



WILDCAT COVE SOCIAL MARKETING ANALYSIS REPORT

Prepared by Peak Sustainability Group
November 3, 2023



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Introduction

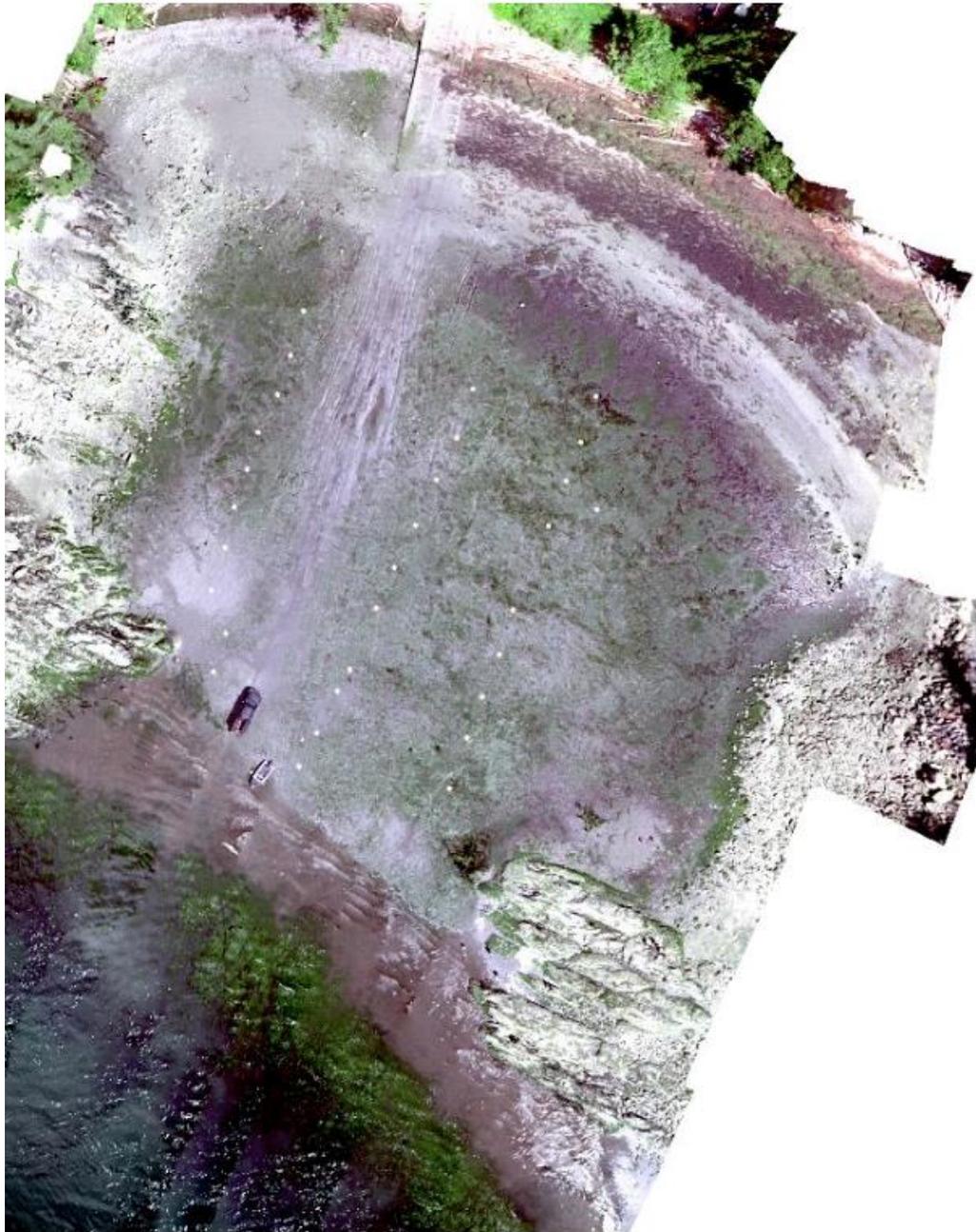
This project is being conducted in response to the apparent reduction of eelgrass coverage in and around Wildcat Cove in Larrabee State Park. It is well understood that the Pacific Northwest's eelgrass beds play a critical role in maintaining the region's coastal ecosystems. Damage to these vital habitats can lead to a myriad of consequences. Eelgrass destruction disrupts the balance of the marine environment, impacting various species dependent on it for shelter, feeding grounds, and breeding sites. This loss can trigger a decline in populations of commercially and ecologically important species like salmon, Dungeness crabs, and herring. Furthermore, the absence of eelgrass reduces water quality as these plants help in nutrient cycling and maintaining clarity. It weakens the stability of the coastline, leaving it vulnerable to erosion. Eelgrass is also an effective natural carbon store. The consequences of damaging eelgrass in the PNW are extensive, affecting both marine life and the overall health of the coastal ecosystem. Efforts to conserve and restore these habitats are crucial for preserving the ecological balance and sustainability of the region.

