Dear Senators and Representatives,

I am writing to you today in opposition of proposed Senate Bill 1589. I have written to various members of the Oregon Legislator since 2018, when legislation was first proposed by then Representative Kennemmer and others (proposed legislation HB 4099 and 4138). In an email from February 2018, I wrote:

"There are many causative factors of erosion. There have been studies and reports in other states, in other countries; but more importantly, studies and reports on waterways here in Oregon. Overwhelming, natural erosion is the largest contributor to erosion along a continuous flowing waterway. The Willamette River is an active, continuous waterway with a documented history of cyclical and historic flooding. The river runs continously, 365 days a year, with various debris and rising & lowering water levels and velocity. My observation of the boating community (outside of fishermen) is that boaters are using the waterway for 3-4 months out of the year, depending on weather conditions. During those 3-4 months, there are about 16 - 18 weekends (32 - 36 days) with the highest water activity use, generally when water levels are lower. My observation may be inaccurate (based on my observation at home in Wilsonville and at work along the Willamette River in Lake Oswego); however, I would hypothesize that very few boaters use the waterway outside of the summer months. I'd be interested to know how the 36 days of highest boating activity impacts the river and how the 365 days of continuous water variances (the velocity of water flow, debris, volume of water, dredging or lack thereof, changes to river channel gradients, etc.) impacts the river.
I would also like to point out that areas along the Willamette River with homes (and docks) are within the FEMA Regulatory Floodplain. The dynamics of a rivers volume and velocity will be impactful on erosion, as well as the the presence of (or removal of) natural vegetation and riparian areas. Another factor to the erosion component is to consider the impact of the lack of/decrease of dredging along parts of the Willamette River.

From my point of view, the main purpose of this bill is a backdoor way to restrict a certain style and type of boat along the Willamette River — without the data to support this restriction. There are many factors that show the impact of a wake - not just simply "the size". As to restrictions on a certain type of boat - all boats create a wake and each wake has its own energy and rate of energy dissipation. The Willamette River has been a river "highway" for boat vessels of all sizes. Before a law is restricting a certain type of boat, there should be some data to support that restriction.

As a Oregonian who enjoys using the Willamette River for boating and other recreational activities, I have been dismayed at how this legislation has come about and the appearance of a lack of data to support the legislation (I have asked for any data/study that has supported Rep. Kennemmer's position and reason for this legislation - his response to me was, "I have my own personal observation". While I can appreciate his personal observation - even pictures - that does not tell the accurate "story". Personal observation is subjective; and unfortunately, not always accurate. Studies and data rely upon science to draw conclusions, not just personal observation. Science, simply, is knowledge based on demonstrable and reproducible data. Science aims for measurable results through testing and analysis and is based on factual & accurate data, not opinion or preference. Personal opinion, perception, observation, and experience will inherently be prone to bias.)"

In February 2019, I again wrote emails regarding proposed HB 2351 and 2352. In December 2019, I was asked to participate in a Rules Advisory Committee (RAC) for the Oregon State Marine Board (OSMB). Discussed at length during one of the RAC meetings was boating size/weight – as some members of the RAC wanted restrictions similar to those on a privately held lake, Lake Oswego. The Willamette River is not a private waterway, but rather a public and forever free waterway. And if Lake Oswego is the bench mark for proposing legislation on the Willamette River (as it appears with this latest proposed weight limit), I would hope those Representatives Sponsoring and Co-Sponsoring a Senate Bill would amend and include regulations and restrictions for ALL water activities on the Willamette, as seen on Lake Oswego. Lake Oswego has many restrictions and rules for all users of the lake – not just a certain type of boat and water-sport. As a part of the RAC, we also talked at length about the water-sport zones, looking at having the zones in areas without structures or docks, and a 300 foot or greater rule in place within the zones, and water-sport endorsement (and I advocated that all boaters have to take a test to be aware of the zones, safe distance from shoreline and structures, the impact of boat wake — as ALL boats create a wake and distance to shoreline/structures is important for any boater).

