

From: alicea@riversalliance.org
To: [DEEP Boating](#)
Subject: Comments on Wake Boat and Wake Surf Study
Date: Thursday, April 30, 2026 5:47:25 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[Rivers Alliance Comments on Draft Wake Boat and Wake Surf Study.pdf](#)

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Good evening,

I hope you will accept the attached comments of Rivers Alliance on the draft wake boat and wake surf study even though I missed the 5 pm deadline. My mom was admitted to the ICU on Tuesday so I've lost track of some things. But this is very important to us and we've had our comments prepared for weeks. I just hadn't hit send yet!

Warm Regards,

Alicea



Alicea Charamut
Executive Director

(860) 416-7859

www.riversalliance.org





To: DEEP Boating Division

From: Alicea Charamut, Executive Director, Rivers Alliance of Connecticut

Date: October 22, 2025

Subject: Comments on DEEP Draft Wake Boat & Wakesurf Study

Rivers Alliance of Connecticut appreciates the opportunity to comment on DEEP's Draft Wake Boat & Wakesurf Study. We commend the Department for undertaking a comprehensive and thoughtful review of a complex and increasingly important issue affecting Connecticut's waters.

Overall Assessment

The study provides a strong foundation for understanding boats operating in wake surf mode and wakesurfing impacts in Connecticut. In particular, we appreciate:

- The report's clear acknowledgement that boats operating in wake surf mode produce larger, more powerful wakes than traditional vessels, with the potential to impact shoreline stability, water quality, aquatic habitat, and other users
- The thorough treatment of water quality impacts, including sediment resuspension, phosphorus release, and disruption of lake stratification
- The recognition that all forms of recreation are valuable, and that policy must balance recreational use with environmental protection and public safety

Key Considerations That Should Be Strengthened

While the study identifies many relevant factors, we recommend strengthening the role of Connecticut-specific resource characteristics in shaping conclusions and recommendations.

Lake and River Characteristics Must Drive Policy

The study should more explicitly emphasize that management decisions must be grounded in:

- Lake size and morphology
- Water depth
- Existing water quality and ecological health
- Shoreline development density

These factors are particularly important in Connecticut, where most waterbodies are relatively small, shallow, and highly developed compared to lakes in other parts of the country.

The study notes that Connecticut has over 2,200 lakes and ponds, but only a limited number of larger waterbodies suitable for motorized recreation. This reinforces the need for Connecticut-specific standards, rather than relying heavily on comparisons to other states.

“Apples to Oranges” Comparisons

We recommend a stronger and more explicit statement that: Comparisons to lakes in other regions are often not directly applicable to Connecticut due to fundamental differences in size, depth, and shoreline development.

Even the study’s own findings show that wake impacts persist at substantial distances and depths. For example:

- Boats operating in wake surf mode may require 500–600 feet from shore to approximate the wave energy of a non-wake boat at 200 feet
- Sediment resuspension and water column impacts can extend to depths of 20 feet or more

These findings highlight that minimum standards developed elsewhere may not be protective in Connecticut waters.

Need for Stronger, Science-Based Recommendations

While the study outlines management approaches, it stops short of offering sufficiently clear, science-based recommendations tailored to Connecticut.

Setbacks and Depth Standards

The study should provide clearer guidance on protective thresholds, based on the weight of the scientific evidence presented.

- Multiple studies cited indicate that distances of at least 500 feet or more are needed to reduce shoreline impacts
- Depth-related impacts—including sediment resuspension and water column mixing—extend well beyond shallow zones, with research indicating 20 feet or greater may be necessary to minimize impacts

However, the study also references lower thresholds (e.g., 10–15 feet), which are inconsistent with more recent field-based findings.

We strongly recommend that DEEP:

- Clearly distinguish between industry-funded or modeled studies and independent field-based research

- Identify protective thresholds, not just a range of values
- Provide guidance on combined standards (distance + depth + activity zone), not each in isolation
- Include the Lake Waramaug Terra Vigilis study in materials referenced. As it is a valuable independent study of the impact of wake surfing on a Connecticut Lake.

Depth Thresholds Are Not Protective as Presented

The study suggests that 10–15 feet may be sufficient to minimize water quality impacts . However, other findings within the same report contradict this:

- Wake-induced velocities capable of resuspending sediment extend to ~20 feet or deeper
- Sediment plumes and mixing effects persist and can last for extended periods

We recommend revising this section to reflect that depths of 10–15 feet are not consistently protective, and a more precautionary standard is warranted based on the best available science.

Data Gaps and Information Needs

Bathymetry Data

Connecticut lacks readily accessible, consolidated bathymetric data for many lakes. Without this information, both policy development and enforcement will remain limited.

We recommend that DEEP identify this as a critical data need, including:

- Development or consolidation of statewide bathymetric mapping
- Identification of lakes that can realistically support wake surfing under protective standards
- Potential mapping of designated wake sport zones, similar to Vermont’s approach

Conclusion

DEEP’s draft study is an important and necessary step toward informed decision-making on wake surfing in Connecticut. The science presented in the report clearly demonstrates that boats operating in wake surf mode:

- Generate substantially greater wave energy and subsurface disturbance than traditional vessels
- Can contribute to shoreline erosion, sediment resuspension, nutrient release, and habitat disruption
- Create heightened risks for user conflict and safety, particularly on smaller waterbodies

At the same time, Connecticut's lakes are uniquely vulnerable due to their size, depth, and development patterns.

For these reasons, we respectfully recommend that the final study:

1. Place greater emphasis on Connecticut-specific conditions
2. Provide clear, science-based minimum standards for distance and depth
3. Recognize that lower thresholds (e.g., 200 feet, 10–15 feet) are not sufficiently protective
4. Identify and prioritize data needs, including statewide bathymetry
5. Support a framework that enables both strong statewide minimum standards and local control

We appreciate DEEP's leadership on this issue and look forward to continued engagement as the Department finalizes the study and considers next steps.

From: [Betsy Gara](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 4:12:47 PM
Attachments: [Comments Wakesurfing Study 26.pdf](#)

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Attached are comments on the Wake Boat & Wakesurf Study.

Thank you.

Betsy Gara
Executive Director
COST
860-841-7350
bgara@ctcost.org



To: DEEP.Boating.Gov

From: Betsy Gara, Executive Director, CT Council of Small Towns

Date: April 30, 2026

RE: Draft Wake Boat & Wakesurf Study

The Connecticut Council of Small Towns (COST) appreciates the opportunity to submit the following comments on the State Department of Energy & Environmental Protection's Wake Board & Wakesurf Study.

COST appreciates that the study examines the impact of wakesurfing on Connecticut's inland waterbodies and recommends options for managing this recreational activity in a way that balances environmental protection, public safety, and outdoor recreation.

As noted in the report, wake surfing can negatively impact water quality and wildlife habitats, contribute to shoreline erosion, and create public safety issues. Municipalities devote considerable resources to ensuring that recreational lakes and other water bodies are properly maintained to provide recreation and enjoyment to residents and visitors.

Towns have invested considerable resources to protect the water quality of lakes in their communities, including addressing toxic algal blooms, invasive species, and other water quality issues. According to the report, "DEEP's review of available research concludes that the operation of wake boats can cause impacts to water quality of lakes through turbidity, phosphorus resuspension, and changes to the natural water column stratification process. These impacts can be addressed through management approaches which require operation of wake boats in deeper water." COST agrees with DEEP's conclusion that depth restrictions on wake boat operation will help minimize water quality impacts.

In addition, municipalities and lake associations actively strive to protect wildlife habitats. During certain times of the year, municipalities may place restrictions on boating and other activities to protect nesting or spawning sites and other wildlife habitats. The large waves created by wake surfing boats can undermine these efforts.

Accordingly, COST supports DEEP's findings that restrictions limiting the operation of wake boats in wakesurfing mode to a minimum distance from shore and minimum depth are necessary to protect wildlife habitats.



Distance restrictions would also help prevent shoreline erosion and damage to docks and other structures. Such restrictions are also important in protecting the safety of other boaters, kayakers, swimmers, etc.

As noted in the report, Connecticut contains 2,267 lakes and ponds greater than ten acres in size. Most of these lakes and ponds are small and cannot accommodate large power boats, including wake surfing boats. Any statewide regulation should include a ban on wakesurfing based on the size and acreage of a lake.

COST supports a statewide wake surfing regulation that includes 1) distance restrictions, 2) depth restrictions, and 3) size and acreage restrictions. Such restrictions should be based on sound science and data to ensure the protection of water quality, wildlife habitats, and public safety.

In addition to a statewide wake surfing regulation, however, municipalities should continue to retain statutory authority to adopt ordinances to regulate boating, including wake surfing, within their communities. Municipalities are in the best position to determine if wake surfing is negatively affecting water quality, wildlife habitats, and public safety. There may be times when a statewide regulation, depending on how it is crafted, is not sufficient to address these issues.

Thank you for the opportunity to comment.

From: [Bill B](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Saturday, March 28, 2026 2:47:55 PM
Attachments: [WB DEEP letter + testimony.docx](#)
[WB Appendix.docx](#)
[favicon.ico](#)

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I am attaching two documents that provide testimony on important issues with the DEEP draft report on Wakeboats.

Professor William Banholzer

Banholzer, William - UW-Engineering
Directory | College of Engineering @ The
University of Wisconsin-Madison
engr.wisc.edu

To: Connecticut Department of Energy & Environmental Protection

From: Professor William Banholzer

Date: March 28, 2026

Subject: Technical Comments on DEEP's Draft Wake Boat & Wakesurf Study

Dear Authors,

I appreciate the effort undertaken by the Connecticut Department of Energy and Environmental Protection to review the potential impacts of wakesurfing on inland waters. As someone with professional expertise in fluid mechanics, sediment transport, and statistical analysis, I have carefully reviewed the Draft Wake Boat & Wakesurf Study and the literature cited therein.

