

WAKE SPORTS IN THE ADIRONDACKS

The Hidden Impacts & Dangers to our Ecosystems

NYSFOLA – May 8-9, 2026

**Scott Ireland, Executive Director
Adirondack Lakes Alliance**

**Guy Middleton, Executive Director
Upper Saranac Foundation**

What is the desired outcome?



What is a wake boat?

What are the environmental concerns and impacts?

What can be done?

Proposals & Recommendations

WAKE BOATS AND WAKE SPORTS AGENDA



The goal of this project is not to ban the use of wake boats or wake sports. Rather, it is to educate the community and the wake boat operators as to the potential for negative impact on the local environment, and to promote responsible use and enjoyment of these watercraft. We recognize the fragile nature of our lakes and wish to convey that to the wake boat operators.

WHAT IS THE DESIRED OUTCOME?



**WHAT MAKES A BOAT A
“WAKE BOAT”?**



WAKE SPORTS

- ▶ Rapidly growing segment of recreational boating, growing by 20% per year
- ▶ Important to note that 'wake boats' are NOT boats that generate wakes...all do.
- ▶ Purposely designed to create large surfable or skiable wakes behind the boat



WAKE SPORTS

▶ Wake Boarding

- ▶ Similar to water-skiing, rider is towed behind boat
- ▶ Still generating large wakes
- ▶ Boat speed ~20mph

VS.

▶ Wake Surfing

- ▶ Rider is towed until sufficient speed and wake is achieved
- ▶ Lower boat speeds of ~10-15mph
- ▶ Boat travels in specific 'wake-generating' mode
 - ▶ Typical wake size 3-5'



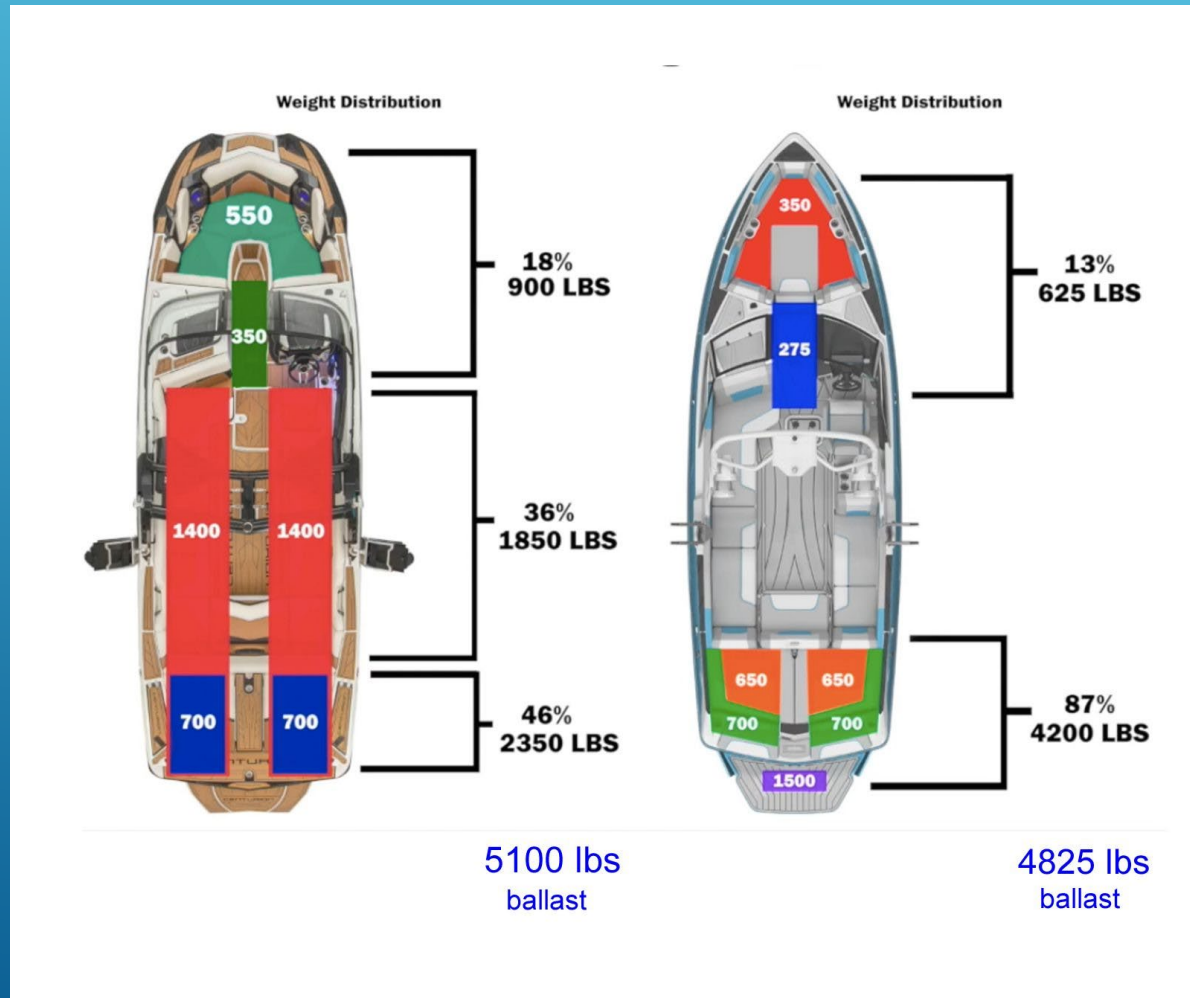
WAKE BOAT DESIGN

- ▶ Wake boats are made differently from traditional motorboats
- ▶ Big, heavy, deep-v hulls, ballast systems, and specialized hardware
- ▶ All to enhance wake creation – up to 5' in wave height

