicate that a unit is being turned on and off and is thus out of compliance with the regulation, transmission gaps can and do also occur because the transmission has not been successfully received for numerous potential reasons. These transmission gaps are a commonly acknowledged limitation in using AIS data for compliance purposes. IEc identified that it is common for a given CWW licensed vessel's AIS track to be non-continuous during a given day and trip. Thus, AIS track data are not a perfect indicator for evaluating compliance with the requirement for AIS unit use.

While this requirement becomes voluntary per Senate Bill 5371 starting in 2025, the regulations have required that all CWW and Paddle Tour license holders maintain logs that they submit to WDFW each time a vessel comes within one-half NM of SRKW (WAC 220-460-140(3)). WDFW Encounter Data alone do not allow for confirmation of adherence to the requirement. However, interviews with industry suggest that reporting to WDFW is a long-standing practice and results in no additional costs to the business.[10] In 2024, license holders reported a total of 23 encounters (WDFW SRKW Encounter Data). Reported encounters in 2023 and 2024 (to date) were lower than in 2021, which had 50 reported encounters. Importantly, there has been a reduction in the frequency with which license holders are reporting purposefully encountering SRKW within the days and times during which viewing is allowed.

Each time a motorized CWW licensed vessel comes within one-half NM of SRKW they must also log sighting information to WRAS through the WhaleReport application (WAC 220-460-140(4)). Reports made to WDFW must include an indication of whether the encounter being logged was also reported to WRAS. In 2021, 86 percent (43 of the 50) of the encounter records logged with WDFW indicate that they were also reported to WRAS, while in 2024, only 78 percent (18 of 23) of the logged encounters

[10] Interviews with Commercial Whale Watch Business License holders in September 2024.

identified that they reported to WRAS (WDFW SRKW Encounter Data). A review of the WRAS data identified that in 2024, the number of encounters reported to WRAS was only 52 percent of the encounters reported to WDFW. Technical difficulties and cellular service limitations are identified as affecting license holder ability to comply with this reporting, and there is reason to believe that even more encounter reports being made to WDFW are not being reported to WRAS than are identified within the WDFW data. Beginning in January 2025, CWW License holder encounter reporting to WDFW will become optional, while reporting to WRAS will remain mandatory. As WDFW prepares for the transition, it should consider how additional outreach and education may improve compliance with this requirement, as well as how the agency might partner with Ocean Wise to address the technical limitations of reporting to WRAS.

Have SRKW experienced reduced disturbance from vessel traffic since implementation of the CWWLP*?*

The results of this analysis indicate that SRKW continue to experience disturbance from vessel traffic in the region. Data collected by the Soundwatch program identify an overall reduction in the number of vessels within one-half NM of SRKW during on-water vessel counts since implementation of the CWWLP in 2021, on a "per vessel count" basis. However, although Soundwatch has generally documented speeding and approach violations per day of SRKW presence that are lower than what the organization documented in 2020, they continue to identify vessels operating in violation of existing regulations. Despite a general reduction in the number of incidents reported per day of SRKW presence, 2022 represented a substantial increase above 2020 levels for both speeding and approach violations. The cause of this anomalous increase in violations cannot be determined conclusively. Importantly, the numbers and rate of vessel presence and speed and approach violations differ substantially between vessel types. Violations are predominantly associated with private recreational vessels and not CWW vessels.

This analysis finds that disturbance to SRKW in the form of vessel presence within the vicinity of SRKW from commercial whale watching has decreased substantially since 2020. Data suggest that since implementation of the CWWLP, purposeful viewing of SRKW by commercial operations is greatly reduced, and CWW vessels continue to be responsible for only a minor proportion of approach and speed violations (three percent in 2024). Accordingly, IEc recommends that future efforts to reduce negative effects of vessel traffic focus on private recreational vessels, which are responsible for the majority of approach distance and speeding violations, and constitute the majority of vessels present within one-half NM of SRKW during Soundwatch monitoring events. This recommendation comports with WDFW's growing focus on education and outreach to recreational boaters, which will continue in the next reporting period, contingent upon available funding and capacity.

What factors might hinder commercial whale watching industry compliance with the forthcoming 1,000-yard approach distance regulation?

During a series of interviews conducted in September 2024, CWW Business License holders were asked if they anticipate any challenges or potential costs of this regulatory change, and whether they are

currently undertaking actions or incurring costs to prepare for the change. The majority of business license holders described that they no longer focus whale watching activities on SRKW, have not been taking advantage of the currently allowed opportunities to view SRKW, and are thus already operating with a requirement to remain one-half NM from SRKW.[11]

In preparation for implementation of the 1,000-yard approach distance regulation, WDFW is considering the challenges vessels may face in complying with this requirement. One clear consideration is the nature of the Puget Sound/Salish Sea shoreline, and prevalence of locations in which the passage between coastal features is narrower than 1,000 yards. An exploration of the shoreline in the vicinity of the San Juan Islands, which is a hot spot for both SRKW sightings and commercial whale watching activity, as well as private recreational boating more generally demonstrates that there are many "pinch points" wherein navigation would be difficult if SRKW were present. This analysis suggests that the lack of available space between coastal features must be considered in implementation and enforcement of this regulation.

In addition to those spatial limitations, CWW Business License holders identified several additional potential challenges they expect vessels may face in complying with the forthcoming regulation:

- **Nature of whale behavior and movement.** Several interviewees noted that SRKW generally do not travel in a tightly grouped pod, but rather, tend to spread out across a wide area. Thus, even in locations with passage well-exceeding 1,000 yards, it could be logistically challenging to be more than 1,000 yards from every individual in the group of whales.[12]
- **Travel requirements.** Related to the challenge described in the previous bullet, interviewees identified that there are certain routes they may be required to travel due to the location of their home port relative to the primary locations for whale watching (e.g., through Admiralty Inlet) that they would be prevented from passing through if SRKW were present due to the likelihood of the whales being spread out within the area.[13]
- **Mobility limitations**. One interviewee identified that the ability of sailing vessels to maneuver and reposition quickly is more limited, making it more difficult to make the necessary adjustments to move away from the whales.[14]

Weather and currents. Several interviewees identified weather and currents as being the most prominent factors that could limit a vessel's ability to prioritize position relative to the whales in making navigational decisions. Certain locations within the region, such as Deception Pass, are subject to currents that for safety reasons must be the primary consideration when transiting those waters.[15]

[11] Personal communication with multiple Business License Holders in September 2024.

[12] Personal communication with multiple Business License Holders in September 2024.

[13] Personal communication with Business License Holder, September 5, 2024.

[14] Personal communication with Business License Holder, September 3, 2024.

[15] Personal communication with multiple Business License Holders in September 2024.

Summary of ORCA Group Process

Senate Bill 5371 includes a new section that directs the Department to "convene a diverse work group…to inform the development of [its] outreach and education strategies to implement RCW 77.15.740 (4)," the Revised Code of Washington's chapter and section which relates to new vessel regulations and associated best practices to protect SRKW for recreational boating, including the mandatory 1,000-yard setback. Senate Bill 5371 says the Department "must conduct intensive outreach and education in fiscal year 2024 and the first half of 2025 to implement the work group outreach recommendations regarding compliance with the 1,000-yard setback…[which] may include the advancement and proliferation of tools for notifying boaters of [SRKW] presence, identifying orca ecotypes, and estimating distance on the water."

In early 2024 the Department convened the Orca Regulations Communications Advisory Group (ORCA Group) and contracted Ross Strategic to provide process support and facilitation services. The ORCA Group began its work by assessing the SRKW 2024 communication landscape, including ongoing efforts led by the Department and other entities such as Be Whale Wise. This assessment, along with information provided by a recreational boater subgroup, two virtual boater engagement workshops, and initial results from research conducted by C+C, a Seattle-based communications, marketing, and public relations agency, allowed the ORCA Group to identify communication needs, guide communication investments through the end of the Department's fiscal year 2024 (June 2024), and develop communication investment recommendations for the Department's full fiscal year 2025 (July 2024-June 2025).

The timeline for determining FY2024 spending was abbreviated, as the first ORCA group meeting wasn't convened until March 2024. As a result, the Department and ORCA Group agreed in their second meeting for the advisory group to provide input on near-term spending in FY2024, based on suggested investments developed by the Department, and allow the ORCA Group to develop more substantial recommendations for the $110,000 allocated for FY2025.

Ultimately, WDFW consulted with the ORCA Group to inform its total $110,000 FY2024 investments and collaborated with the ORCA Group to develop recommendations for the Department to fund with $110,000 in FY2025. The amount of Department communication investment remained the same in both fiscal years.

The process for developing FY2024 and FY2025 recommendations differed as well. Initially, the ORCA group provided recommendations on allocated spending for digital, broadcast, and print media advertising for FY2024, as well as initial suggestions for additional communications strategies for the Department to begin pursuing. The Group developed more detailed recommendations for a comprehensive communications strategy in FY2025, including recommendations for specific tactics, during the remainder of the process.

WDFW Recommendations

The Washington State Legislature requested that the Department provide, in its 2022, 2024, and 2026 adaptive management reports, recommendations to the Legislature for improvements to the CWWLP, rules for commercial viewing of SRKW, and general rules aimed at protecting SRKW from presence and noise impacts from vessels. The recommendations that WDFW made in the 2022 report, as shaped and adopted by the Legislature, have set major changes in motion. Yet, the results and effectiveness of the changes will not be known before the 1,000-yard vessel setback from SRKW goes into effect January 1, 2025. As such, the Department is not recommending any other major legislative changes until we can observe and comment on the effectiveness of the enhanced vessel setback. Thus, WDFW anticipates any new recommendations for legislative changes to the vessel regulations would be offered in the 2026 adaptive management report.

While the Department's recommendation is to not pursue additional legislation during the 2025 session as we evaluate the effectiveness of Senate Bill 5371, we do have a recommendation and several considerations for the next two-year adaptive management period.

Recommendations for the Washington State Legislature:

- **Recommendation:** Fund WDFW's 2025-27 Enforcement decision package,[16] which will increase Enforcement's reach and resources across the state, broadly increasing capacity to protect habitat and wildlife including SRKW. This request includes funding for a vessel for use in patrols that will increase on-water Enforcement presence, which is a major deterrent of vessel regulation violations. Funding this request would increase Enforcement's education and outreach capacity both on and off-water.

In addition, the Department would like to note the following, some of which will have bearing on the Department's 2025-2026 implementation and the 2026 adaptive management report:

- Note that RCW 77.15.740 (4)(d) limits Enforcement's discretion and conditionally restricts enforceability, which is anticipated to pose enforcement challenges that may impact the effectiveness of Senate Bill 5371's changes to the vessel regulations. WDFW intends to assess and report on outcomes in the 2026 adaptive management report.
- Note that RCW 77.15.740(6) requires WDFW to "conduct outreach and education regarding regulations and best practices for recreational boating in waters inhabited by southern resident orcas… consistent with the recommendations of the [ORCA Group]." The Legislature provided funding for a project staff position (COEES 3) during the 2023-25 biennium to support implementation of ORCA Group recommendations, but agency capacity to continue this work will be curtailed when the project position ends on June 30, 2025.

[16] This recommendation refers to a specific 2025-27 operating budget request that was submitted to the Governor's Office for consideration in September 2024.

- Note that RCW 77.15.740(8), which makes reporting incident logs to the Department optional for CWW operators, is anticipated to reduce the Department's ability to analyze and report on the effectiveness of regulations related to CWW in the 2026 report.
- Note that RCW 77.15.740(2)(c) offers an exemption to the 1,000-yard setback for authorized activities such as research or oil spill response, pursuant to the conditions of the permit from the National Marine Fisheries Service (NMFS) or the Department. NMFS is the appropriate authority that authorizes research and oil spill response in the vicinity of SRKW. WDFW defers to NMFS and does not separately permit these activities.

Finally, the Department has three relevant bodies of work moving forward during the 2025-2026 reporting period:

- WDFW is recommending a suite of updates to the CWW rules in WAC Chapter 220-460 in alignment with the recommendations from the 2022 adaptive management report and the changes to the vessel regulations implemented via Senate Bill 5371. The proposed changes are under consideration as part of a Department rulemaking process (#2024-14), which was initiated September 30, 2024 and which will be presented to the Fish and Wildlife Commission for a public hearing and consideration in early 2025. A preview of the draft revisions to WAC 220-460 is included in Appendix A.
- WDFW is migrating the CWW business licenses, operator licenses, paddle tour business licenses, and paddle guide licenses to a new licensing platform. This will provide an opportunity to implement recommendations described in Appendix B for improved customer experience as well as compliance tracking over the next reporting period.
- Contingent on available funding and resources, WDFW will continue to conduct outreach and education regarding regulations and best practices for boating in waters inhabited by SRKW, including best practices for avoiding or minimizing encounters closer than 1,000 yards from SRKW. This work will be conducted in alignment with the ORCA Group recommendations described in Appendix C.

WDFW thanks the Legislature for continued interest and commitment to saving the SRKW from extinction, and particularly thank all who led and engaged on Senate Bill 5371 in the 2023 session. In addition, the Department is grateful for the ongoing collaboration and partnership with the other local, state, federal, Tribal, and transboundary partners, as well as the dedicated network of nonprofits, researchers, and members of the public dedicated to orca recovery.

Appendix A: WDFW Recommended Changes to WAC Chapter 220-460

This section includes draft updates to WAC Chapter 220-460. WDFW initiated a rulemaking process (#2024-14) on September 30, 2024 (filed as WSR 24-20-092). As of the time of this report, the Department intends to file the draft rule in early December 2024, initiating a public comment period that culminates with a public hearing at the Fish and Wildlife Commission's January meeting. In this anticipated timeline, the Fish and Wildlife Commission is tentatively scheduled for a decision regarding rule adoption at its February 2025 meeting. If the rule is adopted, it would go into effect in March 2025. Commission meeting dates and locations are posted on the Department's website.

The purpose of this rulemaking is to amend and add rules in WAC title 220 to clarify requirements for commercial whale watching and paddle tour license holders as authorized under RCW 77.65.620. In part, these changes are prompted by 2023 Senate Bill 5371.

A summary of the proposed revisions include:

- Removing sections 110 and 120, which define the number of vessels at a time and days and hours when commercial whale watching vessels may approach SRKW closer than one-half nautical mile (1,012.69 yards). With the shift to a uniform 1,000-yard vessel setback from SRKW year-round, these sections are no longer relevant.
- Defining a fee waiver process related to RCW 77.65.615(13) for organizations whose relevant commercial whale watching or marine paddle tour activities are solely for bona fide nonprofit educational purposes.
- Adjusting definitions and reporting requirements to strongly encourage, but not require, logging and reporting SRKW encounters to the Department, and to clarify the requirement to report SRKW encounters to the WhaleReport app for the Whale Report Alert System to include any time a commercial whale watching operator identifies or comes within 1,000 yards of SRKW.
- Making other minor clarifications and refinements within the WAC Chapter.

The Department's proposed revisions are included below in track-change formatting. Please note that only sections of WAC Chapter 220-460 that contain proposed revisions are included.

WAC 220-460-010 Definitions. For the purposes of this chapter, the following definitions apply:

(1) **Commercial whale watching.**

"Commercial whale watching" shall be defined as the act of taking, or offering to take, passengers aboard a motorized or sailing vessel to view marine mammals in their natural habitat for a fee.

(2) **Commercial whale watching business.**

"Commercial whale watching business" means a business that engages in the activity of commercial whale watching.

(3) **Commercial whale watching operator.**

"Commercial whale watching operator" means a person who operates a motorized or sailing vessel engaged in the business of whale watching.

(4) **Paddle tour.**

"Paddle tour" means the act of guiding or offering to take people aboard nonmotorized or human-powered vessels, such as kayaks or paddle boards, on a trip, tour, or guided lesson that involves viewing marine mammals in their natural habitat for a fee.

(5) **Paddle tour business.**

"Paddle tour business" means a business that conducts paddle tours.

(6) **Paddle guide.**

"Paddle guide" means a person who conducts guided tours on behalf of a paddle tour business. The term paddle guide includes anyone who directs the movement or positioning of any nonmotorized commercial whale watching vessel(s) involved in a tour.

(7) **Commercial whale watching license.**

"Commercial whale watching license" means a commercial whale watching business license or a commercial whale watching operator license as defined in this section.

(a) "Commercial whale watching business license" means a department-issued license to operate a commercial whale watching business.

(b) "Commercial whale watching operator license" means a department-issued license to operate a commercial motorized or sailing vessel on behalf of a commercial whale watching business.

(8) **Paddle tour license.**

"Paddle tour license" means a paddle tour business license or a paddle guide license as defined in this section.

(a) "Paddle tour business license" means a department-issued license to operate a business that conducts paddle tours.

(b) "Paddle guide license" means a department-issued license to conduct commercial guided paddle tours on behalf of a paddle tour business.

(9) **Vessel.**

"Vessel" includes aircraft while on the surface of the water, and every description of watercraft on the water that is used or capable of being used as a means of transportation on the water.

(a) "Commercial whale watching vessel" means any vessel that is being used as a means of transportation for individuals to engage in commercial whale watching.

(b) "Motorized commercial whale watching vessel" shall be defined as any vessel with an engine being used as a means of transportation for individuals to engage in commercial whale watching, regardless of whether the engine is in use. This definition includes sailboats with inboard or outboard motors.

(c) "Nonmotorized vessel" or "paddle tour vessel" shall be defined as any vessel without an engine being used as a means of transportation for individuals to engage in a paddle tour. This definition includes human-powered watercraft such as kayaks and paddleboards.

(10) **Group of southern resident ~~killer whales~~ orcas.**

"Group of southern resident ~~killer whales~~orcas" is defined as a single southern resident ~~killer whale~~orca or an assemblage of southern resident ~~killer whales~~orcas wherein each member is within one nautical mile of at least one other southern resident ~~killer whale~~orca. Any individual(s) farther than one nautical mile constitutes a separate group.

(11) **Vicinity.**

"Vicinity" is defined as ~~one-half nautical mile~~1,000 yards from all southern resident ~~killer whales~~orcas in the group. References to "vicinity" in this chapter do not permit operators to approach a southern resident ~~killer whale~~ orca closer than the statutorily defined distances in RCW 77.15.740.

(12) ~~**Vicinity instance.**~~ **Encounter.** Each time any commercial whale watching vessel or nonmotorized vessel operating under a license identifies and/or enters within ~~one-half nautical mile~~1,000 yards of a southern resident ~~killer whale~~ orca will count as one ~~vicinity instance~~encounter associated with that license.

(13) **Automatic identification system (AIS).** AIS refers to a maritime navigation safety communications system standardized by the International Telecommunication Union, adopted by the International Maritime Organization, that:

(a) Provides vessel information, including the vessel's identity, type, position, course, speed, navigational status and other safety-related information automatically to appropriately equipped shore stations, other ships, and aircraft;

(b) Receives automatically such information from similarly fitted ships, monitors and tracks ships; and

(c) Exchanges data with shore-based facilities.

(14) **Inland waters of Washington.**

"Inland waters of Washington" means Puget Sound and related inland marine waters, including all salt waters of the state of Washington inside the international boundary line between Washington and British Columbia, and lying east of the junction of the Pacific Ocean and the Strait of Juan de Fuca, and the rivers and streams draining to Puget Sound as mapped by water resource inventory areas 1 through 19 in WAC 173-500-040 as it exists on July 1, 2007.

WAC 220-460-025. Fee waiver for nonprofit educational whale watching and paddle tours.

(1) In order to qualify for a fee waiver, an organization's relevant commercial whale watching or marine paddle tour activities must be solely for bona fide nonprofit educational purposes.

(2) In order to receive a fee waiver, the organization must submit documentation to the department:

(a) Demonstrating the organization's nonprofit status, and

(b) Explaining the relevant whale watching or paddle tour activities and the educational purpose of the activities.

(3) Each year after the initial application, when applying for an annual commercial whale watching and/or paddle tour business license, the organization must:

(a) Affirm that all relevant activities are for nonprofit educational purposes, and

(b) Ensure that all documentation remains up-to-date, and submit revised documentation if needed.

(4) Individuals that solely operate on behalf of an organization that qualifies for a fee waiver are eligible for a fee waiver for their operator or paddle guide license.

(a) Operator or paddle guide licenses issued under a nonprofit educational fee waiver may not be used by the individual to conduct for-profit activities. The license will be limited to nonprofit educational activities.

(b) In order to engage in for-profit whale watching or paddle tour activities, any operator or paddle guide operating under a license obtained by fee waiver must forfeit their license and apply and pay the relevant fees for a new operator or paddle guide license.

(5) In order to obtain a fee waiver for an operator or paddle guide license, the applicant must:

(a) Be designated as an operator or paddle guide on the qualifying organization's business license, and

(b) Not be designated as an operator or paddle guide for any for-profit commercial whale watching or paddle tour business.

(6) The applicant must indicate at the time of their application that they intend to apply for a fee waiver.

(7) Fee waivers may be issued in the form of a reimbursement.

(8) Organizations and individuals who conduct commercial whale watching or paddle tour activities solely for nonprofit educational purposes are required to follow all laws and rules that apply to for-profit commercial whale watching and paddle tour licensees, including the requirements outlined in this chapter.

WAC 220-460-050 Whale watching vessel designation requirements and required operator and paddle guide documentation. (1) RCW 77.65.615 requires commercial whale watching businesses to designate the motorized vessel(s) that will be used for commercial whale watching. It is unlawful to engage in commercial whale watching activities unless:

(a) The licensee has designated all commercial whale watching motorized, including sailing, vessels to be used;

(b) The department has issued a commercial license to the licensee showing the motorized vessel so designated; and

(c) The person conducting commercial whale watching activities on behalf of the business has the appropriate documentation in physical possession.

The operator of a motorized or sailing vessel must have both the commercial whale watching business license listing the vessel and their individual operator license for the current calendar year in physical possession.

(2) The licensee does not have to own the vessel being designated on the license.

(3) For motorized or sailing vessels, the commercial whale watching business licensee must provide applicable documentation numbers such as a hull identification number (HIN), current United States Coast Guard or Transport Canada certification inspection documentation, and/or a vessel registration number.

(4) It is unlawful to engage in paddle tour activities unless the person conducting paddle tour activities on behalf of the business has the appropriate documentation in physical possession.

The guide of a commercial paddle tour must have both their individual paddle guide license ~~in physical possession~~ and ~~must have either~~ the ~~commercial whale watching~~ paddle tour business license for the current calendar year, or a printed or digital scan thereof, in physical possession.

WAC 220-460-070 Whale watching operator and paddle guide license requirements. (1) A person may operate a motorized or sailing vessel ~~designated on the~~ engaging in commercial whale watching ~~business license~~ only if:

(a) The person holds a valid commercial whale watching operator license issued from the department;

(b) The vessel is designated in a valid commercial whale watching business license issued from the department;

(c) The operator is designated on the underlying commercial whale watching business license; and

~~(c)~~(d) The person has both the commercial whale watching business license listing the vessel and their individual operator license for the current calendar year in physical possession.

(2) A person may lead a guided paddle tour on behalf of ~~the commercial whale watching~~a paddle tour business only if:

(a) The person holds a valid paddle guide license issued from the department;

(b) The paddle tour business has a valid paddle tour business license;

(c) The paddle guide is designated on the underlying paddle tour business license; and

~~(c)~~(d) The person has both their individual paddle guide license ~~in physical possession~~ and ~~must have either~~ the paddle tour business license for the current calendar year, or a printed or digital scan thereof, in physical possession.

(3) Only an individual at least 16 years of age may hold an operator license or paddle guide license.

(4) An individual may hold only one commercial whale watching operator license. Holders of an operator license may be designated on an unlimited number of commercial whale watching business licenses.

(5) An individual may hold only one paddle guide license. Holders of a paddle guide license may be designated on an unlimited number of paddle tour business licenses.

WAC 220-460-090 Commercial whale watching of southern resident ~~killer whales~~orcas and paddle tours operating near southern resident ~~killer whales~~orcas—General. (1) It is unlawful for a commercial whale watching operator or paddle guide to violate any of the restrictions in RCW 77.15.740.

(2) Licenses issued by the department under this chapter are not an exemption under RCW 77.15.740 (2)(c).

(3) The rules and requirements outlined in this chapter regarding southern resident ~~killer whales~~orcas apply to commercial whale watching and paddle tour activity in the inland waters of Washington.

