

# Why You Should Support SB 1589

- Dams restrict summer flow
    - A stagnant "Pool" in summer
    - Mostly vertical soft sediment banks
    - Wakes impact at the same level all summer
  - Development:
    - 400 homes
      - 32 of 306 built after 2000
    - 385 docks in 29 miles
    - 400 boats moored in the Newberg Pool
      - 30 exceed 5,000 pounds
  - Fish and wildlife
    - Essential Salmonid Habitat
    - Blue Heron
    - Bald Eagles
    - River Otter
    - Osprey
    - Oregon Beaver
- And more



# Why You Should Support SB 1589

- THERE IS SOUND SCIENCE
- Many scientists have studied this issue
- Legislators relied on the testimony of these scientists
- **DR. PEDRO LOMANOCO – Head of O.H. Hinsdale Wave Institute**
  - Wave Lab Tour and presentation with 6 scientists from OSU and University of Portland
  - Legislators, county commissioners, city council members attended Newberg Pool Study
  - Dr. Gregor Macfarlane studied wakes in the Newberg Pool
- **THERE IS DATA**
  - **National Data**
  - **Citizens and scientists gathering**
    - Hundreds of hours of video
    - Videos tying actual boats to their wakes
    - Thousands of Photos
    - Hundreds of aerial photos
    - Hundreds of nationwide articles

You can see the erosion in the Erosion Video

# EXPERT SCIENTIFIC TESTIMONY OREGON HOUSE OF REPRESENTATIVES – 3/4/2021

**DR. PEDRO LOMONACO, PhD –**

**Director, O.H. Hinsdale Wave Research Laboratory, Oregon State University**

- “Shoreline changes are very minor due to nature”.
- “Shoreline changes are not produced by flooding”.**
- “Wakes multiple waves of the same size and location, is significant”.
- “Changes in the river margins are significant when we are talking about several meters of erosion”.
- “Rapid change is human, otherwise it would have reached equilibrium over the last hundred years”.
- “Any changes you can see are not caused by nature, changes by nature take a long time, like 15,000 years”
- “Boat wakes results in banks eroded cross sectionally”.**
- “The controlled flow of the Willamette significantly reduces the velocity of the river.
- Changes caused by nature are very minor in comparison to the effect of many waves in a single day, that is a very significant component”.**
- “Changes to the river margins are not produced by flooding, they are produced by boats that create instability in the sediment, which changes the shoreline by removing that sediment”.

**DR GREGOR MACFARLANE, PhD, Director Australian Maritime College, University of Tasmania  
(CONDUCTED WAVE WAKE STUDY IN THE NEWBERG POOL, 2019)**

“The Willamette River is deep, which means the waves that are generated by these boats are totally unaffected by the bathymetry of the riverbed”. (no gradual shoreline resistance)

“**Surfing** - Lateral distance of 400’ is necessary for wake energy to be nearly comparable to water skiing.”

**Wake boarding** - Lateral distance of 300’ is necessary for wake energy to be comparable to water skiing”

**DR. STAN GREGORY, PHD – Oregon State University, Department of Fisheries and Wildlife**

“Sediments suspended during summer months settle on plants and block the sun, also blocking nutrients, and oxygen”.

“There is a huge difference between the effects of erosion in the summer”.

“Juvenile salmon and salmonids move along the edges of the Willamette River every month of the year”.

“They prefer shallow water within 6’ of the bank, in water which is 2 -3’ deep. “Erosion of the habitat affects many species”.