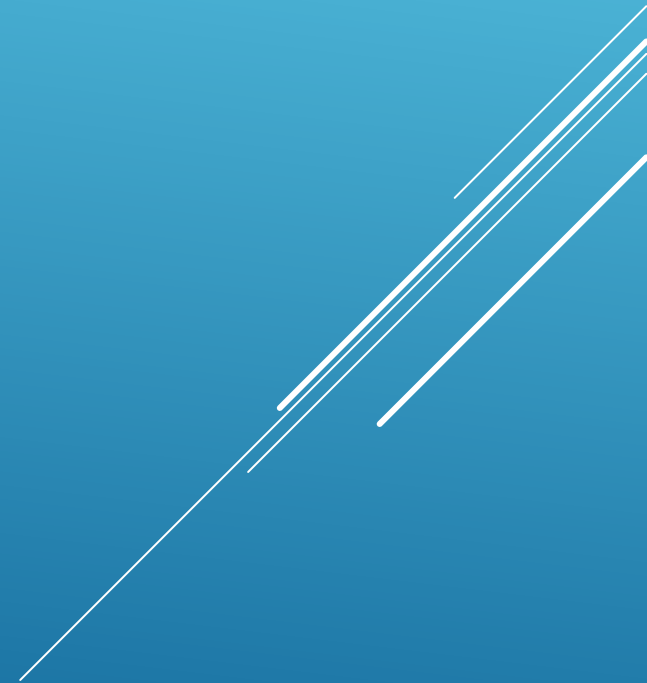


BALLAST TANKS

The ballast tanks are filled and discharged with water to enable certain performance characteristics to enhance wake creation .



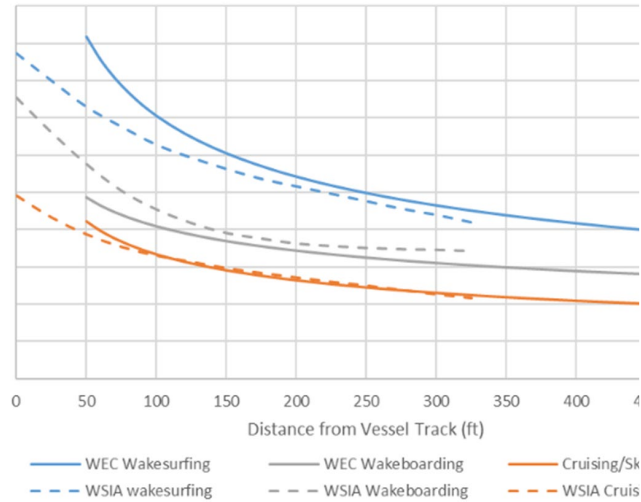
WHAT ARE THE ENVIRONMENTAL IMPACTS AND CONCERNS WITH WAKE BOAT USE?



IMPACTS AND CONCERNS

- ▶ **Shore line erosion and structural damage**
- ▶ **Impact on nesting loons and other wildlife**
- ▶ **Bottom sediment disturbance**
- ▶ **Impact on non-motorized boaters and swimmers**
- ▶ **Number One Concern!**
Transfer of aquatic invasive species in ballast tanks

Analysis – Lake Rabun and Lake Burton, Georgia



WEC measured wake heights and wake attenuation compared to WSIA deep water curves from Goudey and Girod 2015)