Through the course of this project, our team has sought to understand what key messaging strategies could foster a voluntary reduction in the instances of boat launch users driving onto the Wildcat Cove tide flat. Through observations of, interviews with, and surveys of boat launch users, we have identified a set of primary and secondary messages that align with boater interests and sentiments. The data collected demonstrates that messages centered around an actionable step, in this case checking tide charts, supplemented by appeals to conserving eelgrass and thereby local wildlife (like herring, salmon, and crab), is a compelling campaign that resonates with boaters.

We will make references to desired/desirable outcomes and desired/desirable behavior in this report. In this case, the **desired outcome** is that boat launch users do not drive their vehicles onto the Wildcat Cove tide flat when launching their vessels. **Desirable behavior** refers to actions taken by users that will lead to the desired outcome: checking the tide charts when deciding whether or not to launch.

When referring to boat launch users, we are referring to individuals or groups of individuals who came to the launch and launched their vessel(s) together. That could be either individuals launching solo, or a group of people launching one motorized boat or multiple kayaks/paddleboards together.

Picture 1



Picture 1: The consequence of undesirable behavior – launching at low tide. Tire tracks scar the tide flat from vehicles launching boats at low tides. This image was taken by David Wallin two days after the crabbing season opened in July 2023. There is also a visible lack of vegetation through the eelgrass meadow, at the bottom left corner of the image, where boat props stir up and uproot the plant. (Wallin, 2015)

Methodology

To assess what messages would influence users of Wildcat Cove boat launch to increase instances of desired behaviors and decrease instances of undesired behaviors, our methodology included observations of Wildcat Cove boat launch users, interviews with users, and a public survey, in that order. We employed these three methods to gain a more comprehensive understanding of user behavior at the boat launch and to identify the factors that could potentially alter their behaviors.

In July and August 2023, our team spent approximately 15 hours observing how 26 groups used the boat launch. We gathered data about users' equipment, including car make and model and vessel type, as well as user behavior, such as time spent on the launch, if they drove on the tide flat, and whether they were crabbing. Observations spanned various tide stages, including pre-low tide, during low tide, post-low tide, and mid-tide.

Next, on August 26th, 2023, our team interviewed a total of four boaters at the boat launch to help us establish a profile of powerboat owners who use the launch. Our questions covered how and when they use the launch, their understanding of eelgrass and wildlife, and their willingness to change their behaviors. We conducted the interviews over the course of four hours before the 4:30 pm high tide while the boaters were either launching or retrieving their vessels. We asked each interviewee 13 questions during a 5–15-minute interview. Responses were recorded by hand, then later transcribed into a spreadsheet. Interview questions are included in Appendix I.

Finally, we conducted an online public survey to further understand what messages might resonate with users of the launch. The survey was open from September 22nd to September 28th, closed for technical challenges from September 28th to October 4th, and reopened from October 4th to October 16th (during 2023). It yielded 39 responses. The survey was posted on the Whatcom County MRC website, promoted on social media, and advertised on four posters at the Wildcat Cove boat launch.