~~**WAC 220-460-110 Limits on number of vessels in the vicinity of southern resident killer whales at once.** (1) It is unlawful for more than three motorized commercial whale watching vessels at a time to be within the vicinity of any group of southern resident killer whales.~~

~~(2) It is unlawful for an operator of a motorized commercial whale watching vessel to enter the vicinity of a group of southern resident killer whales that contains a calf of under one year of age or a whale designated as sick or vulnerable by emergency rule from the department.~~

~~**WAC 220-460-120 Time limitations on watching southern resident killer whales.** (1) It is unlawful for an operator of a motorized commercial whale watching vessel to approach within one-half nautical mile of a southern resident killer whale between October 1st and June 30th.~~

~~(2) It is unlawful for an operator of a motorized commercial whale watching vessel to approach within one-half nautical mile of a southern resident killer whale outside these time periods: 10:00 a.m. to 12:00 p.m. and 3:00 p.m. to 5:00 p.m. from July 1st through September 30th.~~

~~(3) If any motorized commercial whale watching vessel designated under a commercial whale watching business license enters within the vicinity of a southern resident killer whale between 10:00 a.m. and 12:00 p.m., no vessels operating under that business license may enter the vicinity of a southern resident killer whale after 12:00 p.m. on the same day.~~

~~(4) If an operator of a motorized commercial whale watching vessel enters within one-half nautical mile of a group of killer whales outside of the provisions in this section, after taking reasonable measures to determine whether the killer whales were southern resident killer whales, and then identifies the whales as southern resident killer whales, the operator must:~~

~~(a) Immediately safely reposition the vessel to be one-half nautical mile or farther from the southern resident killer whales.~~

~~(b) Immediately after repositioning the vessel, report the location of the southern resident killer whale(s) to the WhaleReport application for the whale report alert system (WRAS), or to a successor transboundary notification system designated by the department that is adopted by the international shipping community in the Salish Sea.~~

~~(c) Accurately log the incident, including measures taken to determine whether the whales were southern resident killer whales, following the provisions of WAC 220-460-140 and submit the log to the department within twenty-four hours of the incident.~~

WAC 220-460-130 Nonmotorized paddle tour vessels. (1) Tours involving any nonmotorized watercraft used for the purposes of paddle tours, such as kayaks, are subject to these requirements. Such watercraft constitute paddle tour vessels and are referred to as "vessels" in this chapter. Regardless of the type of nonmotorized watercraft involved, the person operating on behalf of the business to conduct the tour is referred to as a " paddle guide" in this chapter.

(2) Paddle guides must prevent all vessels in their tour group from disturbing southern resident ~~killer whales~~orcas. All vessels in the tour group must adhere to the following requirements:

(a) It is unlawful to launch if southern resident ~~killer whales~~orcas are within ~~one-half nautical mile~~1,000 yards of the launch location.

(b) Vessels are prohibited from being paddled, positioned, or waiting in the path of a southern resident ~~killer whale~~orca. If a southern resident ~~killer whale~~ orca is moving towards a vessel, the vessel must immediately be moved out of the path of the whale.

(c) If ~~a vessel or~~ vessels inadvertently encounter a southern resident ~~killer whale~~orca, they must immediately be moved as close to shore as possible and secured, or be rafted up close to shore or in a kelp bed, and paddling shall cease until any and all ~~killer whales~~orcas have moved to at least 400 yards

away from the vessels. Rafting up is defined as manually holding vessels close together, maintaining a tight grouping. Once any orcas are moving away from the vessel(s) and are at least 400 yards away, all paddlers must either remain rafted/secured until the whales are at least 1,000 yards away or must paddle in the opposite direction of travel from the orcas until all vessels are 1,000 yards away from the orcas.

WAC 220-460-140 Commercial whale watching and paddle tour compliance and reporting. (1) An automatic identification system (AIS) must be fitted aboard all motorized commercial whale watching vessels. The AIS must be capable of providing information about the vessel (including the vessel's identity, type, position, course, speed, and navigational status) to state and federal authorities automatically. Operators must maintain the AIS in operation at all times that the vessel is conveying passengers for a fee.

(2) All commercial whale watching and paddle tour license holders must complete annual training from the department on marine mammals, distances on the water, impacts of whale watching on marine mammals, and southern resident ~~killer whale~~orca-related rules and reporting.

(a) At completion of training, license holders must demonstrate adequate understanding of course materials.

(b) It is unlawful to operate a commercial whale watching vessel or guide a tour of nonmotorized vessels without completing the training for the current calendar year.

~~(c) Naturalists and others who work upon commercial whale watching vessels but are not license holders are encouraged to participate in the annual training.~~

(3) All commercial whale watching and paddle tour license holders ~~shall~~ are strongly encouraged to maintain accurate logs on each instance a vessel operating under a license ~~enters within one-half nautical mile vicinity of~~encounters southern resident ~~killer whales~~orcas and submit copies of the logs to the department within 24 hours of the encounter.

(4) Content of Southern Resident orca encounter logs:

(a) Logs ~~must~~ should at minimum include the business ~~license holder~~ name; vessel operator or paddle guide name; ~~other staff names and roles;~~ vessel name; ~~port(s) of departure; departure time(s); return time(s); number of passengers;~~ the location(s) ~~(Lat/Long)~~ of southern resident ~~killer whales~~orcas encountered; and the time and duration of the encounter.

(b) If applicable, license holders are encouraged to log details regarding encounters with southern resident orcas, including time~~(s) entering and departing the one-half nautical mile~~ and duration within 1,000 yards vicinity of southern resident ~~killer whales~~orcas, if applicable; time~~(s) entering and departing~~ and duration within 400 yards of southern resident ~~killer whales~~orcas, if applicable; and measures taken to determine whether the whales were southern resident orcas.

(c) License holders are also encouraged to log qualitative details of southern resident ~~killer whale~~ orca encounters including whale identification, whale behavior and health, other vessel behavior, and any operator behavior, including contact with other boaters or government entities, and resulting outcomes.

~~(b) Information from the logs shall be submitted to the department on the following schedule:~~

~~(i) All vicinity instances in July must be reported by August 15th.~~

~~(ii) All vicinity instances in August must be reported by September 15th.~~

~~(iii) All vicinity instances in September must be reported by October 15th.~~

~~(iv) Operators of motorized commercial whale watching vessels must report vicinity instances that happen outside of the permitted hours and days described in WAC 220-460-120 within 24 hours.~~

~~(v) Paddle guides must report vicinity instances that happen October through June within one week.~~

~~(c) It is unlawful to fail to report a vicinity instance or to fraudulently report the details of a vicinity instance.~~

~~(d) Logs must be provided for inspection on request of department law enforcement.~~

~~(4)~~(5) All motorized commercial whale watching license holders must ~~log~~ report accurate, complete sighting information to the WhaleReport application for the whale report alert system (WRAS), or to a successor transboundary notification system designated by the department that is adopted by the international shipping community in the Salish Sea, immediately upon ~~entering within one-half nautical mile of~~ encountering a southern resident ~~killer whale~~orca.

WAC 220-460-150 Penalties. (1) Commercial whale watching or paddle tour license holders in violation of WAC 220-460-090 may be issued a notice of infraction punishable under chapter 7.84 RCW that carries a fine of $500, not including statutory assessments added pursuant to RCW 3.62.090.

(2) Commercial whale watching or paddle tour license holders out of compliance with WAC 220-460-100, ~~220-460-110, 220-460-120,~~ 220-460-130, or 220-460-140 may be issued a notice of infraction that carries a fine of up to $500, not including statutory assessments added pursuant to RCW 3.62.090.

(3) Nothing in this chapter prohibits the filing of criminal charges for violations of RCW 77.15.815 in lieu of issuance of a notice of infraction.

Appendix B: Analysis of Available Compliance and Effectiveness Data

Objectives

This analysis evaluates available data on Commercial Whale Watching Licensing Program (CWWLP) and vessel traffic regulation performance and outcomes to identify potential adaptive management opportunities for the Washington Department of Fish and Wildlife (WDFW). It also considers the potential challenges with implementation of the forthcoming 1,000-yard approach distance limit, and opportunities to address those challenges. Specifically, the analysis addresses the following questions:

- What is the current profile of the licensed Commercial Whale Watching (CWW) and marine Paddle Tour industry and how has it changed over time?
- Is the industry incurring significant costs as a result of the program that threaten viability?
- Are CWW and Paddle Tour License holders complying with key regulatory requirements and if not, what is preventing full compliance?
- Have SRKW experienced reduced disturbance from vessel traffic since implementation of the CWWLP?
- What factors might hinder compliance with the forthcoming 1,000-yard approach distance regulation?

Presence of SRKW in Regulated Waters

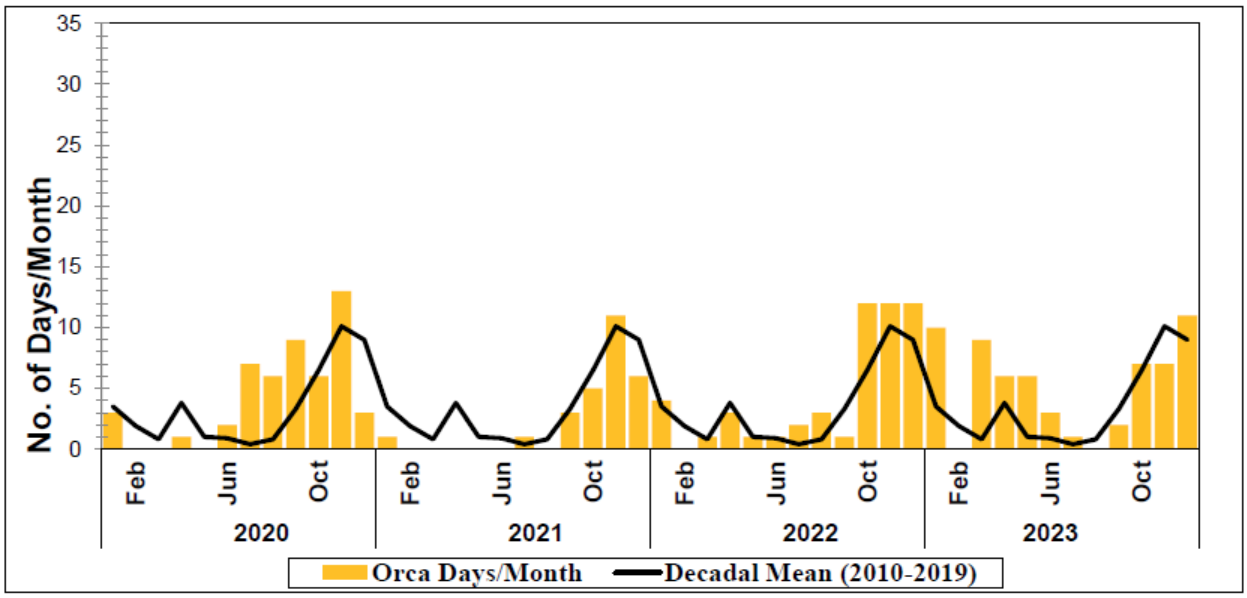
WDFW's CWWLP and other vessel traffic regulations are focused on the conservation and management of Southern Resident killer whales (SRKW). While certain regulations specific to the CWW and Paddle Tour License holders are relevant and required for vessels to comply with at all times (e.g., licensing, use of Automatic Identification Systems [AIS]), others are relevant and applicable only when in the vicinity of SRKW. As such, the descriptions of regulatory compliance and vessel behaviors are important to consider in the context of the frequency and duration of SRKW presence within the regulated waters, and areas monitored by Soundwatch. In particular, an understanding of the presence of SRKW during each of the years considered in the analysis provides important context for understanding non-compliance over time, as well as the potential challenges with compliance with the forthcoming approach distance regulations.

Frequency of Presence

The Whale Museum's annual SRKW sightings report (i.e., "Orca Master" report) to the National Oceanic and Atmospheric Administration (NOAA) provides information on the presence of SRKW within the regulated waters through 2023. **Figure 2** and **Figure 3** depict the number of days per month SRKW were detected in Puget Sound and the Central Salish Sea (including the San Juan Islands), respectively, in 2020

through 2023.[17] Within Puget Sound (**Figure 2**) November 2020 saw the highest number of sighting days in a month, at 13, while there have been several months in which no SRKW were recorded. As shown in **Figure 2**, SRKW are generally more present in Puget Sound in the latter half of the year, with the most sightings days occurring in October through December. However, in 2023 there were also frequent sightings days (seven to 10, with none seen in February) also occurring in January through May. Within the Central Salish Sea, there were substantially more SRKW sightings days in both 2022 and 2023 compared to Puget Sound (**Figure 3**). During 2022, SRKW sightings were generally between eight and 16 days per month through most of the year, with peaks in both July and September. Sighting days were somewhat lower on average in 2023, with peaks in March and April.

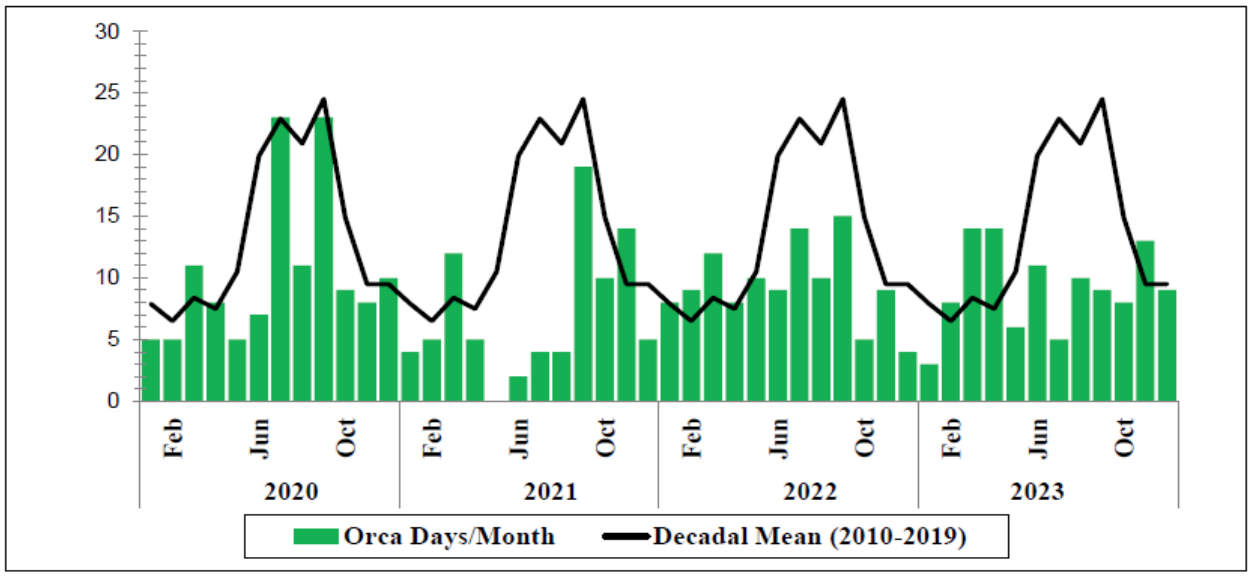
Figure 2. Days/Month SRKW Detected in Puget Sound



Source: Graph excerpted from The Whale Museum (2024b)

[17] Puget Sound is defined as the waters beginning between the Northeastern most point of the Olympia Peninsula (Point Wilson) across to Whidbey Island and southward, including waters to the East of Whidbey Island northward to Deception Pass. The Central Salish Sea includes all waters northward, including most of the Strait of Juan de Fuca, as far North as Vancouver, BC.

Figure 3. Days/Month SRKW Detected in Central Salish Sea



Source: Graph excerpted from The Whale Museum (2024b)

The Soundwatch Program's Annual Monitoring Reports also track the number of monitoring days on which they observed either SRKW or transient killer whales. Soundwatch generally conducts monitoring between six and seven days a week during their active monitoring period (generally May/June to September/October). The number of days during which Soundwatch conducts monitoring is not driven by whale presence, and monitoring occurs regardless of whether whales are in the vicinity.[18] Because the number of days Soundwatch observed either ecotype of whale is partially a function of the frequency with which Soundwatch was conducting monitoring, these data reflect the rate of ecotype presence per monitoring day as opposed to a total count of days of whale presence.

According to Soundwatch Annual Reports, the number of days for which SRKW and/or transient killer whales were present during seasonal monitoring has fluctuated over the last six years as well as in the relative presence of the two ecotypes (**Table 3**). Of the six years of data reviewed, SRKW presence was highest in 2018, when SRKW were present on 39 percent of monitoring days and lowest in 2021, when they were present 13 percent of monitoring days. In 2024, SRKW were present on 26 percent of monitoring days. Differences in identified sightings days by the Soundwatch Program versus the Whale Museum's sightings data compilation may be accounted for in part by the fact that the peak SRKW presence identified in the sightings compilation occurred outside of Soundwatch's monitoring season. Transient presence was highest in 2019 (present 69 percent of monitoring days) and lowest in 2020 and 2022 (present 25 percent of monitoring days). Data for 2024 are not yet available. In 2020 and 2022 the number of days of SRKW and transient presence were comparable; however, in 2021 and 2023, transients were substantially more frequently present in the monitored waters than SRKW. In making these comparisons, it is important to note that the timing of monitoring, distribution of monitoring

[18] Email communication from Soundwatch Program staff to IEc on October 24, 2022.

events, and other factors that can influence the results of monitoring do change across years, limiting direct comparisons.

Table 3. Days of SRKW and Transient Killer Whale Presence During Soundwatch Monitoring

Year	Days of Monitoring	Days of SRKW Presence	Days of SRKW Presence/ Monitoring Day	Days of Transient Presence	Days of Transient Presence/ Monitoring Day
2018	87	34	0.39	31	0.36
2019	74	15	0.20	51	0.69
2020	118	24	0.20	30	0.25
2021	99	13	0.13	48	0.48
2022	101	35	0.35	25	0.25
2023	100	20	0.20	44	0.44
2024	82	21	0.26	Not available	Not available

Source: The Whale Museum (2019, 2020, 2021, 2022, 2023, 2024a); emails communication with Soundwatch staff on October 25, 2024.

SRKW sightings are also confirmed and compiled by the Orca Behavior Institute utilizing data from the Pacific Whale Watch Association (PWWA), PWWA Application, Orca Network, regional sightings networks on social media, and other community scientists (Orca Behavior Institute 2024). These data are reported in **Table 4**. The significant differences in the total number of sightings days reported by the Orca Behavior Institute and Soundwatch are largely attributable to the different geographic scopes of coverage for the respective datasets, with the former covering the entirety of the Salish Sea from the Campbell River (British Columbia) to Puget Sound. According to the PWWA, the Orca Behavior Institute also generally reports higher numbers of sightings days than what is reported by Orca Master, likely owing to slight differences in geographic coverage and reliance on differing data sources.[19]

Table 4. Days of SRKW Presence in the Salish Sea (Campbell River to Puget Sound)

Year	2022	2023	2024
January	10	11	7
February	11	9	11
March	15	19	16
April	11	17	15
May	8	2	20
June	11	10	23
July	14	5	11
August	9	7	3

[19] Email communication from PWWA to IEc, on September 17, 2024.

Year	2022	2023	2024
September	19	10	9
October	20	9	Not available
November	22	15	Not available
December	17	16	Not available
Total	**167**	**130**	**115 (to date)**

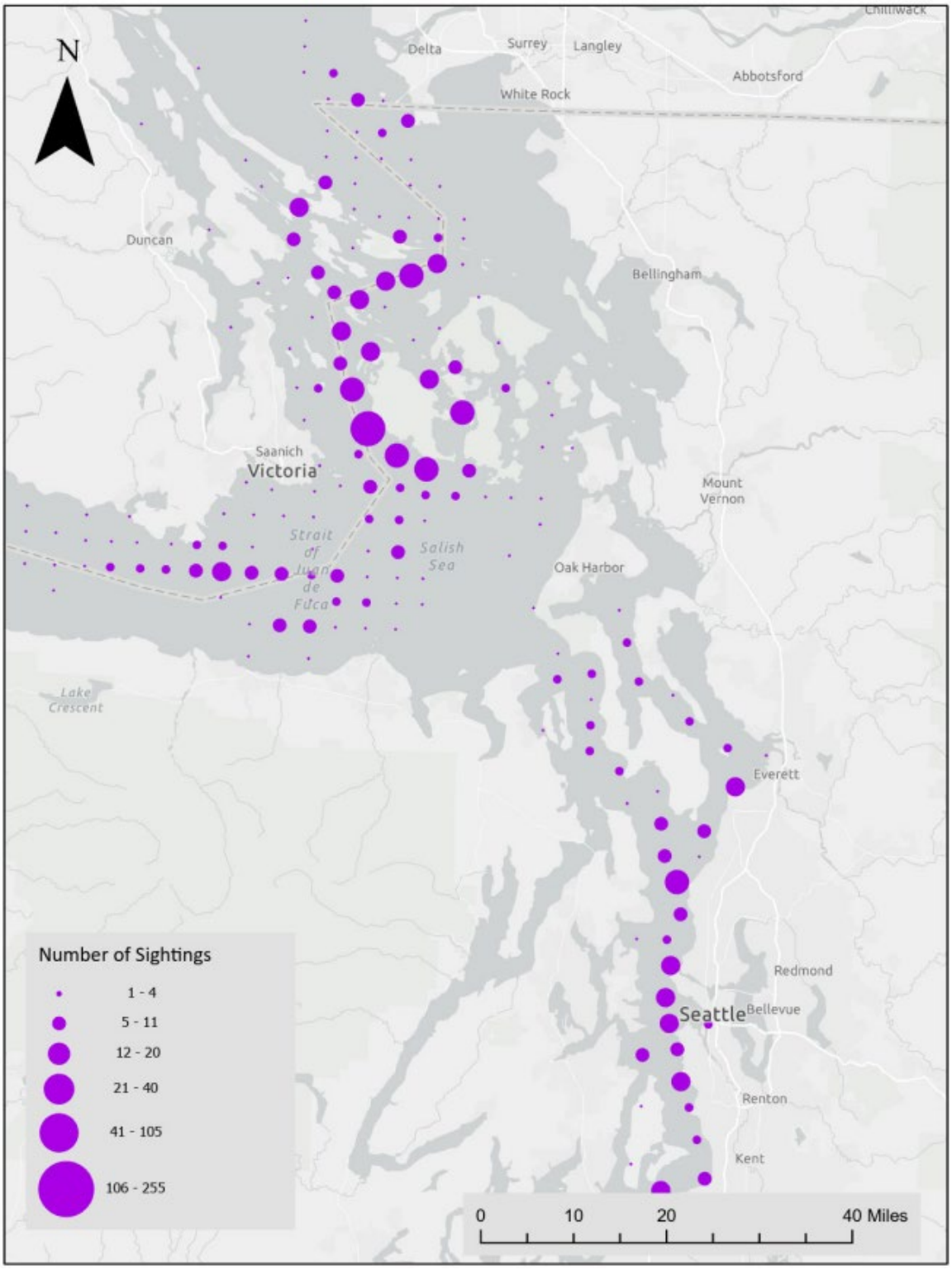
Source: Orca Behavior Institute (2024)

Geographic Distribution

Figure 4 and **Figure 5** identify the location and relative number of sightings of SRKW with the regulated waters according to the Whale Museum's Orca Master Sightings data. Areas on the west side of San Juan Island experienced a substantial proportion of overall SRKW sightings; this is as expected given that efforts to view SRKW are concentrated in that area. However, sightings are reported throughout the region, including as far south as Seattle and Tacoma. In 2024, SRKW were also frequently reported in the waters north of Seattle to Everett, likely driven in part by the population density of that area and number of individuals generally present to see and report them. **Figure 6** presents the location in which SRKW were present each month as observed during Soundwatch monitoring efforts (The Whale Museum 2024a). These data again indicate substantial presence on the west side of San Juan Island, as well as in Boundary Pass (2022) and the eastern Strait of Juan de Fuca (2023). Again, the lack of sightings noted in other regions is likely primarily due to the geographic coverage of Soundwatch's monitoring efforts.