While the report raises legitimate questions regarding wake generation and shoreline protection, several methodological and scientific deficiencies substantially weaken the conclusions and resulting policy recommendations. I offer the following comments in the spirit of constructive scientific review.

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1. Reliance on Non-Peer-Reviewed or Advocacy Literature

A central concern is the report's significant reliance on **self-published, non-peer-reviewed reports and advocacy studies** as primary scientific evidence. As a policy document, this report should be a critical review, not just a summary of work.

Several frequently cited sources in the draft report fall into this category, including:

- Marr et al. (see attached appendix for critique)
- Terra Vigilis reports (see attached appendix for critique)
- Self-published technical memoranda
- Agency reports lacking formal peer review
- Conference presentations without methodological documentation

Most of the documents lack:

- reproducible methodology
- statistical treatment of uncertainty
- instrument calibration details
- transparent experimental design

By contrast, **peer-reviewed journal publications of hydrodynamic and sediment transport** provide far more reliable benchmarks for evaluating wake impacts. Scientific policy should rely primarily on **peer-reviewed evidence**, not grey literature that may reflect advocacy positions or incomplete analysis. Table 1 compares the degree of rigor for many of the studies you cite.

Table 1: Comparison of Methodological Rigor in Boat Wake Studies

Reference	# Wake Boats	# Non-Wake Boats	Repeat Meas.	Calibration	Varied Speed	Semi-Disp. Non-Ballast	Statistical Rigor	Match Froude #	Overall
MacFarlane 2025 ¹	8	4	±	±	✓ (AMC only)	✓-	X	X	Notable
MacFarlane AMC 2018	5	2	✓	✓	✓-	✓-	X	X	Notable
Goudey & Girod 2015	1	0	✓	✓	X	X	X	X	Moderate
Ruprecht 2015 ¹	3	0	✓	✓	✓	X	X	X	Low
Marr 2022 (SAFL) ²	2	2	±	±	X	X	X	X	Low
WEC 2021	1	0	±	±	X	X	X	X	Low
Terra Vigilis 2024	2	2	X	X	X	X	X	X	Very Low
Terra Vigilis 2022	1	2	X	X	X	X	X	X	Very Low
Terra Vigilis 2021	1	-	X	X	X	X	X	X	Very Low
Ray (Payette Lake)	Uncontrolled	0	X	X	-	X	X	X	Very Low

Notes: ✓ = Yes, ✓- = matched speed but not Froude number, X = No, ± = Partial/Inconsistent or not reported. Overall rigor reflects replication, calibration, appropriate benchmarks, and statistical treatment.

NOTES IN PEER REVIEW- if no annotation study was not peer reviewed

¹ Only studies that complete a rigorous peer review.

² The study was sent to reviewers, but did not follow the normal process, requiring that all reviewers' comments be addressed, and they agreed it is suitable for publication.

EXPLANATION OF TABLE COLUMNS

Repeat Measurements refer to repetitive measurements performed under the same conditions to evaluate measurement variation.

Sensor Calibration refers to calibrating the sensor to assess its accuracy.

Varied Speed refers to study measurements made at several speeds within the same regime (e.g., 10 & 12 mph, both in semi-displacement mode).

Semi Displacement Mode-non-ballasted boat data refer to whether the report measured any non-wake boats in semi-displacement mode. As noted above, the proper comparison is between boats at equivalent Froude numbers.

Statistical Rigor refers to whether authors use variance analysis to determine whether differences in means were statistically significant.

Benchmark Uses Similar Froude # refers to whether the authors used a benchmark that compared wake boats to non-wake boats when both were operated at the same Froude number. To date, no study has directly compared boats within the same operating regime when recommending setback distances. Instead, some authors justify their benchmarks by referencing activities such as cruising or water skiing. Yet, tubing—one of the most popular water sports—typically occurs at speeds of 8–12 mph (with a maximum of 15 mph), placing most boats in the semi-displacement regime ($Fr = 0.5\text{--}0.7$). Despite this, no paper has explicitly recognized tubing as a benchmark case.

The lack of statistical rigor creates inconsistency in policy discussions. For example, some proposed ordinances prohibit operation in the transition or semi-displacement regime, yet explicitly exempt tubing or teaching children to ski—activities that generate similar wake characteristics. Such selective exemptions are arbitrary. If the stated concern is safety or environmental protection, regulations cannot reasonably prohibit one activity while permitting others that impose the same physical impacts.

2. Invalid Benchmarking: High-Speed vs Low-Speed Comparisons

A major analytical flaw throughout the wake boat debate—also present in this draft report—is the **comparison of wakes generated in fundamentally different hydrodynamic regimes**.

Wake height and energy depend strongly on the volumetric **Froude number**, which governs vessel behavior across three regimes:

Boats operate in three distinct regimes characterized by their volumetric Froude number (Fr_V), which relates a vessel's speed to the cube root of its displacement volume:

$$Fr_V = \frac{V}{\sqrt[3]{g \cdot \nabla}}$$

where V is velocity, g is gravitational acceleration, and ∇ is displacement volume. This dimensionless number relates a boat's speed to the speed of the gravity waves it creates.

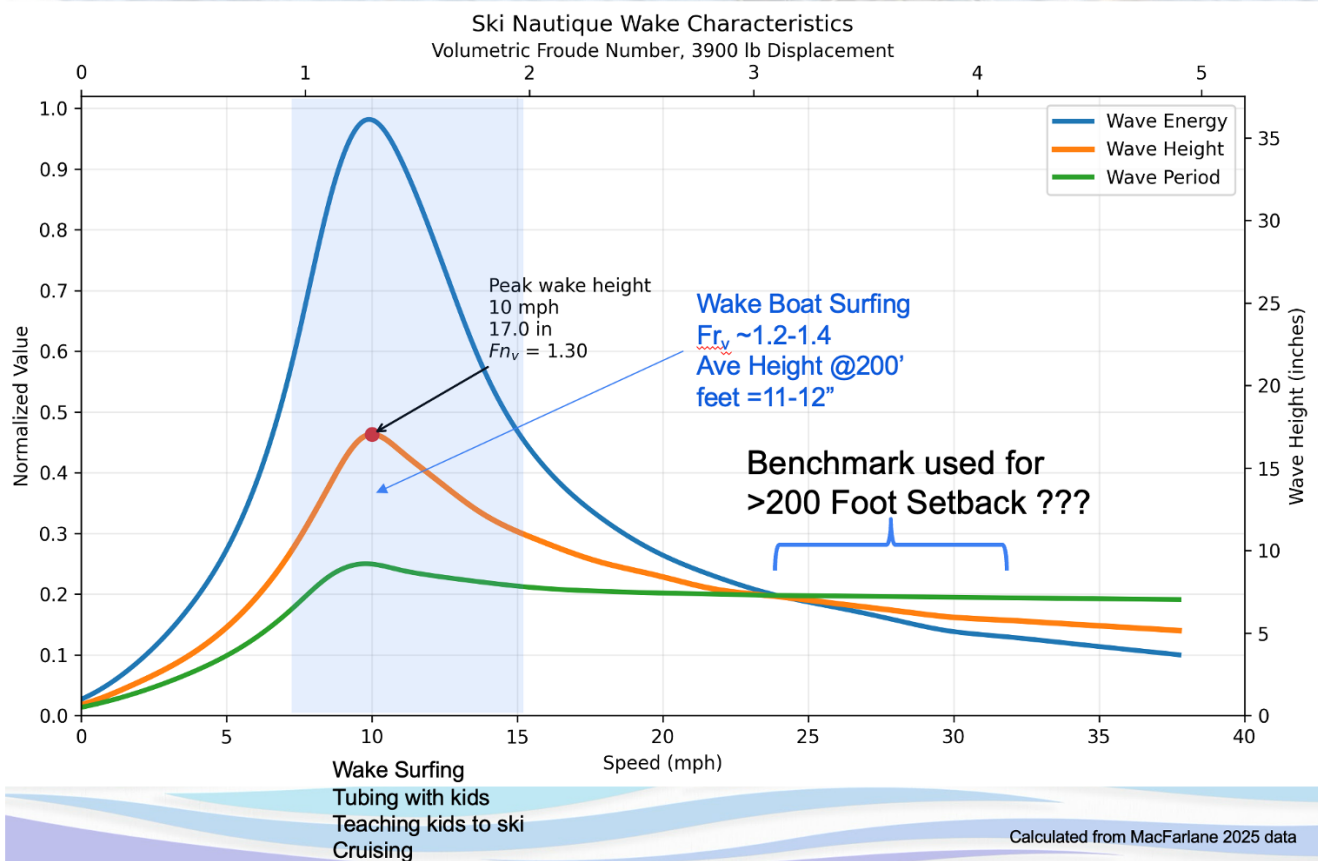
Displacement regime ($Fr_V < 1.0$) The boat moves through the water, pushing it aside. Waves are minimal.

Semi-displacement regime ($Fr_V = 1.0\text{--}2.5$) The boat begins to climb its own bow wave, creating maximum wave height and energy. This is where wake surfing occurs (typically 10-12 mph for 20-23 foot boats).

Planing regime ($Fr_v > 2.5$): The boat rises onto the water surface, significantly reducing wave height as it transitions from displacing water to planing on top of it. High-speed skiing (24-34 mph) occurs in this regime

Figure 1, attached, illustrates this principle. The horizontal axis shows increasing boat speed. The vertical axis represents wake height, wave period, and wave energy. I have also included the corresponding volumetric Froude number (Fr_v), which allows comparison across different boats of varying size and displacement. For simplicity, however, speed alone demonstrates the effect clearly.

FIGURE 1, Wave height (100 ft from boat), Period and Energy vs speed and Volumetric Froude Number for a typical 21 foot ski boat



The MacFarlane (2025) data illustrate this clearly. A Ski Nautique designed specifically to minimize the wake produced:

- 4–5 inch waves at 30–32 mph (200 feet from the boat)
- 17 inches at 10 mph 100 feet (current Wisconsin setback distance)

The same boat, operated at different speeds, produced dramatically different waves. Comparing boats operating in different hydrodynamic regimes fundamentally skews conclusions. This is the problem with all the analyses used to support setbacks in excess of 200 feet. They use a high-

speed benchmark and selectively apply it to wake boats operating at slow speed while ignoring other slow-speed activities.