Results and Analysis

Observations

Our observations took place primarily around low tides, whereas our interviews took place around high tide. We noticed a lower number of motorboat users per hour (one per three hours on average) during observations than we did during our interviews (one per hour on average). During our observation period, only six of the 26 users we observed had crab pots upon launching from and/or returning to the boat launch.

Out of the 26 boat launch users observed during this study, 21 were kayakers and paddleboarders. None of these users drove their vehicles onto the tide flat. Instead, they manually transported their vessels to the water by hand or pull cart. These users had brief interactions with the boat ramp (~3.5 minutes on average), minimizing any disruption to other users' launch activities.

Five of the 26 users had motorized vessels, transported by trailer or truck bed, that they launched at or around low tide. All five of these users drove onto the tide flats, and on average tended to spend more time (14 minutes on average) on the launch and tide flat than kayakers or paddleboarders. Four of these five users drove their vehicles up to the waterline or beyond it to launch their vessel. All five used their motor to drive their boats through the significant eelgrass meadow found at the mouth of the cove.

One boater, upon returning to the launch in their ~12-foot motorized aluminum craft, expressed surprise at the level of the tide. Based on that comment, it appears that they had not anticipated the tide to change so drastically from when they launched their boat.

Our observations indicate that before, during, and after launching, boaters are often juggling multiple variables while trying to limit their time spent on the launch. Because of this, boaters might not see or read signage at the boat launch while launching. However, there was time before and after launching when motorboat users paused for a few minutes in one location. They had to pay a parking fee at the launch kiosk and often stopped to investigate the signage already posted there. And, boaters frequently took time to tidy their boats in the parking lot after retrieving them.

Key Takeaways:

- Kayak and paddleboard users tended to be low-impact users of the boat launch when compared to boaters with motorboats.
- Some boaters willingly retrieved or launched their boats at low tide.
- Around low tides, there were fewer motorboat users at the boat launch than during higher tides, when we conducted our interviews.
- Six of 26, or 23%, of users observed used the launch for crabbing.
- There are certain times and locations in which boaters were more available for messages and interactions.

Interviews

The four interviews that we conducted generated useful information about how some boaters use the boat launch. Of the interviewees, two used the launch at least once weekly during crabbing season. The other two interviewees used the boat launch infrequently. All respondents reported that they primarily use the launch for crabbing. Three of the four respondents stated that they frequently consult tide charts prior to coming to the boat launch and that tide charts were the main factor that they consider when deciding if they were going to launch that day. That same 75 % of interviewees reported having driven their boats out onto the tide flat at low tide in the past. However, because it can potentially damage their boats, trailers, and/or cars, they avoid doing so.

One respondent stated that he would not launch his boat at low tide because he does not want to damage his boat motor (being worth more than his car, trailer, and boat combined). Another informed our team that upon arriving at the launch and seeing a low tide in the past, he and his crew chose instead to drive to another local launch in Fairhaven. A third stated that because of the type of boat he owned, he could not launch at low tide without damaging the motor.

None of the respondents were familiar with the benefits of eelgrass, and most only recognized it when shown a piece. One respondent mentioned using it for garden fertilizer, while another knew it attracted crabs. Three of the respondents, at some point during the interview, voluntarily expressed care about ecological issues (“We care about salmon conservation, all that stuff”; “Stay off the beaches [when the tide is out]. You don’t NEED to go boating.”; “Life begets life. If the tide is too far out, stay out [of the water] ‘till it isn’t”), indicating an understanding of the potential harm caused by driving on tide flats or habitat.

Regarding engaging with boaters, we found that 100% of the individuals we approached before or after they had completed their boat launch were receptive to speaking with our team. This highlights the significance of timing when engaging with boat launch users. Because of our observation that boaters are fully occupied during launch, we did not attempt to engage boaters during that time.