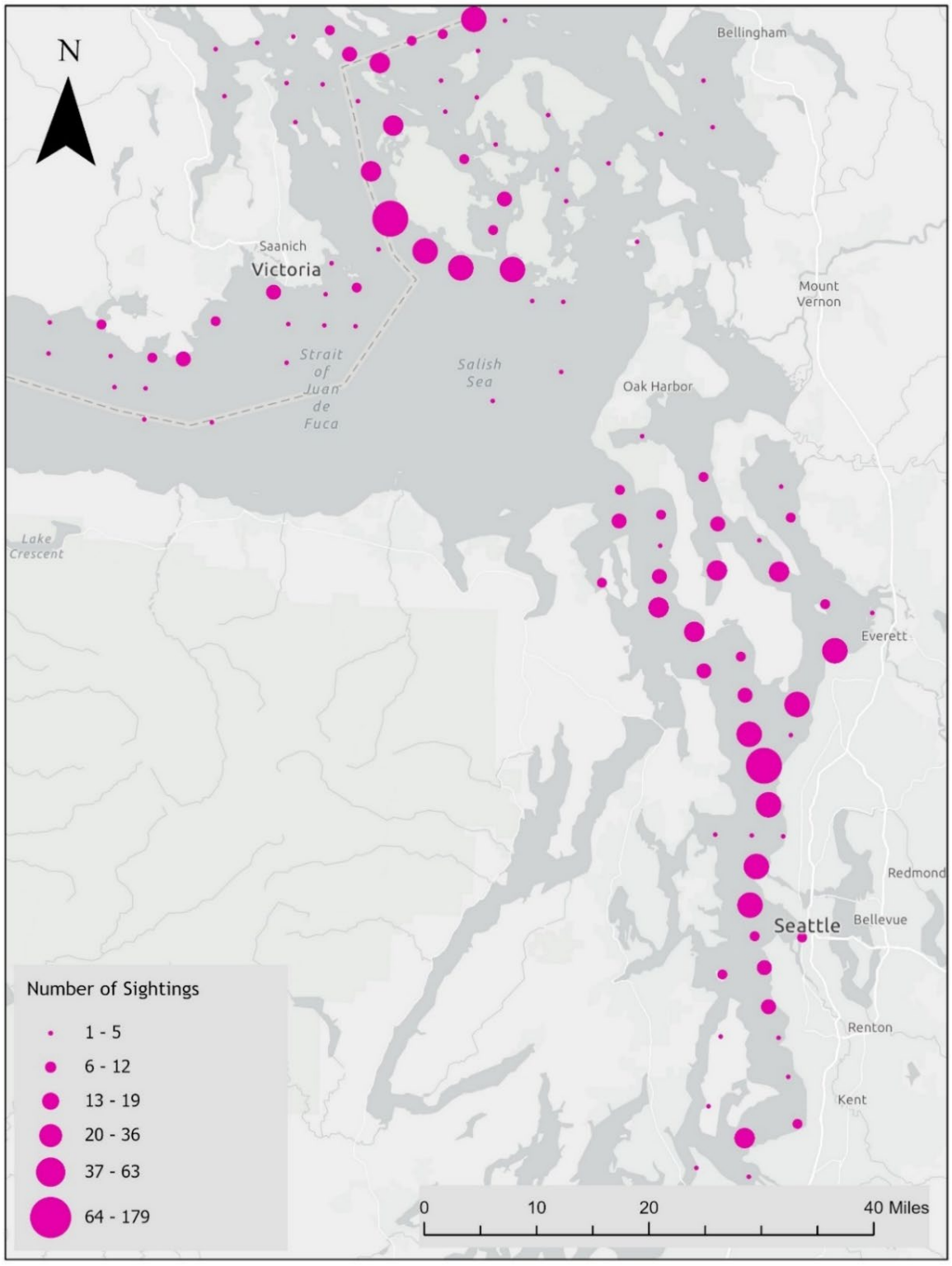
The relative presence of SRKW in specific locations, and within the region more generally, is due to multiple factors, including prey availability, ocean conditions, and/or vessel traffic. While information is not available to quantify the relationship between these stressors and the presence of SRKW, this analysis provides information on the opportunities available for SRKW viewing over time and space, and highlights when SRKW are exposed to vessel traffic.

Figure 4. Map depicting the number of SRKW sightings reported by quadrant in 2022.



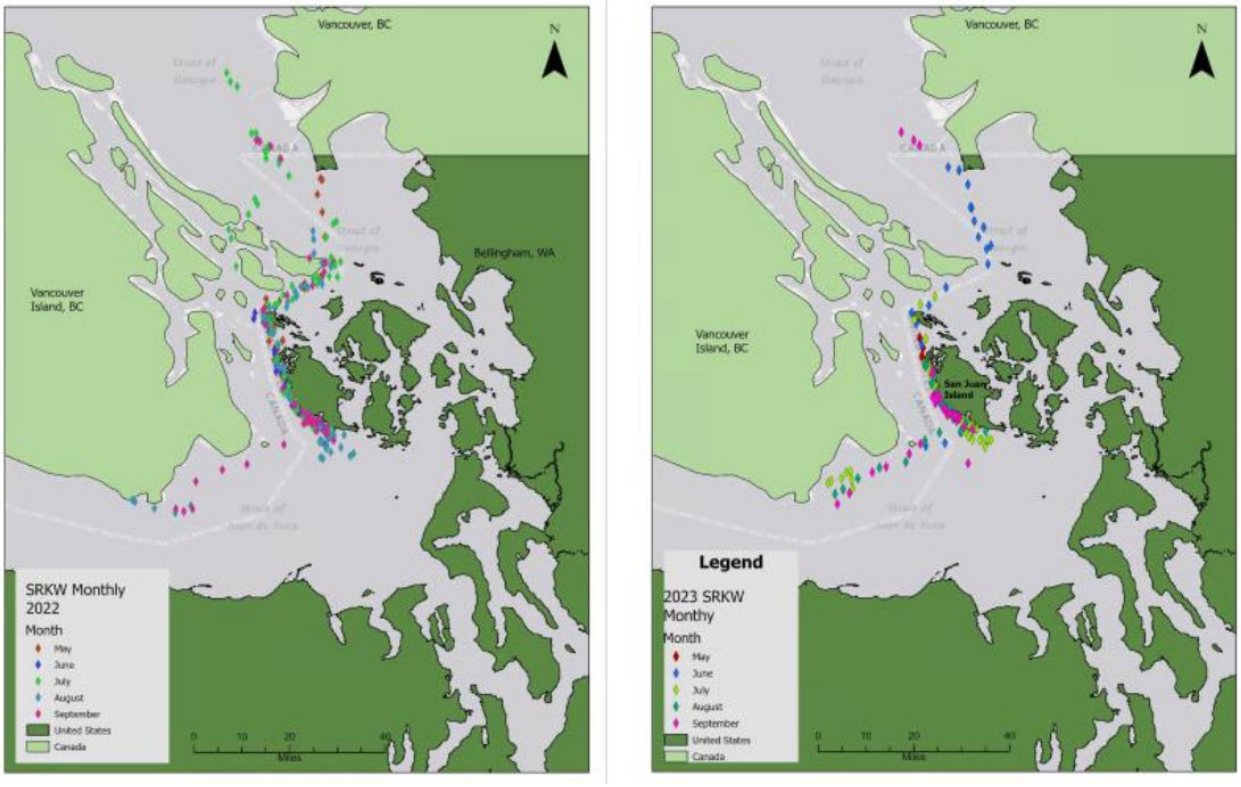
Source: Orca Master Data

Figure 5. Map depicting the number of SRKW sightings reported by quadrant in 2023.



Source: Orca Master Data

Figure 6. SRKW Presence by Month for 2023 and 2024



Source: Excerpted from The Whale Museum (2024a)

Commercial Whale Watch Licensing Program Outcomes and Opportunities

In 2019, the Washington State Legislature passed a law requiring WDFW to adopt regulations for viewing SRKW in Washington's inland waters for holders of the CWW License established in RCW 77.65.615. This section considers the effects and outcomes of the CWWLP in terms of industry composition, costs, implementation, and compliance with certain program elements. It also identifies areas where WDFW may consider adaptive management changes to enhance program performance.

Industry Profile and License Holder Summary

In implementing the CWWLP and promulgating regulations for license holders, the Legislature directed WDFW to consider the economic viability of license holders (RCW 77.65.620). The *Final Analysis of the Economic Viability of Commercial Whale Watching License Holders* found that the regulations were unlikely to threaten the economic viability of the industry as a whole (IEc 2020).[20] However, the analysis acknowledged that the effects on individual businesses could vary. This section considers whether there

[20] Economic viability was defined as the ability of the industry to continue to pursue whale watching as a means of earning a positive profit.

have been changes in the size and composition of the industry since program implementation, and whether businesses or vessels are conducting CWW operations without being properly licensed.

Business Licenses

CWWLP data indicate that the number of Motorized and Paddle Tour businesses licensed each year has been relatively stable since implementation of the program, fluctuating from a low of 34 in 2021 to a high of 39 in 2024 (WDFW License and Training Data). **Table 5** presents the number of businesses of each type licensed by WDFW between 2021 and 2024, as well as the total number of business licenses (which represents the sum of the licenses by business type from the first three columns). For comparison, the last column identifies the number of unique businesses that Soundwatch has identified as engaged in commercial whale watching each year. In 2023, 35 businesses obtained business licenses, while 39 businesses obtained business licenses in 2024. While the data appear to indicate a net increase in the total number of licensed businesses over this period, as well as some change in the composition of the industry by business type (e.g., fewer kayak-only businesses in more recent years), some of these changes are attributable to how WDFW has changed its tracking of vessel types associated with each business license over time. Beginning in 2024, WDFW began issuing distinct licenses to motorized/sailing businesses and paddle tour businesses. As a result, businesses that operate both types of vessels hold two individual business licenses, where they held only a single license in prior years. This change therefore influenced the total count of licenses beginning in 2024. These changes may also reflect several other potential factors including new businesses entering or leaving the industry, businesses changing name or structure, and possibly businesses obtaining licenses in early years and determining that their operations ultimately do not require licensing.

During the 2023 whale watch season, Soundwatch observed a total of 44 unique businesses engaged in commercial whale watching (The Whale Museum 2024a). The difference between the number of business licenses issued in 2023 (35) and the number of unique companies that Soundwatch observed whale watching (44) could reflect that a portion of Soundwatch's observations occurred in Canadian waters, may indicate that unlicensed businesses are engaged in commercial whale watching, or may be due to differences in how Soundwatch identifies a vessel as engaged in "commercial whale watching." Data provided by Soundwatch in 2023 indicate that sixteen businesses that do not appear to have held CWW licenses in 2023 were identified by Soundwatch as having engaged in commercial whale watching during the season (Soundwatch Fleet Data). WDFW may consider outreach and education to these businesses to remind them of licensing requirements if they are operating in U.S. waters.

WDFW Enforcement officers did not issue any citations or written warnings for operating without a CWW Business License in 2022, 2023, or 2024 (WDFW Enforcement Data). In general, the industry is well known to WDFW Enforcement, and known CWW operators are consistently properly licensed. However, WDFW Enforcement staff identified that they have received numerous reports of unlicensed businesses or individuals conducting CWW operations. These reports have resulted in numerous contacts and verbal warnings but have not yet risen to the level of issuing citations.[21]

[21] Personal communication with WDFW Enforcement staff on September 27, 2024.

Table 5. Commercial Whale Watching Business Licenses by Year

Year	Unique Kayak Business Licenses[a]	Unique Motorized Business Licenses[b]	Unique Motorized and Kayak Business License	Total Number of Business Licenses (WDFW License Data)	Unique Businesses Engaged in Commercial Whale Watching (Soundwatch)
2021	6	27	1	**34**	29
2022	4	31	2	**37**	39
2023	3	30	2	**35**	44
2024	3	36[c]	0	**39**	Not available

Note:

a. Beginning in 2024, WDFW issued specific Paddle Tour licenses. Previously, all businesses were licensed as Commercial Whale Watch businesses. Business type for earlier year is based on data identifying the vessels registered under each individual business license.

b. Beginning in 2024, these businesses are licensed as Commercial Whale Watch businesses distinctly from paddle tour businesses and include both motorized and sailing-based businesses.

Of these businesses, three are sailing-based operations, which are licensed as Commercial Whale Watch businesses along with motorized operations.

Source: WDFW License and Training Data; The Whale Museum (2019, 2020, 2021, 2022, 2023, 2024a)

The regulations require that business license holders "designate all commercial whale watching vessels to be used while engaging in commercial whale watching" (WAC 220-460-020 (6)). WDFW license data identify a total of 94 designated and licensed motorized and sailing CWW vessels in 2022, 63 in 2023, and 88 in 2024 (WDFW License and Training Data). During 2022, Soundwatch identified a total of 99 unique vessels observed watching whales in both U.S. and Canadian waters either frequently/actively, occasionally, or rarely and 106 in 2023 (The Whale Museum 2023 and 2024a). That there are significantly fewer vessels identified in WDFW licensing data as affiliated with identified business licenses than were observed engaged in whale watching in 2023 may be explained in part by Soundwatch observations made in Canadian waters, but could also suggest that vessels may be participating in this activity without being properly designated. This issue appears to be driven by vessels associated with businesses that are identified by Soundwatch as participating in whale watching but that are not licensed by WDFW.

Table 6 provides the total count of unique vessels observed engaging in commercial whale watching by Soundwatch in both U.S. and Canadian waters in 2019-2023, compared to the number of designated CWW licensed vessels reported to WDFW.

Table 6. Soundwatch Commercial Whale Watch Unique Motorized and Sailing Vessel Inventory and WDFW Registered Commercial Whale Watch Vessels

Year	Active Vessels (Soundwatch)	Occasional Vessels (Soundwatch)	Rare Vessels (Soundwatch)	Total Vessels (Soundwatch)	Registered Comm. Whale Watch Vessels (WDFW)
2019	100	18	20	138	NA
2020	49	5	14	68	NA
2021	29	17	18	64	81
2022	50	13	36	99	94
2023	89	4	13	106	63
2024	Not available	Not available	Not available	Not available	88

Source: The Whale Museum (2020, 2021, 2022, 2023 and 2024a) and WDFW License and Training Data

Operator Licenses

WDFW issued 139 motorized vessel Operator licenses in 2023 and 133 Operator licenses in 2024. Separately, the agency issued 49 Paddle Guide licenses in 2023 and 44 in 2024. WDFW enforcement officers did not issue any citations or warnings to CWW operators for operating without a CWW Operator's or Paddle Guide license in 2022, 2023, or 2024 (WDFW Enforcement Data).

Any business identified as actively whale watching during a given season should have at least one licensed Operator or Paddle Guide associated with that business, and license holders are required to maintain an accurate record of Operators and Paddle Guides authorized to operate that business's vessels (WAC 220-460-040). Because an individual Operator or Paddle Guide may be employed with multiple businesses, WDFW has put the onus on each business license holder to identify the operators and guides with whom they work within WDFW's permitting system.[22] Available data indicate that business license holders are not all maintaining these lists, as evident from the fact that there are presently multiple license holders with registered vessels that do not identify any authorized Operators or Paddle Guides. As WDFW migrates to a new permitting system, it should consider system modifications that would improve the agency's ability to confirm that all Operators and Paddle Guides engaged in leading CWW excursions are properly licensed, and that license holders are maintaining the required lists of authorized operators and paddle guides. WDFW should also emphasize this requirement in future training materials.

[22] Email communication with WDFW staff on October 17, 2024.

Training Requirements

Following the 2022 season, WDFW updated its licensing system to require that training be completed prior to issuance of an Operator or Paddle Guide license. As such, there were no instances of licensed Operators or Guides having not completed training in 2023 or 2024.

Administrative Costs of Licensing, Training, and Reporting

At the time the CWWLP was implemented, WDFW anticipated the administrative costs of the program would include costs of the license itself, and staff time required to complete required training, and to fulfill both the WDFW and Whale Report Alert System (WRAS) reporting requirements. The *Final Analysis of the Economic Viability of Commercial Whale Watching License Holders* considered the costs associated with the regulatory options specifically.[23] It found that costs associated with training were likely to be low, given that the rule element did not differ substantially from annual training in which all PWWA members already participated.[24] It further concluded that costs associated with reporting would be di minimis, because PWWA members maintain close contact with WDFW when on the water and were already generally reporting interactions with SRKW (IEc 2020).

With respect to costs of business licensing, industry representatives identified that WDFW deferrals of fees and reimbursement of past licensing costs substantially reduced these costs to the industry. **Table 7** summarizes the history of documented licensing fees for one example motorized business and one example paddle tour business, and whether those fees were paid, waived, or if paid fees were reimbursed. These data indicate that businesses did not pay licensing fees in 2021 or 2022, and that fees in 2023 and 2024 were substantially reduced from originally identified levels. Some representatives indicated that the time spent on the application itself was somewhat onerous given "clunkiness" of the system and fact that the same information must be entered every year; however, they did not identify it as a substantial cost.[25]

[23] Because the application and costs of the license itself were not part of the same rulemaking process, they were not considered in the viability analysis.

[24] The majority of Commercial Whale Watch Business License holders are members of the PWWA.

[25] Interviews with Commercial Whale Watch Business License holders in September 2024.

Table 7. Summary of Annual Commercial Whale Watch and Paddle Tour License Fees for Example Businesses

Source:	**Original fees per 2019 SB 5577**	**Fees per 2021 SB 5330**	**Fees per 2021 SB 5330**	**Fees per 2023 SB 5371**	**Total Paid by Business (2021-2024)**
Year(s):	**2021**	**2021 & 2022**	**2023**	**2023 & 2024 (and ongoing)**	**4-Year Cumulative**
Status:	Not collected	Fees waived during COVID-19 pandemic per SB 5330	Fees refunded to SB 5371 updated fee levels	Fees collected	
Sample CWW operation					
Business	$200 + $75 app. fee	$0	$200 + $75 app. fee	$200 + $70 app. fee	$540
Vessel 1: 125 passengers	$1,825	$0	$1,825	$0	$0
Vessel 2: 30 passengers	$525		$525	$0	$0
Vessel 3: 12 passengers	$325	$0	$325	$0	$0
Operator 1	included in business license	$0	$100 + $75 app. fee	$25 app. fee	$50
Operator 2	$200 + $75 app. fee	$0	$100 + $75 app. fee	$25 app. fee	$50
Operator 3	$200 + $75 app. fee	$0	$100 + $75 app. fee	$25 app. fee	$50
Total	$3,500	$0	$3,475	$345	
Actual Payment (Net)	**$0**	**$0**	**$345**	**$345**	**$690**
Sample paddle tour operation					
Business	$200 + $75 app. fee	$0	$200 + $75 app. fee	$200 + $70 app. fee	$540
30 kayaks	$425	$0	$0	$0	$0
Guide 1	included in business license	$0	$25 + $25 app. fee	$25 app. fee	$50
Guide 2	$200 + $75 app. fee	$0	$25 + $25 app. fee	$25 app. fee	$50
Guide 3	$200 + $75 app. fee	$0	$25 + $25 app. fee	$25 app. fee	$50
Guide 4	$200 + $75 app. fee	$0	$25 + $25 app. fee	$25 app. fee	$50
Guide 5	$200 + $75 app. fee	$0	$25 + $25 app. fee	$25 app. fee	$50
Guide 6	$200 + $75 app. fee	$0	$25 + $25 app. fee	$25 app. fee	$50
Guide 7	$200 + $75 app. fee	$0	$25 + $25 app. fee	$25 app. fee	$50
Guide 8	$200 + $75 app. fee	$0	$25 + $25 app. fee	$25 app. fee	$50
Total	$2,350	$0	$675	$470	
Actual Payment (Net)	**$0**	**$0**	**$470**	**$470**	**$940**

The costs associated with Operator and Paddle Guide licensing and training differ across businesses, driven primarily by the number of staff that must be licensed. Although these costs do not appear to be substantial for the industry as a whole, they can be a meaningful cost for individual businesses. At least one CWW License holder indicated that his costs for staff time spent on license applications and training are on the order of several thousands of dollars each year.[26]

Industry representatives identified a range of opinions regarding the utility of the required training. Some interviewees identified it as a helpful refresher, particularly if there is new and updated information to provide with respect to regulations or other policies. Others felt that the frequency of training (i.e., annual) was unnecessary, citing a comparison to receiving a driver's license, where training is only completed once. [27]

To reduce the administrative costs of licensing and improve the utility of the training, WDFW should consider the following potential improvements:

- Modify the application system to provide option to have the system "pre-fill" application fields for businesses, vessels, and operators/guides that are already in the system;[28]
- Review training materials annually to identify opportunities to provide new or updated information; and
- Consider moving from an annual training to a bi-annual or other, less frequent training.

No industry representative interviewed felt that requirements to report SRKW interactions to WDFW or WRAS a substantial cost. Most cited that, given the fact that they do not actively target SRKW for viewing, and that they actively avoid interactions with SRKW where possible, the need for reporting is infrequent.[29]

AIS Compliance and Use

All licensed CWW vessels are required to have fitted aboard an AIS unit, and the unit must be in operation any time that vessel is engaged in commercial whale watching (WAC 220.460.140). This section describes compliance with this regulation and explores the potential uses and limitations of AIS data.

Compliance with AIS Carriage Requirement

Upon registration of individual vessels under an active business license, license holders must provide details specific to the vessel's AIS unit including the class type, name, and Maritime Mobile Service Identity (MMSI).[30] Because this information is self-reported to WDFW, it does not conclusively

[26] Interview with Commercial Whale Watch Business License holder on September 11, 2024.

[27] Interviews with Commercial Whale Watch Business License holders in September 2024.

[28] Although at least one interviewee identified this as a potential helpful program update, WDFW staff noted that applicants do already have the option of pre-filling information related to registered vessels so they need not be re-entered each year.

[29] Interviews with Commercial Whale Watch Business License holders in September 2024.

[30] MMSIs are nine-digit numbers assigned to digital selective calling, AIS, and other types of communication equipment to uniquely identify a ship (FCC 2024).

demonstrate that a unit is installed and active, or that WDFW is able to locate and identify the vessel using available AIS tracking applications.

To confirm that all registered CWW licensed vessels have AIS units on board that are operational, and that WDFW could retrieve activity data as needed, IEc referenced shipfinder.com, which can identify and isolate a vessel's location and time of last ping from their AIS based on the vessel's MMSI or name. IEc entered each vessel MMSI into the site. If the site produced a result, IEc was able to validate the vessel as being in compliance with the requirement that vessels have installed an AIS unit that is demonstrably operational.[31] For the list of vessels registered for the 2023 and 2024 seasons, the initial search identified eight vessels that shipfinder.com could not immediately identify as actively transmitting AIS signals under the MMSI listed in WDFW registry. Of those, a representative from the U.S. Coast Guard conducted additional research that found the following:

- Two vessels reported a valid MMSI that Coast Guard was able to locate and confirm;
- One reported a valid MMSI that Coast Guard was able to locate and confirm, but which had last been reporting from New Orleans;
- Four vessels mis-transcribed their MMSI number into WDFW's registration system, but Coast Guard was able to locate the correct MMSI number based on vessel name and confirm active transmissions; and
- One reported an erroneous MMSI, but the vessel name was too common to identify a correct MMSI or validate that the vessel is question has an active AIS unit on board.

To improve the ease of validating compliance with the AIS carriage requirement, and ensure that WDFW can retrieve associated AIS data as necessary, IEc recommends WDFW consider the following:

- Validate the reported MMSI number for each vessel immediately upon registration and follow up with license holder to correct if needed; and
- Reduce the potential for transcription errors by saving and pre-populating vessel characteristics each time a vessel is re-registered.

Compliance with AIS Operation Requirement

AIS units must be in operation any time that vessel is carrying paying passengers to view whales. Evidence suggests that across regulated industries, vessels may turn off AIS units during vessel operations for different reasons. In certain cases, there may be legitimate safety related reasons for vessels to do so (e.g., commercial ships transiting areas known for piracy). However, vessels may also turn off AIS units to mask illegal activity (e.g., fishing in a closed area), to protect confidentiality of their activity location from other vessels, or simply because of privacy and not wanting to be "watched" (Global Fishing Watch 2016). Given the location of CWW activity, legitimate safety-related concerns do not apply, and all vessels are required by law to maintain operation of the system during trips. IEc

[31] This analysis considers specifically whether an AIS unit is installed, and there is evidence that it is able to transmit data. The following section, *Compliance with AIS Operation Requirements,* considers whether vessels are complying with the requirement that the AIS unit be actively transmitting data during all commercial whale watching activities.

explored whether the AIS track data would allow us to confirm that CWW licensed vessels are adhering to the requirement to have their AIS units turned on when operating tours.

In theory, a vessel with an active AIS unit would display as a single, unbroken track for a given trip on a given day. To test this assumption, IEc reviewed a sample of trip data to identify track patterns that might suggest intentional engagement and disengagement of the systems. The intent of this review was not to comprehensively evaluate compliance with this requirement. But rather, to identify whether the AIS data themselves could be used for this type of compliance validation. Specifically, after downloading the AIS track data for the year of 2023 and uploading it into ArcGIS Pro, IEc used a SQL script to isolate all MMSI numbers for registered CWW vessels. From there, IEc randomly selected several specific MMSIs and from those results, a single day through GIS processes to observe how the AIS tracks appeared on a random isolated date.

A review of 2023 AIS transmissions from the licensed CWW fleet showed gaps in the track data, known as "AIS transmission gaps." In 2023, licensed vessels transmitted 52,614 individual track lines across 355 days, with a single track line indicating the beginning through end of a transmission (Marine Cadastre 2023). If all individual vessel trips in a single day did not experience a break in transmission, that trip would be represented as a single track for that day. Assuming every vessel in the fleet (61) participated in a trip on each day within the dataset (355), the total number of tracks in the data (52,614) far exceeds the number of tracks that would be expected (21,655), suggesting that many trips are represented as >1 track within the data (i.e., experienced transmission gaps). Under a different assumption that each vessel participates in two trips daily on each of the 355 days, which is almost certainly an overestimate of the number of total trips taken across the fleet, the number of expected tracks (43,310) is still lower than the number of tracks in the data (52,614), supporting the conclusion that many trips experience transmission gaps.