Shorelines naturally acclimate to wind-generated waves. Even small lakes routinely experience 8–10 inch waves with ~2-second periods, and most lakes exceed 12 inches during storms.

If you are determined to reduce wake impacts to levels equivalent to high-speed ski operation, that standard must apply equally across all activities. Wake boats are only one of several activities operating in the semi-displacement regime. Tubing, for example, is far more prevalent and frequently involves circular or figure-eight driving patterns that can create constructive interference and amplify wave height — precisely the type of physics your question pointed toward.

A rational, physics-based standard would focus on operating regime rather than boat category. For example, any boat operating in semi-displacement mode (8–18 mph) must remain at least 200 feet from shore, piers, or other stationary objects. That approach directly addresses the hydrodynamic mechanism producing large wakes without singling out a specific boat type. and ignoring others that can have equal wakes.

3. Arbitrary Targeting of Wake Boats

If the report intends to regulate **semi-displacement wake regimes**, then logically **all activities producing such wakes must be treated consistently**.

Examples include:

- tubing
- teaching children to waterski
- slow towing for knee boarding
- many recreational activities operating at 8–15 mph

These activities generate wakes within the **same hydrodynamic regime** as wakesurfing. Yet the report proposes restrictions **solely for wake boats**, while leaving these activities unregulated. Such selective regulation raises serious concerns about **arbitrary and capricious policy design**, because the proposed criteria would apply broadly to many common recreational boating practices if applied consistently.

4. Misinterpretation of Wake Decay with Distance

The report also underestimates the **rapid decay of wake energy with distance from the boat**.

Both empirical data and wave theory show that:

- wake height decreases rapidly with distance

- steep wakes break and transition to lower-energy waves
- ballast makes no difference on wave size after 100 feet

Field measurements consistently show that: **70% of initial wake energy dissipates within the first 150–200 ft.**

In addition, wakes produced by wakesurfing are intentionally **steep waves**, which means they **exceed the wave stability threshold** and begin breaking shortly after formation. Breaking waves lose energy quickly through turbulence and dispersion.

Therefore, measurements taken close to the vessel do **not represent the energy that ultimately reaches shorelines or lakebeds.**

5. Overreach of the Proposed 20-Foot Depth Restriction

The report recommends a **minimum operating depth of 20 feet** for wakesurfing. However, this recommendation appears to lack a clear mechanistic basis in sediment transport physics.

Sediment mobilization is governed primarily by **bed shear stress**, which depends on **near-bed orbital velocities**.

Extensive sediment transport literature indicates that:

- fine sediments typically require velocities around **10–15 cm/s** (~0.3–0.5 ft/s) to initiate movement.

Most measurements of boat wakes show **near-bed velocities significantly below this threshold at moderate distances from the boat**, especially when water depth exceeds about **12–15 feet**.

Because orbital velocity decays rapidly with depth, deeper water dramatically reduces bed disturbance potential.

Consequently:

- the proposed **20-foot depth requirement appears significantly more conservative than necessary**
- the report does not demonstrate that depths between roughly **12–18 feet pose measurable sediment transport risk**

Without such analysis, the 20-foot threshold appears **unsupported by hydrodynamic evidence.**

The draft report also fails to place recreational boat wakes in the broader physical context of sediment dynamics in lakes by ignoring the dominant role of wind-driven wave action. One of the most comprehensive field investigations of sediment resuspension in shallow lakes—conducted by Anthony and Downing on Clear Lake, Iowa—demonstrated that wind events, not recreational

boating, are the primary driver of sediment disturbance and nutrient mobilization. Their analysis showed that moderate winds exceeding roughly 10 m s^{-1} ($\approx 22 \text{ mph}$) can mobilize nearly half of the lake's benthic surface area, while stronger winds can disturb nearly the entire lakebed. In contrast, the statistical relationship between boat traffic and turbidity was weak ($r = 0.23$), indicating that boating effects were highly variable and secondary to natural wind-driven mixing. These findings underscore that sediment dynamics in shallow lakes are governed primarily by wind energy and lake morphology. By failing to incorporate this well-established limnological literature, the DEEP draft evaluates boat wakes in isolation rather than in the context of the much larger and more frequent natural forces that control sediment resuspension, leading to policy conclusions that risk substantially overstating the relative impact of recreational boating.

6. Need for Consistent Scientific Standards

In summary, several aspects of the report require reconsideration before the findings can be considered scientifically robust:

1. Greater reliance on **peer-reviewed hydrodynamic literature**
2. Comparisons limited to **boats operating in comparable hydrodynamic regimes**
3. Consistent treatment of **all semi-displacement recreational activities**
4. Proper accounting for **wake decay and wave breaking**
5. A **mechanistic justification** for any proposed depth restriction beyond 14 feet

Without addressing these issues, the report risks producing policy recommendations that are **not supported by the underlying physics of wave generation and sediment transport**.

Closing

I appreciate the opportunity to provide these comments and would welcome continued dialogue as the Department refines its analysis. Sound water policy should rest on **objective, reproducible science and consistent regulatory principles**, and I hope these comments contribute to that goal.

Below are comments I prepared for the Environment Committee as they debated the merits of Senate Bill 313. You may find information contained in [this testimony](#) useful.

I have also included an appendix containing my critiques of the Maar s et al. and Terra Vigilis studies referenced here, along with a white paper I wrote on this topic for further reference.

Respectfully,

Professor William Banholzer

Author Biography

My name is William Banholzer, and I am a Professor of Practice at the University of Wisconsin-Madison, a position I have held since 2014. My extensive background in engineering, including fluid mechanics, equips me with the technical expertise to critically evaluate the scientific literature on wake boats and their environmental impacts. I am one of only 250 chemical engineers elected to the US National Academy of Engineering. I am also a Certified Six Sigma Master Black Belt in statistical analysis. I have published research in a peer-reviewed journal on the movement of particles in a flow field, which involves the same physics as shore erosion and sediment resuspension.

Throughout my career, I have specialized in interpreting experimental data, including statistical analysis. This interdisciplinary expertise allows me to assess both the quantitative data and the methodological rigor in studies examining wake-boat impacts. My work involves evaluating research quality, understanding experimental design, statistical analysis, and the application of hydrodynamic principles—all critical components in analyzing claims about wake-boat effects on inland lakes.

I have thoroughly reviewed the peer-reviewed literature, regulatory studies, and technical reports on wake boats, including work by MacFarlane (2025, 2018), the University of Minnesota St. Anthony Falls Laboratory (SAFL), Daeger et al. (2022), Goudey and Girod (2015), and numerous other sources. My analysis focuses on scientific rigor, appropriate benchmarking, statistical validity, and adherence to fundamental hydrodynamic principles.

TESTIMONY BY PROFESSOR WILLIAM BANHOLZER IN OPPOSITION TO SB 313: AN ACT CONCERNING WAKESURFING ON CERTAIN LAKES

TO: The Honorable Members of the Environment Committee

FROM: Professor William Banholzer

RESIDENT OF: Madison, WI

DATE: March 3, 2026

RE: OPPOSITION to Senate Bill 313

Executive Summary

This testimony reflects my extensive background in engineering, including in fluid mechanics, as a Professor of Practice at the University of Wisconsin-Madison. I have published research on the motion of particles in fluid, the same physics of shore erosion and sediment resuspension in a peer-reviewed journal. I meet the professional criteria to assess both the quantitative data and the methodological rigor of studies examining wake boat impacts.

Fact: The scientific evidence demonstrates that wake boats operating at 200 feet from shore in water depths exceeding 10-15 feet pose no unique or disproportionate threats compared to ski and fishing boats. Arguments for full bans or more extreme setbacks are based on fundamentally flawed comparisons that ignore basic physics and misapply data. I provide extensive research support for this fact in the pages that follow.

A statewide 200 ft. standard for wake surfing would be supported by science and protect Connecticut's lakes. It would prevent towns from wasting resources on ineffective, and arbitrary ordinances.

In my view, the language in SB 313 encouraging lake-by-lake or town-by-town regulation is a serious error that risks causing more harm than it solves. I urge Connecticut to reject this

approach. I am a Wisconsin resident and lake property owner. Our state is currently expending substantial taxpayer resources developing and defending a patchwork of local wake surfing ordinances that are proving unenforceable, unsupported by sound science, and misaligned with the demonstrated causes of shoreline erosion, lakebed disturbance, and aquatic invasive species (AIS) transmission. Wisconsin would be far better served by consistent, statewide standards grounded in settled, peer-reviewed research. Connecticut still has the opportunity to enact a clear, uniform policy rather than repeat our mistakes.

At first glance, local control appears sensible. Local officials understand their lakes' geography. In theory, they are well-positioned to tailor regulations to local conditions. In practice, however, Wisconsin's experience shows that outcomes are driven less by hydrodynamics and more by politics. Lakes with comparable morphology and ecological characteristics are regulated in fundamentally different ways. One town enacts sweeping restrictions largely based on advocacy-driven presentations or public pressure, while a neighboring town in the same watershed imposes none. When similarly situated lakes are treated differently, the distinguishing factor is not science—it is local political dynamics. That inconsistency undermines the premise that local control is producing evidence-based policy.

Local governments are rarely equipped with the technical expertise, time, or financial resources necessary to evaluate complex hydrodynamic data and environmental studies. As a result, decisions are often influenced by the loudest voices in the room rather than by rigorous analysis. Reports presented as scientific justification may appear authoritative at first glance, but closer technical review often reveals methodological shortcomings that fall well short of the standards required to justify restricting citizens' access to a shared public resource. When fundamental recreational rights are infringed, regulatory decisions must rest on defensible, peer-reviewed science—not advocacy framed as science. When state environmental authorities, such as the WI DNR, acknowledge limits in the evidence, local ordinances grounded in contrary assumptions warrant scrutiny rather than deference.

