

# EVANS POLICY INNOVATION COLLABORATIVE

## NON-MOTORIZED BOATING FATALITIES IN WASHINGTON - DECEMBER 2022

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This report provides background into non-motorized boating activity in Washington State including an overview of existing research and Washington law; a study of non-motorized boating fatalities from Washington State Parks Boating Program's Boat Accident Report Database (BARD) by county; feedback from stakeholders in the Washington State boating industry; comparisons between Washington State and other states nationally using the National Recreational Boating Safety Survey (NRBSS); and recommendations for increased boater safety in Washington State.

### Background

The state of Washington has a vast array of water resources available for recreational activities, such as boating, fishing, kayaking, and paddlesports. Non-motorized boating activity involves watercraft that do not use a motor as a method for propulsion, including kayaks, canoes, inflatable rafts, rowboats, standup paddleboards, drift boats, inflatable pool toys, waveskis, and paddleboats. As interest in certain non-motorized boating activities have risen across the country, so has concern for the safety and well-being of those partaking in these activities.<sup>1</sup> Yet, there has been little research into non-motorized boating risk and fatality. To begin to fill this gap, this report will explore:

- 1) The prevalence of non-motorized boating fatalities and rescues in Washington and,
- 2) Washington's rates of fatalities and rescues as compared to other states.

Data underlying the analyses here come from the Washington State Parks Boating Program, which is responsible for monitoring reportable boating incidents in the state. State law requires a Boat Accident Report (BAR) be filed whenever a) loss of life occurs; b) injury occurs which requires medical treatment beyond first aid; c) a person disappears from a vessel under circumstances that indicate death or injury; or d) property damage is in excess of \$2,000, or there is complete loss of a vessel.<sup>2</sup> Despite this mandate, it is likely that many boating accidents without a fatality or significant damage are not reported to the state and added to the database, according to interviews conducted in the course of this project.



## Literature Review

A number of studies have examined motorized boating safety risks using the Boat Accident Report Database (BARD), but there is limited research surrounding only non-motorized boating. *One case-control study of boat-related injuries and fatalities in Washington State, found that non-motorized boating accidents were more likely to involve fatalities than motorized boating accidents.* For both motorized and non-motorized boating accidents, however, fatalities were much more common when passengers were not wearing a personal flotation device (PFD).<sup>3</sup> An analysis of drowning incidents in Alaska found that of non-occupational drowning deaths, 25% occurred in non-motorized boats such as canoes, kayaks, and rafts.<sup>4</sup>

Another study concluded that canoes and kayaks account for less than 4% of recreational boating activity but have some of the highest annual boating-related fatality rates. Operators of non-motorized boats or watercraft were more likely to use a PFD when conditions were present that created higher accident risk (e.g., low water/air temperatures, hazardous waters, poor visibility, and whether a child was on board). Nevertheless, failure to wear a PFD was strongly associated with fatality incidents.<sup>5</sup>

While the existing literature indicates that risks of fatality in non-motorized boating activity may differ depending on the type of craft, there has been little research examining non-motorized boating fatalities in Washington State. Attention to non-motorized boating fatalities is also warranted given that paddlesports sales increased by 56% from 2019 to 2020 across the United States.<sup>6</sup>

## Washington State Laws

Registration requirements for non-motorized craft varies from state to state. Currently, Alaska, Illinois, Ohio, Oklahoma, Iowa, Minnesota, and Pennsylvania are the only states that require registration of paddlecraft.<sup>7</sup> The State of Washington does not require non-motorized boats to be registered, which makes it challenging to monitor the purchase and use of these vessels across the state. Washington does have a Boating Under the Influence (BUI) law that applies to all vessels regardless of motorized or non-motorized status.<sup>8</sup> In addition, all vessels in Washington State are required to have U.S. Coast Guard approved PFDs accessible, and children 12 years old or younger are required to wear a PFD.<sup>9</sup>

It is important to note that the Washington State Legislature is considering legislation (HB 1018) concerning boater education that would require the Parks and Recreation Commission to establish and implement a program to provide boating safety education. Provisions also would require the possession of boating education cards to operate any vessel, motorized or non-motorized.<sup>10</sup>

## Data

### Boating Accident Report Database

As required by federal law, each state must record and report marine casualties to be collected by the US Coast Guard.<sup>11</sup> The database contains 57 fields that are intended to provide information about the conditions (e.g., weather, primary causes, PFD use) of each boating accident with varying levels of completeness. In addition, because disappearances are counted only when there is an indication of death, fatality numbers in this report include disappearances.

Researchers received the data from the Washington State Parks Boating Program on February 15, 2022, for 1,325 boating accidents that occurred between January 2010 and November 2021 in the State of Washington. Of these 1,325 boating accidents, 140 accidents were reported as occurring in a non-motorized boat.

This study uses counties as the primary unit of analysis when reporting boating accident locations because county sheriff offices are often the reporting entities. While reports often specify where an accident occurred within the county, there are times where such detail is not present. A number of accidents were labeled as occurring in large bodies of water such as the Puget Sound, the Pacific Ocean, and the Columbia River. Some bodies of water also overlap with each other. For example, some accidents were listed as occurring in the Strait of Juan de Fuca, a feature in the Puget Sound, while others were labeled more generally in the Puget Sound.

There are several features and limitations of the data worth noting at the outset. First, accident reports that involve fatalities and disappearances are the most complete in terms of reporting about vessel type, accident type, and other pertinent details. Vessel type was only reported when there was a disappearance or fatality, however, so there are no reports of non-motorized boating accidents where only injuries occurred. As a result, there is significant missing information in cases where there were no fatalities or disappearances. Analyses reported here focus only on accidents where a fatality or disappearance occurred.

This dataset is limited to information from jurisdictions under the State of Washington and does not include information on boating accidents from Tribal Nations. This could indicate a gap in the data as many Tribal Nations in Washington have jurisdiction over recreationally used bodies of water.

Third, while the database is frequently updated to include new reports, there can be long delays between the occurrence of an accident and a report being recorded in the database. For example, a 2021 study by Washington State University of the Washington BARD showed fatalities from 2004-2019. Comparing the most current data for this report, at least 27 fatalities have been added to the database since that report was published. This includes 5 fatalities that occurred in 2010 that were added to the database in 2021.

Finally, there is no consistently gathered data that provides insight into the relative frequency of motorized versus non-motorized boating activity, making it difficult to compare fatality rates across the two types of activities.

Despite these limitations, information from the BARD is the best publicly available data to follow non-motorized boating fatalities over time.