Key Takeaways:

- Boaters who launched at high tide tended to check tide charts prior to visiting the launch.
- Boaters were *aware* of environmental conservation. However, they didn’t have a strong understanding of the connection between their boating habits, damage to eelgrass, and subsequent effects on wildlife populations.
- Boaters were willing to speak with attendants before or after they launched to answer questions or learn.

Survey

A total of 39 respondents completed the public survey. Responses to the five questions are summarized in the below charts and Appendix II. When responding to a survey, it is a common tendency for individuals to overestimate their willingness to engage in desired behaviors. Consequently, the data from certain questions, especially Questions 3 and 4, may indicate a greater inclination to positive behavior change than what would be seen in reality.

Question 1: Frequency of Consulting Tide Charts Before Launching Boats

In the first question, respondents were asked to report how frequently they check tide charts prior to using the boat launch (see Figure 1). A total of 48% of respondents reported that they often check tide charts ($n=19$), a desired behavior for protecting eelgrass around the Wildcat Cove boat launch. With this group, providing members with additional resources to learn more about eelgrass conservation and its associated benefits would reinforce the desired behavior.

A total of 52% of respondents reported checking the tide charts half the time or less. Of this group, 32% stated that they check the charts about half the time ($n=12$), 10% stated they never check the charts ($n=4$), and 10% stated they rarely do ($n=4$). We anticipate that the 42% of respondents categorized as "about half the time" and "rarely" regarding consulting tide charts may be the most receptive to increasing their use of tide charts with proper prompting. These individuals already engage in the desired behavior, albeit less frequently than desired. Posting reminders at the boat launch to check the tides will likely increase the consistency with which this group performs the desired behavior. We could monitor the shift in percentages within those two respondent categories in a future project assessing the efficacy of this social marketing campaign.

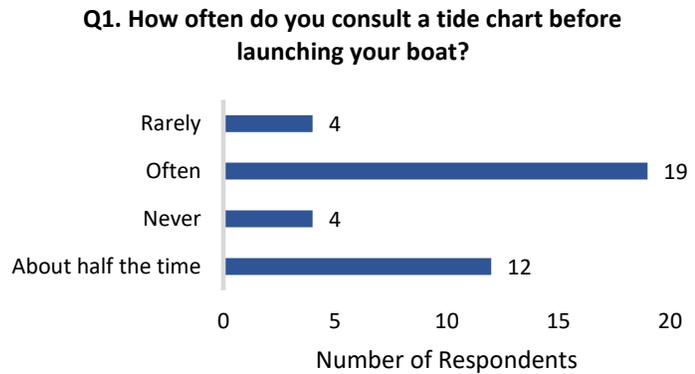


Figure 1. Wildcat Cove Boat Launch User Survey Results for Frequency of Consulting Tide Charts Before Boat Launch

Question 2: Impacts on Wildlife of Launching Boats at Low Tide

When asked if they are aware that launching their boat when the tide is low can harm local wildlife, most respondents (77%) indicated that they are aware ($n=34$). Only five respondents indicated that they are not aware of the impact on wildlife. Together with the results of the first question, this suggests the need to more explicitly communicate the importance of consulting tide charts to prevent boat launches during low tide and protect local wildlife.

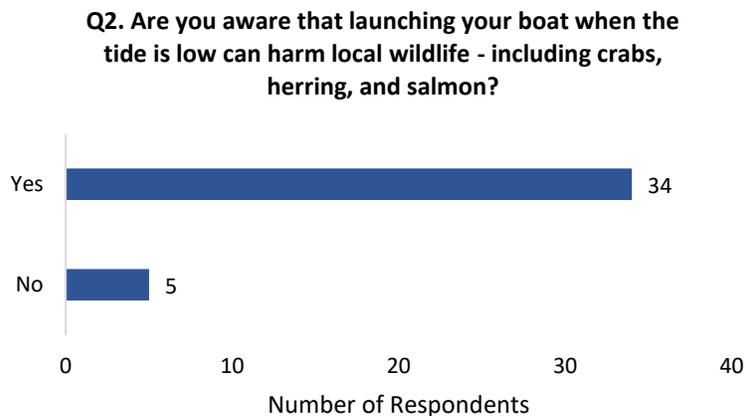


Figure 2. Wildcat Cove Boat Launch User Survey Results on Awareness of Environmental Impact of Low Tide Boat Launches on Local Wildlife