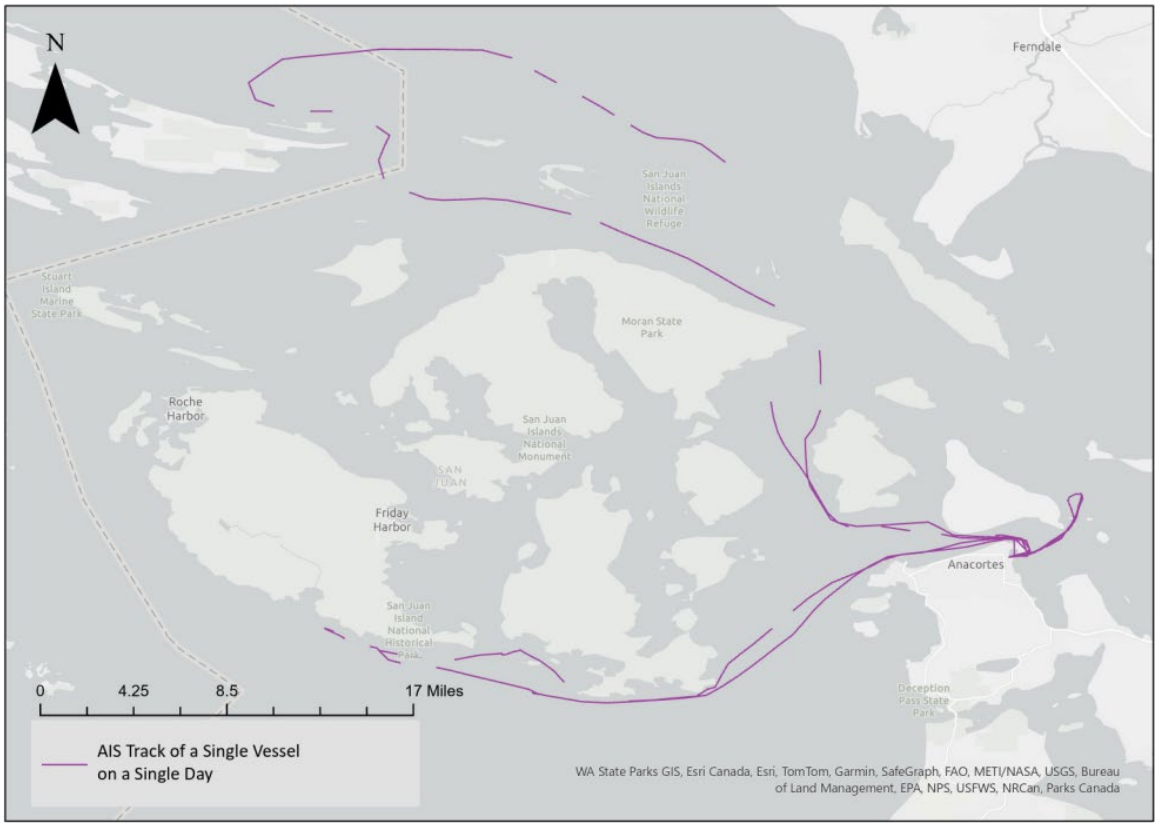
Figure 7 and **Figure 8** provide two examples of the AIS tracks of two separate single CWW vessels operating in the vicinity of the San Juan Islands. Through this process, IEc identified that it is common for a given vessel's AIS track to be non-continuous during a given day and trip. However, this does not necessarily suggest the vessel operator was intentionally engaging and disengaging the unit, as transmission gaps can also occur because the transmission has not been successfully received. According to our research, this can occur for several reasons including:

- Operation in an area without terrestrial stations and beyond satellite coverage (likely not applicable in Puget Sound);
- High volume of vessel traffic resulting in conflicts between signals;
- Poor quality transmissions due to vessel system or receiver; or
- Poor weather conditions (Windward 2024, Ford et al. 2018).

Altogether, it is not unusual for AIS transmission gaps to occur, and thus breaks identified in vessel tracks alone are not an appropriate method of identifying non-compliance. This fact is a known limitation in the ability to use AIS data to identify illegal activity, and developing methods for analyzing large amounts of AIS data and isolate "legitimate" breaks in vessel tracks from those that may indicate

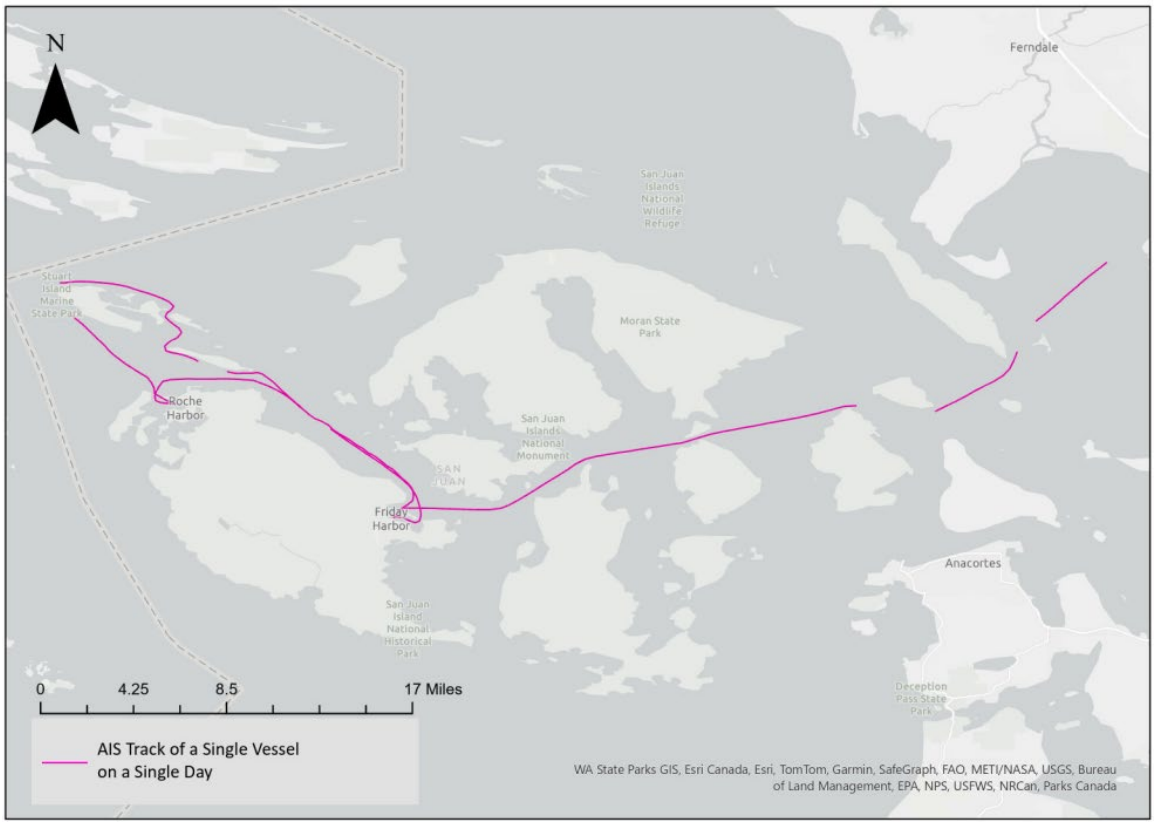
non-compliant activity is an area of active research (see, for example, Ford et al. 2018). It may be possible to obtain some additional information regarding compliance rates with closer inspection of data to determine whether gaps in vessel tracks are explainable. However, IEc expects this would provide limited additional insight given the level of effort that would be required.

Figure 7. Recorded AIS Tracks for a Single Vessel on August 3, 2023 (Example 1)



Source: AIS tracks were developed using AIS data from Marine Cadastre (2023).

Figure 8. Recorded AIS Tracks for a Single Vessel on October 4, 2023 (Example 2)



Source: AIS tracks were developed using AIS data from Marine Cadastre (2023).

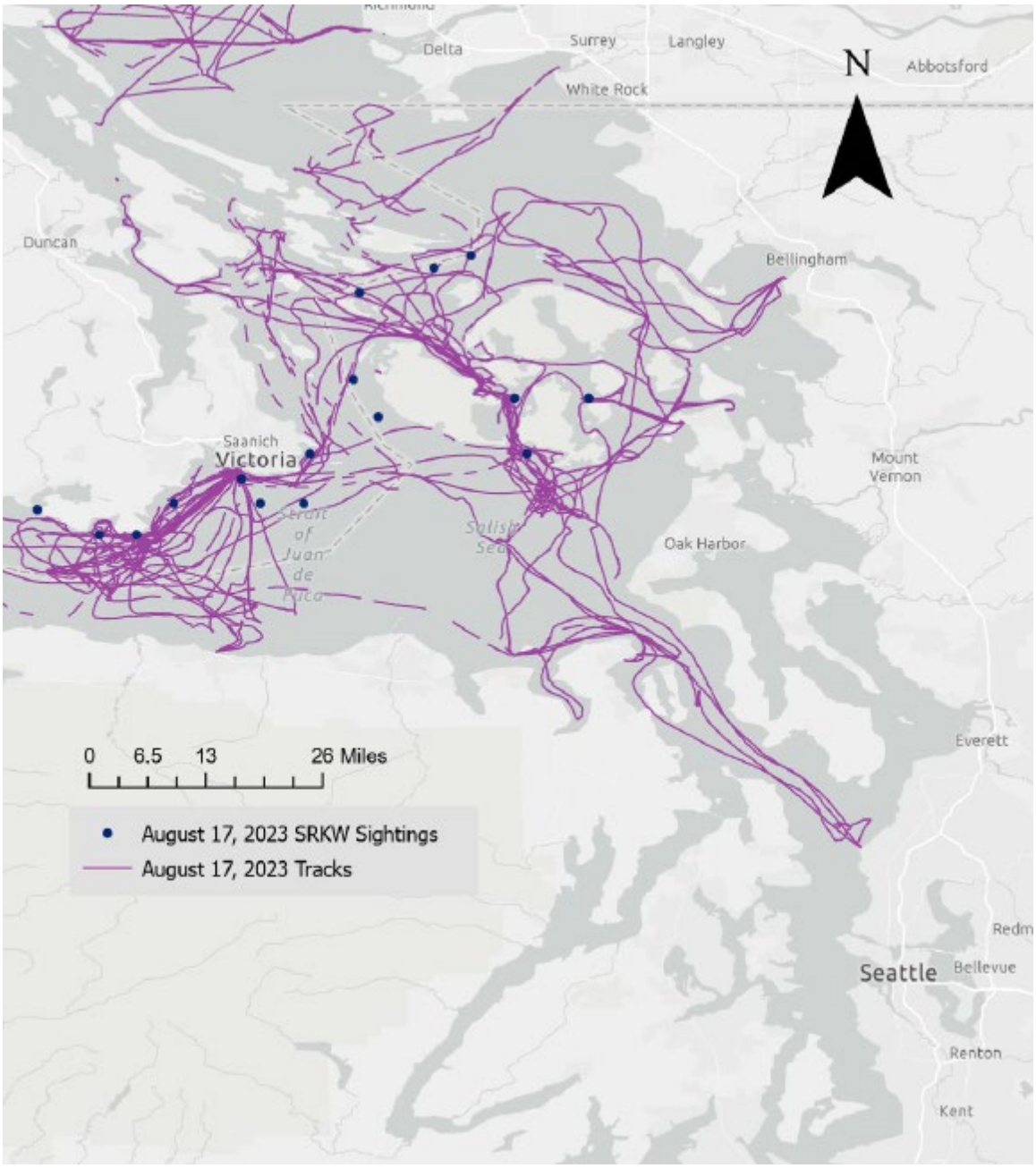
Opportunities to Use AIS Data

AIS track data allow for the monitoring of individual vessels, traffic hotspots, and variations of the two over an entire year, month, week, or day, depending upon the needs of the analysis. Using a single vessel identifier such as their MMSI number can provide a way to isolate vessels over a period of time. AIS tracking data allow WDFW and others to view and analyze the timing, location, and path taken by any CWW vessel with an operational AIS unit on board. With the exception of times when transmissions may be absent, WDFW should have access to these data for the entire CWW fleet.

The availability of this detailed geospatial information offers the following potential opportunities:

- Understanding at a high level the relative intensity of CWW activity within the vicinity of known SRKW sightings;
- Retrospectively viewing the activity of the licensed CWW fleet in a specific location and on a specific day when available data indicate SRKW were present (see, for example, **Figure 9**);
- Tracking CWW activity outside of the locations and seasons in which Soundwatch is on the water; and
- Understanding the relative levels of activities across regions to identify the best distribution of limited enforcement resources.

Figure 9. AIS Tracks for Licensed Commercial Whale Watch Vessels and SRKW Sightings, August 17, 2023



Source: AIS tracks were developed using AIS data from Marine Cadastre (2023); Orca Master Data

Note: Vessel track and SRKW sightings data presented in this figure identify vessel and whale locations comprehensively across the entire day. The presence of both a vessel track and SRKW sighting in a single location does not imply that both events were occurring at the same point in time.

While AIS does provide these monitoring opportunities, there are some limitations to working with these data. In particular:

- The dataset itself is large and cumbersome to work with, and there is a fairly intensive process required to isolate specific regions or vessels in a GIS program such as ArcGIS Pro;
- The track data are known to contain gaps where the AIS stops recording the vessels movement for typically short periods of time (as shown in **Figure 7** and **Figure 8**).
- The data do not have sufficient spatial resolution to use as a tool for identifying vessel activity in a very specific location relative to a known whale sighting (e.g., for purposes of identifying approach distance violations).

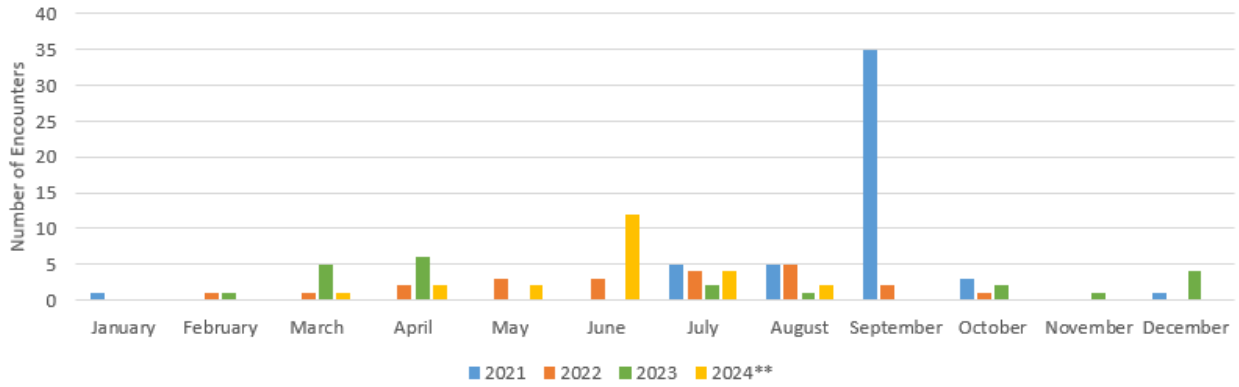
Reporting Compliance

The CWW and Paddle Tour License Holder regulations require reporting all encounters within one-half NM of SRKW to WDFW, and motorized CWW License Holders must also report to WRAS. This section describes how encounters within one-half NM of SRKW as reported to WDFW have changed over time, whether operators are making the required corresponding report to WRAS, and whether there are any specific challenges operators are encountering with respect to reporting compliance that could be addressed through adaptive management.

Reporting to WDFW

While logging and reporting SRKW encounters to the Department will be optional starting in 2025 per Senate Bill 5371, the existing regulations require that all CWW and Paddle Tour license holders maintain logs that they submit to WDFW each time a vessel comes within one-half NM of SRKW (WAC 220-460-140(3)). **Figure 10** presents the total number of SRKW encounters by month reported by license holders. In 2023, license holders reported a total of 22 encounters, 50 percent of which occurred between March and April (WDFW SRKW Encounter Data). The 2024 encounters were highest in June, but represent only a portion of the year, as they exclude data from October through December. Reported encounters in 2023 and 2024 during the period from January through September (15 and 23 encounters, respectively) were lower than in 2021 for that same period, which had 46 reported encounters. During this period, only motorized operations reported encounters with SRKW, although Soundwatch Vessel Count data indicate that Ecotour kayaks were included in counts of vessels within one-half NM of SRKW (see discussion in the section, *Soundwatch Vessel Count*). Importantly, there has been a substantial reduction in the frequency with which license holders are reporting purposefully encountering SRKW within the days and times during which viewing is allowed and viewing the whales within one-half NM. This is discussed in greater detail in a later section of this report, *Co-Occurrence of SRKW and Vessel Traffic*.

Figure 10. Encounters with SRKW by Commercial Whale Watch and Paddle Tour License Holders Reported to WDFW

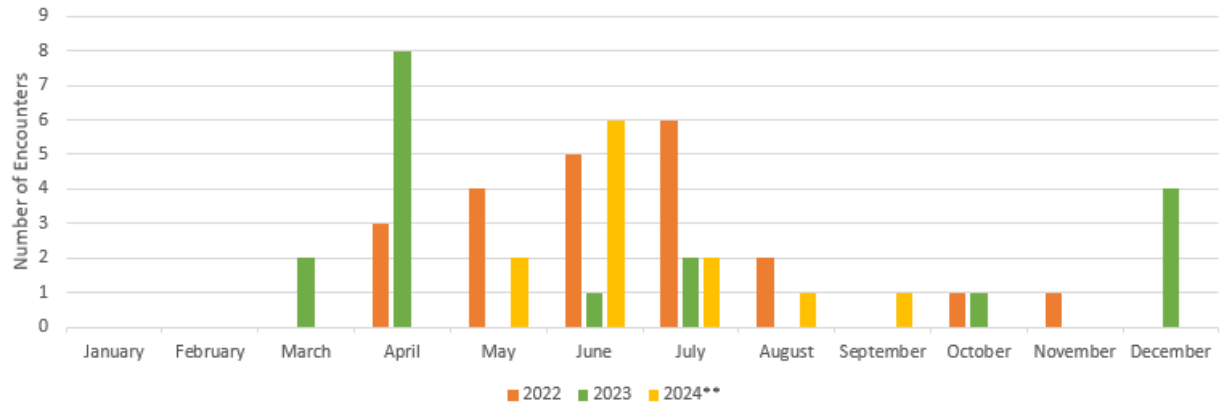


Source: WDFW SRKW Encounter Data
Note: ** 2024 data are only available through September.

Reporting to WRAS

Each time a motorized licensed vessel comes within one-half NM of SRKW they must also log sighting information to WRAS through the WhaleReport application (WAC 220-460-140(4**)**). **Figure 11** identifies the total number of SRKW encounters within Washington waters by month reported by license holders directly to WRAS. In 2023, license holders reported a total of 18 encounters, with the highest number of encounters reported in April (8) (WRAS Data). The reported 2024 encounters were highest in June (6), but represent only a portion of the year, as they do not include data from October through December. Encounters for the period between January and September in 2024 (12) are similar to what was reported for the same period in 2023 (13), but notably lower than what was reported for 2022 during these months (20).

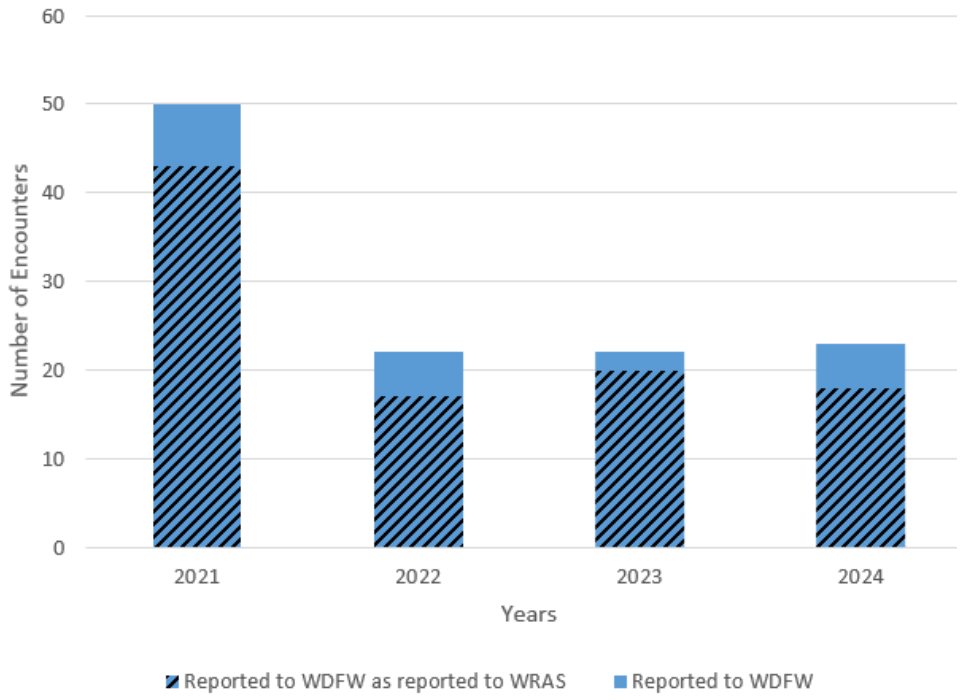
Figure 11. Encounters with SRKW by Commercial Whale Watch License Holders Reported to WRAS



Source: WRAS SRKW Encounter Data
Note: ** 2024 data are only available through September.

Reports made to WDFW must include an indication of whether the encounter being logged was also reported to WRAS. **Figure 12** presents the total number of SRKW encounters reported to WDFW and the proportion of those reports identified within the WDFW Encounter Data as also made to WRAS. In 2021, 86 percent (43 of the 50) of the encounter records logged with WDFW indicate that they were also reported to WRAS, while in 2023, 91 percent (20 of 22) of the logged encounters identified that they reported to WRAS (WDFW SRKW Encounter Data). In 2024, however, only 78 percent of encounters were identified as reported to WRAS. The data presented in **Figure 12** do not indicate any clear trend in terms of license holder compliance with the requirement to report all encounters identified to WDFW to WRAS as well.

Figure 12. Commercial Whale Watch and Paddle Tour License Holder Encounters Reported to WDFW as Reported to WRAS, as a Proportion of Encounters Reported to WDFW



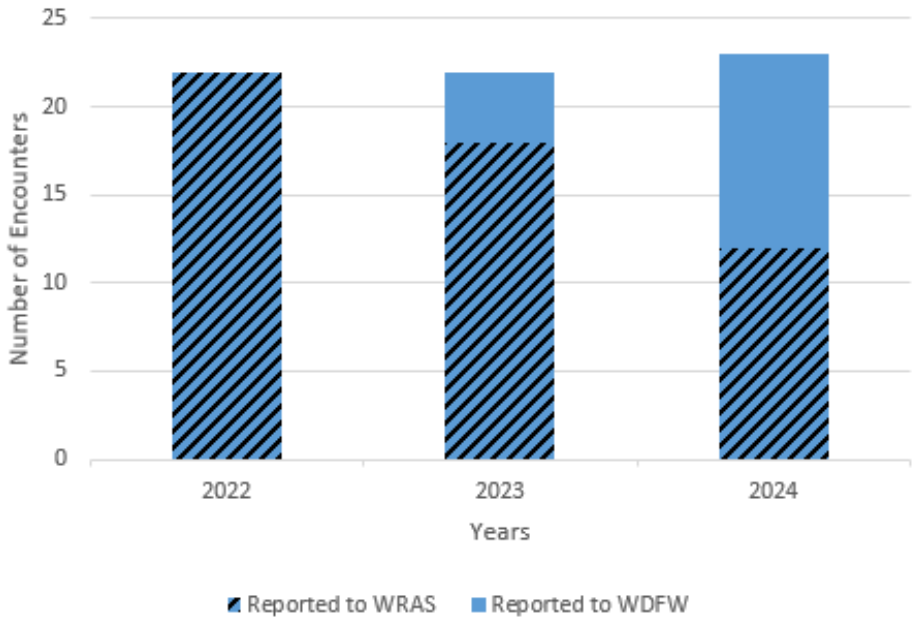
Source: WDFW SRKW Encounter Data
Note: ** 2024 data are only available through September.

Figure 13 shows the actual number of encounters reported to WRAS as a proportion of the number of encounters reported to WDFW. Encounters reported to WRAS fell from 22 encounters in 2022 to 12 encounters in 2024. In contrast, the number of encounters reported to WDFW has been consistent, with reports increasing slightly from 22 encounters in 2022 to 23 encounters in 2024. Notably, in 2024, the number of encounters reported to WRAS (12) was only 52 percent of the encounters reported to WDFW, despite 78 percent of reports to WDFW identified as having been reported to WRAS. This discrepancy could indicate that not all encounters identified to WDFW as having been reported to WRAS have, in fact, been successfully reported.