Wisconsin's recent experience also shows how "local control" can be used to achieve indirectly what cannot be justified directly. Early personal watercraft ordinances effectively imposed de facto bans by limiting operation to 2 hours per week. More fundamentally, the majority preference expressed at public meetings is not, by itself, a sufficient basis to curtail lawful use of a shared public resource. Minority rights must be preserved. Public waters are held in trust for all citizens—not only for shoreline property owners or the most vocal participants in a town hall meeting. If riparian owners were asked whether they would support closing a public boat landing to reduce the spread of invasive species, decrease boat traffic to enhance safety, and eliminate the occasional bad actor who accesses the lake, such a proposal might receive near-unanimous support. Yet closing public access would be wrong. It would elevate majority convenience over

equal access and undermine long-settled public trust principles. Allowing a majority to restrict a minority group of lawful wake boat users based on preference rather than demonstrable, peer-reviewed evidence is no different in principle. Sound public policy requires intellectual consistency: regulations must be proportional, evidence-based, and protective of minority rights. A uniform statewide framework would reduce litigation, lower enforcement costs, protect property owners and recreational users alike, and ensure that policy is driven by objective science rather than by the volume of public sentiment.

(I) WAKE BOATS ARE NOT UNIQUELY HARMFUL

- When boats are compared under equivalent conditions and speeds, wake boats 200 feet from the shoreline produce waves indistinguishable from fishing boats, ski boats, or other watercraft operating at slow speed (8-18 mph).
- There is no scientific basis for singling out wake boats and ignoring other slow-speed activities that produce comparable waves, including casual tubing, teaching novices to ski, and cruising.

(II) SHORELINE EROSION IS DRIVEN BY WIND

- Dominant causes of shoreline erosion are wind, fluctuating water levels, ice, storm runoff, and overdevelopment — not recreational boats.
- A single wake boat pass affects a sliver of shoreline for less than 60 seconds, whereas wind delivers wave energy continuously over hours or days over a much larger area— accounting for more than 95% of total shoreline wave exposure over a boating season.
- To match the total energy delivered to shore by a 20-mph wind over six hours, a wake boat would need to pass at 200 feet every minute.

(III) SEDIMENT AND WATER QUALITY: A DEPTH QUESTION, NOT A BOAT QUESTION

- Sediment resuspension is a function of water depth and boat speed, not boat type. Rigorous field studies show that no boat type — wake boats included — disturbs lake sediments at depths greater than 10–15 feet, but all boats can disturb sediments in 3-8 feet.
- A 2015 study measured water velocity at varying depths as wake boats passed overhead. They found that water 10-15 feet below the wake boat does not move fast enough to mobilize fine silt particles. In other words, in water at least 10 -15 feet deep, wake boats do not resuspend sediment from the lakebed.
- Claims that wake boats uniquely degrade water clarity or phosphorus levels are not supported by direct measurement. The most-cited study used to justify extreme

restrictions has significant methodological flaws and was not subject to a formal peer-review process.

- A 2003 study of sediment dynamics found that “sediment resuspension by wind-induced waves... contributes to daily, often substantial” redistribution of nutrients like phosphorus, far exceeding boat-related effects.
- Long-term water quality data from lakes with heavy wake boat use show stable or improving conditions, directly contradicting claims of ecological harm.

(IV) AQUATIC INVASIVE SPECIES (AIS) RISK IS NOT WAKE-BOAT-SPECIFIC

- All watercraft retain water that can transport invasive species.
- Modern wake boats retain less residual water than stern-drive boats, and they are typically used on a single home lake.
- Fishing boats — which make up the large majority of watercraft and frequently travel between multiple bodies of water — carry far greater AIS risk.
- AIS is a serious concern, but any policy addressing it should account for the magnitude of the risk factors.

(V) A STATEWIDE STANDARD PREVENTS SERIOUS PRACTICAL HARM

- Allowing towns to set their own rules creates a patchwork that is arbitrary:
- Boaters cannot know or comply with rules that change from town to town, and enforcing inconsistent ordinances will unduly burden boat patrols.
- Lakes governed by restrictive wake boat ordinances lose their appeal to the fastest growing segment of watersport enthusiasts, depressing waterfront property values.
- Municipalities face litigation exposure: towns in other states have already been served with legal claims for banning wake boat use.

Imperative Context for Evaluating Wake Boat Opponents’ Studies

You are going to receive claims of evidence that wake boats pose a great threat. **However, most studies cited by wake boat opponents do not meet the level of scientific rigor necessary to support calls for excessive restrictions or bans.**

The claims that wake boats pose special dangers to lakes rest on a fundamental error: every cited study compares wake boats traveling at slow speed — where all boats generate their largest waves — to boats traveling at high speed “on plane,” where waves are minimal. This comparison is invalid

and explains why most studies cited by opponents are self-published technical reports rather than peer-reviewed journal articles. They lack fundamental elements of sound research, including proper sensor calibration, replication, transparent statistical analysis, and independent editorial oversight.

For example, the widely referenced 2022 St. Anthony Falls Laboratory wake study is often described as “peer reviewed,” but it did not undergo a formal peer-review process in which reviewer critiques were fully addressed and revisions re-evaluated prior to release. The study has excessive (100%) data variability, inconsistent energy calculations, and failure to reconcile findings with established prior research; these deficiencies raise serious questions about its reliability as a basis for public policy.

I hope you will keep this in mind in your review of the submitted testimony.

Detailed Technical Appendix

(I) The Fundamental Problem: Inappropriate Benchmarking and Misunderstanding of Hydrodynamic Regimes

1. Understanding Operating Regimes

The single most critical flaw in every study cited by anti-wake-boat advocates is the **comparison of boats operating in fundamentally different hydrodynamic regimes**. This is not a minor methodological issue—it invalidates the entire analytical framework.

Boats operate in three distinct regimes characterized by their volumetric Froude number (Fr_V), which relates a vessel's speed to the cube root of its displacement volume:

$$Fr_V = \frac{V}{\sqrt[3]{g \cdot \nabla}}$$

where V is velocity, g is gravitational acceleration, and ∇ is displacement volume. This dimensionless number relates a boat's speed to the speed of the gravity waves it creates.

Displacement regime ($Fr_V < 1.0$) The boat moves through the water, pushing it aside. Waves are minimal.

Semi-displacement regime ($Fr_V = 1.0-2.5$) The boat begins to climb its own bow wave, creating maximum wave height and energy. This is where wake surfing occurs (typically 10-12 mph for 20-23 foot boats).

Planing regime ($Fr_V > 2.5$): The boat rises onto the water surface, significantly reducing wave height as it transitions from displacing water to planing on top of it. High-speed skiing (24-34 mph) occurs in this regime[1].

2. The Flawed Comparison

You will find that all studies cited by wake boat opponents compare:

- **Wake boats at 10-12 mph** (semi-displacement, maximum wave generation)

- **To ski boats at 24-32 mph** (planing regime, minimal wave generation)

This comparison is **scientifically invalid**. It is analogous to comparing the fuel efficiency of a car accelerating uphill in second gear to one cruising downhill in overdrive—the vehicles are operating under completely different physical conditions.

MacFarlane's 2025 study provides definitive evidence of this phenomenon. A Ski Nautique 200 operating at:

- **30 mph (planing)**: Produces a 5-7 inch wave at 100 feet from the boat
- **10 mph (semi-displacement)**: Produces a **17-inch wave** at 100 feet, and 15 inches, 200 feet from the boat, which exceeds the average wake boat wave at 200 feet of 11-12” [2].

3. The Appropriate Benchmark

If we are concerned about wave impacts, we must compare boats operating under similar physical conditions—that is, similar speeds and Froude numbers —conditions that shorelines have already acclimated to. The appropriate benchmarks for wake boats surfing at 10-12 mph are:

1. **Fishing boats at 10-12 mph at 100 feet**: Average wave height 11.4 inches
2. **Ski boats at 10-12 mph at 100 feet**: Average wave height 11.4-17 inches
3. **Any large recreational boat (deck boat, cruiser, pontoon) at 10-12 mph at 100 feet**
4. **Tubing with children** (recommended speeds 8-12 mph per industry guidelines [3])
5. **Teaching children to water ski** (10-15 mph)
6. **Cruising** (10-15 mph)

All of these common, widely accepted activities generate waves of similar magnitude to those of wake surfing, 200 feet from shore, because they occur in the same hydrodynamic regime.

Figure 1 compares data from the Austrian Maritime College for these benchmarks to a wake boat surfing with ballast at 200 feet from shore. The results are compelling: wave heights in all scenarios are comparable. The data provides no scientific basis for singling out wake boats as a unique threat.