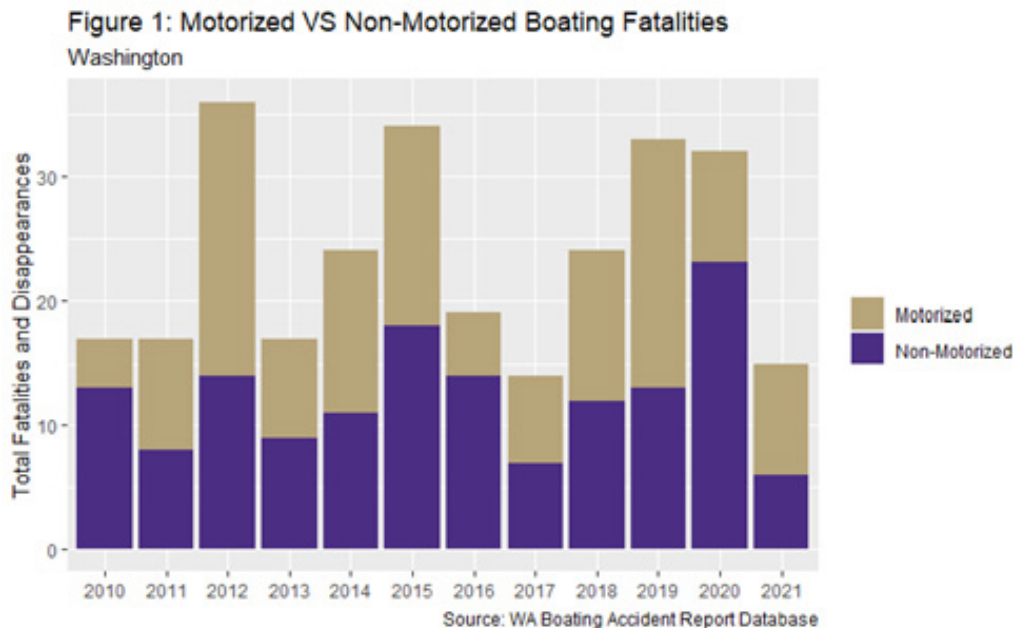
## Community Engagement

The research team hosted two stakeholder engagement convenings in August 2022. The purpose of the meetings was to foster conversation about non-motorized accident reporting, which would help to inform the analysis of data from BARD. These convenings provided an opportunity to understand what professionals in the industry observe about non-motorized boating safety in Washington and nationally, as well as to share initial insights from analysis of BARD. Nine stakeholders participated in the convenings including Washington's Boating Law Administrator, the National Association of Boating Law Administrators Paddlesports Committee Chair, and representatives from the Recreational Boating Association of Washington. The overarching questions that guided the discussions were:

- 1) What perspective or information are we missing that should be included in this report?
- 2) How would more information on boating accidents help you in your position?
- 3) What do you think are the barriers to boating safety in Washington? What suggestions do you have to improve them?

A recap of the convenings can be found in Appendix 1.

## Accidents and Fatalities



There were 140 non-motorized boating accident reports for the years 2010 through 2021, which involved 143 fatalities and 13 disappearances. These 140 non-motorized boating accident reports also indicated the presence of 15 total non-fatal injuries. Non-motorized boating fatalities make up 53% of total fatalities from reported boating accidents since 2010 (see Figure 1).

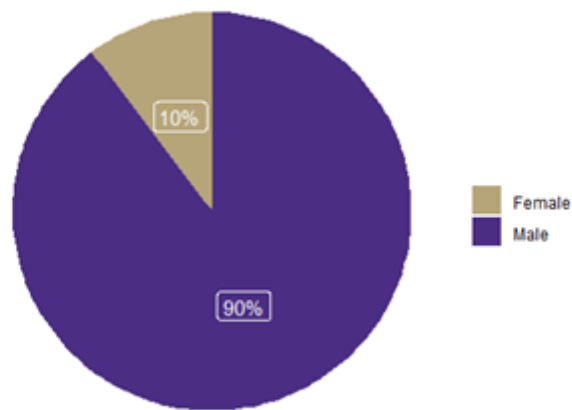
Nearly two-thirds (59%) of non-motorized boating fatalities occur between April and August each year. Roughly 90% of reported non-motorized boating fatalities and disappearances from 2010 to 2021 involved were male operators (see Figure 2).

On average there are about 13 non-motorized boating fatalities or disappearances reported per year in Washington, although the number of fatalities and disappearances does vary over time (see Figure 1). Reported non-motorized boating fatalities increased in 2020, with 23 deaths or disappearances. This was 77% more than in 2018 or 2019 and reflected the highest total since 2010. Fatalities sharply decreased in 2021 to 6 total – the lowest level since 2010. This decline from 2020 to 2021 may reflect greater recreational activity during the COVID-19 pandemic. Fatalities in 2021 also may be lower than prior years due to delays in reporting.

Nearly half of all non-motorized boating fatalities report that capsizing was the primary accident type, followed by falling overboard (24%). Drowning was declared the cause of death for 120 out of the 143 fatalities and hypothermia or exposure accounts for 13.



**Figure 2: Non-Motorized Boating Fatalities by Sex**  
Washington

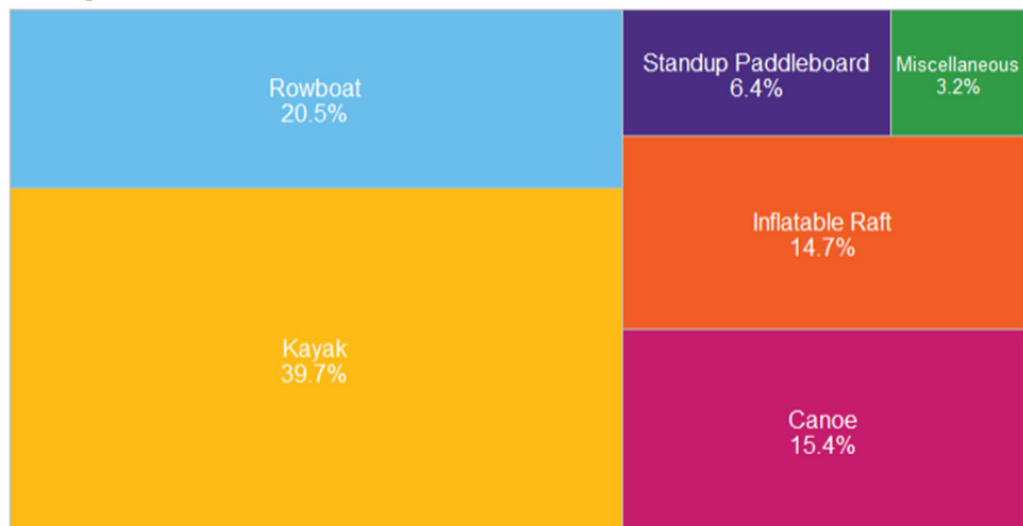


Source: WA Boating Accident Report Database

### Vessel Types

Approximately, 40% (62 of 156) of all reported non-motorized boating fatalities occurred while operating a kayak in Washington (see Figure 3). The next highest number of fatalities occurred in rowboats (20.5%, n=32), followed by canoes (15.4%, n=24), inflatable rafts (14.7%, n=23), and standup paddleboards (6.4%, n=10). Reports indicated other types of non-motorized vessels involved in accidents with a fatality – drift boats, inflatable pool toys, waveskis, and paddleboats (categorized as miscellaneous for the data analysis) – but these accounted for less than 4% of all fatalities.