Questions 3: The Impacts of Boat Launching on Wildlife and 4: The Impacts of Boat Launching on Your Vessel

Interestingly, both questions 3 and 4 indicate that nearly all respondents (97%) are willing to change their behavior ($n=38$). This suggests that if boaters are made more aware of the consequences that launching at low tide can have on their vehicles and wildlife, they will be more likely to adopt the desirable behavior.

While the results from question 2 indicate that many respondents are already aware of the impacts that launching at low tide has on wildlife, the results of question 3 suggest that they would change their behavior if made aware. There seems to be a disconnect between these findings for which there could be multiple explanations. Perhaps it indicates that if respondents were made *more* aware of the linkages between low-tide launches and habitat damage, or if they were reminded more frequently of the damage that a low-tide launch can cause, they would be more likely to reduce the frequency of their low-tide launches. Regardless of the reason, there is a clear willingness to change behavior if given the right information.

Q3. If you knew that the way you launched your boat could potentially hurt local wildlife, would you change the way you launched your boat (even if it inconvenienced you)?

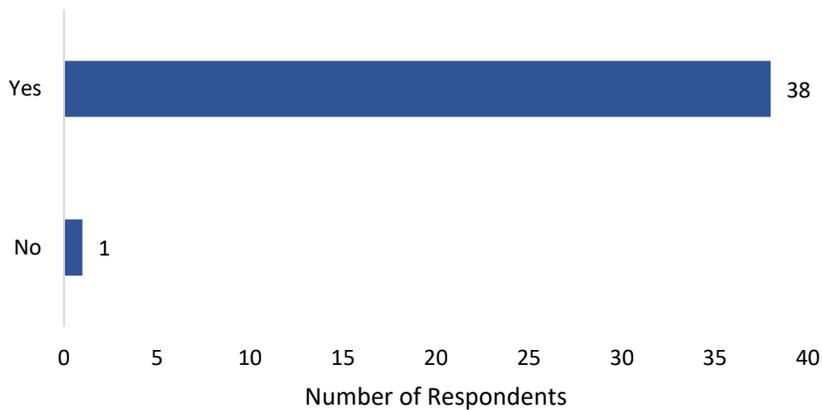


Figure 3. Wildcat Cove Boat Launch User Survey Results on Willingness to Alter Boat Launch Behavior for Wildlife Protection

Q4. If you knew that the way you launched your boat could potentially damage your boat, motor, trailer or car, would you change your actions (even if it inconvenienced you)?

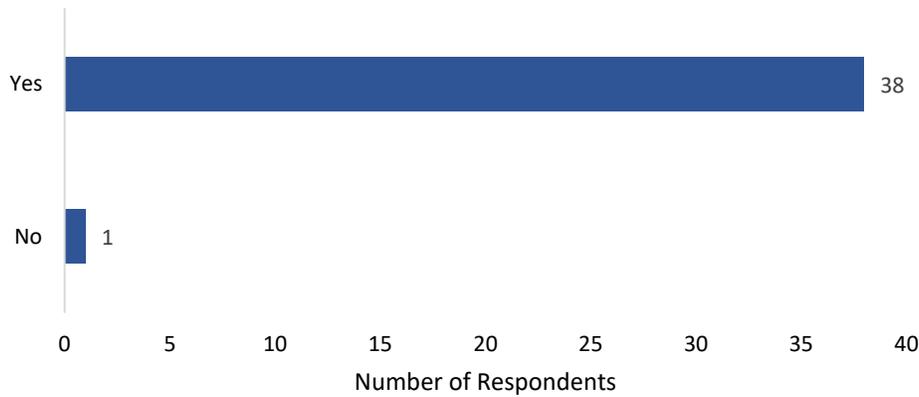


Figure 4. Wildcat Cove Boat Launch User Survey Results on Willingness to Modify Boat Launch Behavior to Prevent Damage to Property