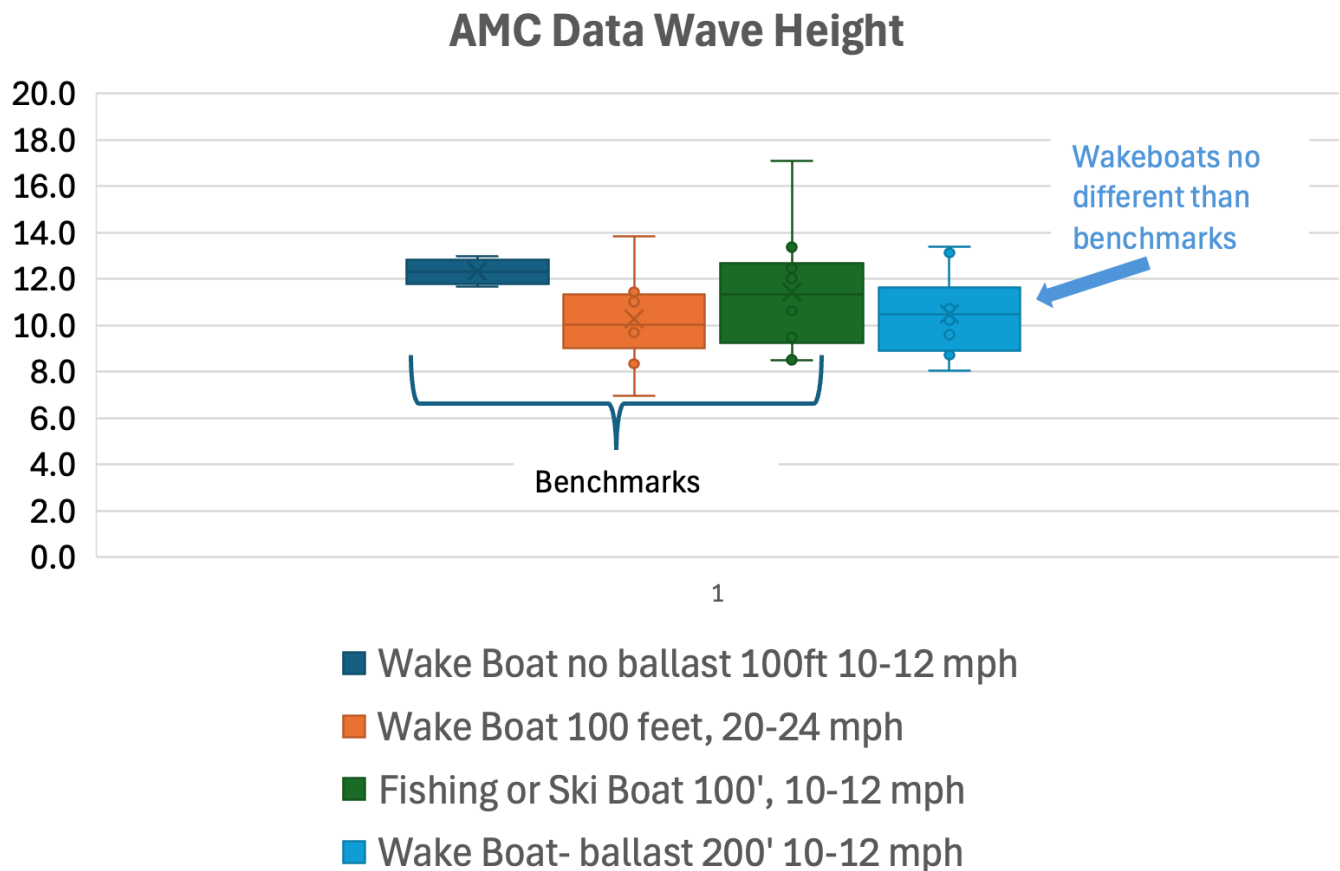


FIGURE 1 Box Plot of AMC wave height data for 1) a wakeboat with no ballast at 100 feet from shore (10-12 mph), 2) a wake boat at higher speed (20-24 mph) at 100 feet from shore, 3) a fishing or ski boat operating at 10-12 mph at 100 feet from shore, and 4) a wake boat surfing at 200 feet from shore.

The visual data in Figure 1 can be tested for statistical significance to confirm the conclusion.

4. Statistical Analysis: Wake Boats at 200 Feet Are Not Significantly Different

I conducted formal statistical analysis (Welch's t-tests) on wave height data from six independent studies, including the Austrian Maritime College (AMC) data, University of Minnesota SAFL data, Goudey and Girod (2015), and others[4].

Key Findings from Statistical Testing

⇒ **Comparison 1: Wake boats (no ballast, 10-12 mph, 100 feet) vs. Wake boats (with ballast, 10-12 mph, 200 feet)**

- Mean heights: 12.31 inches vs. 10.97 inches
- **p-value: 0.012** (AMC data only) or **0.545** (all six studies combined)
- Result: Wake boats WITHOUT ballast at 100 feet produce statistically LARGER waves than wake boats with ballast at 200 feet.

⇒ **Comparison 2: Wake boats (20-24 mph, 100 feet) vs. Wake boats (surfing, 10-12 mph, 200 feet)**

- Mean heights: 10.26 inches vs. 10.97 inches
- **p-value: 0.817** (AMC) or **0.051** (all studies—borderline)
- Result: No statistically significant difference. Waves are comparable.

⇒ **Comparison 3: Fishing/Ski boats (10-12 mph, 100 feet) vs. Wake boats (surfing, 10-12 mph, 200 feet)**

- Mean heights: 11.42 inches vs. 10.97 inches
- **p-value: 0.359** (AMC) or **0.645** (all studies)
- Result: No statistically significant difference. The waves are indistinguishable.

These results demonstrate that **wake boats at 200 feet produce waves no larger—and in some cases smaller—than other common boating activities at 100 feet**[5].

(II) Wave Energy and Shoreline Impact

1. Rapid Energy Dissipation

Wave energy dissipates rapidly as waves propagate away from the source. More than 70% of a wake boat's initial wave energy is dissipated within the first 200 feet due to breaking, geometric spreading, and frequency dispersion. [6].

At 200 feet from the boat, the average maximum wave height from wake boats across all studies is **12 inches** with a period of approximately **2 seconds**. Goudey states “In all but the most protected of shorelines, it would be difficult for boating to match the role of wind waves and natural currents on shaping shorelines “[7].

2. Wind Dominates Shoreline Energy Exposure

While individual wake boat waves may momentarily equal or slightly exceed background wind waves, the **total energy delivered to shorelines** is what drives erosion. Wind-generated waves deliver continuous energy over hours or even days, while a wake boat affects any given shoreline for only 45-60 seconds per pass.

To match the total energy delivered by a 20-mph wind in six hours, a wake boat would need to pass **200 feet from shore every minute**—an absurd and unrealistic scenario.

In my home state of Wisconsin, weather data show that wind speeds exceed 20 mph on more than 20% of days in April and May, with gusts exceeding 25 mph on 10% of days. Data for CT show that in July, >15% of days have sustained winds over 25 mph [8]. Over an entire boating season, wind-generated waves contribute more than **95% of total wave energy** impacting shorelines.

3. Wave Period and Erosion Potential

Wave erosion is not solely a function of wave height—wave period (the time between successive waves) is equally or more important. Cox and McFarlane (2019) emphasize: *“The dynamic stability of a shoreline impacted upon by a natural wind wave climate is more likely to be maintained provided the incident wave energy is dominated by height and not period.”*[9]

In other words, waves with long periods (>2.4 seconds) are more damaging than taller waves of with the same total energy. Longer-period waves penetrate deeper into the water column because the wavelength increases with the square of the period. A 2.7-second wave has nearly twice the wavelength of a 2.0-second wave and therefore influences a greater depth of the water column. Wake-surf waves measured in field studies typically have periods of 1.8–2.2 seconds, well within the range of moderate wind-generated waves on inland lakes. Nanson et al. (1994) identified erosion thresholds for protected cohesive shorelines at approximately 0.25 m (9.8 inches) with a 2.7-second period. Field measurements indicate that wake-surf waves at 200 feet in shallow-water settings generally fall below this height and have shorter periods, implying lower deep-water penetration and lower energy per crest length than the Nanson threshold condition. [10] Wave period is the dominant control on erosion because it determines how deeply orbital motion penetrates, how energy is packaged within the wave group, and how shoreline thresholds are exceeded—whereas height alone does not capture these dynamics

(III) Sediment Resuspension and Water Quality: The Definitive Evidence

1. Evaluating the Research

The Gold Standard: Daeger et al. (2022)

The most rigorous experimental study of sediment resuspension was conducted by Daeger, Bosch, and Johnson (2022) at Lake Wawasee, Indiana's largest natural lake. This study directly measured nutrients, suspended solids, and turbidity before and after multiple boat types passed over instrumented sites at various depths[11].

Key findings:

- **All boat types** (wake boats, fishing boats, pontoons, PWCs) can resuspend sediment in **3-5 feet** of water
- **No boat type** caused measurable sediment resuspension at depths of **10-15 feet or greater**
- Sediment disturbance is **depth-dependent, not boat-type dependent**

The study measured total phosphorus, total nitrogen, ammonia, silica, and suspended solids. At depths of 10-15 feet, none of these parameters showed statistically significant increases after boat passage, regardless of boat type or operating mode[12].

Supporting Evidence: Water Velocity Measurements

Raymond and Galvez-Cloutier (2015) measured water velocities at various depths using acoustic Doppler instruments as wake boats passed overhead. They found:

- At 10 feet depth: Maximum velocities of **10 cm/s** (0.22 mph)
- This velocity is **below the threshold** (12 cm/s) required to mobilize fine silt particles
- A diver observing the lakebed during testing reported: *"He did not notice any material suspended as a result of the passage of the boats."* [13]

Beachler and Hill (2003) measured propeller wash velocities from a 150-horsepower boat at various speeds and depths:

- Maximum velocities occurred at **6-8 mph**, well below wake surfing speeds
- Water velocity **dropped sharply** between 4 feet and 5 feet depth
- At 11 mph (typical wake surfing speed), velocities at 5 feet were **16 cm/s**—only marginally above the silt threshold, and rapidly decreasing with depth[14]

The Physics: Why Deep Water Doesn't Disturb the Lake Bed

Two mechanisms could theoretically disturb lake beds: propeller wash and wave-induced orbital motion.

Propeller wash: The turbulent jet created by the propeller dissipates rapidly due to entrainment, viscous drag, and geometric spreading. Field measurements in recreational lake studies show that at water depths of 10–14 feet or greater, bottom velocities decline to below 10 cm/s. These velocities are below commonly cited incipient motion thresholds for non-cohesive sediments. [13] Consistent with this hydrodynamic behavior, Draeger's field measurements of suspended sediment, nitrogen (N), and phosphorus (P) concentrations at depths of 10–15 feet detected no measurable increase attributable to propeller wash, indicating no observable sediment resuspension or nutrient release under those conditions.[11]

Wave orbital motion: Surface waves create circular orbital motion that decreases exponentially with depth. A wave is considered in “deep water” (minimal bottom interaction) when water depth exceeds half the wavelength ($d > \lambda/2$).