Beginning in July 2022, WDFW began requesting an explanation from license holders when indicating they had not reported an encounter to WRAS. In the latter half of the 2022 season, individuals reported technical difficulties and the need for engagement and communication with their passengers as reasons for not reporting to WRAS (WDFW SRKW Encounter Data). In 2023, users reported one instance of a technical difficulty using the reporting application, and one instance of uncertainty as to whether all vessels on the scene were required to make a report. However, in 2024, there were five instances of technical difficulties that prevented encounters reported to WDFW from being successfully reported to WRAS.

Technical difficulties and cellular service limitations affect license holder ability to comply with the requirement to report encounters to WRAS. In addition, as described previously, there is reason to believe that even more encounter reports being made to WDFW are not being reported to WRAS than are identified within the WDFW data. Beginning in January 2025, CWW License holder encounter reporting to WDFW will become optional, while reporting to WRAS will remain mandatory. As WDFW prepares for the transition, it should consider how additional outreach and education may improve compliance with this requirement, as well as how they might partner with Ocean Wise to address the technical limitations of reporting to the system. WDFW should also consider ensuring that training materials clarify that every vessel experiencing an encounter with SRKW, including kayaks, is required to report it, regardless of whether it is reported by other vessels on the scene.

Figure 13. Proportion of Commercial Whale Watch and Paddle Tour License Holder Encounters Reported to WRAS as a Proportion of Encounters Reported to WDFW



Source: WRAS SRKW Encounter Data
Note: ** 2024 data are only available through September.

Co-Occurrence of SRKW and Vessel Traffic

An objective for SRKW recovery of both the CWWLP and vessel traffic regulations more broadly is to reduce the extent of noise experienced by SRKW. Although data are not available to directly measure the level of noise experienced by SRKW and how that has changed over time, one can consider changes in other factors that are directly related to noise. That is, the number of vessels operating in proximity to SRKW, the incidents of fast speeds around SRKW that are known to be a key determinant of noise they experience, the number of vessels out of compliance with current approach restrictions (i.e., operating in close proximity to SRKW), and the frequency with which CWW License holders are purposefully viewing SRKW.

Soundwatch Vessel Count

The Whale Museum's Soundwatch program provides systematic monitoring of vessel activities around whale species, with a particular focus on SRKW. During each day of monitoring, Soundwatch conducts counts of vessels within one-half NM of any whale species by type every 30 minutes (the Whale Museum 2024a). Vessels that remain within the area for extended periods of time may be counted multiple times throughout a given day (i.e., a single vessel may be represented in more than one vessel count). For additional information on the Soundwatch Program, please see Supplement B-1. Data Sources.

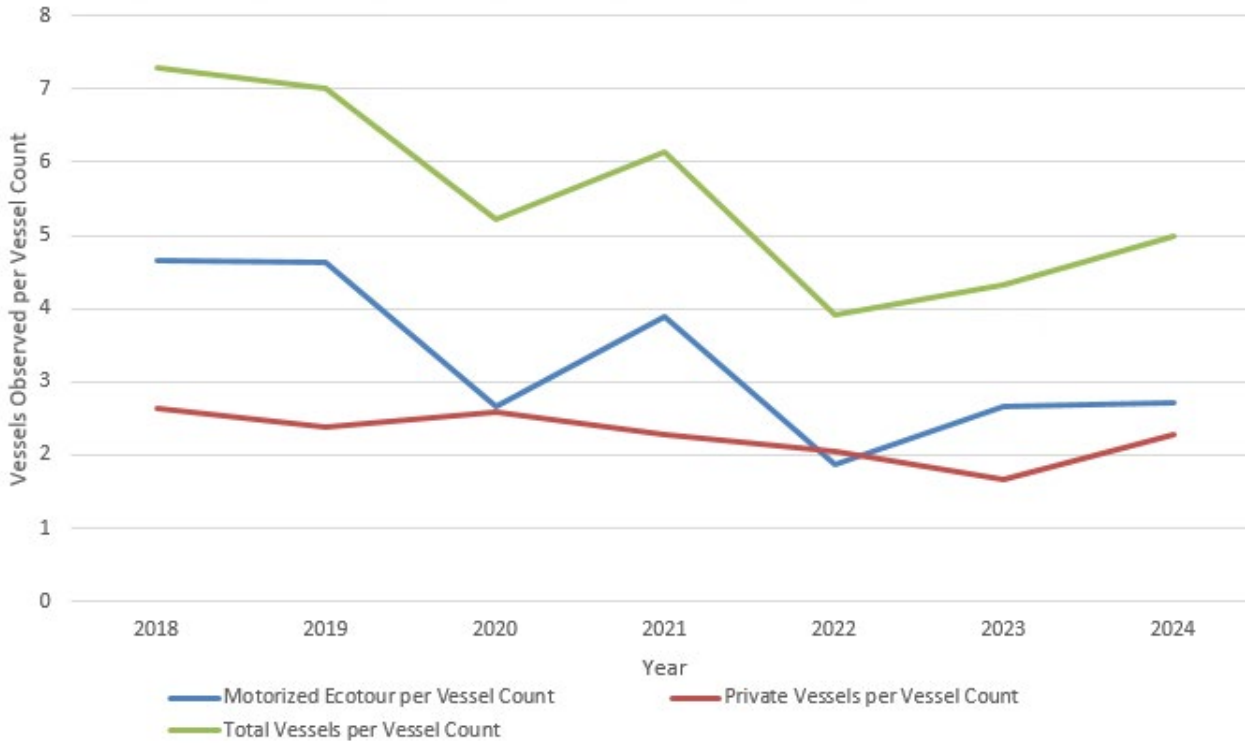
Soundwatch vessel count data indicate that vessel activity in general has likely changed over the analysis timeframe. This analysis considers the number of CWW (referred to as "Ecotour" by Soundwatch) and private recreational vessels observed per number of Soundwatch vessel counts, inclusive of all vessel count events around all whale species. This initial analysis provides context for understanding observed changes in vessel traffic in the vicinity of SRKW reported later. That is, it considers whether the observed changes in vessel activity around SRKW reflect a change in overall vessel activity around all whale species or changes in behavior around SRKW specifically.

> **Soundwatch South**
>
> *Beginning in September 2023, Soundwatch began its Puget Sound Program as an expansion of the geographic range of coverage for its Boater Education Program. Soundwatch conducted a preliminary monitoring season in September to November 2023 as a proof of concept and implemented its first full monitoring season in 2024 (The Whale Museum 2024c). During the 2024 season, Soundwatch conducted a total of 122 vessel counts in the vicinity of SRKW on 21 monitoring days (Soundwatch South Vessel Count Data). Future Vessel Adaptive Management reports will include a complete analysis of vessel count and incidents occurring around SRKW within this region.*

As shown in **Figure 14**, vessel traffic around whales overall has decreased since 2018. In 2018, Soundwatch identified an average of 7.3 private recreational and Ecotour vessels (motorized and sailing vessels only) per vessel count (4.7 per vessel count for Ecotour vessels and 2.6 per vessel count for

private recreational vessels). Vessel traffic around whales then declined substantially in 2019 and again in 2020, when Soundwatch observed 5.2 vessels per vessel count (2.7 per vessel count for Ecotour vessels and 2.6 for private recreational vessels, respectively). Following an uptick in 2021 driven largely by Ecotour vessels returning to operations following the COVID-19 pandemic, vessel traffic decreased again in 2022 to 3.9 vessels per vessel count but has increased steadily each year since then. These data demonstrate that observed changes in vessel traffic in the vicinity of SRKW (discussed in the next section) could to some extent be driven by changes in overall vessel traffic around whales.

Figure 14. Vessels Observed per Vessel Count



Source: Soundwatch Vessel Count Data

Vessel traffic observed in the vicinity of SRKW has declined markedly since 2018, as show in **Figure 15** and **Figure 16**. In 2018, Soundwatch observed a total of 6.1 vessels per vessel count conducted in the presence of SRKW, which declined to 2.0 vessels per vessel count in 2021 and to 1.4 vessels per vessel count in 2023 and in 2024 (Soundwatch Vessel Count Data). These changes are likely driven by several factors including overall changes in vessel traffic, and almost certainly, the implementation of the CWWLP, which has substantially reduced the prevalence of CWW vessels within proximity to SRKW.

The Ecotour (motorized/sailing vessels and kayaks) vessel counts within one-half NM of SRKW and transients exhibit differing trends through the years 2018 to 2024. The number of motorized and sailing Ecotour vessels in the vicinity of SRKW has decreased from 1,170 vessels counted across all vessel

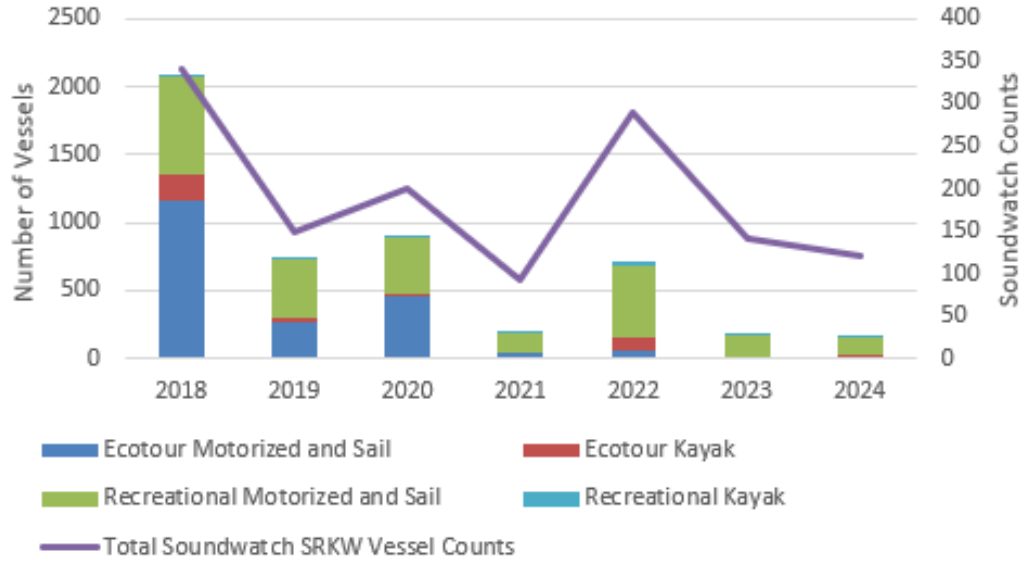
counts in 2018 (3.4 per vessel count) to 15 vessels counted in 2024 (0.1 per vessel count).[32] Similarly, Ecotour kayaks in the vicinity of SRKW has decreased from 186 vessels in 2018 (0.5 per vessel count) to 18 vessels in 2024 (0.1 per vessel count). At the same time, the number of motorized and sailing Ecotour vessels in the vicinity of transients has fluctuated substantially between 3.4 and 6.7 vessels per vessel count in the vicinity of transients throughout the period, with a relatively higher rate of observation every year relative to SRKW, particularly beginning in 2021 (the first year of the CWWLP). The number of kayak Ecotour vessels has remained relatively low, fluctuating between 0.1 and 0.2 vessels per vessel count in the vicinity of transients throughout the period (see **Figure 17** and **Figure 18**).

In 2023, the majority (80.3 percent) of vessels in the vicinity of SRKW (155) were private recreational motorized and sail (1.1 per vessel count), while only nine were motorized and sail Ecotour vessels (0.1 per vessel count). Similarly, in 2024, 75.4 percent of vessels in the vicinity of SRKW during vessel counts (129) were private motorized and sail recreational (1.1 per vessel count), while only 15 were motorized and sailing Ecotour vessels (0.1 per vessel count). Kayak Ecotour vessels in the vicinity of SRKW decreased substantially from 2022, in which 108 kayaks were counted (0.4 per vessel count) to 18 in 2024 (0.1 per count), while private recreational kayaks remained steady at 0.1 per vessel count. Although Ecotour kayaks have been present within one-half NM of SRKW in each year between 2021 and 2024, there are no recorded encounters of Ecotour kayak vessels within the WDFW Encounter Data.

As shown in **Figure 15** and **Figure 16**, motorized and sail Ecotour vessels in the vicinity of SRKW have decreased significantly over time, while private recreational motorized and sail vessels have increasingly constituted the majority of vessels observed around SRKW. Although the proportion of vessels in the vicinity of SRKW is now weighed more heavily toward private recreational vessels, the total number of private recreational motorized and sail vessels observed per vessel count has decreased somewhat over time, going from 3.0 vessels per vessel count in 2019 to 1.1 vessels per vessel count in 2024. The vessels in the vicinity of transients, shown in **Figure 17** and **Figure 18**, has been primarily motorized and sail Ecotour vessels each year, a pattern that has continued since implementation of the CWWLP (Soundwatch Vessel Count Data).

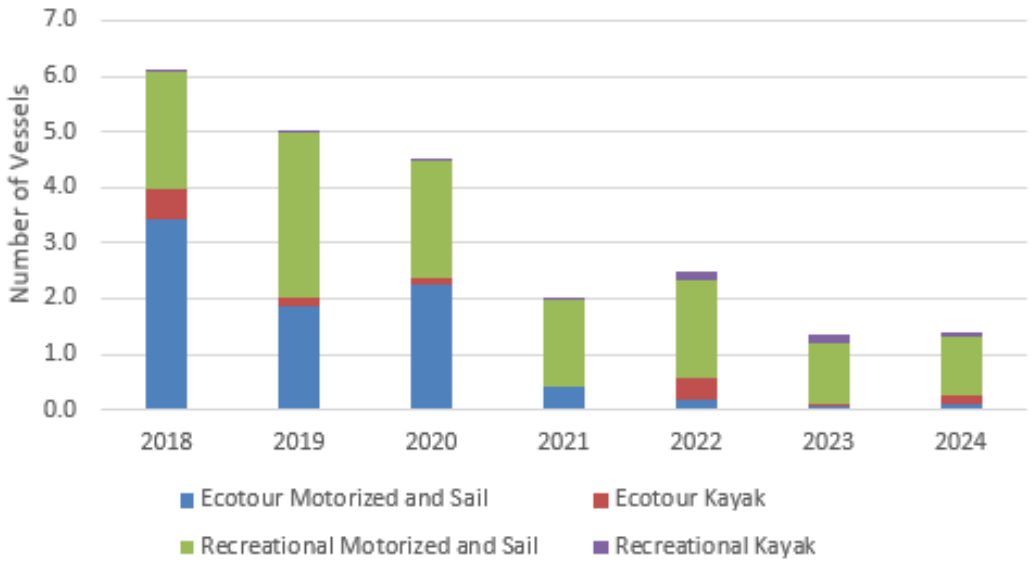
[32] As described previously, vessel counts are conducted every 30 minutes, and a given individual vessel may be counted more than once if it remains in the vicinity of observed whales for an extended period of time.

Figure 15. Vessels in the Vicinity of SRKW



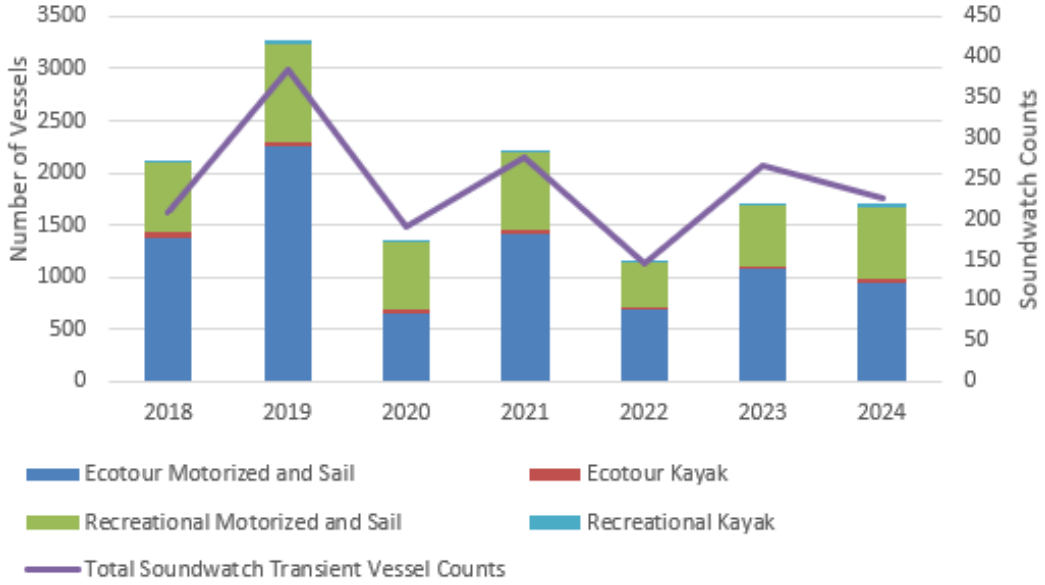
Source: Soundwatch Vessel Count Data

Figure 16. Vessels in the Vicinity of SRKW per Vessel Count



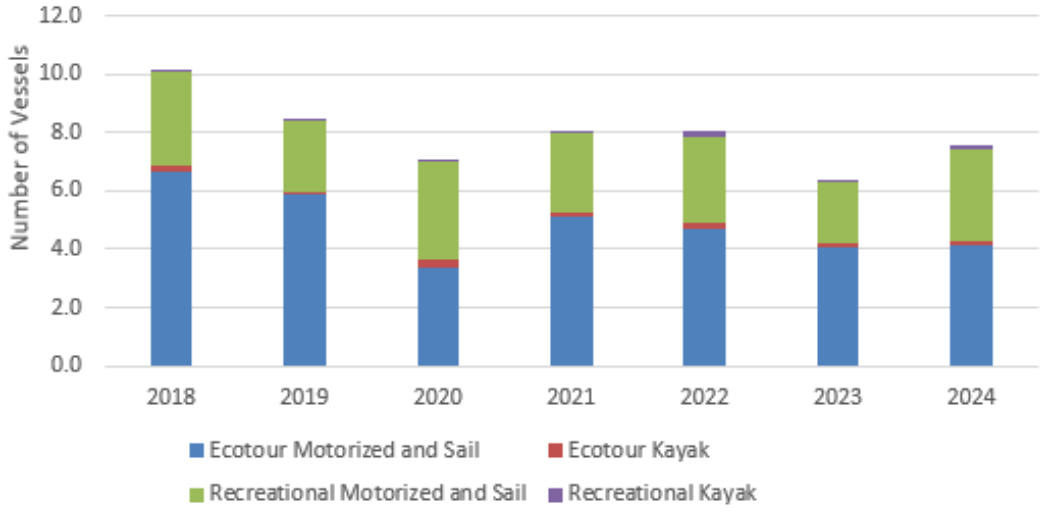
Source: Soundwatch Vessel Count Data

Figure 17. Vessels in the Vicinity of Transients



Source: Soundwatch Vessel Count Data

Figure 18. Vessels in the Vicinity of Transients per Vessel Count



Source: Soundwatch Vessel Count Data

Soundwatch Incidents

Soundwatch monitoring data allow for consideration of trends in vessel behaviors over time relative to compliance with regulations. Soundwatch identifies instances of violations of existing regulations and guidelines as “incidents” within their data. Each incident may include more than one violation (e.g., a vessel that is speeding at a distance closer than 300 yards on the side of SRKW is violating two regulations but is counted as a single incident). Importantly, it was not until 2020 that Soundwatch

began to clearly and consistently identify the species and ecotype in a format that allows for ready analysis. As a result, comparisons of vessel behavior in proximity to SRKW versus transient killer whales reflects only 2020 through 2024.

The variable of changes in the number of incidents over time is sensitive to the level of monitoring effort and presence of whales, which changes from year to year. For this reason, incident figures for "Ecotour" (the terminology used by Soundwatch to identify both motorized and kayak CWW vessels) and private recreational vessels are also reported in terms of incidents per day that Soundwatch was monitoring and identified that SRKW were present, to allow for comparison across years. As described previously, the number of incidents is also dependent upon the level of vessel activity on the water, which as previously described, has fluctuated over time. While an indicator of the extent of compliance with the regulations, the number of identified violations per day of SRKW presence is not a rate of non-compliance. Understanding the rate of non-compliance would require more information and analysis of the level of vessel activity associated with the identified violations. For example, two violations are more than one violation but two violations for 100 trips is a better compliance rate than one violation per 10 trips.

This section considers what Soundwatch incident data reporting violations of approach and speed restrictions can tell us about how SRKW are experiencing vessel traffic disturbance and whether that has changed over time.

SRKW Speeding Violations

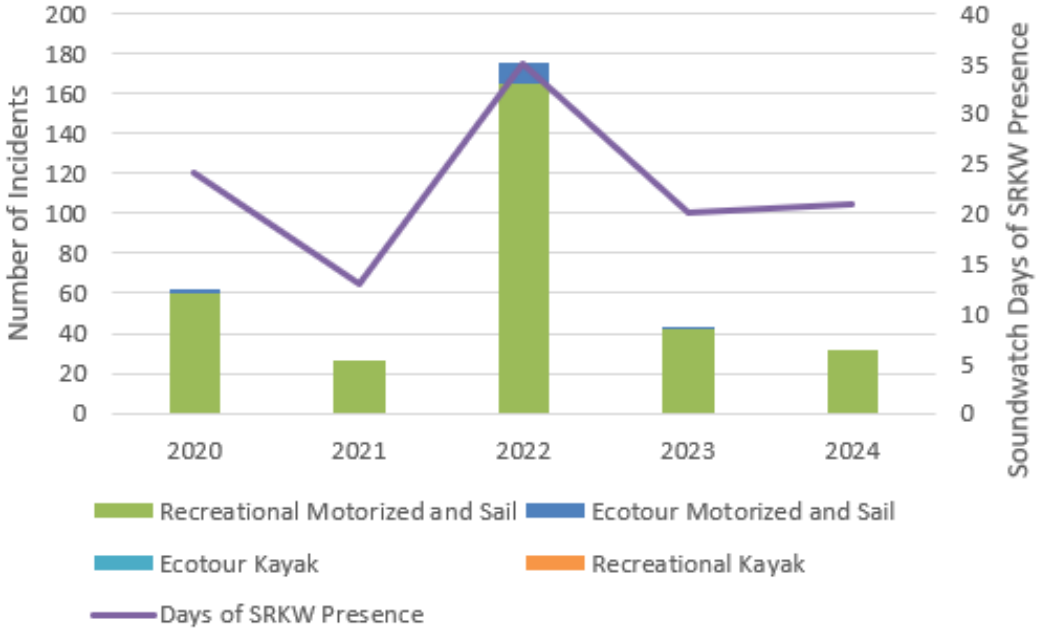
Reported incidents of speed violations in the vicinity of SRKW per day of SRKW presence do not directly confirm whether exposure to speeding at large has been reduced over time. This is because Soundwatch is not monitoring all areas of the region in all locations where SRKW are present at all times. Soundwatch incident data do, however, reflect the known number of instances in which SRKW were subject to noise associated with speeding.

The total number of speeding incidents (**Figure 19**) and number of speeding incidents per day of SRKW presence (**Figure 20**) across all vessel types has remained relatively consistent between 2020 and 2024 at 1.5 to 2.5 incidents per day of SRKW presence, with the exception of 2022, when Soundwatch recorded 5.0 incidents per day of SRKW presence. Since the high of 5.0 incidents per day of SRKW presence in 2022, incidents have trended downward, with 2024 representing the lowest rate of speeding incidents per day of SRKW presence (1.5) since the Licensing Program was implemented. Overall, the number of speeding incidents recorded per day of presence has decreased by just over one vessel per day since program implementation.