SHORELINE EROSION AND STRUCTURAL DAMAGE

WAVE ENERGY IS A

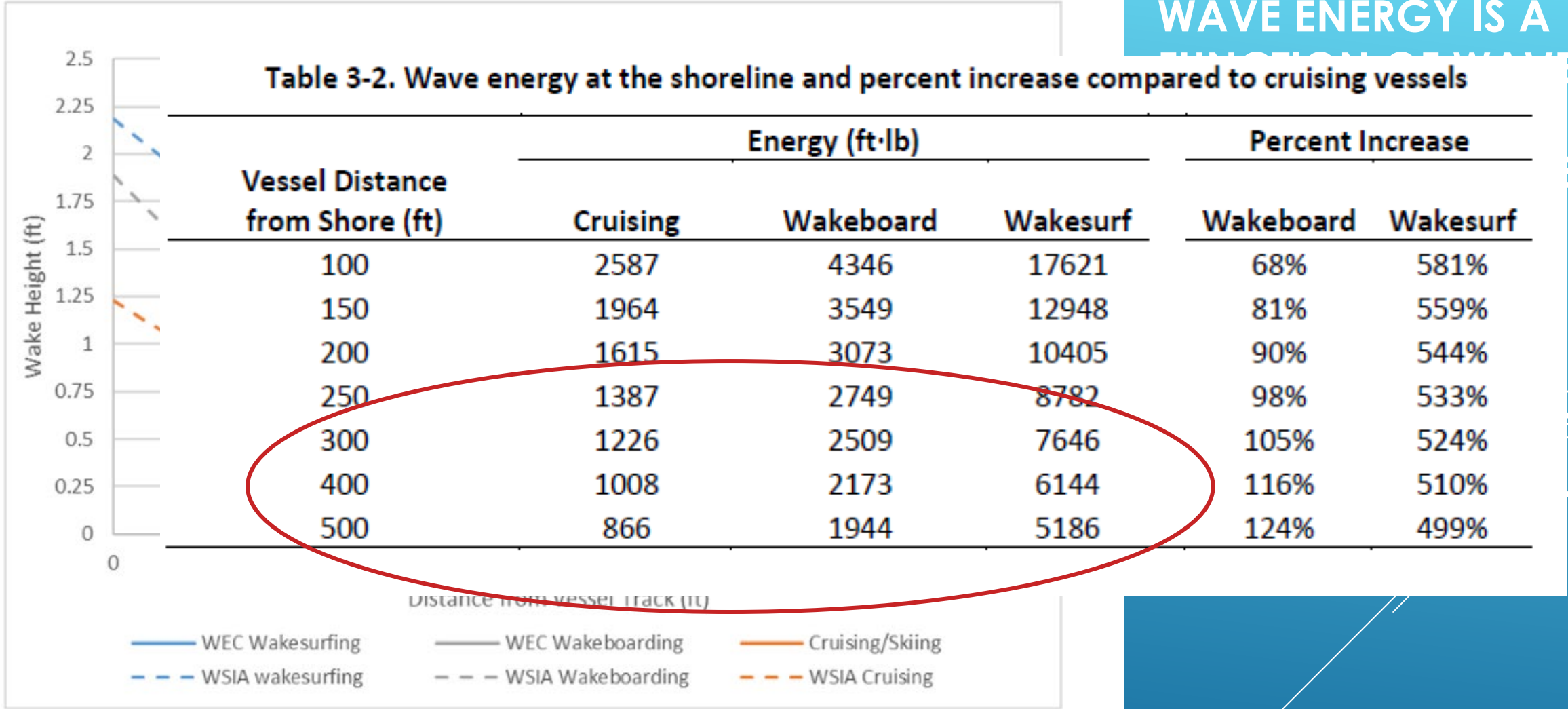


Figure ES-1. WEC measured wake heights and wake attenuation compared to WSIA study (digitized deep water curves from Goudey and Girod 2015)



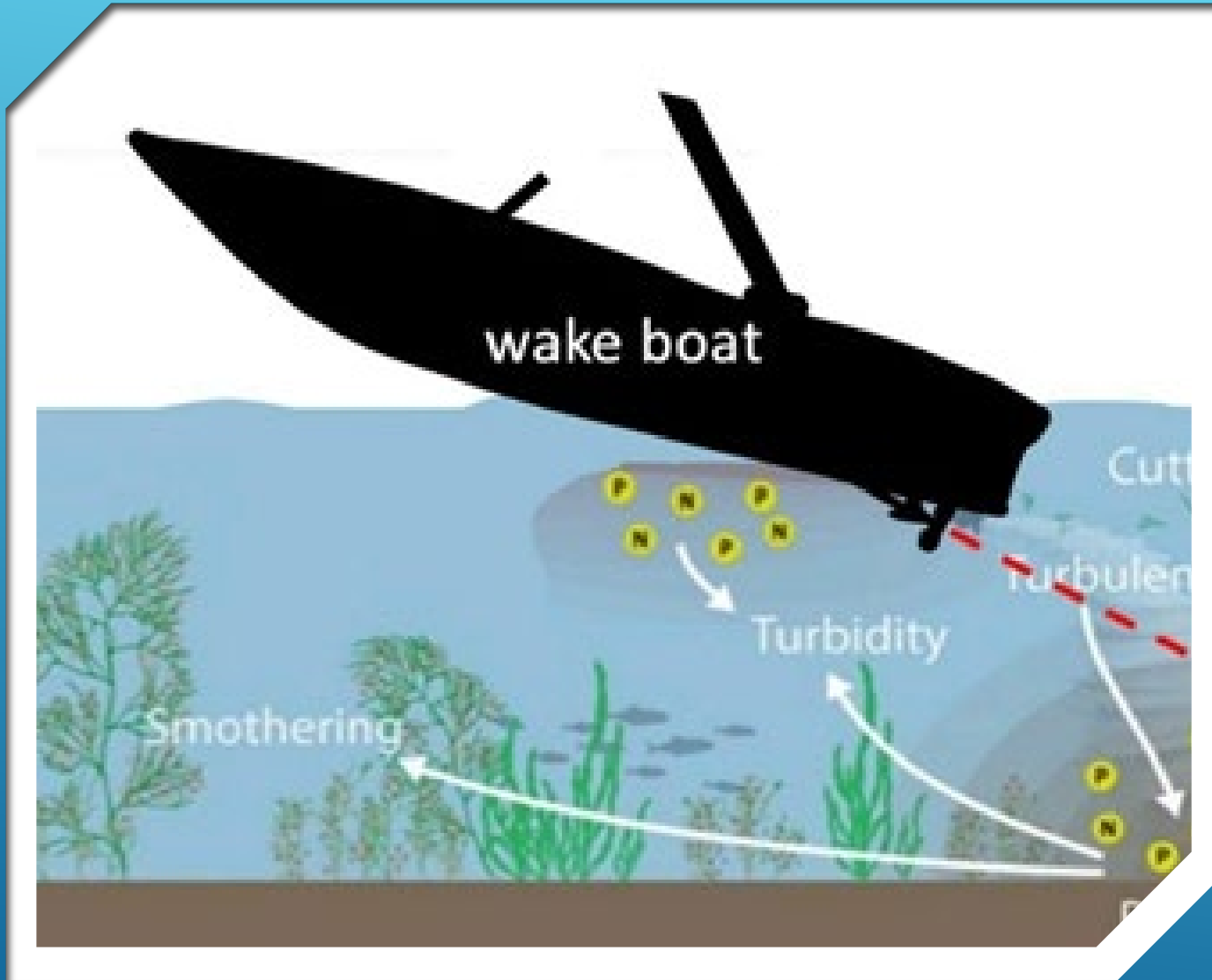
- ▶ Loons can not walk on land very well, so nest right on the shore line
- ▶ Excessive wakes and waves often cause eggs to tumble into the waterbody
- ▶ Entire nests can also be swept away

IMPACT ON LOON NESTING

BOTTOM SEDIMENT DISTURBANCE

- ▶ Nutrients like phosphorous are stirred up into the upper water column
 - ▶ Coupled with increased summer water temperatures, this creates the perfect environment for a harmful algal bloom (HAB) to form.