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
West Coast Region  
1201 NE Lloyd Boulevard, Suite 1100  
PORTLAND, OREGON 97232-1274

January 16, 2020

Chairwoman Val Early  
Oregon State Marine Board  
435 Commercial Street Northeast, Suite 400  
Salem, Oregon 97301

SENT VIA U.S. MAIL AND ELECTRONIC MAIL TO [marine.board@oregon.gov](mailto:marine.board@oregon.gov)

Re: Effects of Wake Boat Activity on ESA-Protected Fish and Designated Critical Habitat

Dear Chairwoman Early:

National Marine Fisheries Service (NMFS) recently became aware that the draft agenda for the January 22, 2020 meeting of the Oregon State Marine Board (OSMB) will include an update from the Newberg Rule Advisory Committee (RAC) regarding the OSMB's options to regulate wakeboard or wake surfing in the Newberg Pool, and that a second RAC is examining this issue in the Lower Willamette River.

Moreover, we understand that work to date by the OSMB and the RACs on the justification for wake sport regulation has focused on impacts to boating congestion and private property damage, but has paid little attention to the impacts that wake sports have on aquatic life, including salmon and steelhead species designated as threatened under the Endangered Species Act (ESA), and their critical habitats. NMFS encourages OSMB and the RACs to add consideration of ESA protected resources to their list of concerns regarding wake sports, and offer the following comments in support of that approach.

Two ESA-listed species and their critical habitat occur in the mainstem of the Willamette River above Willamette Falls, including the Newberg Pool: Upper Willamette River (UWR) Chinook salmon and UWR steelhead. Three additional ESA-listed species from the Lower Columbia River (LCR) region and their critical habitat also occur in the Willamette River below Willamette Falls: LCR Chinook salmon, LCR coho, and LCR steelhead. All five species are listed as "threatened" under the ESA. Individual fish from each of these species use critical habitat within the affected reaches to complete essential life history functions related to freshwater migration and rearing, and their ability to do so depends on the presence and quality of specific physical and biological features (PBFs) that include, but are not limited to, freedom from obstructions (which may include artificial noise or excessive sediment), floodplain connectivity, forage (adequate food quantity and quality), natural cover, and water quality.

In NMFS' experience, noise and wave actions are frequently a threat to juvenile salmon and steelhead. Therefore, we expect that wake sports are likely to have a significant adverse impact on those listed species and their critical habitats by injuring and killing individual fish when, for example, the surge and wakes caused by artificial waves from passing boat and wake sport participants wash juvenile fish onto the shore, or otherwise modify or degrade PBFs in ways that injure or kill fish by significantly impairing their essential behavior patterns (see Williams and Holmes 2019, and literature cited therein, and additional citations below).

NMFS has a responsibility under the ESA to protect and recover threatened and endangered species, and we have a long history of working with state and local agencies in Oregon to restore salmon and steelhead populations and their habitat. We also have a responsibility to enforce the prohibitions of the ESA, which makes it unlawful for any person to harm threatened salmon and steelhead, through activities which injure or kill protected fish or interfere with the function of their habitat. Through the ESA, Congress has made the public at large responsible for avoiding harm to these species, and NMFS is offering to work proactively with the Board to minimize these concerns in the course of its review of wake sports.

Before the OSMB approves rules that authorize wake sports in the Willamette River that are likely to affect ESA-listed species or their critical habitats, it should ensure that it or the applicant will comply with the ESA either by avoiding the kinds of harm described above, or by showing that any harm that will occur is subject to an exception or exemption under the ESA.

I hope this letter gives the OSMB the information it needs to clearly understand NMFS' views on the wake sports in the Willamette River. My staff and I stand ready to work with the OSMB in any way necessary to comply with the ESA.

Sincerely,

Kim W. Kratz, Ph.D.  
Assistant Regional Administrator  
Oregon Washington Coastal Area Office

- cc: Jason Miner (Oregon Governor's Natural Resources Office)
- Larry Warren (Oregon State Marine Board)
- Jennifer Wigal (Oregon Department of Environmental Quality)
- Bruce McIntosh (Oregon Department of Fish and Wildlife)
- Vicki Walker (Oregon Division of State Lands)
- Travis Williams (Willamette Riverkeeper)

# Watch your wake

According to the OSMB IN 2008 (this is their publication)

"Hydrologists estimate that a wake 5 inches high produces limited damage to the shoreline, but a 10- inch wake is 5 times more destructive, a 25- inch wake is 30 times more destructive, and so on"

## WATCHING YOUR WAKE

### Fast Fact

You are legally responsible for your wake and the damage or personal injury it causes, no matter how large or small the wake.