For wake boat waves with periods of 1.8–2.2 seconds, wavelengths are approximately **16–25 feet**. Therefore, these waves are in deep water at depths greater than **8–12 feet**, meaning the bulk of wave energy does not interact with the lakebed[15].

Wind Waves Dominate Sediment Resuspension

Anthony and Downing (2003) conducted one of the most comprehensive field studies of sediment dynamics in Clear Lake, Iowa—a shallow Midwestern lake with mean depth of 2.9 meters (9.5 feet). Their findings:

- Wind speeds exceeding **22 mph** mobilize nearly **46% of the lake bottom**
- Wind speeds exceeding **45 mph** mobilize almost **98% of the lake bed**
- Boat traffic showed a **weak correlation** with turbidity ($r = 0.23$), strongly confounded by wind
- The authors concluded: “*Sediment resuspension by wind-induced waves...contributes to daily, often substantial, nutrient fluxes*” far exceeding any boat-related effects[16]

2. Claims of Wake Boats Degrading Water Quality Are Unsupported

If wake boats were significantly degrading lake water quality through sediment resuspension and phosphorus release, we would expect to see measurable declines in water clarity and increases in

phosphorus concentrations over the past 15 years as wake boats became popular. **This has not occurred.**

In Wisconsin, long-term water quality monitoring data from lakes with substantial wake boat use show:

- **Stable or improving** water quality metrics
- **Increased species diversity** (Simpson Diversity Index of 0.85 maintained from 2018 to 2023)
- **Increased maximum plant depth** (27 feet in 2023 vs. 22 feet in 2018)
- **Improved Floristic Quality Index** (29.8 in 2023 vs. 29.0 in 2018)[17]

I understand data from Connecticut lakes, including [Lake Waramaug](#), show similarly improved metrics. These data directly contradict claims that wake boats are degrading lake ecosystems.

3. Critique of the SAFL Phase 2 Study (2025)

The University of Minnesota St. Anthony Falls Laboratory (SAFL) Phase 2 study has been widely cited to justify restrictive regulations. However, critical analysis reveals significant methodological limitations:

Limitations and Concerns

1. **Subjective thresholds:** The study uses a **10 dB echo-intensity threshold** for detecting suspended sediment—a value chosen subjectively without validation against actual sediment-concentration measurements [18].
2. **Instrument limitations:** Acoustic Doppler Current Profiler (ADCP) measurements detect echoes only **1.5 feet above the instrument**, not at the sediment-water interface where resuspension initiates[19].
3. **Confounding factors:** Fay (2025) documented that testing occurred after **1.94 inches of rain** and **steady 15 mph winds with gusts to 24 mph** over the three days preceding tests. These natural disturbances would affect turbidity throughout the lake, making attribution to boats “inconclusive and unreliable” [20].
4. **Precautionary recommendations exceed data:** The study’s recommendation for 20-foot minimum depth represents a conservative, precautionary endpoint based on near-zero velocities, not a demonstrated threshold for ecologically meaningful disturbance. They did not find an impact beyond 14 feet and demonstrated that non-wake boats also impact sediment. [21].

Synthesis Across Multiple Studies

When SAFL is evaluated alongside independent field studies (Daeger et al., Beachler and Hill, Anthony and Downing, Raymond and Galvez-Cloutier), a consistent picture emerges:

- Sediment disturbance is dominated by **shallow depth** and **low-speed semi-displacement regimes**
- Clear impacts occur below **8-10 feet** for all boat types in semi-displacement mode
- Effects **rapidly diminish** by 10-15 feet
- **No reproducible evidence** of sustained resuspension beyond 15 feet

The broader literature supports **15 feet as the upper bound** indicated by field evidence for wake-surfing impacts, whereas deeper thresholds (20+ feet) reflect **precautionary and excessive policy choices** rather than consensus based on measured data.

(IV) Aquatic Invasive Species: Wake Boats Are Not the Primary Risk

Water Retention Facts

All Watercraft Retain Residual Water

The concern about wake boats spreading aquatic invasive species (AIS) stems from their internal ballast systems, which can be difficult to inspect and may retain residual water. However, this concern applies to **all watercraft**, not uniquely to wake boats.

Residual water retention by watercraft type:

- Wake boats (modern rigid tanks): ~0.1 gallons (~2 quarts)
- Stern-drive boats (inboard/outboard): ~4 quarts—**twice as much as wake boats**[22]
- Fishing boats (live wells, bilges): Variable, often several gallons
- All boats (bilge pumps, engine cooling systems, heaters, trailer frames): Additional residual water

Doll's (2018) University of Minnesota study found that **stern-drive boats contained the highest concentrations of zebra mussel veligers**, not wake boats. While high engine temperatures typically kill veligers in stern drives during operation, cold water remains in the system when the boat is trailered, creating an AIS transfer risk when relaunched [23].

Relative Risk Assessment

A quantitative risk assessment considering both **likelihood** (frequency of use) and **severity** (residual water volume, cross-lake travel) reveals:

- **Wake boats:** 3-5% of total watercraft; typically used on a single home lake; low residual water
- **Fishing boats:** 60-70% of total watercraft; frequently travel between multiple lakes (30% visit multiple lakes in a single day[24]); significant residual water
- **Runabouts/pontoons:** 20-30% of total watercraft; moderate cross-lake travel; moderate residual water
-

Risk Priority Number (RPN) = Frequency × Severity:

- Fishing boats: **RPN = 11-17 times higher** than wake boats
- Runabouts: **RPN = 4-5 times higher** than wake boats

For reference, the Wisconsin DNR has testified that AIS risk **is not unique to wake boats**, as all watercraft can trap water that cannot be inspected. AIS was a significant problem long before wake boats existed, and the primary risk factor is the **frequency of cross-lake travel**, which makes fishing boats the highest-risk category [25].

(V) Local Control Has Created Chaos and Liability

Allow me to share my perspective from Wisconsin. Without consistent statewide standards, a patchwork of local ordinances will create:

1. **Confusion and inequity:** Boaters cannot know or comply with varying local rules
2. **Economic harm:** Lakes with restrictive ordinances may experience diminishing property values by eliminating buyers interested in the fastest growing water sport.
3. **Enforcement impossibility:** Law enforcement agencies refuse to enforce inconsistent local rules
4. **Litigation risk:** Seven WI towns have been served with a Notice of Claim seeking damages for loss of use of wake boats as intended[31]

(VI) Important Factors

1. Enforceability: Depth Restrictions Are Not Viable

Both the Wisconsin DNR and county sheriffs have explicitly stated that **depth-based restrictions cannot be enforced:**

1. **Lakebed contours change over time** due to sedimentation and erosion
2. **DNR depth maps are outdated** and specifically labeled as not admissible in court proceedings
3. **Onboard depth finders are not accurate enough** (± 1 -2 feet) for citation purposes
4. **No method exists** to measure a boat's precise location and depth remotely with legal certainty [27]

The Vilas County and Oneida County Sheriffs have stated they will not enforce local wake boat ordinances unless towns contract specifically for enforcement—and even then, it is not a priority. Sheriff Harman stated, *"I really don't want anything to do with it."*[28]

Enacting unenforceable ordinances creates municipal liability without providing environmental benefit.

2. State Precedents: 46 of 48 States Use 200 Feet or Less

Extreme setback proposals (500-700 feet, 20-30-foot depth) are **outliers nationally**. No state has adopted a 700-foot restriction. Of the 48 continental U.S. states:

- **46 states:** 200, 100 foot setback or no specific statewide restrictions
- **Vermont:** 500 feet (most restrictive, with "home lake rule" and decontamination requirements)
- **Maine:** 300 feet[29]

Southern states where wake surfing occurs **year-round** on environmentally sensitive reservoirs have adopted **200-foot standards**:

- **Tennessee:** 200 feet, banned on lakes <50 acres
- **Alabama:** 200 feet, banned on lakes <50 acres
- **Georgia:** 200 feet
- **South Carolina:** 200 feet, banned on lakes <50 acres
- **Virginia:** 200 feet (advisory)[30]

These states have **more wake boat activity** and **more vulnerable ecosystems** (shallow reservoirs with fluctuating water levels) than Wisconsin, yet they have found 200 feet to be adequate based on scientific evidence.

(VII) Recommendations

Wake surfing provides significant recreational and accessibility benefits, particularly for older adults and individuals with physical limitations who cannot participate in traditional water skiing. It is a safe, inclusive activity that expands access to Connecticut's waters.

Based on comprehensive scientific analysis, I recommend that Connecticut adopt a **consistent, statewide regulation** for wake surfing:

1. **Minimum 200-foot setback from shore** for all wake-producing boats operating in semi-displacement mode (including tubing, teaching water skiing, cruising)
2. **AIS decontamination requirements** for all boats traveling between water bodies
3. **Consistent enforcement** based on measurable distance from shore (enforceable via visual estimation, GPS, or radar)

These standards align with:

- **Scientific evidence** from peer-reviewed studies
- **National precedents** (46 states use 200 feet or no restriction)
- **Enforcement practicality** (distance from shore is measurable and enforceable)
- **Equal treatment** (applies the same standard to all boats in the same operating regime)

Author Biography

My name is William Banholzer, and I am a Professor of Practice at the University of Wisconsin-Madison, a position I have held since 2014. My extensive background in engineering, including fluid mechanics, equips me with the technical expertise to critically evaluate the scientific literature on wake boats and their environmental impacts. I am one of only 250 chemical engineers elected to the US National Academy of Engineering. I am also a Certified Six Sigma Master Black Belt in statistical analysis. I have published research in a peer-reviewed journal on the movement of particles in a flow field, which involves the same physics as shore erosion and sediment resuspension.