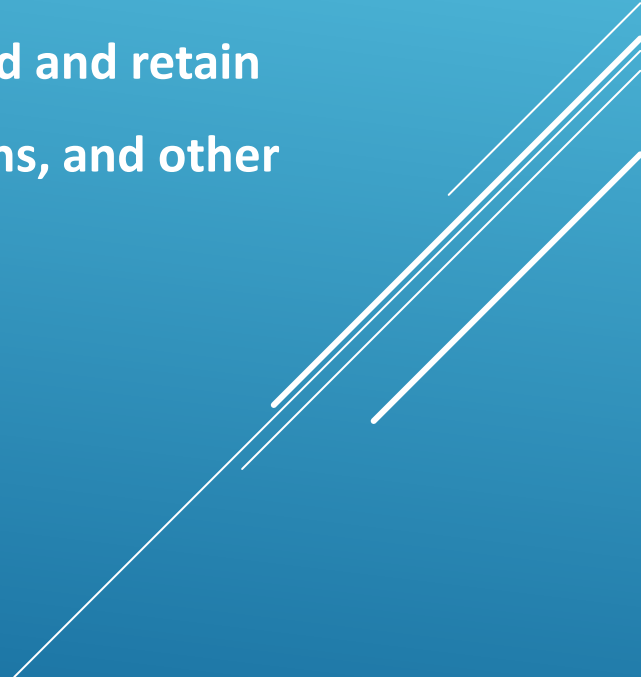




BELOW THE SURFACE

- ▶ Wakeboats can stir up sediments in waters shallower than 25 feet
- ▶ Underwater native vegetation and habitat disrupted – fish nests
- ▶ Decreasing water clarity - sediment resuspension
- ▶ Releasing phosphorus trapped in the lakebed
- ▶ Nutrient dispersion is linked to an increase in HABs

BOTTOM SEDIMENT DISTURBANCE

- ▶ Pre 1980s acid rain left large amounts of mercury in our lakes, which is now sequestered in the lake bottom
 - ▶ PCBs are also present
 - ▶ The larger the fish, the more of these chemicals they have ingested and retain
 - ▶ Increased mercury in the water column will impact game fish, loons, and other top tier predators
- 

BOTTOM SEDIMENT DISTURBANCE

FOX 6
MILWAUKEE

WAKESURFING LAKEBED IMPACT STUDY



IMPACT ON NON-MOTORIZED BOATERS AND SWIMMERS

- ▶ Wake boats operate in a 'bow high' manner to generate the surfable wake
 - ▶ This can restrict visibility of canoes and kayaks, and swimmers
 - ▶ Swamping of smaller boats and fishermen also possible



**Zig-Zagging Motorboat Swamps
Canoe Crewed by Native Americans
on Boston-to-New York Journey**



- ▶ Large ballast tanks pump water in from lake, approximately 600-700 gallons.
- ▶ A recent study showed that after emptying tanks, between 10 and 30 gallons remain.
- ▶ Most ballast tanks have no access port for decontamination
- ▶ If this process is repeated in follow-on lakes, the risk for releasing invasive fragments or larvae is very high.
- ▶ E.g. – Lake Champlain has >50 aquatic invasive species, including water chestnut, round goby, hydrilla and spiny waterflea...



TRANSFER OF AQUATIC INVASIVE SPECIES



**WHAT CAN BE
DONE?**



BE WAKE SMART THIS SUMMER

The Upper Saranac Foundation's wake smart campaign seeks to raise awareness about the impacts that wakeboats have on lake ecology and other users.

BE WAKE SMART

Wakesurfing and wakeboarding are among the fastest-growing watersports in the Adirondacks. As their popularity increases, it's important to consider the impacts they have on the lake ecosystem, other recreational activities, and the shoreline. The Upper Saranac Foundation urges wakeboaters to have a heart and be wake smart.

Upper Saranac Foundation
It still is, and always will be, about Water Quality.



Learn more about how you can be Wake Smart: bit.ly/wakesmart

BE AWARE

Wakeboats can generate waves up to 4 feet tall, which can be dangerous for small crafts, and their bows ride much higher than other motorboats, limiting visibility.



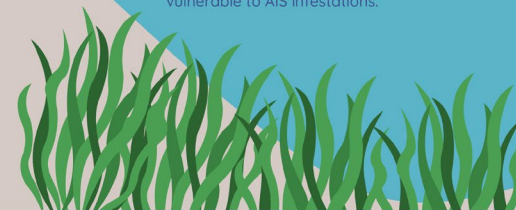
LOOK OUT FOR LOONS

In the Adirondacks, we love our loons. Loons nest their eggs just inches above the shoreline, where large wakes can wash them away.



OTHER IMPACTS

- Wakes can damage shoreline infrastructure, e.g. docks, bathhouses, and moored boats.
- Large wakes can lead to increased shoreline erosion.
- Wakeboats generate strong downward currents in water less than 20 feet deep, reducing water clarity and habitat quality.



DON'T STIR THINGS UP

Wakes can disrupt phosphorus on the lake bottom, which can lead to hazardous algal blooms (HABs) that are dangerous to humans and wildlife. Wakeboats can also spread aquatic invasive species (AIS) via ballast tanks if not properly cleaned, drained, and dried. When a lake ecosystem is damaged or disrupted, it becomes more vulnerable to AIS infestations.



EDUCATE!

- ▶ Depth under keel during wake generation mode should be at least 30 feet.
- ▶ Maintain 500 feet buffer zone on each side of the boat to the shoreline
- ▶ Useable run length of 3,000' or more
- ▶ Remember Clean, Drain, Dry between outings is already the law...

RESPONSIBLE WAKE BOATING

BE WAKE SMART

Upper Saranac Foundation
It still is, and always will be, about Water Quality.

