From:	McCord Family
To:	Rep Helm; Rep Power; Exhibits HNR; Rep Witt
Cc:	Rep Smith D; Rep McKeown; Rep Barreto; Rep Sprenger; Rep Gorsek; Rep Wilde; Rep Reardon
Subject:	No on HB 2351 & HB 2352
Date:	Tuesday, February 12, 2019 5:52:10 PM

Dear Chair Witt and Members of the House Committee on Natural Resources,

I am opposed to HB 2351 and HB 2352. As a registered Independent voter in Oregon, I am tired of the continued legislative politics regarding boating on the Willamette River.

Regarding HB 2352: Although I agree and support waterway education, I oppose the language of HB 2352 and how this bill is currently written.
I am opposed to HB 2352 as this bill does not address all types of vessels on the waterway (kayaks, canoes, paddle-boarders, fishing boats, waterski boats, water-sport boats, small cruising boats, large cruising boats, recreational boats, and jet-skis). Motorized and non-motorized boaters should need an initial and continued endorsement, similarly to a motorcycle endorsement on a drivers license.
All who use the river waterway for recreation need certification to know the rules of navigation (sharing the waterways), BUI, water safety, safety with other vessels on the waterway, etc. — not just motorboats. With the popularity of SUP, canoes, kayaks on the river, does a minimum age requirement need to be looked into for operating a non-powered vessel and any additional licensure of compliance with waterway rules as well. HB 2352 is a quick fix for those in the Willamette River Newberg Pool area who are opposed to a certain type of boating. This bill does not address the issue waterway safety and education - as it is an issue beyond just the operator of a motorboat. I feel as though this issue IS being discussed at the Oregon State Marine Board and educational tools are available through the Oregon State Marine Board. Vote NO on HB 2352 - (and the bias is evident as you read section 5 and section 8 of this bill).

Regarding HB 2351: The proposed language for this amendment states: "…make special regulations relating to the operation of boats within the Willamette River Greenway…..as may be needed for the protection of the shoreline, public and private property, fish and wildlife habitat and vegetation…".

How are the regulations going to be determined, how would they be any different that what is already stated in ORS 830.175, and WHY is this amendment needed (other than to restrict boats along the Willamette River Greenway) when ORS 830.175 already states:

"The State Marine Board, upon consideration of the size of a body of water and traffic conditions, may make special regulations consistent with the safety and the property rights of the public or when traffic conditions become such as to create excessive congestion, relating to the operation of boats in any waters within the territorial limits of any political subdivision of this state. The regulations may include, but need not be limited to, the establishment of designated speeds, the prohibition of the use of motorboats and the designation of areas and times for testing racing motorboats."

HB 2352 appears to be another attempt (much like HB 4099 and HB 4138 in the last session) to discriminate against a certain style of boat based upon a preconceived notion of the type of wake one boat may appear to create versus another type of boat — without any research of

study to support this discriminatory claim. I continue to ask the representatives who are proposing these bills, where is the data and scientific studies to support the claim that shoreline, public and private property, fish and wildlife habitat and vegetation may need protection and management from boat speed and boat wake energy as opposed to the naturally occurring erosion and disruption caused by an active, moving, volatile waterway?

- Observe the water color and clarity after a rain storm due to the runoff of sedimentation and turbulent river current. Observe the waterway water level "river stage" Observe full trees, tree trunks, large tree branches, small tree branches that clump together and travel along the waterway……observe them now at the area around the Oregon Falls in Oregon City

- Does a river homeowner have the appropriate vegetation around their home and shoreline to decrease the amount of natural erosion and protect their private property and river shoreline?

- What is in place along the river bank and river properties that help the rain water to run into the river without causing sheet, rill, gully, or valley erosion (that can add to bank erosion) to the riverbank or river home lot? Does the sheet, rill, gully, or valley erosion disrupt fish and wildlife habitat or vegetation?

- How has the lack of dredging affected the Willamette River Greenway shoreline and fish and wildlife habitat or vegetation?

- As a property owner along a body of water with any type of dock, maintenance in needed and is an incurred cost of having a dock along a waterway. Water naturally, overtime, can cause damage and degrade the dock's structure, especially if deferred maintenance is never completed. What damage has occurred from waterway debris including but not limited to part of a tree can be caught on docks/piling and when gathered and add weight to docks/pilings as the increase river current hits against the obstructions? Is the integrity of the docks compromised if the water level is so low that the docks rest on river banks and does low resting docks impact the river shoreline, fish and wildlife habitat and vegetation?

- When we have freezing rain, ice, or snow - how much damage to public and private property and to vegetation may be caused by the severity of the weather conditions?

- Do low water levels impact shoreline, public and private property, fish and wildlife habitat and vegetation?

The Willamette River is an active, continuous waterway with a documented history of cyclical and historic flooding. <u>Overwhelming, natural erosion is the largest contributor to erosion along a continuous flowing waterway</u>.
The river runs continuously, 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.

<u>I'd be interested to know how the 36 days of highest boating activity impacts the river and</u>

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 presence of (or removal of) natural vegetation and riparian areas.

As a homeowner along the Willamette River who enjoys boating and other non-motorized activities on the river, this bill amendment is not needed and its vague language will potentially impact motorized boater's rights. I have attached the link for various studies and data - boat restriction is not the answer, although those with a vested interest continue to push for legislation of boats on the Willamette River.

I am also interested in understanding why Representative Power's position as Associate General Counsel for the Freshwater Trust is not listed under the "Potential Conflicts of Interest" for HB 2351 bill. I would assume the Freshwater Trust would have an interest in legislation of Oregon waterways?