### My Wake Isn't That Big. How Much Damage Can it Really Do?

#### Recreation

- Can be a danger to inexperienced swimmers or wading anglers
- Can rock, swamp or capsize boats; passengers can even be thrown off balance or overboard
- Can erode sediment from the shoreline, creating cloudy water

#### Property

- Can thrust docked boats against a moorage
- Can wash floating trees against docks or boats
- Can erode shoreline property

#### Wildlife

- Can cause churned sediment to settle to the bottom of the waterway and smother aquatic vegetation
- Can disturb bird nesting along the shore



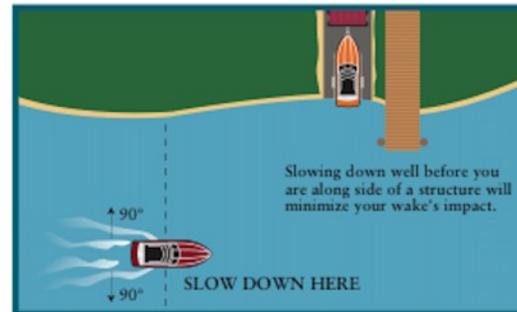
## WAKE SIZES AND EFFECTS

- 5-inch wake ► limited damage
- 10-inch wake ► 5x more damage potential
- 25-inch wake ► 30x more damage potential

## HOW DO I COMPLY?

### Limit Your Wake

- Be aware of your wake, especially when changing speeds.
- Slow down enough to eliminate wake when needed.
- Trim tabs help keep your boat level and limit time in transition speed.
- Boat in deeper waters, away from shore/other boats.
- Arrange passengers; a heavy stern creates a big wake.
- Slow down ahead of time to avoid a following wake.

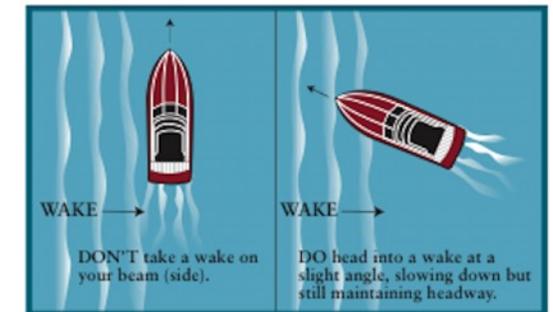


## Wakeboard Boats And Cruisers

Boats that create wakes in excess of 18 inches under normal operation create hazardous conditions that can lead to new restrictions. To prevent unnecessary restrictions, such as extended "no wake" zones, please play away from developed shorelines, other boaters, steep banks of soft sediment or areas used by wildlife. Only use wake-enhancing devices in larger waterbodies. When producing 24" wakes or larger, please stay 500 feet or more from the shoreline. Respect private property – and other boaters, too.

### Protect Against Other Wakes

- Warn passengers ahead of time.
- Slow down but don't stop. You need headway to be able to maneuver through the wake.
- Keep older passengers aft.
- Cross at a slight angle to prevent the bow from being thrown high into the air.
- While overtaking a boat, cross its wake quickly.
- Try not to take a wake on your beam. Turn the bow into the wake at an angle and then resume course.



## WHAT'S THE LAW?

Operators of boats must observe Slow-No Wake, Maximum 5 MPH speed limit within 200 feet of a boat ramp, marina or moorage with a capacity for six or more vessels; a floating home moorage with six or more structures; or people working at water level.

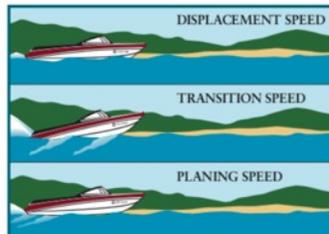
\* **Exemptions:** Commercial vessels or if more speed is needed for safe passage in river navigation.