Question 5

The final question in the survey asked respondents to share which of the three sample messages resonate most with them (which for this report are numbered Messages 1, 2, and 3, in order of occurrence in the chart below). As shown in Figure 5, the messages appealing to wildlife conservation (Messages 2 and 3) resonated with boaters more than Message 1, which makes an appeal to vehicles. This is likely because people are already concerned about their vehicles and understand what behaviors may cause damage. The data suggests that using messaging oriented around conservation will resonate with the most boaters.

Q5. What message would prompt you to change your behavior at the boat launch? Choose one of three options..

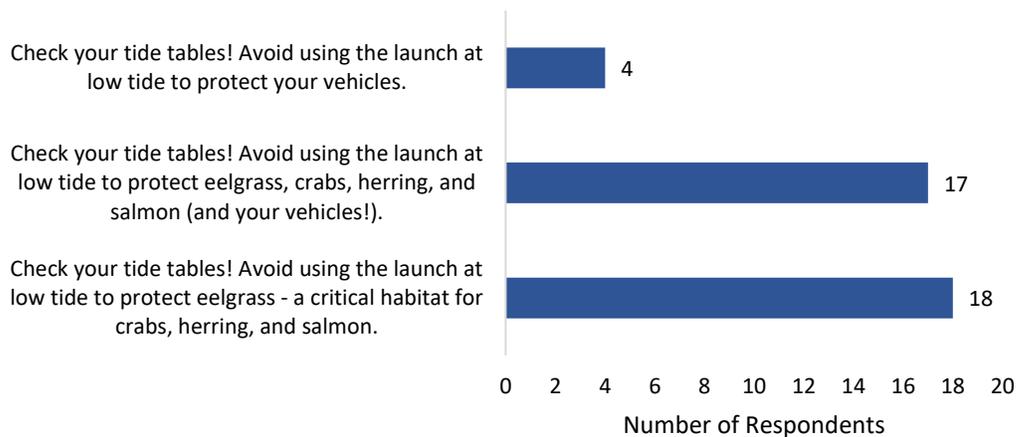


Figure 5. Wildcat Cove Boat Launch User Survey Results on Effectiveness of Behavior-Changing Messages

Key Takeaways

- Over 50% of respondents currently check the tides half the time they launch or less. There is an opportunity to increase the frequency of this desired behavior.
- Most respondents are aware that launching at low tide can cause harm to local wildlife.
- Most respondents are willing to change their behavior if given adequate information and prompting.
- Messaging around wildlife conservation resonated with most respondents. Appealing to vehicle damage did not.

Discussion and Insights

From the results of our observations, interviews, and surveys, we have drawn a few key takeaways. First, some boaters do check the tides when planning if they are going to visit the boat ramp and launch their boats. However, the *number of boaters* who do so could be increased, and the *consistency with which* boaters consult the tide charts could be increased. Increasing both factors would likely lead to fewer low tide launches, and therefore less damage to eelgrass beds. Consequently, we believe the **primary message** should prompt boaters to

check tide charts before using the launch.

Many boaters are aware that launching at low tide may damage ecosystems. Both our survey and interviews demonstrated that boaters strive to act in a way that doesn't harm our tidal environments. However, their understanding of the dynamics of coastal ecosystems like Wildcat Cove is low; the linkage between launching at low tide, eelgrass damage, and the consequent detrimental effects on local wildlife is not well established. Therefore, to increase that understanding, a **secondary message** should inform boaters that

preserving eelgrass helps protect salmon, herring, and crab.