Through the years 2020-2024, the number of motorized and sail Ecotour vessels identified as engaged in speeding incidents have remained low (two or fewer incidents per year), with the exception of 2022, when Soundwatch observed 10 Ecotour vessels violating speed restrictions (0.3 incidents per day of SRKW presence) (Soundwatch Incident Data). As shown in **Figure 19**, speeding incidents have been more frequent for private motorized and sail recreational vessels, fluctuating from a low of 2.0 incidents per day of SRKW presence in 2021 and a high of 4.7 incidents per day in 2022, but reaching the lowest number of incidents in 2024, at 1.5 incidents per day of SRKW presence. These data indicate that while

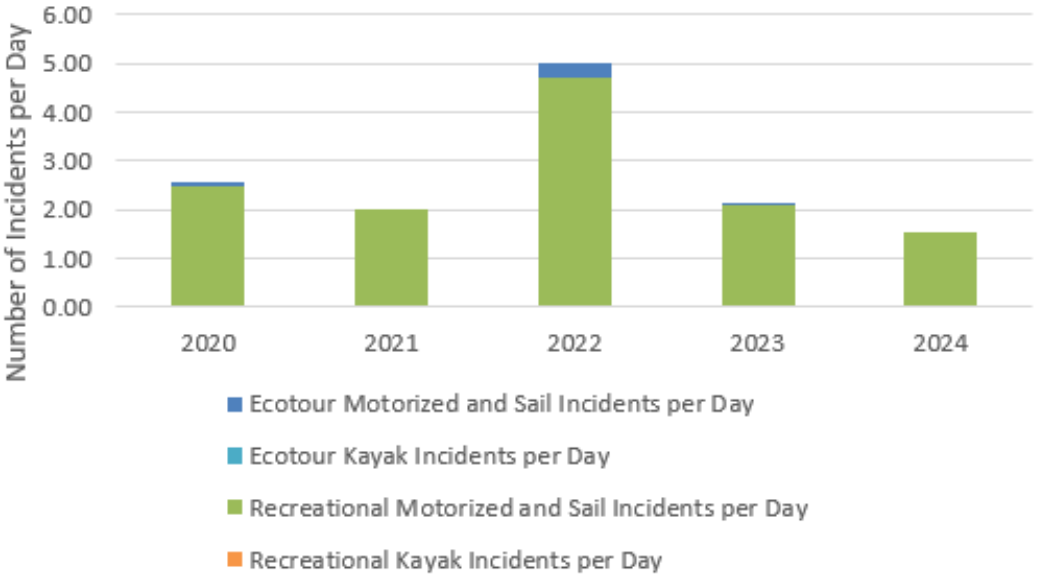
the number of speeding related incidents per day of SRKW presence for private recreational vessels has decreased overall, these incidents remain a source of disturbance to SRKW. Recreational and Ecotour kayaks have not experienced any speeding incidents within this timeframe (Soundwatch Incident Data).

Figure 19. Speeding Incidents in Proximity to SRKW



Source: Soundwatch Incident Data

Figure 20. Speeding Incidents in Proximity to SRKW per Day of SRKW Presence



Source: Soundwatch Incident Data

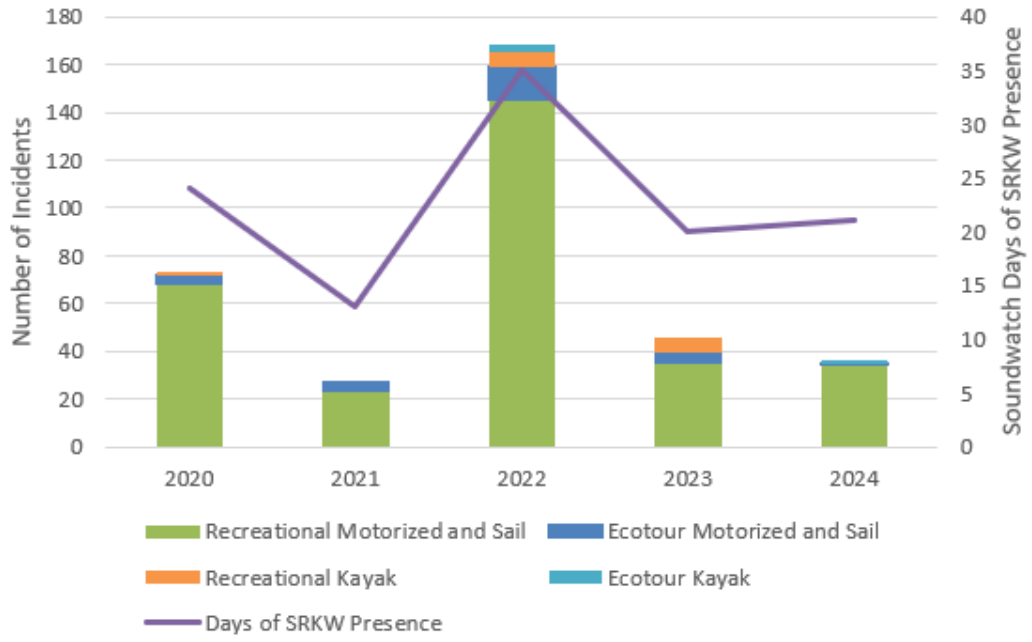
SRKW Approach Violations

Figure 21 presents the total number of incidents of vessels operating in violation of existing approach distance restrictions, while **Figure 22** shows the number of approach distance incidents per day of SRKW presence.[33] These figures show that the number of observed approach incidents both in total and per day of SRKW presence has fluctuated over time, reaching a high of 4.8 incidents per day in 2022 and a low of 1.7 incidents per day in 2024. Although there has not been a clear and consistent decline in the number of approach violations recorded per day of SRKW presence since Licensing Program implementation, data since 2022 show a downward trend to a 2024 level that is 1.3 fewer violations per day than 2020 levels. This suggests a decline in the extent to which SRKW are experiencing vessel traffic disturbance due to close proximity since 2020.

As with speeding incidents, the majority of approach distance incidents are attributable to private recreational motorized and sailing vessels. Between 2020 and 2024, 85 to 95 percent of all approach violations were associated with private recreational vessels. Although the number of incidents per day of presence has fluctuated over time, the number has consistently decreased each year since 2022, and the number of incidents per day of presence in 2024 (1.6) is 1.2 incidents per day lower than in 2020. Although incidents of this type appear to be declining, they still represent a notable source of disturbance to SRKW. Approach incidents for motorized and sail Ecotour vessels have been consistently very low, 0.05 to 0.4 incidents per day of SRKW presence, with the lowest number of incidents per day of SRKW presence occurring in 2024.

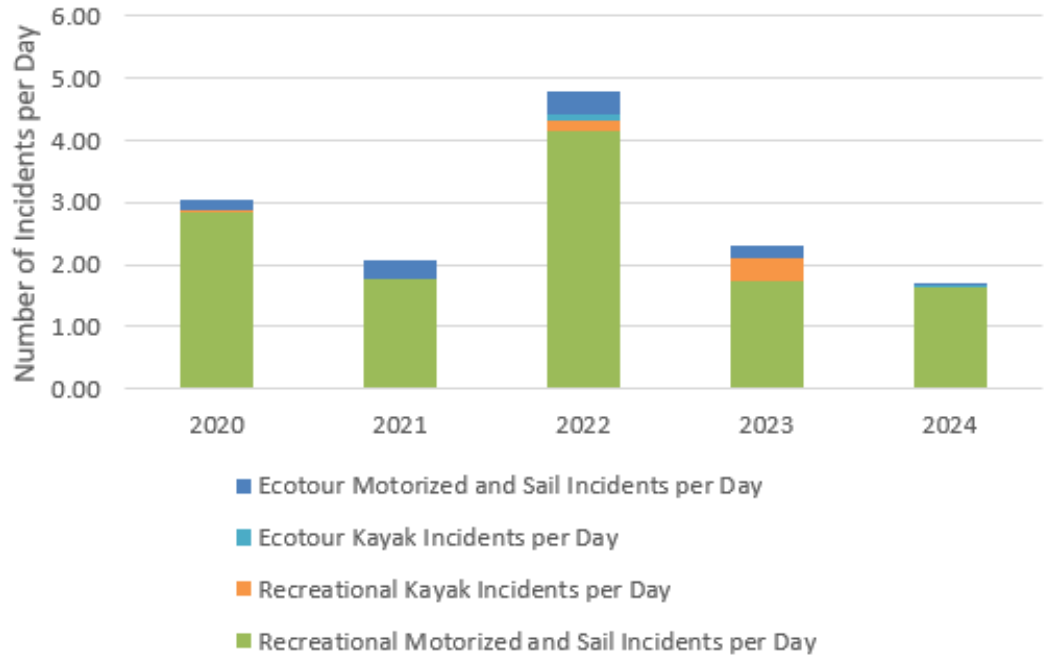
[33] Approach distance violations include vessels operating or shut down within 400 yards, being present in the no go zone or off of Lime Kiln Point when SRKW are present, operating inshore of SRKW when they are traveling within one-half mile of the shore or being within one-eighth mile of shore when whales are present, or cases where commercial whale watch vessels are observed within one-half NM of SRKW outside of allowable viewing periods,

Figure 21. Approach Incidents in Proximity to SRKW



Source: Soundwatch Incident Data

Figure 22. Approach Incidents in Proximity to SRKW per Day of SRKW Presence



Source: Soundwatch Incident Data

WDFW's CWW Reporting Data

WDFW Reporting Data offer insight into whether SRKW have experienced reduced disturbance from directed whale watching since 2020. In 2021, CWW License holders reported 39 instances in which they viewed SRKW from closer than one-half NM during approved viewing windows.[34] In both 2022 and 2023, despite significant presence of SRKW in the region, license holders reported only a single instance of purposeful, legal viewing of SRKW within one-half NM, while in 2024, no viewing was reported. These data are consistent with industry reports that SRKW are no longer the focus of purposeful commercial whale watching activities, whether by choice or due to limitations related to emergency rules protecting calves and vulnerable individuals, and vessel disturbance within one-half NM as a result of commercial watching activity has been greatly reduced.

Looking Ahead to Implementation of the 1,000-Yard Approach Distance

Beginning on January 1, 2025, all vessels will be required to maintain a minimum distance from SRKW of 1,000 yards. For private recreational and other non-CWW vessels that are not otherwise exempted, this represents a change from the current regulations that limit approach distance to 300 yards on the side of and 400 yards in the path of or behind SRKW (RCW 77.15.740). For CWW-licensed vessels, the rule would eliminate the currently available windows for viewing SRKW from 300 yards on the side of and 400 yards in their path. However, this change is not functionally different from current requirements dictating behavior outside of the allowed viewing periods for SRKW, which require CWW licensed vessels to maintain a distance of at least one-half NM (1,013 yards) from SRKW (WAC 220.460.120). It also does not differ from emergency rule requirements for maintaining a 1,000-yard distance from SRKW when calves or vulnerable individuals are present.[35]

Potential Impacts

During a series of interviews conducted in September 2024, CWW Business License holders were asked if they anticipate any challenges or potential costs of this regulatory change, and whether they are currently undertaking actions or incurring costs to prepare for the change. The majority of business license holders described that they no longer focus whale watching activities on SRKW, have not been taking advantage of the currently allowed opportunities to view SRKW, and are thus already operating with a requirement to remain one-half NM from SRKW.[36]

Only one business license holder interviewed identified that viewing of SRKW is still a part of their business, albeit a limited one. As a sailing vessel-based operation, they are particularly challenged by limitations in viewing SRKW when those whales are the nearest present due to the limited range of their

[34] Nearly all these encounters were in September, when SRKW presence in the Salish Sea was at a notably high in the month of September, despite otherwise low presence that year (see Figure 3).

[35] See earlier discussion of the frequency and timing with which this emergency rule has been in place.

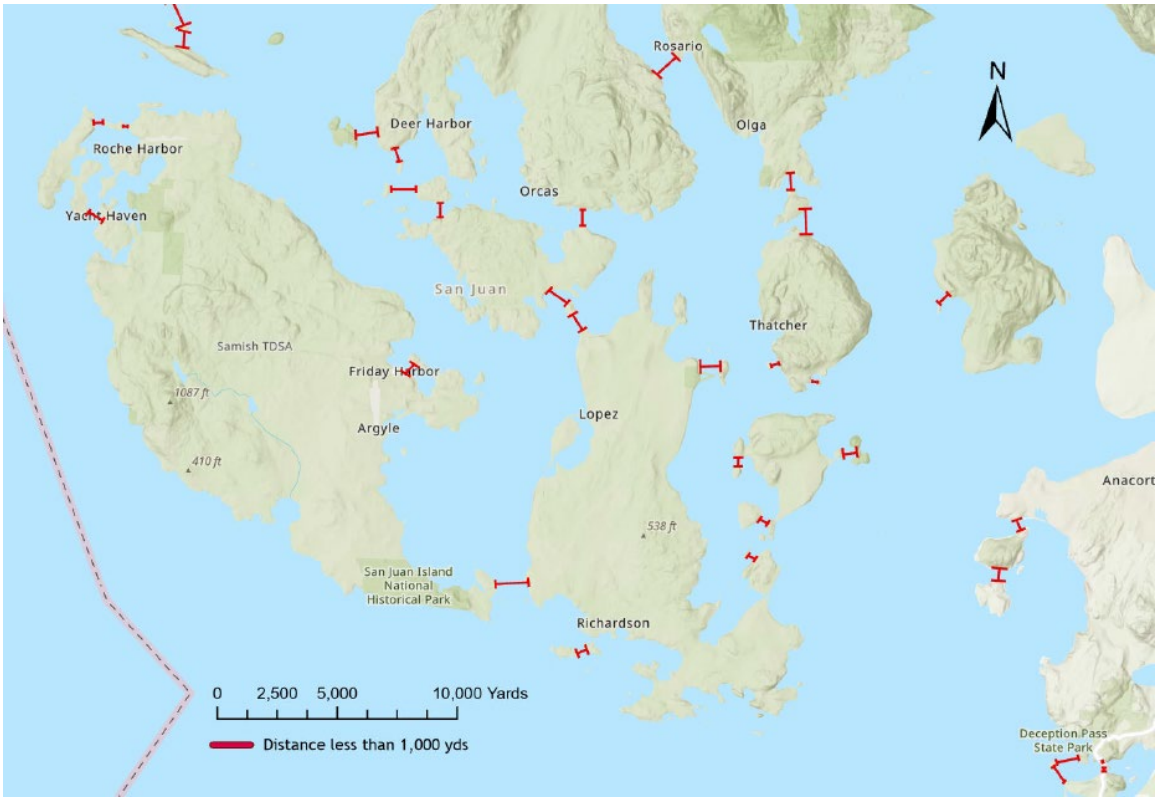
[36] Personal communication with multiple Business License Holders in September 2024.

vessel relative to motorized vessels to travel to view other whales. However, this individual noted that the forthcoming requirement to maintain a distance from SRKW at all times does not represent a significant change for them from current requirements and operations.[37]

Compliance Challenges

In preparation for implementation of the 1,000-yard approach distance regulation, WDFW is considering the challenges vessels may face in complying with this requirement. One clear consideration is the nature of the Puget Sound/Salish Sea shoreline, and prevalence of locations in which the passage between coastal features is narrower than 1,000 yards. Focusing in particular on the vicinity of the San Juan Islands, which is a hot spot for both SRKW sightings and CWW activity, as well as private recreational boating more generally, IEc measured the distance between shoreline features to flag "pinch points" of less than 1,000 yards. **Figure 23** identifies a sample of locations where available passage is less than 1,000 yards. While not a comprehensive accounting of these navigational challenges, it demonstrates that within a specific region in which CWW and recreational boating is concentrated, there are many pinch points wherein navigation would be difficult if SRKW were present. This analysis suggests that the lack of available space between coastal features must be considered in implementation and enforcement of this regulation.

Figure 23. Example locations with passage distances <1,000 yards in the vicinity of the San Juan Islands



[37] Personal communication with Business License Holder, September 3, 2024.

In addition to those spatial limitations, Business License holders identified several additional potential challenges they expect vessels may face in complying with the forthcoming regulation:

- **Nature of whale behavior and movement.** Several interviewees noted that SRKW generally do not travel in a tightly grouped pod, but rather, tend to spread out across a wide area. Thus, even in locations with passage well-exceeding 1,000 yards, it could be logistically challenging to be more than 1,000 yards from every individual in the group of whales.[38]
- **Travel requirements.** Related to the challenge described in the previous bullet, interviewees identified that there are certain routes they may be required to travel due to the location of their home port relative to the primary locations for whale watching (e.g., through Admiralty Inlet) that they would be prevented from passing through if SRKW were present due to the likelihood of the whales being spread out within the area.[39]
- **Mobility limitations**. One interviewee identified that the ability of sailing vessels to maneuver and reposition quickly is more limited, making it more difficult to make the necessary adjustments to move away from the whales.[40]
- **Weather and currents.** Several interviewees identified weather and currents as being the most prominent factors that could limit a vessel's ability to prioritize position relative to the whales in making navigational decisions. Certain locations within the region, such as Deception Pass, are subject to currents that for safety reasons must be the primary consideration when transiting those waters.[41]

Summary of Findings and Recommendations

The results of this analysis indicate that SRKW continue to experience disturbance from vessel traffic in the region. Data collected by the Soundwatch program identify an overall reduction in the number of vessels within one-half NM of SRKW during on-water vessel counts since implementation of the CWWLP in 2021, on a "per vessel count" basis. However, although Soundwatch has generally documented speeding and approach violations per day of SRKW presence that are lower than what they documented in 2020, they continue to identify vessels operating in violation of existing regulations. Despite a general reduction in the number of incidents reported per day of SRKW presence, 2022 represented a substantial increase above 2020 levels for both speeding and approach violations. The cause of this anomalous increase in violations cannot be determined conclusively. Importantly, the numbers and rate of vessel presence and speed and approach violations differ substantially between vessel types. Violations are predominantly associated with private recreational vessels and not CWW vessels.

This analysis finds a reduction in disturbance to SRKW stemming from CWW vessel presence around SRKW since 2020. Data suggest that since implementation of the CWWLP, purposeful viewing of SRKW by commercial operations is greatly reduced, and CWW vessels continue to be responsible for only a

[38] Personal communication with multiple Business License Holders in September 2024.

[39] Personal communication with Business License Holder, September 5, 2024.

[40] Personal communication with Business License Holder, September 3, 2024.

[41] Personal communication with multiple Business License Holders in September 2024.

minor proportion of approach and speed violations (three percent in 2024). Accordingly, IEc recommends that future efforts to reduce the negative effects of vessel traffic on SRKW focus on the behavior of private recreational vessels, which are responsible for the majority of approach distance and speeding violations, and constitute the majority of vessels present within one-half NM of SRKW during Soundwatch monitoring events.

IEc recommends the following potential adaptive management measures related to implementation and evaluation of the CWWLP, and the effectiveness of the CWWLP:

- Consider further outreach and education of unlicensed businesses that appear to be engaged in commercial whale watching activity to remind them of licensing requirements;
- To improve the agency's ability to confirm that all Operators and Paddle Guides engaged in leading CWW excursions are properly licensed, and that license holders are maintaining the required lists of authorized operators and paddle guides, consider requiring license applicants to identify the business with which they are affiliated during the application process or other modifications that could be made during WDFW's migration to the new permitting system. Consider re-emphasizing this requirement during training.
- To reduce the administrative costs of licensing and improve the utility of the training, WDFW should consider the following potential improvements:
    - Modify the application system to provide option to have the system "pre-fill" application fields for businesses, vessels, and operators/guides that are already in the system;[42]
    - Review training materials annually to identify opportunities to provide new or updated information; and
    - Consider moving from an annual training to a bi-annual or other periodicity of training.
- To improve the ease of validating compliance with the AIS carriage requirement, and ensure that WDFW can retrieve associated AIS data as necessary, IEc recommends the following:
    - Validate the reported MMSI number for each vessel immediately upon registration and follow up with license holder to correct if needed; and
    - Reduce the potential for transcription errors by saving and pre-populating vessel characteristics each time a vessel is re-registered.
- Consider ensuring that training materials clarify that every vessel experiencing an encounter with SRKW, whether a motorized vessel or a kayak, is required to report it, regardless of whether it is reported by other vessels on the scene.
- Consider whether outreach and education or technical modifications to WRAS could improve compliance with the requirement to report all encounters with SRKW to WRAS.

[42] Although at least one interviewee identified this as a potential helpful program update, WDFW staff noted that applicants do already have the option of pre-filling information related to registered vessels so they need not be re-entered each year.

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Supplement B-1. Data Sources

The preceding analysis relied primarily on the following data sources collected and maintained by WDFW, Soundwatch (a program of the Whale Museum), and Ocean Wise.

WDFW Enforcement Data[43]

The WDFW Enforcement Program reports and maintains data identifying the occurrence of each patrol, as well as key outcomes and events from each patrol. To support this analysis, WDFW Enforcement provided all reporting data pertaining to patrols identified as Joint Enforcement Agreement (JEA) Type "Execution Priority 3: Southern Resident Killer Whale" between January 1, 2019 and September 30, 2024 (WDFW Enforcement Data). The range of these data includes two years of data prior to implementation of the CWWLP regulations, and three full years and one partial year post-regulation. These data include the following metrics of relevance to this analysis:

- Number of CWW and private recreational whale watch vessels contacted;
- Violations of existing approach and speed regulations and license requirements; and
- Other, unspecified instances of non-compliance or other violations.

These patrols are focused specifically on SRKW, and identified violations are associated with SRKW.

WDFW License Data[44]

Since the establishment of the CWWLP in 2021, WDFW has maintained data identifying all business license holders, operator/guide license holders, and records of completion of the training required by WAC 220-46-140(2). WDFW provided license and training records from 2021 through 2024 (partial year) (WDFW License and Training Data).

WDFW SRKW Encounter Reporting Data[45]

WAC 220-460-140(3) stipulates that "all commercial whale watching license holders shall maintain accurate logs on each instance a vessel operating under a license enters within one-half NM vicinity of southern resident killer whales and submit copies of the logs to the department." WDFW maintains records of each log entry made by CWW license holders, including the date and time of the report, whether the encounter occurred within or outside of the permitted viewing window, and whether the report was also made in the WhaleReport application. WDFW provided reporting data from 2021 through September 2024 (WDFW SRKW Encounter Data).

[43] WDFW provided enforcement data to IEc on October 11, 2022 and May 20, 2024.

[44] WDFW provided the license data to IEc on October 6, 2022 and June 12, 2024.

[45] WDFW provided the reporting data to IEc on October 4, 2022 and May 22, 2024.

Soundwatch Incident and Vessel Count Data

The Whale Museum's Soundwatch Boater Education Program aims to reduce vessel disturbance to marine wildlife, specifically killer whales, by monitoring vessel traffic levels, recording instances of violations with existing regulations and guidelines (referred to by Soundwatch as "incidents"), and educating boaters on rules and best practices in the Salish Sea Region (The Whale Museum 2021). The program specifically focuses on SRKW, although other killer whale ecotypes and whale species are regularly included in the recorded data. Soundwatch's Vessel Incident Data identifies instances in which Soundwatch observed a vessel breaking vessel traffic or other related regulations or guidelines. Key information provided in this dataset includes the date, time, and location of the incident, the type of regulation or guideline the vessel failed to follow, and the species/ecotype of whale involved in the incident (Soundwatch Incident Data).

In addition to tracking the state and federal vessel traffic guidelines applicable to all vessel types, beginning in 2021, Soundwatch began tracking violations of the new CWW regulations dictating daily and seasonal viewing windows (email communication with Soundwatch program staff on October 19, 2022).

Beyond tracking vessel traffic incidents, Soundwatch conducts counts of vessels within one-half NM of any whale species by type during every 30 minutes during each day of monitoring. Data reported include the number of vessels by vessel type (e.g., Ecotour, recreational). Additionally, it details the vessel activity during the monitoring period (e.g., fishing, transiting and observing whales) along with spatiotemporal information. (Soundwatch Vessel Count Data)

In addition to the publicly available Annual Reports summarizing the findings of this monitoring, to support this and other analyses associated with SRKW conservation, Soundwatch provided raw incident and vessel count data from 2018 through 2024.

Whale Report Alert System

The Whale Report Alert System (WRAS) collects user-provided information on reported whale sightings for broadcast to large commercial vessels (Ocean Wise 2024). CWW License holder regulations require that motorized CWW license holders provide sighting information to WRAS through the WhaleReport application when encountering SRKW within one-half NM (WAC 220-460-140). Data provided to WDFW for purposes of this analysis include all reported instances of SRKW encounters by CWW vessels between January 1, 2021, and September 30, 2024 (WRAS Data).

Appendix C: Orca Regulations Communications Advisory Group Report

Background and Report Purpose

In 2023 the Washington State Legislature passed Senate Bill 5371, which expands the state's efforts to protect the region's endangered Southern Resident killer whales (SRKW) from vessel effects. Effective January 1, 2025, it is unlawful for a vessel to approach or intentionally position itself within 1,000 yards of SRKW in Washington waters; if a vessel is within this range, it should move away at a speed of seven knots or slower or disengage its transmission if within 400-yards.[46]

Senate Bill 5371 also includes a new section that directs the Washington Department of Fish and Wildlife (WDFW, or Department) to "convene a diverse work group…to inform the development of [its] outreach and education strategies to implement RCW 77.15.740 (4)," the Revised Code of Washington's chapter and section which relates to new vessel regulations and associated best practices to protect SRKW for recreational boating, including the mandatory 1,000-yard setback. Senate Bill 5371 says the Department "must conduct intensive outreach and education in fiscal year 2024 and the first half of 2025 to implement the work group outreach recommendations regarding compliance with the 1,000-yard setback…[which] may include the advancement and proliferation of tools for notifying boaters of [SRKW] presence, identifying orca ecotypes, and estimating distance on the water."