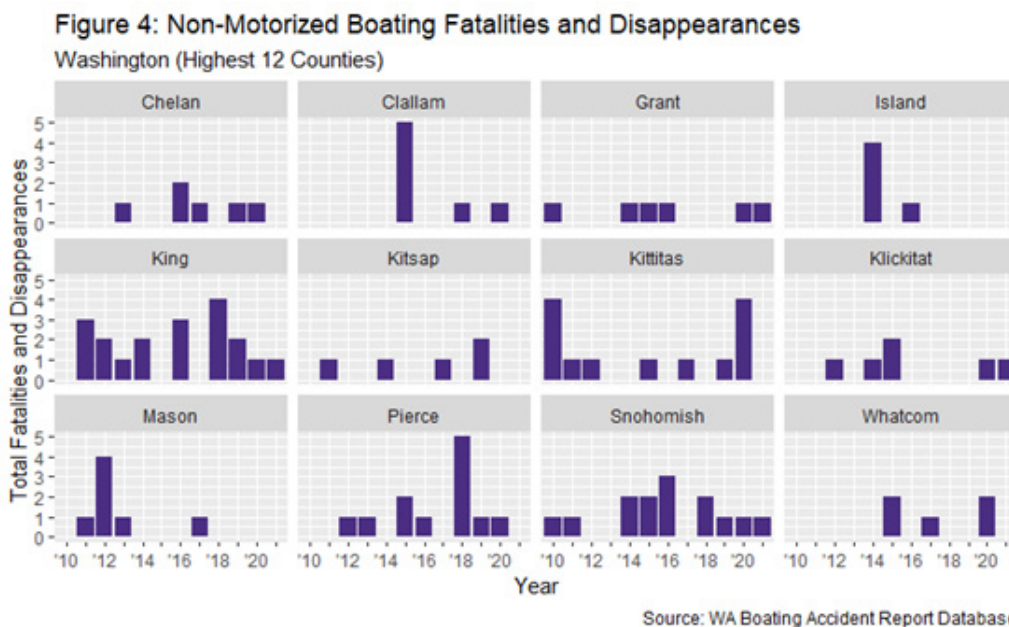
**Figure 3: Non-Motorized Boating Fatalities and Disappearances**  
Washington 2010-2021



Source: WA Boating Accident Report Database

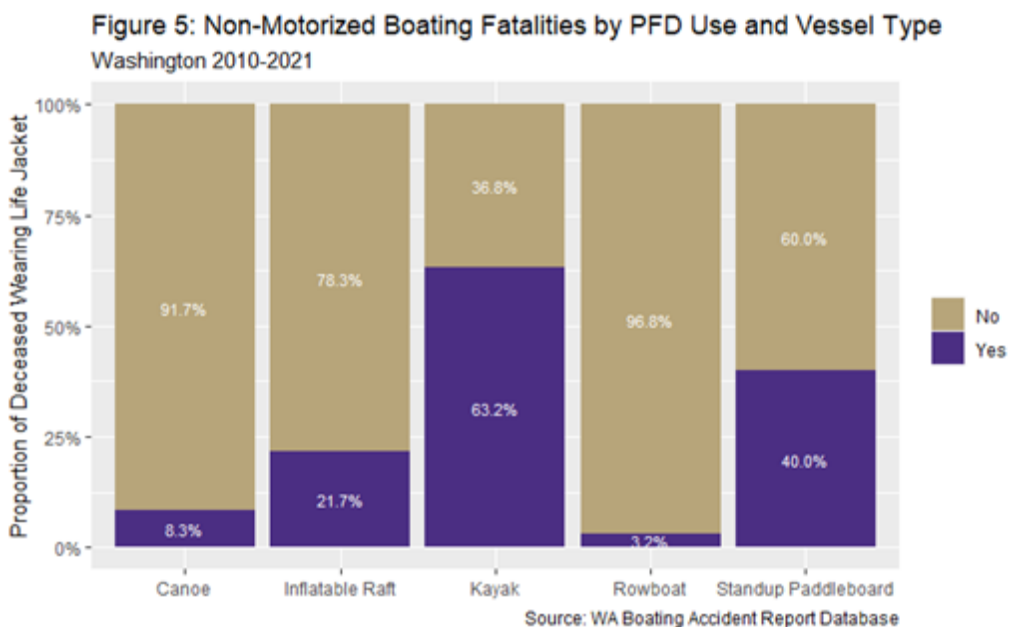
## County Geography

Reported non-motorized boating fatalities occurred in 30 of 39 Washington State counties from 2010 to 2021. King County reported the largest number of boating fatalities and disappearances in the state of Washington during that period (n=19), accounting for roughly 12% of all fatalities in the state. Snohomish County (n=17), Kittitas County (n=13), and Pierce County (n=13) report the next highest numbers of fatalities or disappearances (See figure 4). Combined, these four counties account for 40% of the fatalities in non-motorized boating accidents in the state. Our analysis does not indicate any clear patterns or trends in the prevalence of fatalities across county geography over time.



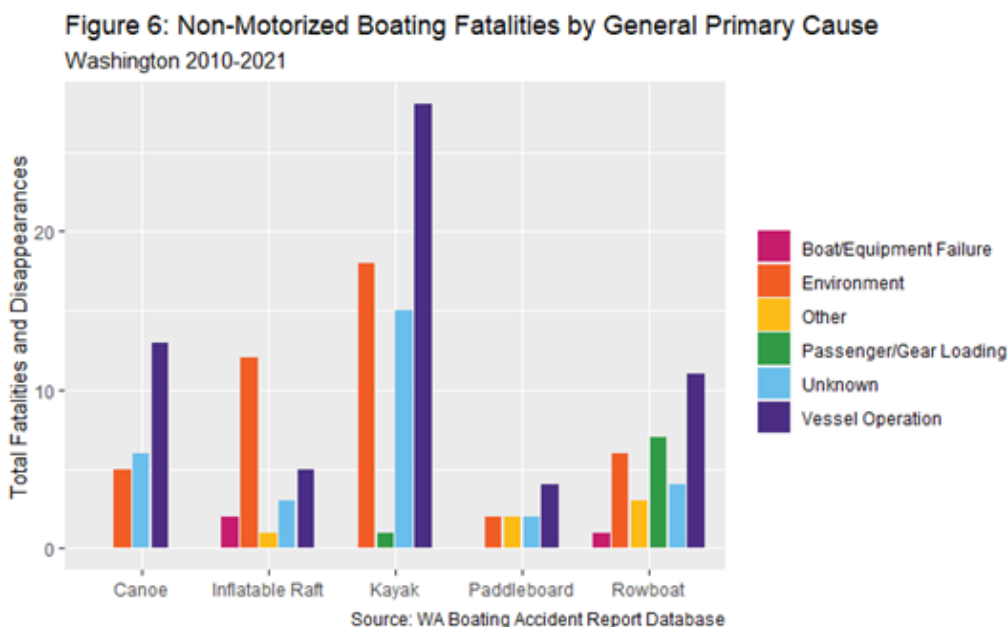
## Presence of Personal Flotation Devices (PFDs)