I continue to be amazed at the time, energy and resources that have been spent on legislating an activity/boat type that occurs 10-30% of the year (36 days to 120 days out of 365 days — about 16-18 weekends during the summer boating season – which would be 32-36 days) — and wonder how (and have yet to receive an answer) these laws/rules/regulations will impact the more causative factors on a continuous moving river, with

various debris and rising & lowering water levels and velocity, the other 329 days of the year. Through the OSMB, many regulations have been placed on boats that participate in certain water sport activities. Interestingly, the Oregon Legislature only sought to have the OSMB establish a Towed Water-sports Education Program but did not require others who recreate on the Willamette additional education to understand/know the rules and responsibility of recreating on the Willamette. A noted bias that is seen when others boating on the Willamette (ski boats, boats pulling a tube, fishing boats, day cruising boats, kayaks, SUP, canoes, etc.) do not follow the RULES in place.
I continue to be disappointed that there has not been a recommendation that ALL BOATERS take the endorsement test so that ALL BOATERS understand the rules in place along the Newberg Pool area, and understand why boats participating in certain water-sports are only in the 2 zones along the river. Many boaters who I talk to that are not participating in the endorsement water-sport (generally after they yell at our boat in the designated zone) are unaware of the zones, the additional endorsement, and the regulations surrounding the Newberg Pool area.

This proposed bill will cause more congestion along stretches of the river, causing those stretches of our river to be less safe for boaters. It is already interesting having to navigate along 2 zones - that total about 3 miles of total river miles. This proposed bill will be impactful and harmful to small businesses that depend on recreational boating.

A March 7, 2020 article from Pamplin Media quoted the Oregon Department of Fish and Wildlife (ODFW) Deputy Fish Chief Bruce McIntosh responding to the question if *"....wake sports really impact salmon and steelhead populations, and, if so, to what degree?" as stating, "Our perspective is they have little to no effect……(the Newberg Pool) is not a place they spend a lot of time making a living (during the summer). (We) look at that and say the impacts are low." An ODFW staffer said that "during peak time when wake sport activities are most popular, the summer months, those species already have completed migration and are more likely to be located in the portion of the Willamette River near the McKenzie and the Santiam tributaries."*
The article also stated, *"McIntosh said the main detriment to such populations are blockages to historical above federal dams. "These are depressed populations and, frankly, they're not going to change all that much until we get passage at the federal dams," Mcintosh said. "You've got anywhere from (25-95%) of historical habitat blocked above those dams." He also mentioned sea lions eating steelhead and salmon at*

Willamette Falls as a major issue. The ODFW received federal clearance to kill some California sea lions there to reduce that effect.'"
Interestingly, I work along the Willamette River in the Milwaukie/Lake Oswego area. This past week, we have observed two sea lions feeding in the river. During the late Winter/early Spring a few years ago, we watched a sea lion take up residence along a homeowners dock as he enjoyed sunbathing and then diving into the river to feed.

I would hope, and I believe as elected officials it is necessary to ensure the proper due diligence has been conducted and an exhaustive understanding (beyond talking points to placate constituents questions) before proceeding with any new proposed law or amended law.

- Studies have been done on other waterways in Oregon. Perhaps it is time to have a study along the Willamette River, especially the Newberg Pool area before proposing another piece of legislation? One study was the "Investigation of Motorboat-Induced Streambank Erosion on the Lower Deschutes River" study in 1990, which states: "Furthermore, bank erosion occurs in many places where motorboats are not the cause for erosion. Hence, motorboats should not be generally blamed for erosion problems." https://ir.library.oregonstate.edu/concern/defaults/2b88qh38b

- How many homes/properties are within the FEMA floodplain (and the ever changing water levels and flow — and the natural changes that occur to continuous river waterways have water levels that rise well above the shore line and drop well below the shore line) and how many properties have altered their property vegetation/ landscape, riparian areas, and changed the slope of the property hillsides to the riverbank (which can be impactful on sheet, rill, gully or valley erosion that can add to bank erosion)?

- In the Willamette River Basin Challenge of Change, on page 16 it states: "Rivers are dynamic and complex living systems. When waters rise or flood, they move gravel around, carve new banks, topple trees, and push sediment downstream. These processes form and reform habitat for aquatic creatures by carving new side channels, building sheltering alcoves, damming pools with large logs, and forming new gravel bars." https://ir.library.oregonstate.edu/downloads/s1784r73f

- More information regarding flooding can also be found in the FEMA Flood Insurance Study – Clackamas County, Oregon – Effective: June 17, 2008: http://www.oregonriskmap.com/index.php?option=com_docman&view=download&category_slug=pdf&alias=37-clackamas-co-fis-vol1&Itemid=32

- The Willamette River has also had historic flooding. The flooding of 1861 & 1894 wiped out some small towns that were built along the Willamette River floodplains, including Champoeg. The flooding in 1964 and 1996 also caused extensive damage. During the winter of 2016-2017, we had extensive snow and ice throughout the Willamette Valley. Damage to trees and other structures along the river could be seen. I recommend a quick read on the the FEMA Floodplains/Flood Inundations report: "Floods raise many concerns for communities living along major rivers such as the Willamette River…….Development of urban and agricultural areas along the Willamette River has placed many homes, buildings, and other structures within the floodplain of the Willamette. Communities and landowners often protect these investments by hardening the banks and minimizing channel change, which leads to reduced channel dynamics and impaired ecological conditions." — "During the recent floods of 1964 and 1996, the Willamette River fully occupied its historical floodplain in the lower, narrow river and occupied most of the historical floodplain in the middle section of the river." http://www.fsl.orst.edu/pnwerc/wrb/Atlas_web_compressed/3.Water_Resources/3e.flood&fema_web.pdf