### How Speed Affects Wake

1) **Displacement Speed:** The boat operates with the bow down in the water. This is the slowest speed, and it creates the least wake.

2) **Transition Speed:** As you increase power, the bow rises and causes the stern to plow through the water. This speed creates the largest wake.

3) **Planing Speed:** The bow drops back down, and only a small portion of the hull contacts the water. This speed creates less wake than transition speed but more than displacement speed.



Oregon State Marine Board  
435 Commercial Street NE, Ste. #400  
PO Box 14760  
Salem, Oregon 97309  
www.boatoregon.com



## WATCHING YOUR WAKE



OSMB's publication Watch Your Wake:  
"when producing a wake greater than 24",  
please stay 500' from docks and the shoreline".

Yet, current rules allow larger boats to be closer to the shoreline.

*\*This publication has been removed from the OSMB website*

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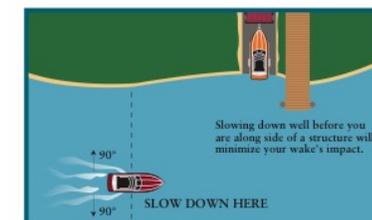
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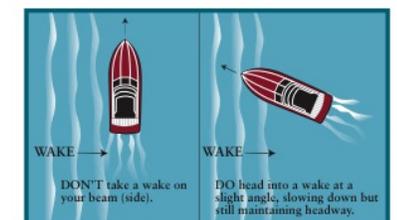