Most non-motorized boating fatalities involved an individual who was not wearing a PFD (see Figure 5). Of the 145 fatality reports where PFD use was recorded, 67% (n=97) of individuals involved in a fatal accident were not wearing a life jacket at the time. It is important to note the variation in fatalities and PFD use by type of non-motorized craft. For example, roughly two-thirds of all kayak fatalities involved an individual wearing a PFD, while only 3.2% of those who died recreating in a rowboat were wearing a PFD.



## Primary Causes, Accident Type, and Cause of Death

Incident reports also provide some information about the primary causes or circumstances in which a non-motorized boating fatality occurred (see Figure 6). Accidents attributed to vessel operation could involve alcohol use, operator inexperience, operator inattention, or improper use of the vessel. Accidents caused by environmental conditions include hazardous waters, heavy weather, or wakes caused by other boats. Another set of causes involve passenger or gear loading, where accidents occurred when loading people or gear onto the boat. It is the case, however, that 19% of fatalities report no or an unknown primary cause of accident.



The most frequent causes of non-motorized boating accidents involving fatalities include: Hazardous Waters (21%); Operator Inexperience (19%); and Alcohol Use (16%).

Different non-motorized vessel types experienced a different mix of primary causes. For example, 54% of canoe accidents were caused by the circumstances of vessel operation, mostly operator inexperience. More than half of inflatable rafting accidents and nearly one-third of kayaking accidents were caused by environmental conditions. These accidents include hazardous waters, heavy weather, or wakes caused by other boats. Nearly a quarter of fatalities on rowboats were from passenger or gear loading, including accidents that involved overloading or improperly loading a vessel, shifting weight of passengers, sitting or standing on the gunwale or bow, or standing in an unstable vessel.

## Washington Compared to Other States

To put the fatality incidents and rates involving non-motorized boats into a national context, we turn to data from the National Recreational Boating Safety Survey (NRBSS).<sup>12</sup> The NRBSS is very labor intensive so it has only been conducted in 2012 and 2018.

In 2018, the NRBSS included a Participation Survey that provides a snapshot of persons participating in recreational boating during that year and an Exposure Survey that estimates total recreational boating exposure hours on behalf of the US Coast Guard.<sup>13</sup> These latter estimates required collecting information on the different types of boats owned in every state, both registered and unregistered; how many of these boats were operated during the year, the number of days and hours that these boats were used, and the number of persons who were aboard these boats when they were being operated.<sup>14</sup> Data from the NRBSS includes the total amount of person boat days, or any part of a day that a person was aboard a boat in the water, by state as well as the total person boat hours, or any part of an hour that a person was aboard a boat in the water, by state.

To compare the rates of non-motorized boating accidents across time and place, we use exposure hours to normalize the data. Previous studies have normalized boating fatalities per every 100,000 registered boats in the state. This approach, however, does not accurately account for growing numbers of unregistered non-motorized boats. Person hours are usually greater for motorized boats than non-motorized boats, so we expect states with higher motorized boat usage may appear to have lower risks associated with non-motorized boats.<sup>15</sup> Thus, we expect any prevalence rates calculated via registered boats will overestimate the fatality rates and risks for non-motorized boating activities.

Figure 7A shows the total numbers of non-motorized person boat hours calculated for each state in order of highest fatality rates. Florida has the highest number of non-motorized person boat hours in 2018 with about 132 million and the District of Columbia has the lowest with a total 232,000 person non-motorized boat hours. The average among the states is about 26.5 million non-motorized person boat hours. Washington was just below average with 23.3 million non-motorized person boat hours.

### Ranking

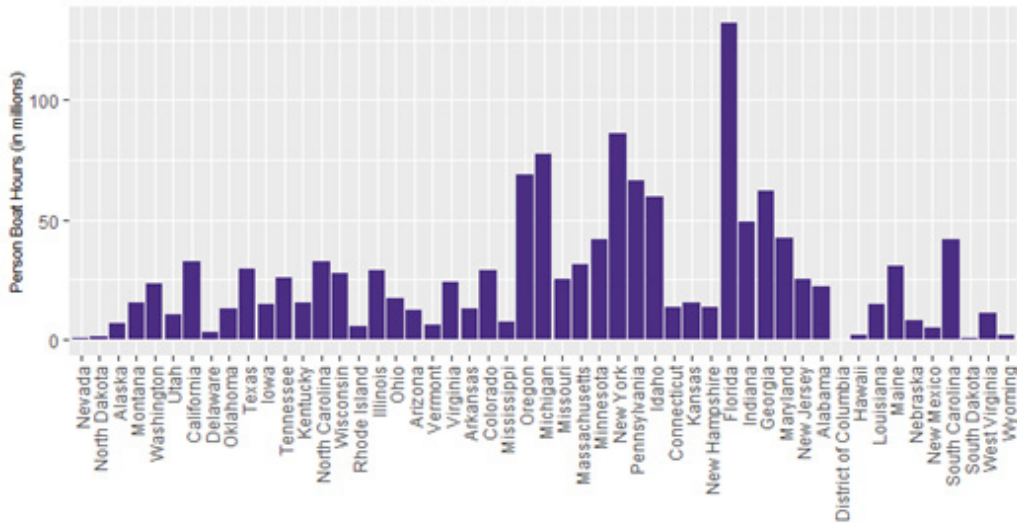
When looking at total accidents reported from 2015-2019, Washington has the 3rd highest number of non-motorized boating fatalities in the country behind Texas and California (53 versus, 81 and 72, respectively).<sup>16</sup>