In early 2024 the Department convened the Orca Regulations Communications Advisory Group (ORCA Group) and contracted Ross Strategic to provide process support and neutral facilitation services. This report summarizes the ORCA Group's process, recommendations to the Department, and the Department's fiscal year 2024-25 outreach and education efforts to implement the ORCA Group's recommendations. It will be attached to the Department's 2024 adaptive management report to the Legislature, which includes an assessment of compliance with and effectiveness of the 1,000-yard setback from SRKW and recommendations for adaptive management of vessel regulations and rules intended to protect SRKW.

ORCA Group Process

Overview

Between March and September 2024, the ORCA Group met five times and held two recreational boater workshops (see Supplement A-1 for a list of ORCA Group members). Each meeting was open to the public and included time for brief public comments. Meeting and workshop agendas, slide decks, and summaries are posted under the Meeting Calendar tab on the Department's ORCA Group webpage.

[46] Exemptions to the speed and distance regulations are described in the bill and include safety considerations and vessels being used for government and Tribal official duties, permitted scientific research, and treaty/commercial fisheries.

The logic behind the ORCA Group process is simple: The Group began its work by assessing the SRKW 2024 communication landscape, including ongoing efforts led by the Department and other entities such as Be Whale Wise. This assessment, along with information provided by a recreational boater subgroup, two boater engagement workshops, and initial results from research conducted by C+C, a Seattle-based communications, marketing, and public relations agency, allowed the ORCA Group to identify communication needs, guide communication investments through the end of the Department's fiscal year 2024 (June 2024), and develop communication investment recommendations for the Department's full fiscal year 2025 (July 2024-June 2025).

Table 8, below, describes the ORCA Group process in more detail, including how meeting topics and outcomes flowed into one another.

Table 8. ORCA Group Process

Activity Date or Timeframe	Topic(s) Discussed	Outcomes
WDFW convenes ORCA Group *Early 2024*	• N/A	• ORCA Group is established
*Individual conversations between ORCA Group members and facilitators *March 2024*	• Individual ORCA Group members' experience and perspectives on the communication of SRKW-related vessel regulations	• Draft work group norms and agenda topics for Meeting 1
ORCA Group Meeting 1 *March 13, 2024*	• ORCA Group purpose, legislative charge, working norms, and overarching goals • Initial criteria to assess effective communication approaches • Current Department-led SRKW Communication efforts and gaps	• Shared understanding of the ORCA Group's purpose, charge, and goals • Established set of working norms • Shared understanding of the Department's FY24 communication activities to date
Asynchronous whiteboard exercise for ORCA Group members *March – April 2025*	• Current landscape of SRKW communication efforts and gaps (in addition to Department-led efforts)	• Comprehensive overview of all SRKW communication efforts and possible gaps
ORCA Group Meeting 2 *April 18, 2024*	• Department FY24 communications goals and priorities • Adjustment to ORCA Group budget approach • ORCA Group guidance on FY24 communications activities • Initial FY25 communications goals and priorities • Recreational boater engagement via workshops	• Shared understanding of the Department's FY24-25 communications goals and priorities • Reallocated ORCA Group influence on Department communications funds (focused on FY25) • Guidance on recreational boater engagement

Activity Date or Timeframe	Topic(s) Discussed	Outcomes
Recreation Boater Work Group *April – May 2024*	• Profile of recreational boaters who operate in the Salish Sea (the SRKW communications target audience)	• Recreational Boater FAQs slide deck
ORCA Group Meeting 3 *June 10, 2024*	• Recreational boater profiles • Initial findings of C+C social marketing research on recreational boater and commercial vessel operator opinions • Preliminary FY25 communication objectives and messages • Recreational boater workshop agenda topics and approach	• Shared understanding of communications target audience • Comprehensive list of FY25 communication methods and strategies being considered by the ORCA Group • Refined set of focus group questions for recreational boater workshop 1
Boater Engagement Workshop 1 *June 20, 2024*	• Context behind the Department's SRKW-related communications efforts • Participant perspectives on the 2025 vessel regulations	• Increased understanding of recreational boater perspectives and thoughts on current and potential communication efforts and feasibility of complying with new vessel regulations
Survey for ORCA Group Members *August 2024*	• FY25 messaging and approaches	• Survey results reflected initial responses from ORCA Group members on FY25 messaging to be discussed at Meeting 4
ORCA Group Meeting 4 *August 20, 2024*	• FY25 messaging and approaches (survey responses) • FY25 Communication tools and priorities	• Refined understanding of ORCA Group perspectives on FY25 messaging and approaches to inform initial recommendations draft • Prioritized group of communication tools
Boater Engagement Workshop 2 *September 12, 2024*	• Potential communication taglines, messages, and tools	• Increased understanding of recreational boater perspectives and thoughts on current and potential communication efforts and feasibility of complying with new vessel regulations
ORCA Group Meeting 5 *September 30, 2024*	• FY2025 and long-term recommendations • ORCA Group process	• Refined recommendations and report content
Survey and asynchronous ORCA Group Report review by ORCA Group Members *October 1-15, 2024*	• Final FY2025 and long-term recommendations • Final ORCA Group report draft	• Refined and prioritized recommendations and report content

*Conversations between ORCA Group members and facilitators were held throughout the process as needed.

The timeline for determining FY2024 spending was abbreviated, as the first ORCA group meeting was not held until March 2024. As a result, the Department and ORCA Group agreed in their second meeting for the advisory group to provide input on near-term spending in FY2024, based on suggested investments developed by the Department, and allow the ORCA Group to develop more substantial recommendations for the $110,000 allocated for FY2025.

Ultimately, WDFW consulted with the ORCA Group to inform its total $110,000 FY2024 investments and collaborated with the ORCA Group to develop recommendations for the Department to fund with $110,000 in FY2025. The amount of Department communication investment remained the same in both fiscal years.

The process for developing FY2024 and FY2025 recommendations differed as well. Initially, the ORCA group provided recommendations on allocated spending for digital, broadcast, and print media advertising for FY2024, as well as initial suggestions for additional communications strategies for the Department to begin pursuing. The Group developed more detailed recommendations for a comprehensive communications strategy in FY2025, including recommendations for specific tactics, during the remainder of the process.

A description of the process used for each fiscal year's deliberation is provided at the start of the FY2024 Communication Investments and FY2025 Communication Investments.

Process Components

Recreational Boater Subgroup

Several members of the ORCA Group with a deep knowledge and understanding of recreational boating in the region were identified by other members as having valuable information when considering communication approaches for the Department's target audience—recreational boaters. These members agreed to develop a comprehensive presentation on recreational boating between ORCA Group Meetings 2 and 3 and lead an informal question-and-answer discussion on the topic during Meeting 3. The Recreational Boater Subgroup's work allowed the ORCA Group to share a baseline understanding of the target audience and informed their subsequent discussions on communication objectives, messages, tactics, and tools.

During Meeting 3, the Recreational Boater Subgroup shared a presentation with their fellow ORCA Group members on the characteristics of recreational boaters to help members understand this target demographic. The information they shared includes the following:

- The average age of a U.S. recreational boater is 58.
- 93.8% of boats registered in Washington are under 26 feet and known as "trailerable."
- The total number of boats registered in Washington is decreasing annually, with 231,387 boats registered in 2023, down from 250,243 boats in 2022.
- Saltwater fishing license sales have also decreased in the last decade, with about 36,000 saltwater licenses issued in 2023, down from over 60,000 in 2013, 2014, 2015, and 2016.

- Multiple subgroups of recreational boaters have different boating priorities i.e., cruisers, racers, anglers, self-powered, etc.

ORCA Group members considered this information and returned to it frequently during their discussions to identify effective communication methods to reach this audience.

Boater Engagement Workshops

The Department hosted two boater engagement workshops—one between ORCA Group meetings 3 and 4 and one between meetings 4 and 5. These workshops were designed to solicit input from the region's recreational boater community on the Department's education, outreach, and communications work related to SRKW.

The first workshop, *Anticipating 2025 Vessel Regulations* on June 20, 2024, focused on sharing information regarding the 2025 vessel regulations and learning about boaters' perspectives on the change. Twenty-three workshop participants provided input to the Department and the ORCA Group on their engagement with WDFW communications, their understanding of the upcoming SRKW viewing regulations, how they determine distances while on the water, and their main vessel safety concerns. Participants shared they were most concerned with complying with the new regulations during rough or choppy boating conditions or within areas of the Salish Sea that are not 1,000 yards wide like in straits or passages. They also shared that they often use golf rangefinders to determine distances on the water and use apps like Whale Alert and sighting networks like the Orca Network Facebook page to help avoid SRKW while boating.

The second workshop, *Shaping 2025 Education, Outreach, and Communication Efforts* on September 12, 2024, focused on sharing the Department's initial education and outreach plans and collecting feedback. Sixty-three workshop participants helped the Department and the ORCA Group understand what technologies they are utilizing on their vessels to both determine distances on the water and to avoid SRKW as well as what communications tools and approaches they think would be effective for reaching Salish Sea boaters. Participants shared that social media is often the best way to reach most boaters, but that other methods should also be pursued to spread WDFW's message as widely as possible. They also shared concerns with turning off sonar systems while boating since many of these systems are also linked and displayed with navigation screens and thus it can be critical for safe boating with larger vessels to leave it on.

Fiscal Year 2024 Communication Investments

As previously referenced, the Department and ORCA Group decided at Meeting 2 to have WDFW consult with the ORCA Group to confirm the Department's total $110,000 FY2024 investments. The Department developed a FY2024 Communication Spending Tracker to identify the communication methods and estimated funding allocation. During the Meeting 2 discussion, members discussed their interest in each tactic and provided input and feedback to the Department. Specifically, the ORCA Group affirmed the Department's recommendations to communicate messages for the following purposes

(Table 9) and investing in the following methods (Table 10). See the *Fiscal Year 2024* subsection of *Fiscal Year 2024 and 2025 Department Activities and Outcomes* for more information.

Table 9. FY2024 Communication Message Objectives

Addresses	Purpose of Message
What	Encourage implementation of 1,000 yards before 1/1/2025
How	Educate why 1,000 yards is necessary
How	Educate on WDFW's 2024 enforcement approach
How	Educate what to do if whales surface w/in 1,000 yards
How	Educate difference between SRKW and Biggs
What	Inform on current and new regulations
Where	Inform on where regulations apply
Why	Inform on why there are vessel regulations

Table 10. FY2024 Communication Investments

Communication Method	Platform	Anticipated Investment
Television/Streaming	Comcast/Effectv	$15,000
Print Ads	The Reel News NW Yachting WDFW Fishing Regulations Guide 48 North Wooden Boats Program	$5,950 $4,408 $5,900 $3,300 $1,349
Digital Ads	WSDOT Ferry Webpages 48 North Web and Emails Google Ad Waggoner E-Newsletter	$18,000 $2,600 $10,000 $1,112.50
Radio/Audio Ads	KUOW (2x) Spotify	$13,680 $10,000
Social Media Ads	Meta (Instagram/Facebook) YouTube	$6,000 $9,837
	Total	**$111,299**

FY2025 Communication Investments

WDFW collaborated with the ORCA Group to develop recommendations on priority communication investments for the Department to fund in FY2025. There were several parts to this process, described below.

ORCA Group Goals

Based on its charge from the Legislature and its adjustment to the budget approach, the ORCA Group identified two specific communications goals for FY2025:

> 1. *Build awareness and understanding of Washington's new 1,000-yard setback from SRKW and associated speed regulations among recreational boaters.*
> 2. *Increase recreational boaters' understanding of and compliance with the new regulations by providing tools and solutions to know SRKW locations within the Salish Sea, estimate 1,000-yard distance on the water, and how to address other compliance challenges.*

WDFW Baseline Communication Methods

In Meeting 1 and Meeting 2, WDFW identified the communication methods it considers as "baseline"—the assortment of communication methods it currently uses to disseminate information about SRKW. The investment in each method is scalable; meaning that the allocation of resources to any one method can be adjusted based on need at the time.

- Printed and digital advertising
- Boater training materials
- Social media campaigns
- Video content
- Signage at water access points
- Presentations to interested groups
- Event tables
- Social marketing research
- Be Whale Wise and other partner coordination

Potential FY2025 and Future Communication Methods

These methods were identified and discussed by ORCA Group members in Meetings 1, 2, 3, and/or 4:

- Ambassador program
- Distribute materials via volunteers
- Pledge program
- Peer-to-peer messaging
- Increased coordination with Be Whale Wise and other partners
- Direct mail/materials to vessel and fishing license holders
- Swag/freebies
- Boater training materials (including video content)
- Temporary buoys that demonstrate 1,000-yard distance
- Volunteer coordination
- Use of influencers
- Additional social media research/consultation

Prioritized Communication Methods

ORCA Group members prioritized the following methods in Meeting 4:[47]

Baseline Methods. These are the methods the Department already uses that ORCA Group members support scaling up in FY2025:

- Printed advertising
- Social media campaigns
- Signage at water access points*
- Presentations to interested groups
- Event tables*

Priority 1. These are new methods the ORCA Group identified as "need to be initiated now" so they are in place by the time the regulations go into place on January 1, 2025:

- Ambassador program*
- Boater training materials*
- Direct mail/materials to vessel and fishing license holders*
- Video content
- Peer-to-peer messaging*
- Additional social media research/consultation

Priority 2. The ORCA Group identified this as a method that could be deferred until later:

- Swag/freebies

Final Recommendation Development Process

The ORCA Group reviewed and discussed an initial set of seven recommendation packages prior to and during Meeting 5.[48] Following Meeting 5, the Project Team refined the recommendation packages based on their conversation and invited the ORCA Group to participate in two surveys to prioritize the recommendation packages. The first survey used a scale with four ratings to indicate how urgent and important each of the seven proposed FY2025 recommendations were, independent of each other and from each member's perspective, to achieve each of the two FY2025 goals.

The second survey invited members to submit a brief narrative response to identify more specific near-term urgent priorities **within** each of the seven recommendations. These narrative responses were used to help develop the Critical Context for FY2025 ORCA Group Recommendations described in the following section.

[47] An asterisk (*) indicates many or all ORCA Group members in Meeting 4 agree on either increasing a baseline method or initiating a Priority 1 method.

[48] Each of the seven recommendation packages are comprised of multiple related recommendations.

Critical Context for FY2025 ORCA Group Recommendations

Because the ORCA Group recommendations do not represent full consensus, this section provides critical context for a reader to understand the nuance behind each recommendation, including pros/cons and potential unintended consequences.

The ORCA Group discussed many topics during their meetings and discussions often spanned multiple meetings. Their deliberations are organized into three main themes: General messaging; Communication methods; and Recreational Boater Education.

Key discussion points in each theme are characterized by the level of agreement among members. In general, points are listed from highest level of agreement to lowest level, and several include counterpoints or notes to further contextualize the discussion. The bolded words all, many, some, and a few have specific meanings:

- "All" = full consensus among participating ORCA Group members
- "Many" = 7 to 12 ORCA Group members
- "Some" = 4 to 6
- "A few" = 3 or fewer

General Messaging Advice

All ORCA Group members believe that Department communication messages should:

- **Share context related to the SB5371 regulations** to educate recreational boaters on the reason the state is trying to protect the animals as much as possible.
- **Encourage recreational boaters to adopt a protective mindset and avoid SRKW in general.** (As opposed to, for example, encouraging recreational boaters to view SRKW from 1,000 yards away.)
- **Emphasize that adhering to the state's vessel regulations with regards to SRKW proximity is the law and will be enforced**. Any potential contingency factors (such as risk to boater safety due to severe weather) when a boater is encountered in non-compliance should be addressed on a case-by-case basis, and not as part of the broader communication and education about the proximity regulations.
- ***NOT* reference commercial whale watching (CWW) or suggest that recreational boaters reference CWW vessels to assess distance from orcas** because: CWW vessels may be viewing Bigg's (or transient) killer whales or other whale species from a shorter setback distance; CWW vessels are not always present in the Salish Sea; CWW vessels may or may not be adhering state regulations.[49]
- **Focus on how a recreational boater can determine whether something is 1,000 yards away from their vessel, rather than identifying SRKW from 1,000 yards.** ORCA Group members believe teaching recreational boaters to distinguish between orca ecotypes is not a worthwhile

[49] While this topic was raised by the Department, the message was supported by all ORCA Group members.

investment, as it is likely not achievable (see *Distinguishing Orca Ecotypes* subsection). While SB5371's direction to WDFW was to consider education methods to distinguish between SRKW and other orca ecotypes, the ORCA Group advised otherwise, based on its collective experience.

Many ORCA Group members believe that Department communication messages should:

- **Encourage recreational boaters to assume all orcas encountered in the Salish Sea are SRKW, unless and until proven otherwise** (as opposed to distinguishing between ecotypes).
    - Counter point: **Some** ORCA Group members believe this message could discourage viewing of Bigg's killer whales and other whale species, an experience which **many** ORCA Group members believe can be educational and inspire a protective mindset.
    - Counter point: **Some** ORCA Group members believe this message could unintentionally discourage participation in commercial whale watching activities.
    - Counter point: **A few** ORCA Group members are concerned this message could lead to confusion because it conflicts with Washington's viewing regulations for Bigg's killer whales and other whale species. For example, someone might observe a recreational vessel near a Bigg's killer whale but mistake it for SRKW and incorrectly report the vessel to WDFW Enforcement or Soundwatch.

Sharing SRKW Locations

- **Many** ORCA Group members recommend the Department ensure it is easy for recreational boaters to know SRKW locations at any given time so they can proactively avoid the animals. **Many** ORCA Group members suggest the Department consider sharing general location of SRKW, such as, "SRKW are in Haro Strait," as opposed to more specific location information because the SRKW location is dynamic, and this could encourage recreational boaters to proceed with caution in a larger area.
    - Counter point: **A few** ORCA Group members have significant concerns related to sharing SRKW locations and cited anecdotal evidence of egregious recreational boater behavior when near SRKW and other whales. They emphasize the importance of education and WDFW Enforcement presence to offset this unintended consequence.
        - **All** ORCA Group members acknowledge that increasing the public's awareness of SRKW locations could lead to increased viewing/violations of the new vessel regulations.
        - Many ORCA Group members do not anticipate significant impacts because SRKW location information is already available to those who look for it.
    - **A few** ORCA Group members believe the Department should emphasize the Whale Alert app as a free tool for recreational boaters to know real-time information about SRKW presence.
        - **A few** ORCA Group members object to WDFW promoting the use of the Whale Alert app because its ease of use and specificity of location increases the risk of misuse by bad actors.

- Note: **All** ORCA Group members believe WDFW Enforcement's on-the-water presence near SRKW is critical to discourage recreational boaters from violating vessel regulations.

Partner Coordination

Much of the ORCA Group discussion about coordinating with non-state entities was focused on Be Whale Wise (BWW), a coalition of partners—including the National Oceanic and Atmospheric Administration, the Department of Fisheries and Oceans Canada, Transport Canada, Washington Department of Fish and Wildlife, and the Whale Museum—that research, implement, and educate regarding laws and best vessel practices to protect the Salish Sea region's marine resources; BWW "houses" the Soundwatch and Straitwatch boater education programs.

However, there are several other regional entities that engage in recreational boater communication and education, including those represented by ORCA Group members: Give Them Space coalition (includes Friends of the San Juans, Washington Conservation Action, National Resources Defense Council, Seattle Aquarium, and The Whale Trail), the Northwest Marine Trade Association, Recreational Boating Association of Washington, the Orca Network and the Pacific Whale Watch Association.

- **All** ORCA Group members acknowledge that, while BWW plays a significant role in recreational boater communications and education and offers a solid "jumping off point" for much of the recommendations in this report, the Department should build its relationship with other entities to learn from them, help refine the landscape of SRKW-related recommendations, and better leverage its SRKW communications efforts.

Communication Methods

Tagline

- **All** ORCA Group members recommend any tagline the Department considers should be formally vetted through additional communications/social media research and message testing.
- **Some** ORCA Group members support the Department using the tagline "Give Whales Space" in its communication efforts/materials because it is simple and aligns with the Be Whale Wise (BWW) tagline.
    - Counter point: Like the counterpoint related to assuming all orcas are SRKW, this tagline is not specific to SRKW—the ecotype and species the new regulations are meant to protect. **A few** ORCA Group members are concerned it could lead to confusion about which whales should or should not be viewed and at what distance.

Ambassador Program[50]

- **All** ORCA Group members support the development of an Ambassador Program.

[50] The ORCA Group briefly discussed the idea of a complementary pledge program but dismissed it because it seemed redundant with the Ambassador Program and a pledge program may not be helpful given that people are already expected to follow the law.

- **Many** ORCA Group members noted the Ambassador Program's natural fit with efforts already underway by BWW and, if this program is pursued by the Department, it should coordinate closely with BWW to design and launch it.
- **A few** ORCA Group members suggested the Department's initial role in an ambassador program could be to create training materials to become an ambassador and develop/host regular communication opportunities for the ambassadors.
- **Some** ORCA Group members feel an Ambassador Program could be launched quickly to build on momentum and capitalize on the few months until the regulations go into effect.
    - Counterpoint: **Some** ORCA Group members cautioned against beginning a program without sufficient training because it could lead to the spread of misinformation.

Recreational Boater Education

Assessing 1,000 yards on the water

- **All** ORCA Group members recommend the Department pursue education/training opportunities to help recreational boaters assess 1,000 yards on the water in varying conditions.
- **Many** ORCA Group members recommend the Department does not invest significant resources in supporting the use of rangefinders.
    - Counter point: While rangefinders may not help determine 1,000 yards, high-quality models can help determine 400 yards (the proximity in which a vessel should disengage its transmission if safe to do so). **Some** ORCA Group members see the benefit in education to use them.

Distinguishing Orca Ecotypes

- **All** ORCA Group members recommend the Department does *not* invest significant resources in educating/training recreational boaters to distinguish between orca ecotypes, i.e., between Bigg's transient killer whales and SRKW.

Turning off acoustic systems when safe to do so

- **Many** ORCA Group members recommend the Department not invest significant resources in educating/training recreational boaters to turn off their vessel's acoustic systems (such as echosounders, fish finders, or underwater transducers) because most systems are integrated with larger systems that are required to run/manage the vessel.
    - Counter point: Because these acoustic systems are known to impact SRKW at 400 yards or closer, **some** ORCA Group members see the benefit in education to turn them off (which aligns with the new regulations' requirement to turn off transmissions when safe to do so if within 400 yards of SRKW).

ORCA Group Recommendations

The ORCA Group provided two sets of recommendations for the Department to consider: Fiscal Year 2025 Communications Recommendations and Long-term Recommendations. Although the Group is

technically only authorized to provide guidance on the Department's FY2025 SRKW and vessel regulations-related communications investments, all members recognize that the recommended actions will not be effective in isolation—their success hinges on the Department's ability to (1) continue its partnerships and communication efforts beyond the fiscal year and (2) rely on the Enforcement Program's marine patrols as a final means to communicate the new regulations to recreational boaters in real time and, when necessary, hold them accountable for their actions.

The ORCA Group's position on Enforcement cannot be over-emphasized: *All members believe Enforcement presence is the best way to protect SRKW.*

The final SRKW communication and outreach strategy will be informed by stakeholder input and a social marketing research effort conducted in partnership with individuals and groups directly affected by the SRKW law. Future planning steps will include working with partners on how best to develop a communication and implementation plan in coordination with their education, outreach and enforcement efforts.

Fiscal Year 2025 Recommendations

The ORCA Group's recommendations for the Department's vessel regulation and SKRW-related communications efforts in FY2025 (July 2024 – June 2025) are listed below. They are *roughly* listed in order of overall importance (in terms of both urgency and significance to achieving the FY2025 goals of building awareness and utilizing tools and solutions (see Table 11, below, to understand which recommendation packages align with which goals); many of the recommendations are actually packages of recommendations with components that ORCA Group members deem different in importance. The Project Team made every effort to capture these nuances within the recommendation text and/or in the *Critical Context* section of this report. See the *Final Recommendation Development Process* subsection for more information about the Group's prioritization process.