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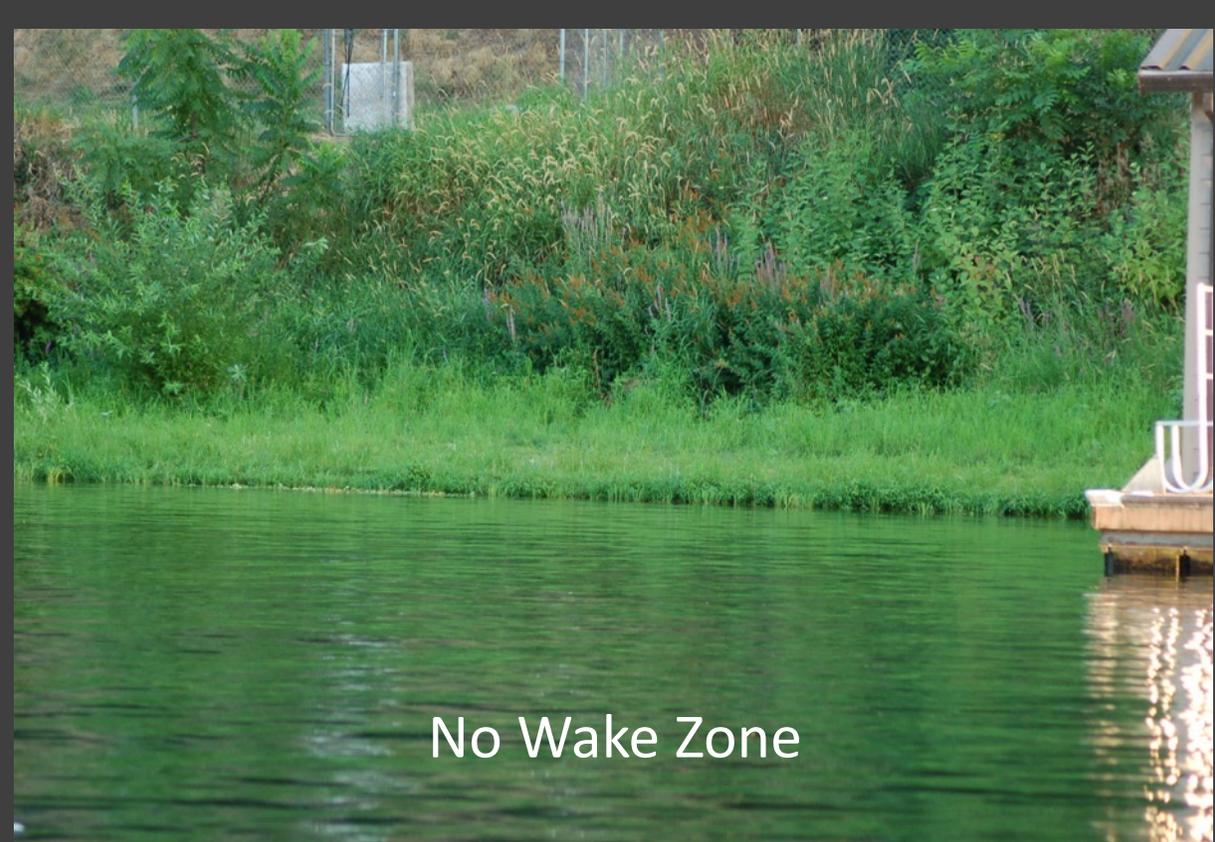
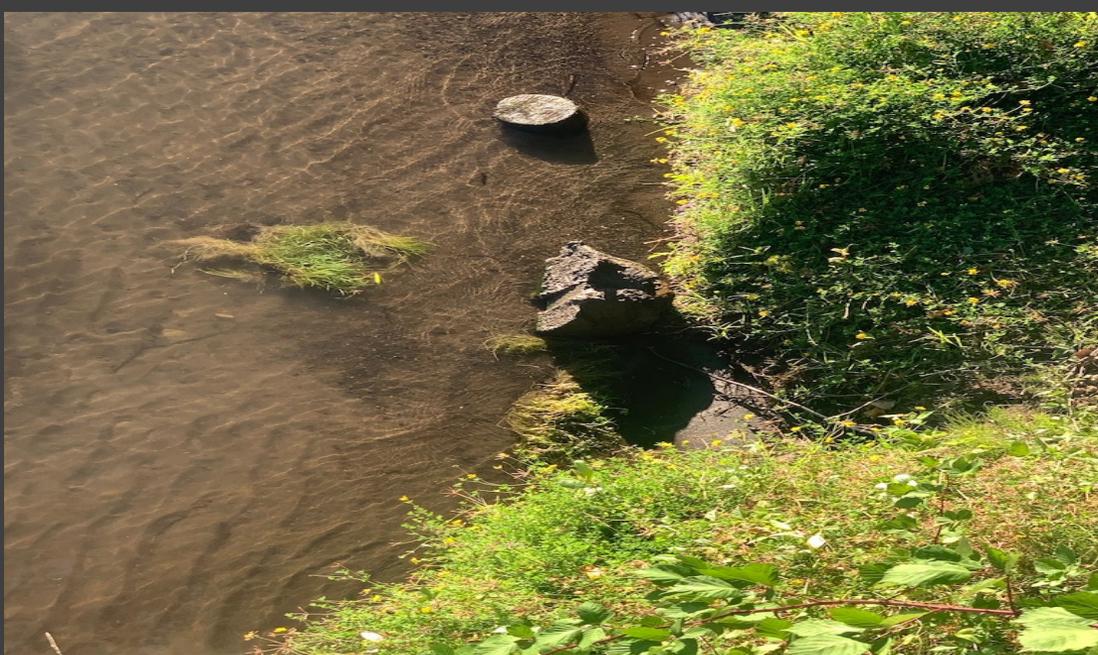
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OREGON STATE MARINE BOARD  
2008 publication