As described above, we normalize these raw numbers to account for boating use by dividing the number of non-motorized fatalities by the number of non-motorized boating hours by state. According to data in the 2018 NRBSS, Washington State had 39 non-motorized boating fatalities per 100 million person boat hours.<sup>17</sup> This ranks Washington State as the 5th highest fatality rate for non-motorized boats in the United States in 2018. The average rate among the states was 18 fatalities per 100 million person boat hours. Comparatively, Oregon had 23 fatalities per 100 million person boat hours and Idaho had 32. The state with the highest rate of fatalities in non-motorized boats per 100 million person boat hours was Nevada with 118. Figure 7B shows the fatality rates of non-motorized boaters by state in 2018.<sup>18</sup>

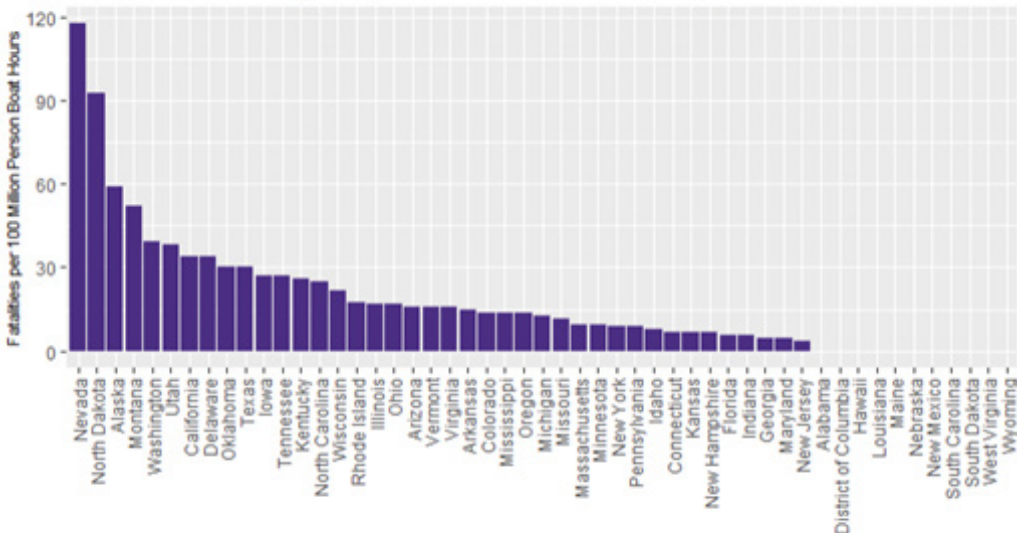


Figure 7

A: Non-Motorized Person Boat Hours by State (2018)



B: Non-Motorized Boating Fatality Rates in the United States (2018)



Source: NRBSS Exposure Survey Final Report 2020

Analyses suggests that the rate of non-motorized boating fatalities is higher in Washington State than many other states, although we report this finding cautiously given the limitations of the available data. It is quite possible that fatality rates for Washington State would change if we were able to analyze more recent data on the total hours of non-motorized boating use.

## Challenges with Existing Data Collection

Participants in the convenings stressed the need to reduce the missing information due to the filing of incomplete reports and discussed a variety of reasons for why it could be so challenging to receive complete data for the BARD.

First, most accident reports are completed by local law enforcement agencies. Washington State has roughly 68 City Police and County Sheriff's Departments, as well as dozens of other agencies, that may appear on scene at a boating accident. Different jurisdictions and organizations complete boating accident reports differently and not all fields are completed consistently across local jurisdictions. Participants noted that record-level law enforcement officer shortages may be a contributing factor to limited completion of boating accident reports in recent years. It may be the case that when there are fewer officers in agencies, proactive boating safety patrols decline as officers prioritize emergency calls and other responsibilities. Second, participants noted that the report itself is difficult to complete. The print version is six pages long and can take a significant amount of time to complete, which can become burdensome amongst other paperwork. Given fatalities are involved, demands on public safety staff may be such that only the main fields in reports are completed.

Participants also noted that other reasons it is challenging to analyze non-motorized boating safety in Washington is that near misses, or accidents that occur, but do not involve fatalities and may not meet the criteria for reporting are not recorded in any meaningful way to the State.

Finally, because non-motorized boats are not registered in Washington, public safety officials can find it challenging to identify ownership when a vessel is found without someone nearby. When such discoveries occur, extraordinary amounts of resources may be used to conduct search and rescue in the area without information on whether someone is missing and who.

## Identifying New Data

Initial analysis of the data showed that there were significant limitations and gaps in information in the BARD and the NRBSS. During our stakeholder convenings, we discussed these data gaps to better understand how they impact the work of public safety professionals who use this data to understand boating safety in Washington State. Participants agreed that fatality data is a critical component for efforts to develop or revise boating safety laws, but that the data currently available was not adequate to inform sound policy development.

Information that was brought up by the stakeholders as data that could be helpful to understanding boating safety with greater accuracy was:

- Identification of vessel types for every accident reported (not only when a fatality occurs)
- Improved reporting of accidents not involving fatalities
- Reporting all vessel types, when more than one vessel is involved in an accident
- Provide GIS location data for accidents
- Whether or not a life jacket loaner station was available
- Information on incidents that occur when public safety has intervened but an accident has not necessarily occurred (i.e. when potentially dangerous activity is observed or reported)
- County of residence for fatalities (not only county of incident)
- Classifications of water bodies to indicate the presence or likelihood of hazards that increase risk of fatality (occurrence of calm water, rapids, or other risks)
- An assessment of the boater's experience
- Consistent data indicating exposure hours, estimated participation, and/or sales data in Washington State

Participants indicated that the consistent collection of these data elements would enable researchers to provide a more detailed and accurate analysis of non-motorized boating accidents in Washington State.

## Other Barriers to Boating Safety

Several stakeholders noted the unique circumstances of operating non-motorized craft in Washington State compared to other states makes it difficult to target boating safety campaigns. Participants discussed the large number of different traffic types in water bodies, especially in King County. For example, in Lake Union and Lake Washington during the Summer peaks, there can be many different motorized boats, non-motorized boats, commercial vessels, and seaplanes. This makes regulating boater safety very complicated because of the different needs and desires of each type of vessel. Some bodies of water in the State of Washington jurisdiction are also extraordinarily large compared to other states. This inflates the already high cost of search and rescue and makes it more difficult to save a boater in danger.

Stakeholders also brought up the attitudes that more experienced boaters may have toward safety. Many kayakers and paddlers do not think of themselves as “boaters” at all and will claim to have different safety and recreation needs. This may have impeded marketing and educational outreach campaigns attempting to target all boaters for increasing life jacket wear and other safety measures. This has also created pushback from boaters that believe only certain vessel types should be forced to follow mandatory life jacket rules or similar laws.

## Deliberated Alternatives

A portion of the stakeholder convenings provided space to discuss and brainstorm potential pathways for improving boater safety in Washington State. We include these discussion points not as official recommendations, but as topics for further discussion and research.