- On the US Army Corps of Engineers website: "The floods of winter 1964 (Dec. 19, 1964–Jan. 31, 1965) were some of the largest flood events ever recorded for many rivers in western Oregon. Heavy rain fell directly on high elevation snowpack, melting the snow and increasing the floodwaters to levels not seen since the historic floods of 1861. The excess water altered the landscape and substantially changed river channels throughout the region. Headwater streams in the mountains of the Cascades and Coast Range became choked with debris from landslides that were triggered across the steep terrain. Floodwaters scoured the previously stable sediment from the floodplain of valley-bottom

streams, causing channels to widen and meander and new gravel bars to form.

- Today, nearly 50 years after the flood, the geomorphic impacts of this flood can still be seen throughout western Oregon. The sediment that was deposited along many rivers during the flooding became seeded with cottonwood, willow, and alder trees, creating distinctive, even-aged modern forests. Many of the channel changes triggered by the 1964 floods have survived recent smaller floods, so that the habitats, ecosystems, and infrastructure still show the effects of the 1964 floods."
- http://www.nwp.usace.army.mil/Missions/Water-Management/Flood-Ready/Were-We/Impact/

- The "Geomorphic and Vegetation Processes of the Willamette River Floodplain, Oregon—Current Understanding and Unanswered Questions" 2013 study is a report that "summarizes the current understanding of floodplain processes and landforms for the Willamette River and its major tributaries." Pages 14 - 25, and page 40 has information on riparian vegetation, flooding, bed-material sediment, and large wood affects on river channels.
  On page 19, the study states:
  "Flooding shapes landforms, habitat, and vegetation patterns along river corridors in the Willamette River Basin (fig. 10). The capacity of floods to form and modify channels and flood- plains is dictated largely by interactions between flood magnitude and channel geometry, and resulting local hydraulics and patterns of sediment erosion and deposition. Stream velocity and sheer stress can be highly variable, but generally increase with channel slope and water depth. Complicating the relations between floods and geomorphic consequences is the nonlinear behavior of erosion and sediment transport in relation to stream velocity and sheer stress."
  https://pubs.usgs.gov/of/2013/1246/pdf/ofr2013-1246.pdf

- What is the impact of the build-up of dead heads/branches of trees fallen (and some obviously cut and allowed to flow down river) that collect along the rivers edge and tangle within docks and other tree roots and can change the river flow/turbidity, and the impact of that along the river bank erosion and the impact of the lack of/ decrease of dredging along this part of the Willamette River?

- I did find an out-dated report,"Corps of Engineers Actions Affecting Riverbanks and Channels in Willamette River Basin, Oregon", from May 1974 that does discuss this portion of the Willamette. It is interesting to consider statements made in this report as to erosion along the river. Such as: "Presumably, the proposed major reduction in Willamette River dredging will result in some increase in meandering and bank erosion by Willamette River."
  "Lands along the river which were formerly left in brush and trees because of of the threat of erosion are sometimes plowed and planted up to the riverbank following revetment construction. This change in land use has been frequently observed over many years by Corps project engineers, but no information is available as to the amount of land involved or whether this is a significant impact of bank protection."
  "Continue the past dredging practice…….from the Willamette River between Portland and Corvallis, as well as snagging. While the channel has been maintained at only 14 percent of the authorized project, it has provided considerable benefits to commercial and recreational boaters and has served to reduce bank erosion and channel changes."
  https://books.google.com/books?id=JhU0AQAAMAAJ

During my time on the OSMB RAC, I researched boat weights. Fishing boats, cabin cruiser, and other boats exceed the 5,000 lb weight. There continues to be NO proposed legislation or rules on any of those boats. I could "plow" or cruise at a low speed along the river in my boat over 5,000 lbs and create a far greater wake than any surf boat. I could pull a tube performing S-turns and circles in my large fishing boat over 5,000 lbs without any restriction or rules on the wake created to the shoreline.

I am hopeful that as elected officials you will take consideration for all constituents concerns and view points as we together enjoy "…all the navigable waters of [the] State, shall be common highways and forever free…".

Sincerely,
Elizabeth McCord