Most of the boaters that we observed and interviewed who used motorized vessels used the launch for crabbing. They also tended to be the users who spent the most time driving on the tide flat. Elucidating the relationships between eelgrass and crab, in particular, may be resonant for Wildcat Cove crabbers and educate them about the consequences of low-tide launching.

During our interviews and survey, we asked boaters how aware they were that launching at low tide could damage their vessels, vehicles, and other equipment, and if that knowledge would change their behavior. We were curious if appealing to their equipment may incentivize boaters to be more thoughtful about when they choose to launch their boats. Our interviews revealed that boaters already understood the risks of launching their boat in low-tide conditions, and Question five from our survey demonstrated that appealing to vehicle damage was the least compelling of the three messages. It appears that this aspect of boat launching is well-established, so focusing on it may not yield the behavior change results Whatcom County MRC desires.

Another axis of analysis we examined is how people interact with signage at various times during their launch. It appears that during the launch, most boaters are either occupied or in transition. A key takeaway is to keep any written material concise to ensure that busy boaters can read and digest it in a short time frame. Another is to place signage in locations where boaters are most likely to pause, such as the pay kiosk or around parking areas where boaters tidy their vessels.

During our interviews, we learned that boaters were willing to have a brief conversation with our team before or after they launched. They were naturally curious why we were approaching them, but once they were informed that our team was gathering information about the launch, they were happy to cooperate. Boaters were also interested to learn about the project. This indicates that if an attendant were physically present to inform boat launch users about the ecological benefits of good boating habits and to draw their attention to signage, it would increase the consideration given to social marketing content posted at the launch.

Conclusion

The observations, interviews, and surveys discussed in this report have yielded substantive insights into boat launch user behavior, preferences, and concerns. Among launch users, there is ample desire to foster healthy coastal ecosystems while still being able to use the launch.

We aim to promote the habit of tide-checking before launch to reduce the prevalence of low-tide boat launching at Wildcat Cove. Our recommended primary message, checking the tide chart, is the most actionable first step that boaters can take to achieve the desired outcome of this project. Our data shows that supplementing that primary message with appeals to wildlife conservation and ecological wellbeing as a secondary message will resonate with launch users. The combination of these messages will serve as a foundation for promoting informed and environmentally responsible boating practices. We hope to decrease the 52% of respondents who check the tides only half the time or less, thereby increasing the proactive 48%. We conclude that the desired behavior is feasible for boaters, and it will lead to increased instances of the desired outcome – fewer launches at low tide, and therefore less harm done to eelgrass beds in and around Wildcat Cove.

Simple, accessible, visually engaging messages will help boaters make choices that ultimately benefit themselves in addition to the eelgrass, crab, salmon, herring, and other species that rely on healthy and less-disturbed Wildcat Cove.

References

Wallin, David. *Wildcat Drone Survey Final Report*. (2023). Western Washington University Department of Environmental Science.

Appendix I

Interview Questions

1. How frequently do you use the Wildcat boat launch?
2. How often do you use the boat launch for the following activities? Your choices are never, occasionally, or often.
 - i. Crabbing
 - ii. Paddleboarding
 - iii. Kayaking
 - iv. Recreational boating
 - v. Tide-pooling
 - vi. Wading/swimming
- b. Is there anything else you come here for that was not on the list?
3. What would you change about the boat launch at Wildcat Cove? What would you keep the same?
4. Which boat launches do you use most frequently?
5. How do you decide when to launch your boat?
6. Have you ever checked the tide charts before launching your boat at Wildcat Cove?
 - a. If yes how often do you check them? (Often, occasionally, infrequently, never)
7. Have you ever driven onto the sand flat when the tide is low?
 - a. If no, skip Q8.
8. How concerned or unconcerned are you about damaging each of these pieces of equipment when launching your boat at Wildcat Cove (whether from salt water, sand, etc.)? Your choices are: Unconcerned, somewhat unconcerned, neither concerned nor unconcerned, somewhat concerned, concerned.
 - a. The first item is your boat.
 - b. The second item is your trailer.
 - c. The third item is your tow vehicle.
9. Do you plan your launch around the tides?
10. This (show them a piece of eelgrass, indicate where the larger eelgrass meadow is outside the cove) is called “eelgrass”. How familiar or unfamiliar are you with eelgrass?
 - a. Very unfamiliar
 - b. Unfamiliar
 - c. Neither familiar nor unfamiliar
 - d. Familiar
 - e. Very familiar
11. People have a broad variety of opinions/perceptions about eelgrass, from strong fondness to utter disdain, and anywhere in between. What are your thoughts, perceptions, or understanding of eelgrass, if you have any?
 - a. How interested or uninterested would you be in learning more about eelgrass?
 - i. Very interested
 - ii. Interested
 - iii. Neither interested nor uninterested