Stakeholders stressed the importance of wearing a life jacket or PFD, which has been shown to keep boaters safe. The availability of low cost or free PFDs at popular boating access points across the state could be hugely beneficial to ensuring that at least everyone who wants a life jacket can receive one. Stakeholders also discussed making life jackets and PFDs mandatory on higher risk bodies of water, such as rivers that have been known to have hazardous white water. Stakeholders noted that the more targeted and specific the safety intervention, the more successful it is in implementation.

Participants discussed how registering non-motorized boats in Washington State could improve understanding of boating safety and possibly generate revenue for boating safety programs. Registering non-motorized vessels could also provide a mechanism for mandating stronger boater education.

Finally, stakeholders discussed the possibility of requiring non-motorized boating rental businesses to provide basic safety information prior to renting out kayaks, standup paddleboards, canoes, and other vessels. This would ensure that there is a minimum amount of knowledge for inexperienced boaters. There was also discussion of more intensive safety education requirements for those who purchase non-motorized boating vessels.

## Future Research

During the course of this research study, many ideas came up that should inform future research. First, future research should request boating accident data from Oregon and other neighboring states to provide more accurate comparative analyses of non-motorized boating fatalities or bolster the amount of data used for analysis. Such data would improve the State of Washington's ability to understand trends in non-motorized boating fatalities and place the State's figures in clearer context.

Second, sales data or more recent non-motorized boating exposure hour data is critical to developing accurate assessment of risk in Washington State. More consistent gathering of demographic information (e.g., age, place of residence, race and ethnicity) through accident reports would provide for more accurate impressions of which populations are most at risk for a non-motorized boating accident.

Future research also may seek information from states that require registration of non-motorized boats. States such as Connecticut and Ohio, have gathered registration information for many years. Such data would provide insight into the benefits of registration and whether it helps make their boaters safer.

Moving forward, it also will be useful to better understand how boating accident reports are prepared and how the State can provide a more complete understanding of non-motorized boating accidents.

In addition, future researchers should explore methodologies for estimating non-motorized boating use that would improve the ability to make relative comparisons to motorized boating and to other settings.

Combined, these additional research tasks will help inform discussion about the risks of non-motorized boating recreation in Washington and possible regulatory changes intended to improve safety.

## Conclusions

This report analyzed information from the State of Washington Boating Accident Reporting Database to assess the prevalence of non-motorized boating fatalities. Currently available data provides some evidence that the rate of reported non-motorized boating fatalities in Washington State may be high by national comparisons. At the same time, however, the number of annual fatalities does not appear to have sharply increased in recent years. Given the pandemic and potential lags in reporting it may be valuable to return to this data in a couple of years to reassess.

We note that data limitations inhibit our ability to assess accurately how Washington State compares to other states.

Input from stakeholder convenings provided important insight into the data reporting context around non-motorized boating accidents in Washington State. Stakeholders discussed many potential reasons for limited and incomplete accident report data.

Stakeholders also felt that boater education, lifejackets, and risk management are critical tools to mitigate risks.

Looking forward, non-motorized boating will remain an important area of research for the State of Washington and future studies should examine more comprehensive datasets, policies that may improve data collection, and regulatory changes that could improve boater safety.

- <sup>1</sup> Outdoor Foundation (2019). 2019 Special Report on Paddlesports & Safety.
- <sup>2</sup> Washington State Parks Boating Program. (n.d.). Boating Accidents. Washington State Parks & Recreation Commission. <https://www.parks.wa.gov/1126/Boating-accidents>
- <sup>3</sup> Stempski S, Schiff M, Bennett E, et al. A case-control study of boat-related injuries and fatalities in Washington State. *Inj Prev* 2014;20:232–237. doi:10.1136/injuryprev-2013-041022
- <sup>4</sup> Hillary D. Strayer, Devin L. Lucas, Deborah C. Hull-Jilly & Jennifer M. Lincoln (2010) Drowning in Alaska: progress and persistent problems, *International Journal of Circumpolar Health*, 69:3, 253-264, DOI: 10.3402/ijch.v69i3.17627
- <sup>5</sup> Phillips MT, Spitzer N, Chow W, Mangione TW. Risk factors associated with life jacket wear among adult canoeists and kayakers in the United States, 1999-2017. *Int J Inj Contr Saf Promot*. 2019 Jun;26(2):176-184. doi: 10.1080/17457300.2019.1576207. Epub 2019 Feb 27. PsMID: 30810502.
- <sup>6</sup> Statista. (2021). Paddle sport sales in the United States in June 2019 and June 2020. <https://www.statista.com/statistics/1181864/paddle-sport-sales/>
- <sup>7</sup> American Whitewater. (n.d.). Boater Registration. [https://www.americanwhitewater.org/content/Wiki/stewardship:boater\\_registration#:~:text=Bills%20requiring%20registration%20of%20non,beginning%20of%20a%20national%20trend.](https://www.americanwhitewater.org/content/Wiki/stewardship:boater_registration#:~:text=Bills%20requiring%20registration%20of%20non,beginning%20of%20a%20national%20trend.)
- <sup>8</sup> RCW 79A.60.040
- <sup>9</sup> RCW 79A.60.160
- <sup>10</sup> Washington State Legislature. (2021). HB 1018 – 2021-22. <https://app.leg.wa.gov/billsummary?BillNumber=1018&Year=2021&Initiative=false>
- <sup>11</sup> 46 U.S.C. § 6101
- <sup>12</sup> The survey is administratively intensive and therefore the exposure numbers are not available every year.
- <sup>13</sup> Duffy T, Kilpatrick G, Krotki K, et al. (2020). National Recreational Boating Safety Survey: Exposure Survey Final Report. <https://uscgboating.org/library/recreational-boating-survey/NRBSS-Exposure-Survey-Final-Report-11302020.pdf>
- <sup>14</sup> Ibid.
- <sup>15</sup> Gona D, Terry T. (2014). Breaking Down the Numbers: A closer look at exposure hours from the 2012 National Recreational Boating Survey. [https://higherlogicdownload.s3.amazonaws.com/NASBLA/76594a34-f3a1-4916-95ac-1e9c872170cc/UploadedImages/Lighthouse/July-Aug14\\_SCA\\_Breaking%20Down%20the%20Numbers.pdf](https://higherlogicdownload.s3.amazonaws.com/NASBLA/76594a34-f3a1-4916-95ac-1e9c872170cc/UploadedImages/Lighthouse/July-Aug14_SCA_Breaking%20Down%20the%20Numbers.pdf)
- <sup>16</sup> NASBLA. (2018). Boating Incident Data – State. <https://idash.nasbla.net/idashboards/viewer/?guestuser=guest&dashID=198&c=0&NRD=True>
- <sup>17</sup> Ibid.
- <sup>18</sup> We generate very similar results when averaging non motorized boating fatalities from 2015 to 2019.