Learn more about how you can be Wake Smart: bit.ly/wakesmart

LOOK OUT FOR LOONS

In the Adirondacks, we love our loons. Loons nest their eggs just inches above the shoreline, where large wakes can wash them away.

BE AWARE

Wakeboats can generate waves up to 4 feet tall, which can be dangerous for small crafts, and their bows ride much higher than other motorboats, limiting visibility.

DON'T STIR THINGS UP

Wakes can disrupt phosphorus on the lake bottom, which can lead to hazardous algal blooms (HABs) that are dangerous to humans and wildlife. Wakeboats can also spread aquatic invasive species (AIS) via ballast tanks if not properly cleaned, drained, and dried. When a lake ecosystem is damaged or disrupted, it becomes more vulnerable to AIS infestations.

OTHER IMPACTS

- Wakes can damage shoreline infrastructure, e.g. docks, boathouses, and moored boats.
- Large wakes can lead to increased shoreline erosion.
- Wakeboats generate strong downward currents in water less than 20 feet deep, reducing water clarity and habitat quality.

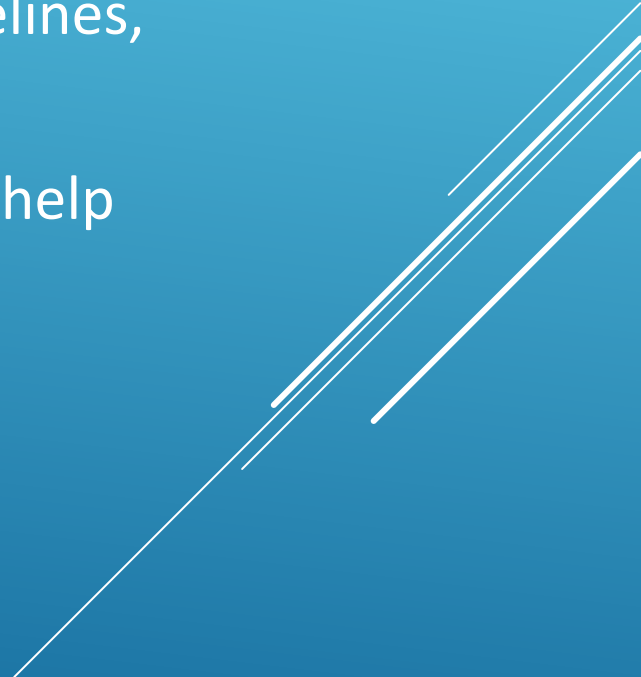
QR Code:

BE WAKE SMART THIS SUMMER



- ▶ Wake smart initiative launched on memorial day weekend 2025
- ▶ Signage at public access areas
- ▶ Mailer campaign, social media posts, press releases
- ▶ Webpage with resources on how to enjoy wakeboating while also sharing the lake.

SHARING OUR LAKE

- ▶ Operate wake boats in **water at least 30 feet deep**
 - ▶ Maintain a **minimum distance of 500 feet** from shorelines, docks, and other boats
 - ▶ **Clean, Drain and Dry** ballast tanks and equipment to help prevent the spread of invasive species
 - ▶ Support lake-friendly policies and educate others on responsible boating practices
- 

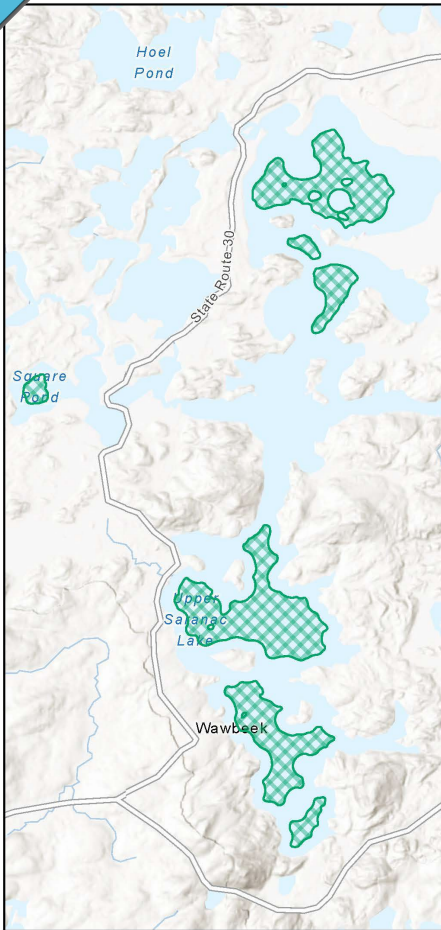
The goal of the Wake Smart campaign isn't to restrict recreation.

Rather, raise awareness about Wakeboat impacts.

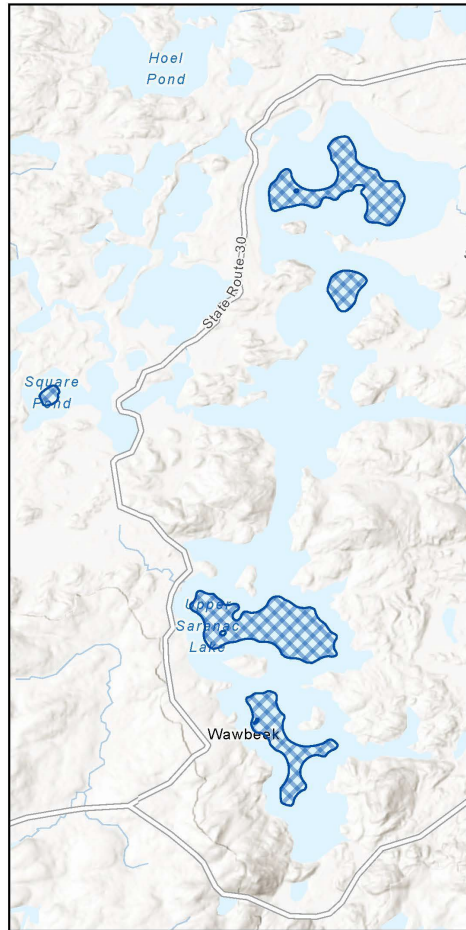
Upper Saranac watershed is a natural resource enjoyed by many different types of users.