No Wake Zone

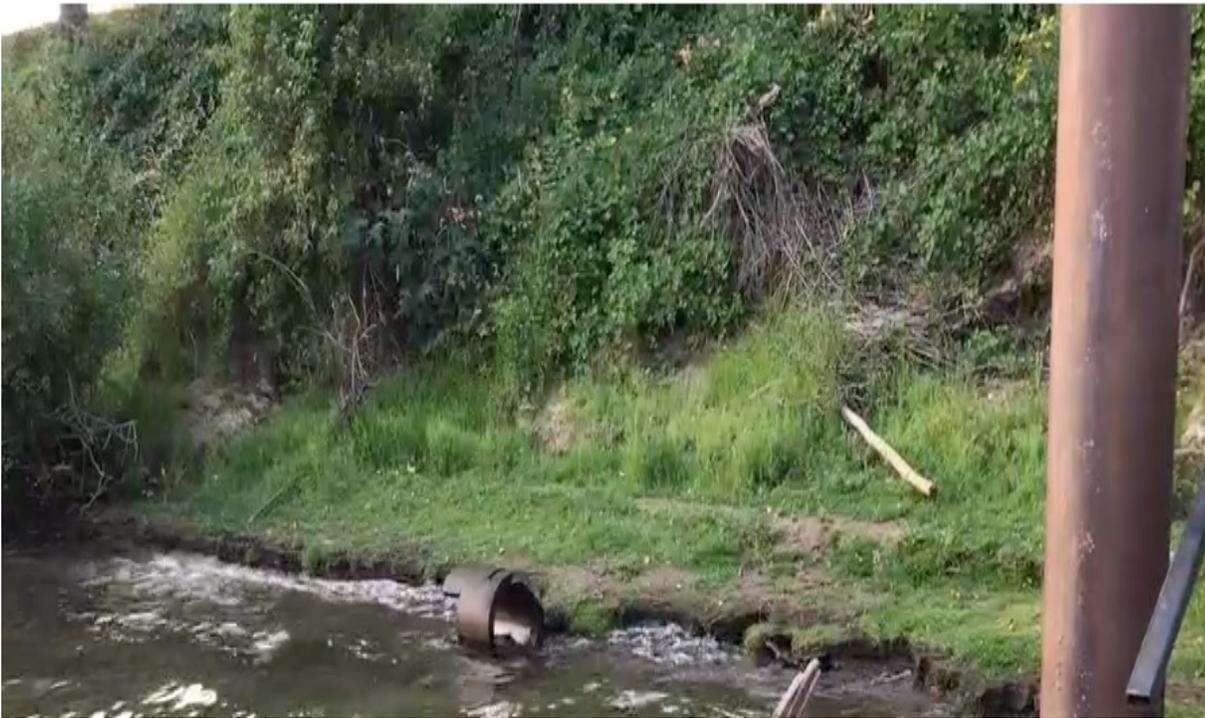
If Erosion is natural, caused by high water.....

*WHY isn't there  
EROSION in the no wake zone?*

# Morning vs. Afternoon effects of wake on the shoreline—wake caused turbidity



Bank erosion in one year—6 feet of shoreline eroded



**EROSION OCCURS DURING THE SUMMER**

Throwing thousands of pounds of energy at docks and shorelines



Launching is dangerous





## Ski Nautique - 2020

**7400** pounds dry weight

2200 pounds ballast

2500 pounds / 16 people

OCEAN LIKE  
WAVES



WE NEED TO  
ACT NOW TO  
PROTECT THE  
SHORELINE,  
HABITAT AND  
RIVER FROM  
AN ACTIVITY  
THAT CAN BE  
RELOCATED  
TO OTHER  
LOCAL  
BODIES OF  
WATER

Increases Safety and reduces user conflict with

- Swimmers
- Paddlers
- Kayakers
- Fishermen
- Canoers
- Water ski boats
- Recreational boaters
- People on docks
- Children in tubes
- Dragon Boats
- Skull

Property damage

- Private docks
- Embankments in which remediation costs hundreds of thousands of dollars per project
- Public docks

Devastation to near shore habitat and aquatic life

This is reasonable restriction that is targeted to specific activity that is PROVEN to cause the significant damage shown in this PPT.