# APPENDIX 1

## Non-Motorized Boating Fatalities in WA: Stakeholder Convenings 1 & 2 8.11.2022 & 8.24.2022 | 2:00 - 3:30 PM

Virtual meeting held in Zoom, round table discussion captured through post-it notes on Mural

### Who is here?

Keala Aronowitz  
Director of  
Innovation &  
Engagement

Wayne Gilham  
Previous  
Boating Assoc.  
of WA, Paddle  
Sport Advisory  
Committee

Amy  
Brakenbury  
Outdoor  
Education Rec.

Peter Steelquist  
Legislative  
Assistant

AK Sterling  
EPIC Project  
Manager

Emma Diamond  
Research  
Assistant

Owen Rowe  
State Parks

Rob Sendack  
State Parks  
Boating  
Program

Tizzy Bennett  
Life Jacket  
Working Group

Kim Jackson  
AZ Fish & Game,  
Chairman of  
Paddle Sports  
Committee

Doug Levy  
Outcomes by  
Levy, LLC

Jessika Gill  
Student  
Assistant

The purpose of this convening was to gather stakeholders around the topic of non-motorized boating in Washington state, a project that EPIC, the Evans Policy Innovation Collaborative, has undertaken. EPIC was tasked with studying the prevalence of non-motorized boating accidents in Washington and comparing the risks to boating in other states.

Three rounds of questions we presented to the stakeholders to better understand the policy landscape around non-motorized boating fatalities in Washington to gather what may be missing from EPIC's initial report, how more information would help stakeholders in their position, and how they would recommend the current system should be revised.

# Summary of Convenings by Round

## Round 1: Report Review: What perspective or information are we missing that should be included in this report?

In this round, we discussed the limits of the current reporting system and how it does not identify most non-motorized boating accidents, and when it is used many times there is not enough data to make well-informed decisions. It was also mentioned that many non-motorized boaters, such as kayakers and paddle boarders, do not consider themselves boaters, making it difficult to enforce policies that are meant to affect these groups. Additional information that might be helpful to add to the reporting mechanism include demographic data (age, gender, race), GIS spatial data, water type descriptions, comparisons to similar states, and where the data intersects.

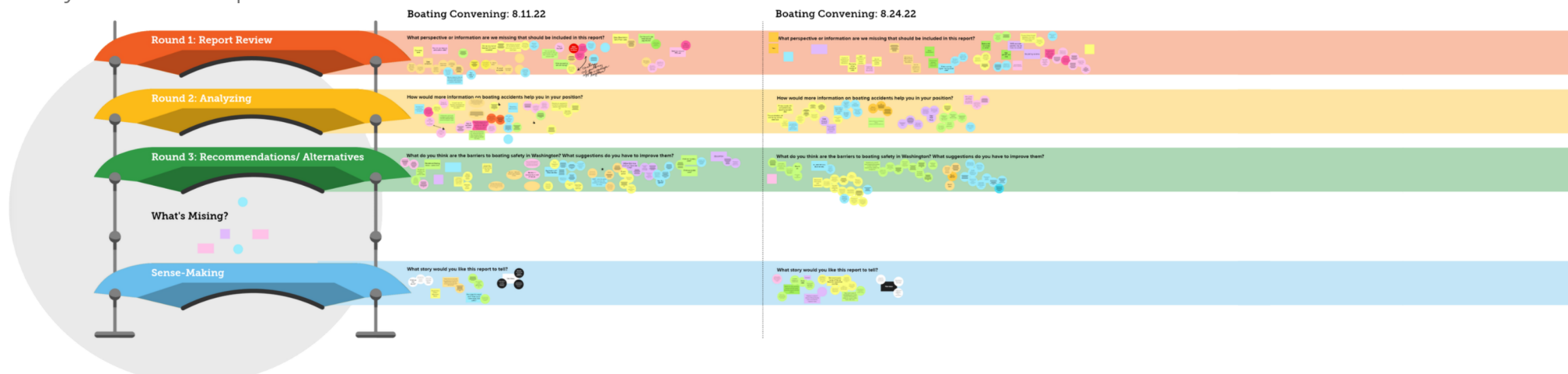
## Round 2: Analyzing: How would more information on boating accidents help you in your position?

There was a general consensus that more detailed information and complete reporting would be beneficial. Ideas on how to go about this included having health care professionals vs. police officials filing reports (as reports are required for any injury requiring more than first aid) and changing registration requirements for non-motorized boats. There was also agreement that any proposed changes have their own set of drawbacks.

## Round 3: Recommendations/ Alternatives: What do you think are the barriers to boating safety in Washington? What suggestions do you have to improve them?

In the third round, we looked at possible next steps for the report that could help promote positive policy change for non-motorized boating in Washington:

- Normalizing the data to account for Washington's unique geography and climate in comparison to other states
- Centering education around boating safety through paddle sport purchases, rental companies, and using tactics similar to anti-tobacco and 'buckle up' campaigns
- Analyzing data and policy from states like Ohio and Connecticut that require registration of non-motorized vehicles that have several years of data to pull from



# Notes from the Mural Board



## Round 1: Report Review

What perspective or information are we missing that should be included in this report?

### Data Gaps

Boat type only listed when there is a fatality

To pass things through legislation, we need data (and there isn't much data)

Interesting - only one boat type listed per accident

Can we get law enforcement to fill out ALL reports with ALL correct info?

Boat that caused fatality/ injury is listed

We are unique in that we have the Puget Sound - normalize data based on coastline population

Kayakers don't think of themselves as boaters, they think of themselves as kayakers

"I'm not on a boat, I'm a paddler!"

So many different kinds of water types in WA and ALL are cold water

Loaner locations vs. fatality & incident locations

Life jacket loaner stations - do bodies of water that have these have less fatalities??

Intervention fatality data tracking

What language would encompass the philosophy of all these groups?

GIS Spatial Data

Compare fatalities & rescues to other states

County of Incidence vs County of Residence

### Additional that might be helpful

Water temperature

Age, gender, & race

Comparisons between lakes, river, reservoirs?