I am hopeful that as elected officials you will take into consideration concerns of all constituents and viewpoints and together we enjoy "…all the navigable waters of [the] State…".

Please vote NO on HB 2351 & HB 2352.

Sincerely,

Elizabeth McCord

links for studies:

- 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

- FEMA Flood Plain information https://msc.fema.gov/portal/search#searchresultsanchor

- 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

- The "Willamette Riverbank Design Notebook" is a notebook by the GreenWorks company published in May 2001. On the company website it states: "Hired by the City of Portland, GreenWorks led a team of biology, engineering, and erosion consultants to investigate existing bank conditions along the Willamette River in downtown Portland." Although this notebook focus is on the Willamette River in Portland, the beginning of the notebook gives descriptions and characteristics of the Willamette River.
  http://greenworkspc.com/willamette-design-notebook/
  https://www.nps.gov/WaterTrails/Toolbox/DownloadFile/127

- Studies have been done on other waterways in Oregon. Such as 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

- 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

- Some in favor of these bills will reference the "*Review of Boat Wake Wave Impacts on Shoreline*

Erosion and Potential Solutions for the Chesapeake Bay" report. (http://ccrm.vims.edu/2017_BoatWakeReviewReport.pdf) Interesting to note in the Chesapeake Bay report that *"The amount of boat wake energy impacting a given shoreline is a function of not only the size and speed of vessels passing that shoreline, but also the frequency of vessels (Zabawa and Ostrom 1980, Glamore 2008)"* something to consider with an ordinance that restricts boats with WED's to certain areas of the river and will increase the frequency of boats having certain style of wakes in a condensed area.

These are other points from the report to consider:

"Boat wake energy is event-dependent and is influenced by the vessel length, water depth, channel shape, and boat speed (Sorensen 1973, Glamore 2008). Wakes are most destructive in shallow and narrow waterways because wake energy does not have the opportunity to dissipate over distance (FitzGerald et al. 2011). Although boat wakes are periodic disturbances, in comparison to wind waves, they can be a significant source of erosive wave force due to their longer wave period and greater wave height, even when they represent only a small portion of the total wave energy (Houser 2010). Our review of the literature demonstrated that even small recreational vessels within 150 m (~500 ft.) of the shoreline are capable of producing wakes that can cause shoreline erosion and increased turbidity (e.g., Zabawa and Ostrom 1980). Vegetated shorelines can effectively attenuate waves in certain settings; however, there is a limit to this capacity particularly if there is frequent exposure to boat wakes."

"Policy makers who are concerned about boat wakes may want to use existing models of boat wake erosive potential (e.g., BoMo, Decision Support Tool) to inform decisions on where to put no-wake zones or other boat policies. However, at this time, we do not have sufficient data to run either model for the Chesapeake Bay."

"Shoreline erosion is a natural process that can be exacerbated by human activities. Natural drivers of shoreline erosion include wind waves, currents, and sea level rise (SLR). Human activities that exacerbate erosion include shoreline hardening (armoring) and boat wake impacts. It is not possible to visually distinguish between the natural and human-induced components of erosion; these must be deduced from measure of human use of an area combined with wind wave erosion models.

This report focused on boat wake-induced erosion, but this should not be interpreted to mean that the other drivers of erosion are unimportant in the Chesapeake Bay"

"Waves that travel in water that is deeper than 1/2 of their wavelength (the distance between two successive wave crests) are referred to as deep water waves. The motion of deep water waves do not penetrate the full depth of the water column, thus these waves have little impact on the bottom sediments (Sorenson 1997, Hill et al. 2002). As a deep water wave travels away from the sailing line, wave height will decrease with distance traveled as wave energy spreads out along the wave crest. Given a long enough transit in deep water, much of the wave energy will distribute over a wide area before reaching a shoreline. In deep water, the speed at which a wave moves away from its point of generation is largely a function of wavelength; waves with longer wavelengths travel faster than those with shorter wavelengths"

"In the Kenai River, Alaska, Maynord et al. (2008) demonstrated higher shoreline erosion rates when peak boating conditions corresponded to times of high river flow and decreased erosion, despite high boat activity, during lower flow conditions. They noted that during low flow conditions, much of the wave energy was lost due to contact with gravel sediments near the river margins."

"As a result, the presence of living root material in shoreline soils results in a stronger soil that is less easily eroded (van Eerdt 1985, Francalanci et al. 2013). Additionally, shoreline vegetation like marsh plants combats erosion by attenuating wave energy (Yang et al. 2012, Möller et al. 2014; Figure 5) and this response is proportional to both the height and density of the vegetation (Möller 2006). The presence of even a narrow band (on the order of 1 m wide) of marsh vegetation in front of the shoreline has been shown to result in decreased rates of shoreline erosion (Currin et al. 2015)."
*** interesting to note for the Willamette River, most boating is done when the water level is low and some of the vegetation is on the higher slope of the riverbank.

"Shoreline change may include shoreline erosion and resuspension in the foreshore environment, although sediment can be transported landward as well. The balance of transport (whether the shoreline erodes or accretes) depends on the size of the wake (Osborne and Boak 1999, Houser 2011). Most studies found the effects of boat wakes on the shoreline are dependent on many factors. Site-specific conditions such as water depth, bank profile, type, size and supply of sediment and bank resistance can control suspended-sediment concentrations (McConchie and Toleman 2003, Hughes et al. 2007)."