Throughout my career, I have specialized in interpreting experimental data, including statistical analysis. This interdisciplinary expertise allows me to assess both the quantitative data and the methodological rigor of studies examining wake boat impacts. My work involves evaluating research quality, understanding experimental design, statistical analysis, and the application of hydrodynamic principles—all critical components when analyzing claims about wake boat effects on inland lakes.

I have thoroughly reviewed the peer-reviewed literature, regulatory studies, and technical reports on wake boats, including work by MacFarlane (2025, 2018), the University of Minnesota St. Anthony Falls Laboratory (SAFL), Daeger et al. (2022), Goudey and Girod (2015), and numerous other sources. My analysis focuses on scientific rigor, appropriate benchmarking, statistical validity, and adherence to fundamental hydrodynamic principles.

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To: Connecticut Department of Energy & Environmental Protection

From: Professor William Banholzer

Date: March 28, 2026

Subject: Appendix of Study Critiques and Author’s White Paper

Dear Authors,

Included in this appendix are methodological and scientific critiques of two of the studies cited most frequently by wake boat opponents. I have also included a white paper I wrote on this topic for further reference. I am available to answer any questions you may have about this material.

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Critical Issues with the Maars et al. MN St. Anthony Falls Wake Study

By Professor William Banholzer

Boat wakes have been a subject of scientific inquiry since the 1960s, initially focusing on wave energy to estimate vessel resistance. Numerous studies have examined the wake characteristics and impact of wake boats. The 2022 study by Maars et al. at the MN St. Anthony Falls Lab is frequently cited by groups opposing wake boats despite the fact his study was not novel, and was never published in a scientific journal, nor did it follow peer review protocols. This study suffers from severe flaws in data collection and analysis. It fails to adhere to standard scientific conventions. This work does not rise to the level required for policy decisions. Below are the key issues that undermine its credibility:

1. Peer Review Protocol Deficient

The peer review process involves experts evaluating a paper and requesting necessary revisions to ensure all criticisms are addressed, with an editor overseeing the exchange. The references for this study were Gregor McFarlane and Greg Cox; both recognized authorities with over 30 years of experience in the field of boat wakes. They were directly contacted for their candid opinions on the peer review process, methodology, and publication worthiness of this study. Their expertise provided an authoritative lens on the study’s validity. Notably, one reviewer directly contradicted the statements by Marr and colleagues. He indicated that the study did not undergo a rigorous or complete re-review following revisions and that substantial technical criticisms were not adequately addressed. These concerns included fundamental flaws in experimental methodology and misunderstandings of the underlying science. Despite these issues being clearly identified during review, the study proceeded without meaningful correction, leading the reviewer to characterize the work as lacking scientific rigor.

2. Data Collection: Massive Variability Lacking Precision

The studies used two different types of sensors, creating discrepancies in the data. Their acoustical Doppler current sensors consistently measured higher wave heights than the pressure

sensors, yet they used both data sets in their analysis of wake boats, introducing systematic error. There was no cross-calibration of the different sensors nor explanation for the discrepancy. Both of these sensors are inferior to capacitance sensors other researchers have used. State-of-the-art researchers use above-surface radar sensors, which are simpler and more robust.

The wave height data collected in this study is riddled with inconsistencies, rendering it impossible to analyze confidently. For instance, wave heights measured 200 feet from the MXZ boat varied wildly, with reported values of 9 inches and 18 inches. A 100 % discrepancy is unacceptable. The standard for reliable data is no more than a 20% relative range (range/average) for identical operating conditions. Similar prior studies exhibited 10%. The significant scatter in the data effectively renders it useless for any meaningful analysis. Even using just their mast sensors they have >50% variation in data.

The authors attempted to obscure this lack of precision by applying regression to fit a curve. Averaging data with such a high degree of scatter yields poor R-squared correlation coefficients, indicating they are not explaining the data variability with their equation. The R-square for the wake boat studied was 0.7-0.5. Anything less than 0.8 is considered unacceptable. Averaging data to reduce random noise is acceptable, but averaging to reduce systemic errors is not. The exponential coefficients of their fit are not consistent with prior work.

3. Failure to Compare Data with Prior Studies

In any rigorous scientific study, it is essential to compare new data and analysis with existing research, identifying and explaining any discrepancies. The authors of the St. Anthony Falls study failed to do so, disregarding significant relevant prior work. For example, they include a reference to Ruprecht J, et. al., which uses similar watercraft, but they never compare their energy calculations to that work. Goudey and Girod conducted an extensive measurement analysis of wakeboard waves in 2015, followed by a similar study by McFarlane in 2018. Both studies offer superior data quality and analysis. However, the St. Anthony Falls study ignores these efforts, claiming they were not journal articles which their report is neither. This is particularly disturbing since their analysis is inconsistent with the prior art. In addition, they attempt to calculate total wave power while other experts such as Greg Cox and McFarlane have shown that max wave energy and period are the most useful parameters to consider in erosion. (Cox and McFarlane 2019)

4. Flawed Analysis & Energy Calculations

Poor-quality data undermine the study's attempts to characterize waves. Further degrading the usefulness of this paper is the analysis approach. The best practice for this type of work is to accurately measure wave height and period and then calculate the max wave energy (Cox and

McFarlane 2019). Due to the dispersive nature of boat wakes in this regime, the initial large wave observed at the boat breaks up into multiple lower-amplitude waves. The further from the sailing line, the more waves and the smaller the height. Using the max wave height is the standard practice for this type of work. The St. Anthony Falls authors did not adopt this approach but rather attempted to calculate the total cumulative energy of all waves in a boat wake wave packet. This approach is fraught with challenges even when using good data. The authors need to determine the duration of the packet. They assume the endpoint of the packet is when the next wave contributes less than 1% to the total wave energy. Given this was an experimental study, it inherently had noise from wind drive waves, reflected waves, and other boat waves. This can be seen in Figure 12. Their data for the unique boat wake waves are confounded by the superposition of other waves from wind, reflection, and other boats. In the example they present, they summed no less than 16 individual waves with no definitive way to know if these are actual boat wakes or waves from interference.

The authors also adopt a nonstandard approach, converting their wave periods to wavelengths. Even when wave characteristics appear similar to previous studies, the energy calculations presented in this study are 3 to 8 times higher than previously reported results. For instance, the study calculates a wave energy of 16,000 J/m at the boat for the Malibu MXZ; Goudey and Girod, who used a similar approach, calculated a total wave energy of 1800 J/m. To demonstrate how absurd this value is, The Australian Maritime College measured the wake of a 118-foot, 116-ton catamaran at 14,000, 3 boat lengths away from the craft.

The St. Anthony Falls study reports wildly inconsistent energy values. At 100 feet from the boat, they report both 9,000 J/m and 4,800 J/m—raising the question, which should be believed? Goudey and Girod's calculations for similar conditions yielded 1,200 J/m in deep water.

These analysis errors are particularly troubling since wave energy calculations are critical for comparing different watercraft and forming the basis for recommended setbacks from shorelines.

5. Inappropriate Benchmark.

As noted above, any analysis based on this data is inherently questionable due to its extreme variability. The authors rely on curve fits with unacceptably low correlation coefficients to propose benchmarks for setback distances. Two examples are provided in Table 5.

Example 1 uses non-wakesurf boats operating on plane at 200 feet from shore (Condition 2 – planning) as a benchmark and compares this to wake surfing operations. Based on this comparison, the authors claim that wake boats would require a 500–700 foot setback to match the wave characteristics of a runabout or ski boat. However, this comparison is invalid, as it contrasts high-speed planning operations with the low-speed displacement operation typical of wake surfing.

Example 2 compares wake boats to non-wakesurf boats in transition to plane at 200 feet (Condition 1a – largest wave) and concludes that wake boats would need to operate at distances exceeding 425 feet to match the wave characteristic. This comparison is also flawed. Under current Wisconsin law, any boat may operate at low speed 100 feet from shore. Since this has been accepted for decades, the appropriate benchmark is the wave characteristics of non-wakesurf boats operating at slow speed 100 feet from shore.

Applying the same methodology used in this study, and referencing wave height specifically, the data would instead support a setback of approximately 150–250 feet for wake boats—far less than what the authors propose, while this boat was fitted with a wave shaping device which could skew the data, MacFarlane (2025) show a Ski Nautique operating at 10 mph will produce a 17” wave at 100 feet and 15” at 200 feet.

Figure 50 from St Anthony Falls Study using 100 feet reference.