Storytelling narrative

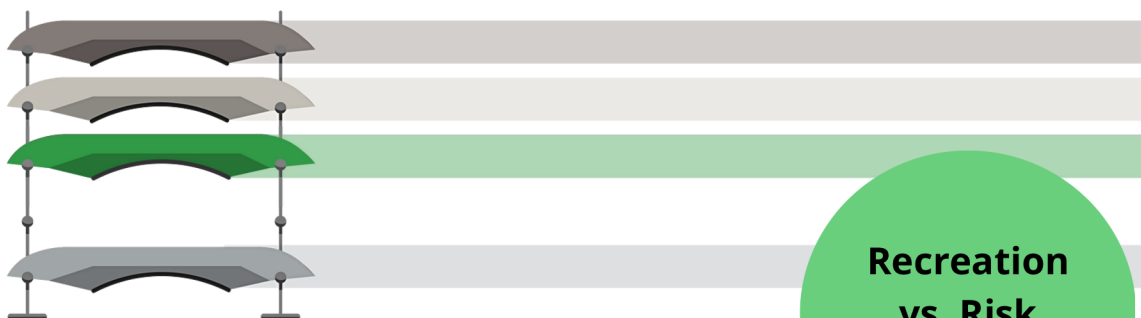
Boat type to Month of the year could be illustrative



## Round 2: Analyzing

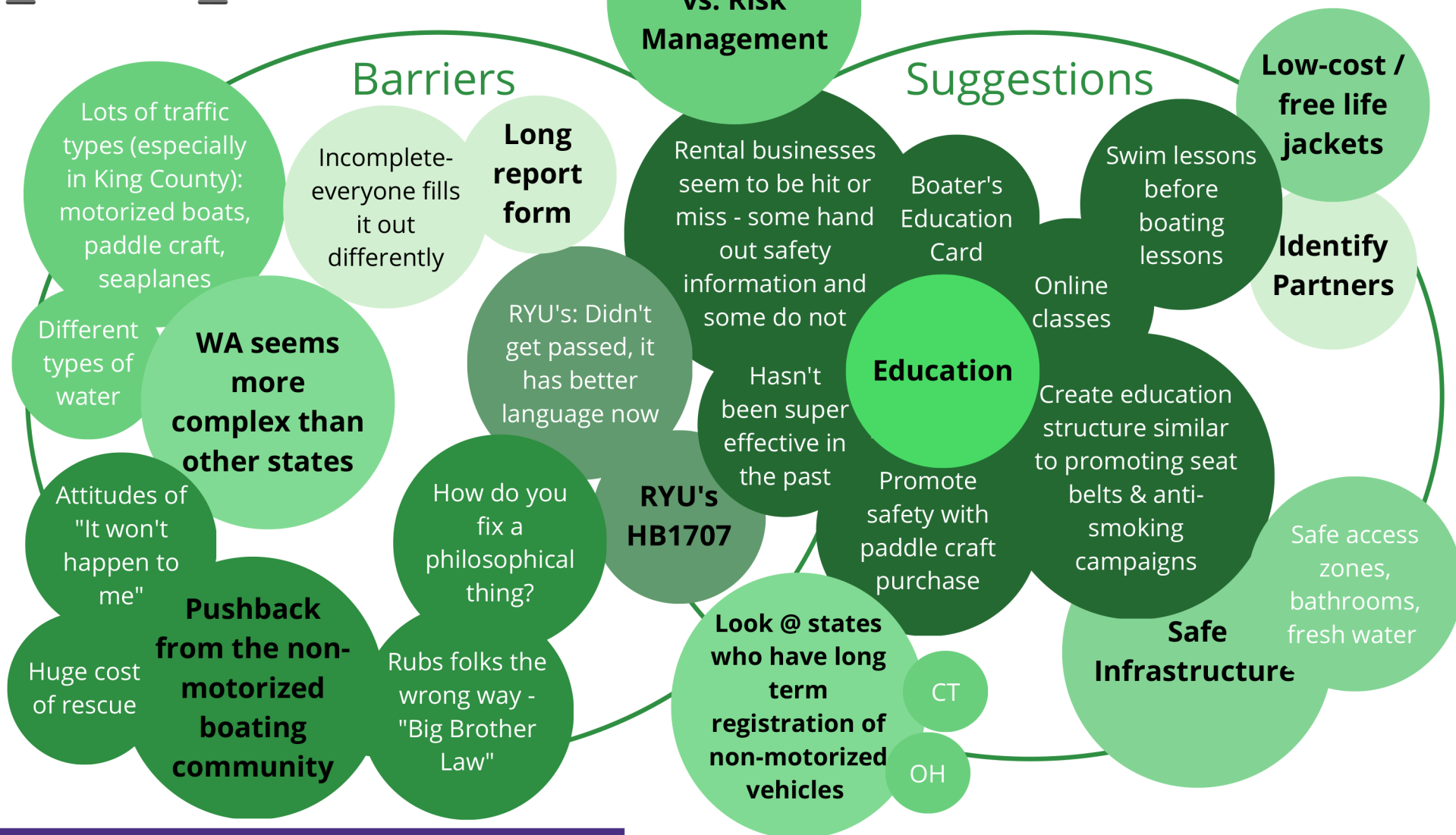
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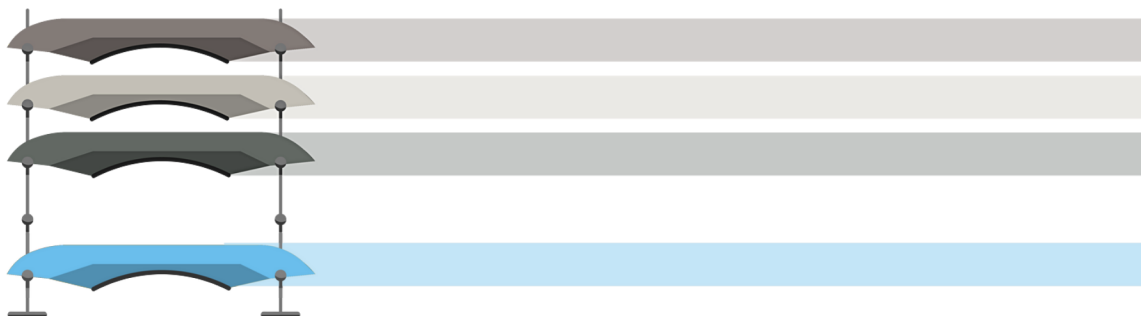


## Round 3: Recommendations/ Alternatives

What do you think are the barriers to boating safety in Washington? What suggestions do you have to improve them?







## Sense-Making

What story would you like this report to tell?

### More Data

Residents vs. vacationers, time of year, water type, age & gender, rented craft vs. owned, etc.

Deep dives into other state's data that have life jacket regulations

Similar water types

Pull out trends from data that could be different from assumptions

Other states in the PNW

Qualitative data, storytelling

**There are resources we could use to fill in data gaps**

Marine Patrol

**Safety Training / Education**

**Registration of non-motorized boats**

### Next Steps

Emma will integrate this information into the report

We encourage you to continue adding the the Mural board this next week! Or email us with changes

A recap newsletter capturing both convenings