*Educational efforts like the Wake Smart campaign help ensure that we're **being respectful of each other and the lake itself.***

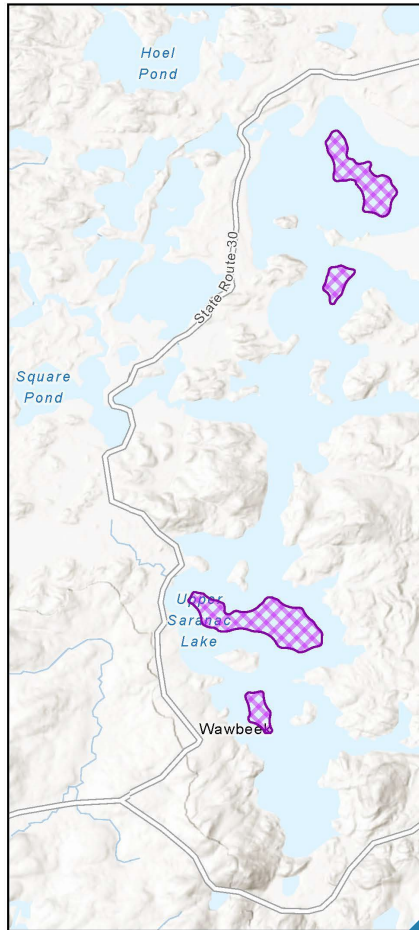