Table 11. Alignment of FY2025 Recommendations with SRKW Communication Goals

Recommendations	FY25 Goal 1: Build Awareness	FY25 Goal 2: Tools & Solutions
1. Build Partnerships to Streamline the Region's Vessel Regulation and SRKW Communication Landscape	X	X
2. Develop a Living SRKW Communications and Implementation Plan to Guide Department Efforts	X	
3. Immediately Augment Current Communications with a Stand-alone Information Card	X	
4. Employ a Range of Communication Methods to Reach as Many Recreational Boaters as Possible	X	

Recommendations	FY25 Goal 1: Build Awareness	FY25 Goal 2: Tools & Solutions
5. Coordinate with State and Federal Partners to Leverage Existing Systems for SRKW Communication Purposes		X
6. Develop a Robust Vessel Regulations and SRKW-related Toolkit	X	X
7. Increase Awareness of New Regulations and Enthusiasm for SRKW Recovery through an Ambassador Program	X	X

1. Build Partnerships to Streamline the Region's Vessel Regulation and SRKW Communication Landscape

Nurture existing partnerships, such as Be Whale Wise (BWW), the Give Them Space coalition, and Orca Network, and build new partnerships with SRKW and marine mammal advocates, Tribes, recreational boater groups, and others to learn from and leverage effective SRKW communications. Work with partners in an ongoing effort to evaluate current SRKW campaigns and resources, outreach strategies, and potential actions. The Department should lead additional communication research and testing.

2. Develop a Living SRKW Communications and Implementation Plan to Guide Department Efforts

Develop a "living" SRKW Communications and Implementation Plan (Comms Plan), with input from partners, by December 31, 2024, (earlier, if possible, to align with the intent of implementing this work before the new regulations are in place) to serve as a guide for all entities involved in SRKW efforts as they conduct education and outreach activities. The Comms Plan should outline actions to be taken based on current information and be responsive/adaptable to future feedback on SRKW communication tools, messaging, and strategies. The Comms Plan should highlight overlap and coordination with partners, clearly articulate SMART[51] goals, include specific messages that resonate with recreational boaters, and present an implementation strategy for how and when the messages will be delivered, leveraging existing efforts and tools. The Department will provide leadership to coordinate and work with partners to assist in the delivery of planned activities.

3. Immediately Develop Material(s) to Augment Current Communication Methods

The ORCA Group recommends a high-priority action to develop a simple WDFW-branded 'Information Card' (or similar stand-alone materials) no later than December 31, 2024, (ideally earlier) that describes the new regulations and rationale to address immediate communications needs. This material, which could be included in the SRKW Communications Toolkit (see Recommendation 6), should be inserted into current BWW materials, and distributed at near-term in-person events (e.g., boat races, rallies, and

[51] Specific, Measurable, Attainable, Relevant, and Time-Bound

boat shows), and points of contact (e.g., rental companies) for smaller vessels such as standup paddle boards, sea kayaks, hydrofoils, and jet skis. The material or information card should:

A. Educate recreational boaters on the reason maintaining distance from SRKW will help these specific whales.
B. Encourage recreational boaters to adopt a protective mindset that assumes Orcas they encounter in the Salish Sea are SRKW until proven otherwise.
C. Direct recreational boaters to resources to help them visualize and practice estimating 1,000 yards from their vessel (see Recommendation 6: SRKW Communications Toolkit).
D. Direct recreational boaters to an FAQ resource to help recreational boaters understand nuanced parts of the regulations (e.g., appropriate 400-yard actions; see Recommendation 6: SRKW Communications Toolkit).

4. Employ a Range of Communication Methods to Reach as Many Recreational Boaters as Possible

Employ a wide range of methods to reach as many different recreational boater audiences as possible. Adapt/revise communication methods as new information becomes available through communications feedback, research and testing. The ORCA Group recommends WDFW fund the following methods in FY2025:

A. Increase the level of effort in the following four WDFW current communications activities, both for WDFW-branded activities and those done in partnership with others, using messages and content from the Comms Plan (see Recommendation 2) to share messages identified from Recommendations 1 and 3:
    a. Advertising: Expand both print and digital advertising efforts, including in the Waggoner Cruising Guide, local tide timetable books, and with the Seattle Boat Show.
    b. Social media campaigns, which can be implemented in the very near term. Specific actions to consider: Strengthen social media presence and use an identical campaign across platforms; Provide partners with ready-made content (e.g., template tweets, Facebook posts, and graphics); Use a unique hashtag; Share easy-to-understand SRKW facts and interactive content (e.g., polls or trivia); Leverage well-known voices within the boating community to deliver messages; Initiate a countdown until new regulations take place; and Encourage boaters to amplify SRKW messaging through social media sharing.
    c. Based on audience research, update and install eye-catching and durable signage regarding new regulations, and tips for how to identify 1000-yard distances at water access points and marinas. Signs should be produced in a variety of sizes, depending on available space, audience, and needs. This guidance could extend to supporting changes to other partner signs and/or streamlining sign efforts.
    d. Presentations and event tables: Coordinate with partners to ensure the Department has a presence at key events.

B. Initiate three new communications activities:
    a. Direct mail to fishing/captain's license holders and boat registrants to raise awareness about SKRW regulations and encourage compliance. *Caveat: Many of the state's fishing license holders and boat registrants do not operate in the Salish Sea. The Department should consider ways to target direct mail recipients to best use resources.*
    b. Develop training materials and video content to increase awareness and understanding of the regulations and increase boaters' ability to comply (see Recommendation 2: SRKW Communications Toolkit).
    c. Peer-to-peer messaging: Begin developing a peer-to-peer communication network through the Ambassador Program (see Recommendation 7: Ambassador Program).
C. Consider creating swag/freebies to support communications activities listed above that can be distributed at outreach events.

5. Coordinate with State and Federal Partners to Leverage Existing Systems for SRKW Communication Purposes

Pursue the following opportunities to improve existing tools and systems to work better for boaters:

A. Explore possibility of the U.S. Coast Guard issuing regular Securité messages on VHF Channel 16, and looped messages on marine weather channels, to provide SRKW near-real-time location updates. If implemented, update public via communication efforts. *Caveat: Given past engagement on this topic, the US Coast Guard will likely not be in favor of issuing SRKW-related marine updates because it does not involve safety of life at sea. The Department should consider the fact that, ultimately, this opportunity may not be feasible, which will impact its ability to implement this recommendation.*
B. Coordinate with State Parks Boating Program and Be Whale Wise to:
    a. Distribute the Whale Warning Flag (only distribute with requisite material on appropriate use)
    b. Leverage SPBP list of contacts
C. Boaters Education Card: Request SPBP update and expand information related to SRKW and/or request that BEC trainers provide toolkit materials at in-person trainings.

6. Develop a Robust Vessel Regulations and SRKW-related Toolkit

Develop a WDFW-hosted communications/training toolkit with print and digital components developed with partners that can be accessed online and/or distributed via direct mail, shared at events, and used by ambassadors. Ideally, this toolkit will be "live" by mid-January 2025 (or earlier) in time for the Seattle Boat Show—a peak time to reach Salish Sea recreational boaters. The toolkit should include the following:

A. A Department-run website that serves as a central "hub" for the toolkit and related information; include a digital "button" (see D below)
B. Build on BWW toolkits – add specific-to-Washington regulations information
C. FAQ resource

D. A digital "button" and/or graphics for entities to add to their website and direct people to the toolkit
E. Updated BWW materials (if available) that reflect the new regulations for SRKW and outcomes from communications research and testing.
F. Updated rangefinder cards from Sea Grant (if available) to help determine distances. Caveat: It is unclear whether these cards will be useful for determining the 1,000-yard distance and may have an unintended consequence of increased litter. The Department should consider these factors before issuing them to the public.
G. Whale Warning Flag (with instructions for proper use)
H. Video that describes the law change in general and addresses various scenarios and tools/tips to navigate them.
I. Videos/images that reference objects at various distances in various conditions.
J. Videos that provide technical training on a variety of boater-preferred tools for recreational boaters to:
    a. Use the Whale Alert app to locate SRKW locations in the Salish Sea in order to avoid them
    b. Use VHF radios to hear SRKW location updates
    c. Use hand-held rangefinder devices to determine distances
    d. Use distance-finding features on digital navigation software
    e. Turn off depth sounders (when feasible and safe to do so) to reduce underwater noise when within 400 yards of SRKW

    Caveat: High-quality videos that can be hosted and shared on YouTube (like the Commercial Whale Watching Licensing Program's instructional videos) may take a while to make; a quick video for technical training purposes could suffice in the short term.

K. Swag/freebies to increase awareness of the regulation distances, e.g., stickers (if available and leveraged from partners, too). *Caveat: Similar to the rangefinder cards, the Department should consider the benefits vs cost of any swag it develops.*

7. Increase Awareness of New Regulations and Enthusiasm for SRKW Recovery through an Ambassador Program

This recommendation builds on Recommendations 2 (Comms Plan), 4 (Range of Communication Methods), and 6 (SRKW Communications Toolkit). The Department should develop a phased strategic plan to launch an Ambassador Program, ideally by January 2025, though recruitment for an ambassador program could begin in the very near term, that would help the Department with its outreach efforts by creating a network of informed individuals who can help recreational boaters understand the regulations. The strategic plan should:

A. Clarify and define the Ambassador Program's goal by December 31, 2024. For example, "To help recreational boaters on the Salish Sea understand and embrace Washington's SRKW-related vessel regulations through peer-to-peer messaging and technical training."

B. Reflect coordination with BWW and other partners to align efforts, share resources, and avoid duplication—especially with BWW, which is considering a similar program. and other partners. *Caveat: When coordinating with BWW, the Department should consider that BWW's scope is broader than SRKW-related regulations and that the coalition does not currently have defined leadership (though the current de facto leader is the Soundwatch Program Director).*
C. Include quality assurance and quality control mechanisms to ensure ambassadors share accurate information.
D. Prepare the Department to launch an initial **Phase 1** by December 31, 2024, so it can be active when the vessel regulations take place on January 1, 2025. Begin recruiting and mobilizing individuals before the program launch so they can serve as knowledgeable peer messengers within their communities. Phase 1 should also include planning education and outreach activities for January through June 2025.
E. Include a **Phase 2** that builds ambassador training and coordinating mechanisms in FY2026. For example, design a more formal structures to "train the trainers," regularly coordinate ambassadors, and refine training materials.
F. Include a starter contact list (for example, local boating groups, yacht clubs, kayak associations) to help identify possible ambassadors.
G. Outline training materials (and development plan) for ambassadors to use and share, which should include but are not limited to:
    a. A PowerPoint presentation that explains the new regulations, the rationale behind them, where to find more information, and an overview of how to use tools available in the toolkit.
    b. The Department's SRKW communications toolkit (see Recommendation 6: Toolkit).
    c. Games and/or activities to do with interested groups to help determine distances.

Long-term Recommendations

The following are the ORCA Group's long-term recommended actions to maintain, improve, and support SRKW communication efforts and overall program goals:

A. Secure ongoing funding to sustain and refine communications efforts beyond FY2025. This should include additional research and message testing and a feedback loop to determine effectiveness of messages and methods.
B. Sustain strategic partnerships to develop and implement coordinated SRKW education and outreach and provide guidance and resources to partners who have a role in providing education and outreach about the SRKW requirements.
C. Increase WDFW Enforcement marine patrols during daylight hours when SRKW are in the Salish Sea (including fall and winter months in Central and South Puget Sound). **Regulations that aren't enforced lose their effectiveness**. Communicate that while safety on the water will continue to be a consideration in enforcement actions, it is not an excuse for not following the regulations.

Department Implementation in Fiscal Years 2024 and 2025

Fiscal Year 2024

The Department's FY2024 SRKW- and vessel regulations-related communication budget was primarily allocated to digital media and print advertising, including display, video, and audio ads, across multiple online and broadcast platforms. The following results indicate this investment reached many people:

- Video and display ads on Google ads earned over 840,000 views and over 17 million impressions, respectively.
- Video, display, and sponsored post ads on Meta (Facebook and Instagram) earned over 2.3 million impressions collectively.
- 30-second video commercials broadcast across channels and streaming programs that directly targeted Washington's boating target audience earned over 2 million impressions collectively.

Audio advertisements were also included in WDFW's FY24 spending strategy:

- Audio ads on Spotify earned over 890,000 impressions.
- Audio ads on KUOW local radio (including its streaming platform) were anecdotally successful, although listener and impression results were not available.

Based on these results, the Department and the ORCA Group agreed that continuing to invest in both print and digital ads should be a part of any outreach strategy moving forward. The ORCA Group discussed print and digital publications that are likely to reach most recreational boaters and advised the Department to continue, add, or drop advertising in specific publications.

Though not part of the FY2024 communications budget the ORCA Group advised on, the Department conducted a parallel effort by engaging C+C, a Seattle-based social marketing and public relations firm, to conduct research that will support the development of a social marketing campaign to announce and influence adherence to the new vessel regulations to protect SRKW. C+C's research was aimed at better understanding the opinions of recreational boaters and commercial vessel operators in the Salish Sea. Specifically, the firm gathered information on boater barriers and motivators to abide by specific regulations, opinions on three separate messages, and preferred communication channels and trusted messengers. C+C shared their initial findings with the ORCA Group at Meeting 3, which informed their deliberations in subsequent meetings.

Fiscal Year 2025

The Department refined its print and digital advertising approach based on ORCA Group advice and has continued to use this communications method in FY2025. The Department has not invested as many resources in this method as FY2024, because it plans to implement the ORCA Group's FY2025 recommendations as soon as possible to support recreational boaters' understanding and adherence to the new vessel regulations in 2025.

Supplement C-1. ORCA Group Membership

ORCA Group members are listed alphabetically below; a roster is also available on the WDFW ORCA Group website.

ORCA Group Member	Affiliation (if any)
April Rebollo*	-
David Bain	ORCA Conservancy
David Willis*	Recreational Boaters Association of Washington
Donna Sandstrom	The Whale Trail
Erin Gless	Pacific Whale Watch Association
Frances Robertson	San Juan County
George Harris*	Northwest Marine Trade Association
John Boyd	Western Prince
Justine Asohmbom	Washington Department of Ecology
Stephanie Raymond*	Orca Network
Tisa Annette	Puget Sound Orcas
Thomas Wooten**	Samish Indian Nation

* Indicates this person participated in the Recreational Boaters Subgroup between ORCA Group meetings 2 and 3.

**Wooten was able to join a few ORCA Group meetings but ultimately was unable to participate in the final recommendation development process. The recommendations in this report do not necessarily represent his perspectives or interests.

Supplement C-2. Member Letters

The ORCA Group was not convened as a consensus-based group—areas of agreement and disagreement are documented in the report. Members also had the opportunity to submit letters providing their individual perspective on the ORCA Group process and/or outcomes. The following two letters reflect the views of their writers, not the ORCA Group or the Department.

This is a letter from an individual ORCA Group member (Donna Sandstrom) reflecting on the group's process and outcomes. It does not reflect the perspectives of other ORCA Group members or Washington Department of Fish and Wildlife.

October 24, 2024

Director Kelly Susewind
Washington Department of Fish and Wildlife
Natural Resources Building
1111 Washington St.
SE Olympia, WA
98501

Re: ORCA Group Report Dear Director Susewind,

Thank you for the opportunity to serve on the Orca Regulations Communications Advisory (ORCA) Group. For me this was the last leg of a long marathon that began when I served on Governor Inslee's Orca Recovery Task Force and the Vessel Impacts Group that supported it.

Together we have made a tangible difference for the endangered Southern Resident Killer Whales (SRKW), by making it easier for them to forage, rest and tend their young. From recommendation to legislation to rule-making, we can all be proud of a public process that worked.

In 2022, the Department recommended that all boaters should stay 1000 yards away from southern residents, year-round. The recommendation was based on best available science showing that SRKW were up to 50 percent less successful at foraging when vessels approached closer than 1,500 yards. The harmful impacts are especially pronounced in females, who abandon hunts when vessels approach closer than 400 yards.

When DFW made its recommendation, The Whale Trail and four other members of the Give them Space coalition sprang into action. We worked closely with legislators, scientists, other non-profit organizations and the public to champion the bill, from committee meetings through final passage.

Legislators fully understood the implementation challenges of this law. Boaters would need to know where and when southern residents were in the Salish Sea, so they could be avoided. Boaters would also need to know how to estimate 1000 yards at sea.

The ORCA group was formed, and funded, to recommend a suite of solutions that will help boaters learn about the new law, and comply with it. The implementation of this law was delayed by a year and a half to support this work. Our recommendations mattered—or should have.

I believe this group has failed to achieve its goals, for the following reasons:

1. The recommendations are a high level collection of ideas, with little detail attached to them (who, what, where, when, why). As such they will be easy to ignore and hard to get done. High priority items like promoting Whale Alert and forming an Ambassador program are buried, while information cards rise to the top.
2. Unlike all other similar efforts I've participated in, the ORCA group did not develop and does not have a clear and shared understanding of what each recommendation is—how it will be

implemented, who it will reach, how effective it will be, how much it will cost, how soon it can or should be done, how well it will achieve our goals and how its success will be measured. These are square one criteria by which the recommendations should have been characterized, evaluated, and prioritized.

3. The group had little say in how these ideas were described, grouped or presented. We were not polled on which recommendations should be included in the report, or not. And we were disallowed from including a recommendation on which there was strong consensus. As such, this report does not speak for me.

Our shared and overarching goal is to reduce noise and disturbance around the southern residents, and give them the space they need to forage successfully. This law was a milestone step towards that goal.

- If boaters don't have the information they need to avoid the southern residents, it is the whales who will pay the price.
- If the rollout of this law is chaotic, it is the whales who pay the price.

To that end, please consider the following recommendations as an amplification of and in addition to what is contained in this report.

1. Promote and encourage the use of Whale Alert with all boaters. Include in all communications about this law.

Whale Alert is a free, downloadable app to view and report whale sightings. Whale Alert is the best and so far only tool we have to reliably alert boaters to orca presence and ecotypes. The app is developed by conserve.io and supported by a consortium including NOAA, National Marine Sanctuaries (NMS) and IFAW. It was originally developed to alert ships on the east coast to right whale presence, and has recently been customized to support orca recovery in the Salish Sea, including the ability to report and view orca sightings by ecotype.

Key Benefits:

- **Availability.** Whale Alert is free, downloadable, accessible to all and available now.
- **Reach.** While not all boats are equipped with navigation systems, most boaters carry phones. Whale Alert is a tool that can be used by most boaters, most of the time.
- **Reliability.** Orca Network and other trusted observers input whale sightings into this app, including orca ecotypes. This means that boaters don't have to tell one kind of orca from another, and can have a high level of confidence in the sightings.
- **Realtime info about Laws and Guidelines.** Each sighting is displayed with a list of relevant laws and guidelines.
- **Provide useful context for other tools.** If boaters see a Whale Warning Flag flying, they can use Whale Alert to find out which species are being watched, and understand whether it's okay to go closer or if they should go away (see below).
- **Data Shared with Whale Report.** The sightings in Whale Alert are ported to Whale Report, which is used by large vessel operators. The sightings in Whale Alert are available to the public; Whale Report sightings are not.
- **Allows boaters to participate in conservation by contributing sightings.** Boaters should be encouraged to contribute orca and other whale sightings to the app. These sightings can help other boaters to become aware of whale presence, and follow the guidelines
- Real-time orca sightings have been provided to the public for more than a decade, especially

through private and public social media groups. Whale Alert presents sightings in a neutral, reliable format that is easily accessible to boaters and does not require them to launch a social media platform.

2. **Launch an Ambassador program by 12/31/2024.** While this is mentioned in the report, the urgency and priority of this solution has not been made clear. This train-the-trainer program allows members of yacht clubs and boater associations to share key information about this law with their peers. DFW should prioritize creating materials and support for this program sufficient to roll it out when the law takes effect.

3. **Increase capacity of WDFW Enforcement so that marine patrols are present in daylight hours when SRKW** are in the Salish Sea. Consider increasing staffing, or deploying a more flexible approach, or both. The best boater solution is to ensure that there is a DFW marine patrol accompanying the southern residents during daylight hours, including during the fall and winter.

    - Decades of Soundwatch data shows that all boaters are 5 to 6 times more likely to obey laws when Enforcement is present.
    - Marine patrols are highly effective at modeling and maintaining best practices around SRKW, as well as monitoring and ensuring compliance. This is going to be especially critical in Year One, as boaters get used to the change.
    - DFW should consider changing its staffing approach. Instead of scheduling SRKW patrols based on fixed days, the schedule could be whale-driven. That is, the Department could have a flexible approach so that its SRKW patrol hours are prioritized to be spent when southern residents are in.

Currently DFW enforcement is present less than 10% of the days SRKW are in the Salish Sea, and almost never in the winter, when the weather is worse and they may be harder to see. Southern residents are in the area on average of 20 times per year between October and February. DFW should have the flexibility to field patrols on those days. Many members of the ORCA group supported this recommendation and considered it the highest priority.

Thanks again for the opportunity to participate in this group, and for the Department's leadership in orca recovery. The Whale Trail and I will do everything we can to support the implementation of this law, and give the whales the space they need.

Sincerely,

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This is a letter from an individual ORCA Group member (Tisa Annette) reflecting on the group's process and outcomes. It does not reflect the perspectives of other ORCA Group members or Washington Department of Fish and Wildlife.

Letter from Tisa Annette:

There is an overarching presumption that sharing real-time whale locations to a broad and general public is self-evidently beneficial to that audience without repercussions to either specific whale ecology or overall marine wildlife. While acknowledging that such information can help the overall community and lead to optimal observational behaviors over time. I strongly disagree with any investment in marketing, further development or wide distribution of the Whale Alert app at this time without deeper consideration for its impacts, stressing the following themes:

Increased Boater Traffic
Marketing the Whale Alert app to a much broader audience may result in more boater traffic in pursuit of viewing whales in the area. Without deep scientific scrutiny into the impacts of additional boaters on whales, it is a risky proposition to advance a cause that leads to increased encounters. While whale sightings are already shared on many social channels, these are still somewhat limited to niche communities, and we should not use this as justification for expanding those opportunities further. However, the scale, ease of access, and consistency of an app magnifies the impact, drawing in those who would otherwise not pursue whale interactions.

Misaligned Focus and Risk to Non-Target Species
The focus of this group should remain on Southern Resident Killer Whales (SRKWs). However, promoting Whale Alert would inadvertently impact other whale species and areas outside of the SRKWs normal range, such as south of the Narrows or Hood Canal. Expanding the app's reach to non-relevant regions risks harming these populations without supporting the group's primary goal.

Unique Challenges of the South Puget Sound
The geography of the South Puget Sound, with its narrow passages and shallow bays, amplifies the potential negative effects of boat traffic on whales. This region is particularly vulnerable to increased vessel activity, making it critical to limit disturbances & harassment which can reach as many as 50+ watercraft on some days.

Challenges with Enforcement and Regulation
One of the most critical aspects of this debate is the lack of enforcement, which renders many of the proposed protections or guidelines ineffective. Without proper enforcement mechanisms, even the best-intentioned app users might unintentionally harm the whales. Even though Whale Alert provides users with laws and best practices, there is no guarantee that individuals will follow these rules or even read them. Many casual boaters or tourists may either be unaware of the regulations or choose to ignore them, knowing that the chance of enforcement is minimal. Without strong, consistent enforcement, the app's ability to protect whales is severely limited, especially in areas like the Puget Sound where human-wildlife conflicts are already prevalent.

Ethical and Ecological Concerns
There is no way to reverse the damage once oversharing creates more traffic toward the whales. This makes the potential risk of introducing real-time whale location data far greater than any perceived benefits. Centralizing whale sightings through a single app could become a larger target for exploitation, with users flocking to sighting areas without fully understanding the harm they may cause.

Unintended Consequences of "Equal Access"
While sharing whale locations might seem like a way to provide "equal access", it's also important to recognize that equal access does not mean equitable outcomes for the whales. Apps make whale sightings easily accessible, potentially increasing human interactions that are difficult to manage or regulate. Unlike social media, where content is mixed and not always reliable, apps feel more official, which could give users a false sense of security that merely accessing whale locations doesn't have harmful consequences.

Conclusion

This is a letter from an individual ORCA Group member (Tisa Annette) reflecting on the group's process and outcomes. It does not reflect the perspectives of other ORCA Group members or Washington Department of Fish and Wildlife.

Promoting real-time whale location sharing through the Whale Alert app is likely to have detrimental effects on both SRKWs and other whale species in the region. There are real ethical, ecological, and enforcement challenges, and expanding access to whale sightings would put the very whales we are trying to protect at risk.

- **All whale species in the region are impacted**, not just SRKWs.
- **The unique conditions of the Puget Sound** make it particularly sensitive to increased vessel traffic.
- **Without strong enforcement, guidelines are meaningless**, and the risk far outweighs any benefits of offering "equal access" through an app.

At a minimum, any such app should require a strict registration and approval process, similar to what was implemented in Southeast Alaska to address ship strikes. However, given the unique ecological and enforcement challenges in the Puget Sound, it is recommended that further discussions take place, and alternative solutions be explored before promoting any app that shares real-time whale sightings.

The welfare of the whales in the area should never be compromised for the sake of convenience & cost. The welfare of these whales should never be compromised for the sake of convenience. This app was originally designed to prevent ship strikes and should not be repurposed as a whale sighting tool. I recommend further discussions and consideration of alternative approaches to protecting these vulnerable populations.