- iv. Uninterested
 - v. Very uninterested
 - b. Eelgrass has been shown to provide many ecosystem services. It is
 - i. Forage for certain marine animals
 - ii. Provides habitat for fish (including juvenile salmon) and crustaceans (like crabs)
 - iii. It contributes to the cycling of nutrients
 - iv. It sequesters carbon dioxide from the atmosphere
 - v. It is a spawning ground for fish like Herring, an important part of the oceanic food chain
 - c. Which, if any, of the aforementioned benefits resonate most with you?
12. Next, I have a list of items that our team thinks could help to protect the eelgrass in Wildcat Cove. I want to ask - how willing or unwilling would you be to do the following on your future visits to Wildcat Cove? People usually overestimate their willingness to change. Please think carefully about what you would realistically be willing and able to do. Would you be...
- a. Unwilling
 - b. Somewhat unwilling
 - c. Neither willing nor unwilling
 - d. Somewhat willing
 - e. willing
 - a. The first item is checking the tides before coming to the cove so you can launch your boat at higher tides.
 - b. Waiting to launch boats one at a time?
 - c. [If the boats are small enough to walk] Walking your boat out past the eelgrass bed instead of driving through it?
 - d. Not launching below a certain tide.

Appendix II

Survey Results

Table 1. Wildcat Cove Boat Launch User Survey Results for Frequency of Consulting Tide Charts Before Boat Launch

How frequently do you consult a tide chart before launching your boat?	Count of Q1
Answers:	39
About half the time	12
Never	4
Often	19
Rarely	4
Grand Total	39

Table 2. Wildcat Cove Boat Launch User Survey Results on Awareness of Environmental Impact of Low Tide Boat Launches on Local Wildlife

Are you aware that launching your boat when the tide is low can harm local wildlife - including crabs, herring, and salmon?	Count of Q2
Answers:	39
No	5
Yes	34
Grand Total	39

Table 3. Wildcat Cove Boat Launch User Survey Results on Willingness to Alter Boat Launch Behavior for Wildlife Protection

If you knew that the way you launched your boat could potentially hurt local wildlife, would you change the way you launched your boat (even if it inconvenienced you)?	Count of Q3
Answers:	39
No	1
Yes	38
Grand Total	39

Table 4. Wildcat Cove Boat Launch User Survey Results on Willingness to Modify Boat Launch Behavior to Prevent Damage to Property

If you knew that the way you launched your boat could potentially damage your boat, motor, trailer or car, would you change your actions (even if it inconvenienced you)?	Count of Q4
Answers:	39

No	1
Yes	38
Grand Total	39

Table 5. Wildcat Cove Boat Launch User Survey Results on Effectiveness of Behavior-Changing Messages

Which of the below messages would be most likely to change your behavior?	Count of Q5
Answers:	39
Check your tide tables! Avoid using the launch at low tide to protect eelgrass - a critical habitat for crabs, herring, and salmon.	18
Check your tide tables! Avoid using the launch at low tide to protect eelgrass, crabs, herring, and salmon (and your vehicles!).	17
Check your tide tables! Avoid using the launch at low tide to protect your vehicles.	4
Grand Total	39