Shoreline Setback Comparison



500ft
Total Suitable Area= ~1,409 acres



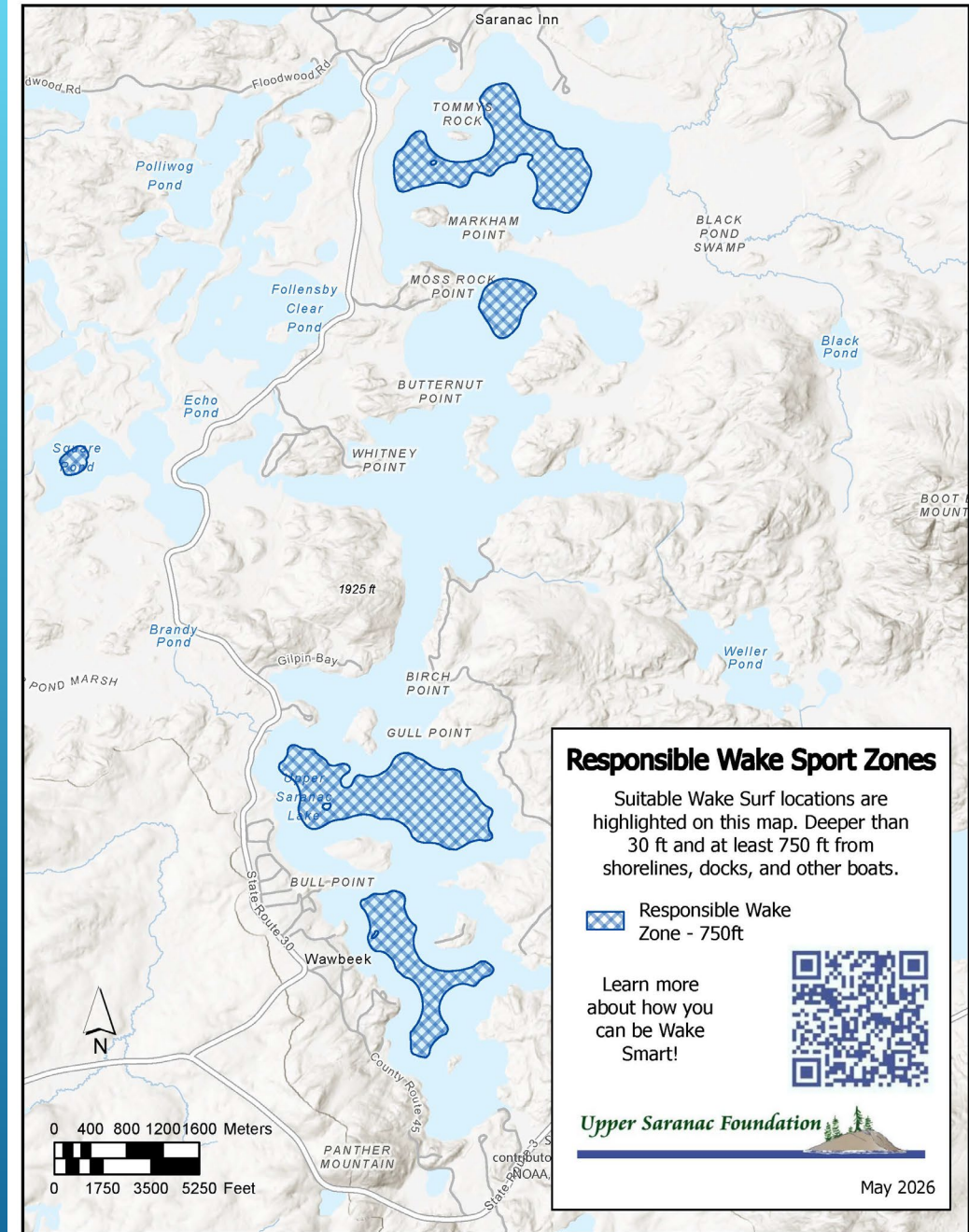
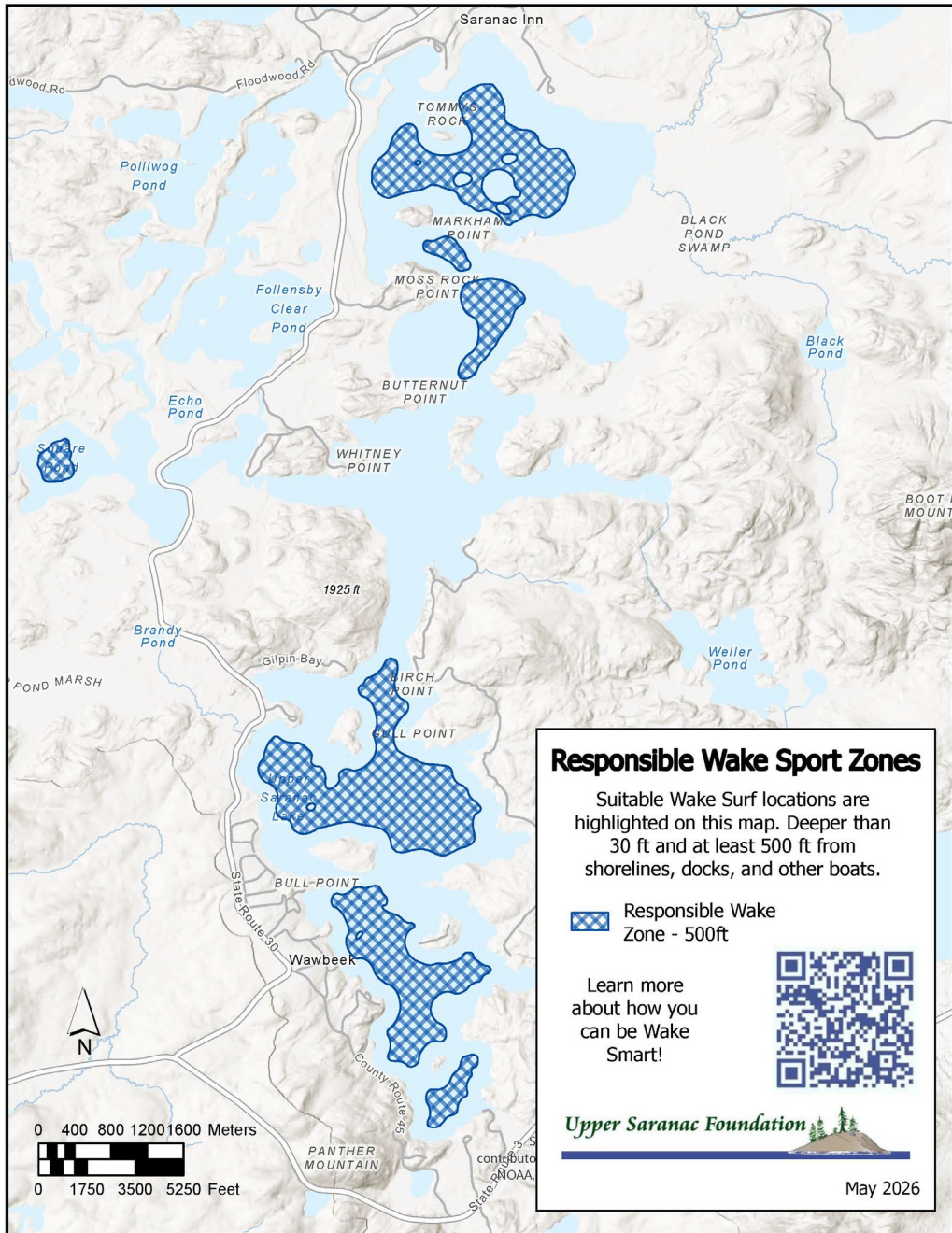
750ft
Total Suitable Area= ~ 912 acres



1000ft
Total Suitable Area= ~ 477 acres

PROPOSED RESTRICTIONS ON UPPER SARANAC LAKE

A CLOSER LOOK...



REGULATE

PROPOSED TOWN LAW

III. Prohibition: No person shall operate a wake boat for wakesports or operate any vessel or watercraft in a way that creates enhanced wake activity on a water body within the Town of [Name], [Name] County, New York unless the wake boat, vessel or watercraft is at least **1,000 feet from a shoreline**, the water is at least **30 feet deep**, the usable area is at least **3,000 feet in length**, and the water body has at least **60 contiguous acres** of surface water. The operation of wake boats is explicitly prohibited on the following water bodies that are smaller than 60 contiguous acres and/or have a depth that is less than 30 feet: _____.

AUTHORITY FOR TOWNS TO REGULATE BOATING ACTIVITIES

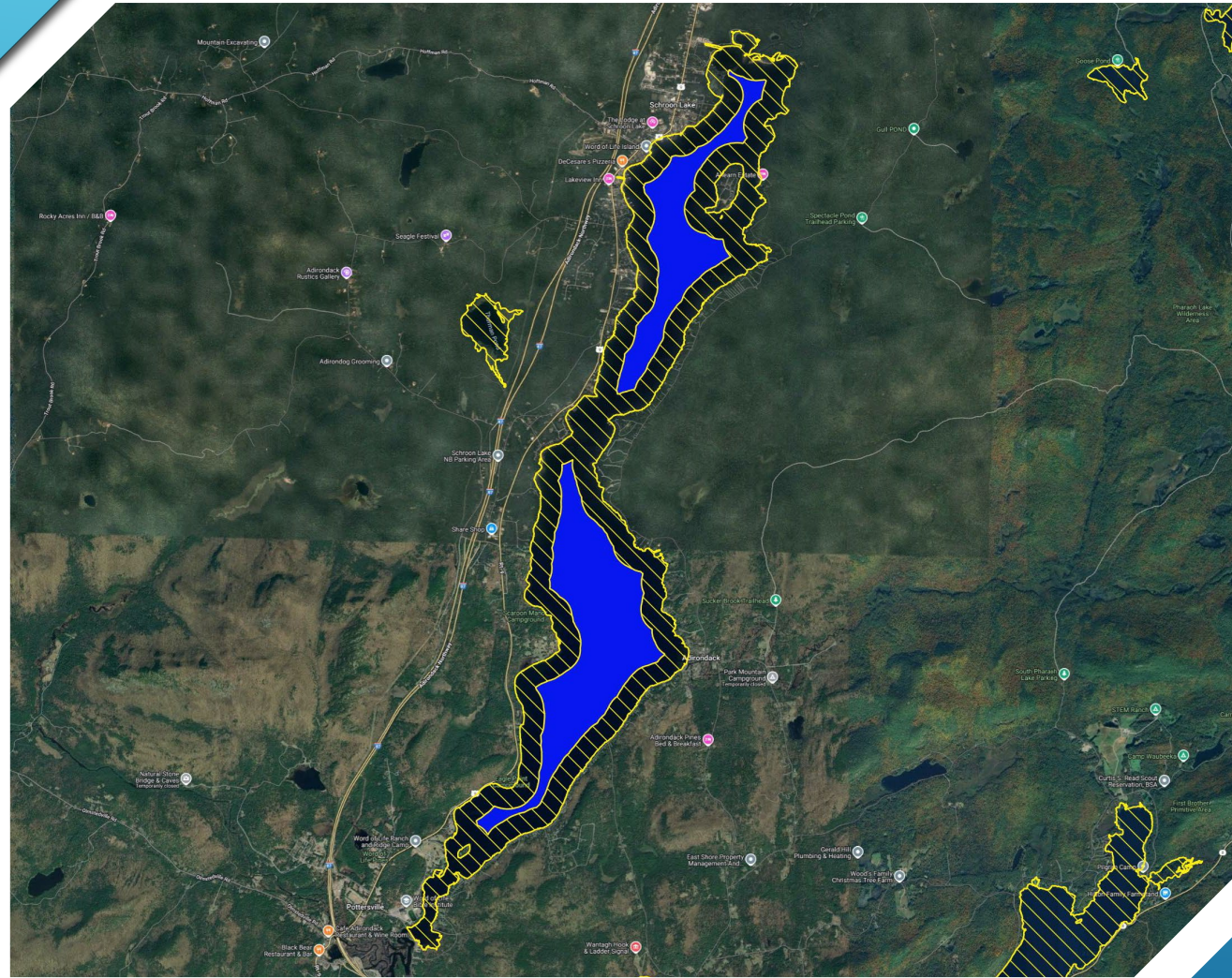
- ▶ Towns have authority to regulate speed and operation of watercraft within 1,500' of shorelines under New York State Town Law § 130(17)
- ▶ Further, Municipal Home Rule Law §10, towns may enact local laws and regulations to protect the health, safety, and welfare of their residents.
- ▶ Environmental Conservation Law § 9-1710 requires all persons to take reasonable precautions before launching watercraft to prevent the spread of aquatic invasive species, such as through the removal of any plant or animal matter by cleaning, draining and drying the watercraft.

BUT WHAT ABOUT ENFORCEMENT?




- ▶ Enforcement of wake boat restrictions would follow the same general approach used for other boating regulations, including speed limits, vessel registration, and safety requirements, with compliance supported by clear definitions, signage, and public outreach.
- ▶ While education and awareness are critical, establishing legal restrictions also serves as an important reinforcing mechanism—clarifying expectations and encouraging voluntary compliance even in the absence of constant enforcement. Experience from Vermont demonstrates that once regulations are in place, the combined effect of education, peer accountability, and a clear legal framework results in high levels of voluntary compliance, even when direct enforcement capacity is limited.

SCHROON LAKE ALLOWABLE AREA



FURTHER ACTIONS

- ▶ **Education** – A series of webinars, presentations, and educational literature will be produced.
 - ▶ It is our belief that most wake boat operators simply do not realize the impact and damage their boats have the capacity to cause.
 - ▶ **Boat Launch Stewards** will now have check box to count the number of wake boats launched on a water body.
- 
- A decorative graphic consisting of several parallel white lines of varying lengths and orientations, located in the bottom right corner of the slide.

WHAT CAN YOU DO AS A LAKE ASSOCIATION?

- ▶ **Learn More** – Join our webinars, and visit Upper Saranac Foundation’s Wake Smart page >> <https://usfoundation.net/programs/wakesmart/>
- ▶ **Educate Others** - Present to Town Boards or Community Education events
- ▶ **Town Board** – Present to Town Board proposal for regulation
- ▶ **Signage** – Post WakeSmart info in prominent locations in community
- ▶ **Boat Launch and Wash Stewards** – Remind boaters of responsible wake boating principles.

Adirondack Lakes Alliance

- Scott Ireland

Adirondack Council

- Jackie Bowen
- Andrew Williams

Adirondack Center for Loon Conservation

- Denise Silfee

Adirondack Watershed Institute

- Maureen Cunningham
- Michale Glennon
- Sara Kelly

Protect the Adirondacks!

- Claudia Braymer

Upper Saranac Foundation

- Guy Middleton

ADIRONDACK WAKE BOAT WORKING GROUP



Adirondack
Lakes
Alliance

ALA. Protecting & Preserving Adirondack Waters



ADIRONDACK
COUNCIL

PRESERVING WATER, AIR AND WILDLANDS



ADIRONDACK CENTER FOR
LOON CONSERVATION

PAUL SMITH'S COLLEGE



ADIRONDACK
WATERSHED INSTITUTE

Upper Saranac Foundation



PROTECT
THE ADIRONDACKS!