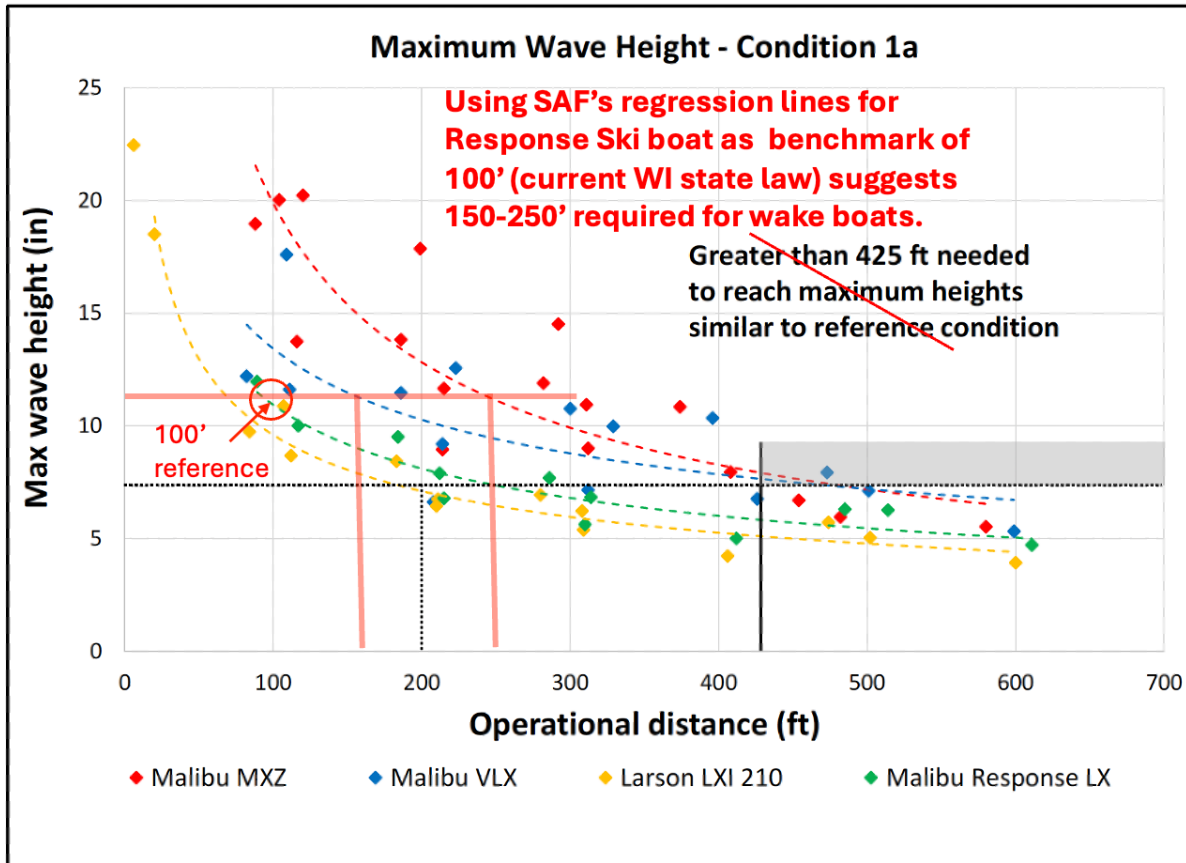


Figure 48. Illustration of a potential method for estimating the operational distance needed to reduce the maximum wave height of the wakesurf boat to reference levels associated with Condition 1a (largest wave) of the non-wakesurf boats (black horizontal dashed line).

The authors also use wave energy and wave power to calculate setbacks. But as mentioned above, the wave energy calculations are dubious. The power calculation uses the square of wave height, which exacerbates the extreme variability in the data, making the conclusions unreliable.

5. Comparison to AMC data

Much higher quality data was obtained by MacFarlane (2018 and 2025), a researcher with over 30 years of experience studying boat wakes. His measurements showed half the variability compared to the St. Anthony Falls study (50% vs. 100%), despite evaluating a broader range of operating speeds (10–12 mph). MacFarlane measured wakes from four different wake boats, as well as from a ski boat and a fishing boat at various operating speeds. At a distance of 200 feet, the maximum wave height from a wake boat was 13 inches, compared to 17.5 inches reported by the St. Anthony Falls study. The St. Anthony Falls study consistently reports wave heights more than 30% higher than those measured by MacFarlane

MacFarlane also evaluated a Ski Nautique ski boat, reporting a 17-inch wave at 100 feet (10 mph), whereas St. Anthony Falls reported only 11 inches for a ski boat. That is a 50% difference for similar boats operated under similar conditions.

Table 1 Comparison of MacFarlane and St Anthony Falls data.

	Max Wave Height 2	Range	Average
SAF Wake @200'	17.5"	6.7-17.5	11.6
MacFarlane Wake @200'	13.4	8-13.4	10.5
SAF Ski @100'	11		
MacFarland Ski @100'	14		

Overall, the St. Anthony Falls study shows twice the variability in wake boat data and reports maximum wave heights more than 30% higher than those measured by MacFarlane. At the same time, it reports wave heights for ski boats at 100 feet that are 50% lower than MacFarlane's findings. Together, these significant discrepancies result in the St. Anthony Falls study substantially overestimating the setback distances required for wake boats.

Conclusion

The St. Anthony Falls wake study was severely criticized by its reviewers, and they were not given an opportunity to view a revised manuscript to ensure their comments were addressed. It is fundamentally flawed, both in its data collection and analysis. The combination of unacceptable scatter in the experimental data and erroneous calculations makes it impossible to draw reliable conclusions from this work. Given the availability of superior research from more experienced scientists, the conclusions drawn from this study should not be considered credible or used in policymaking.

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Critique of Terra Vigilis Lake Waramaug Nov 2024 study

By Professor William Banzholzer

Executive Summary: Critique of Terra Vigilis Lake Waramaug November 2024 Study

The Terra Vigilis Lake Waramaug report is self-published with no editorial review, lacks scientific rigor, and fails to provide credible evidence to support its conclusions about wake boat wakes and prop wash. The study employs non-standard methods, such as drone video analysis, to measure wave height but provides no explanation of how or if this was validated against established measurement techniques like capacitance or pressure sensors. The report provides no information on the variation in the experimental measurements. This methodological shortfall undermines the reliability of the wave height data presented, which is inconsistent not only with more comprehensive studies but also with the author's own prior work.

The study's findings on wave dynamics are flawed. Their reference case is a 26-year-old runabout-ski boat operating to minimize wave height. A proper comparison is to other heavy boats operating at slow speeds (e.g. tubing). The reported wave heights are significantly higher than those documented in previous, more precise studies, leading to misleading conclusions about required setbacks. The comparisons to ski boats, which generate the smallest wakes instead of heavier boats, skew the findings and fail to reflect the variation in real-world conditions.

Regarding propeller downwash, the study again relies on subjective video imagery without quantification calibration or baseline measurements. This study's claims are contradicted by established quantitative research, such as Daeger et al. (2022), which demonstrated minimal lakebed disturbance beyond 15 feet for wake boats, Raymond et al. (2015), which utilized sonar technology in an attempt to quantify water velocity measurements at depth.

The study does not adequately reference or reconcile its results with prior, more reliable research, further discrediting its findings. Its use of speculative models and unvalidated claims demonstrates a lack of expertise in fluid mechanics and raises serious questions about its credibility. As such, **the Terra Vigilis study fails to meet the standards of scientific inquiry and should not be considered a valid source of information on wake boat impacts.**

Critique

This report, published without editorial review, uses nonstandard techniques to measure wave characteristics and prop wash from a wake boat and ski boat. It neglects to acknowledge more comprehensive studies and does not clarify why its results are inconsistent with even the author's

own prior research. The report employs nontraditional experimental techniques without calibration against other measurements, making any quantitative use of its information questionable. The authors do not explain why their results should be accepted over other, more quantitative experiments that contradict their conclusions. They present an incomplete comparison, relying solely on a ski boat on plane to support their recommendations. This case represents an extreme example of a ski boat designed to produce as small a wake as possible. A more relevant example would include data from a heavy deck boat or fishing boat operating at the slower speeds typical of other recreational activities, such as tubing.

Wave Height and Wave Dynamics.

ISSUES:

- THERE WAS NO THIRD PARTY REVIEW OR VERIFICATION; THIS WAS A SELF-PUBLISHED STUDY.
- NON-STANDARD TECHNIQUES- LACK CALIBRATION
- INCONSISTENT WITH MORE COMPREHENSIVE STUDIES.
- USE INCOMPLETE COMPARISON RELYING ON SKI BOATS AT PLANE

This report employs drones and video to measure wave dynamics. In contrast, other studies have relied on direct measurements using capacitance or pressure sensors or stationery above-water radar. Using drones and video analysis to assess wave heights presents several challenges compared to the more established method of capacitance probes. Video analysis entails complex algorithms that can introduce errors if they are not calibrated or applied correctly. It is susceptible to inaccuracies and can be influenced by distortions such as camera angle and lens curvature. Since the authors did not provide information on how they calibrated the wave heights or discuss how their system compared to previous studies, it remains unclear how quantitatively their results can be interpreted. Conversely, capacitance probes utilized by most studies offer a more direct and reliable method of measuring wave heights by physically interacting with the water surface, resulting in highly dependable data. Additionally, capacitance probes are less susceptible to interpretive errors inherent in video-based techniques, establishing them as the gold standard for accurate and consistent wave measurements.

The wave heights discussed in this study do not demonstrate the same reduction with distance as seen in all previous research, including their own referenced works. For example, at 300 feet, a wave height of 12 inches is reported in this study. The average wave height from six other studies utilizing more precise techniques is **8.4 inches**, suggesting that their results are **50% higher than those from earlier research**. This study reports a wave height of 8" at 500 feet, whereas, in their own prior work, they reported 8 inches (2022)- waves were observed at 200 feet with no explanation given for the 2X difference. They cited references include Ray, who reported 8 inches

at 300 feet, and Marr et al., whose findings indicate wave heights ranging from 7 to 11 inches 300 feet from the boat. The authors never acknowledge or address these inconsistencies, even with their own research. Why should the reader accept this data? Within the report itself there are also inconsistencies. In Figure 9, the authors say the wave heights are from 100, 300, and 500 feet, but the wave traces report 150, 300, and 500 feet. There is a note saying they did the shallow test at 150 feet, but the deep test also says 150 feet.

Finally, within this flawed data set, the rate of wave decay is much less than in all other reports, bringing further doubt to the validity of these results. Six other studies of wave decay vs. distance have an average of 13.7" inches 100 feet from a wake boat and 8.4" 300 feet away, a 36% decrease, with some studies showing a >50% reduction. Much of the data in previous studies was done in deep water where there is no interaction with the lakebed. This study claims there is only a 2", or 17% change (14' to 12") from 100 to 300 feet. This study fails to calculate wave energy and uses a simplistic approach to assign energy as a percentage to the results. This is critical since their wave heights and energy estimate are the basis of their suggestion of a 500-foot setback. Since their data is inconsistent with all other data, their setback proposal lacks sufficient proof to be taken seriously.

The authors rely on an extreme example of a ski boat on a plane to establish acceptable wave height. This approach is deceptive because it compares a boat designed to produce the smallest wave possible at high speed with a wakeboat at low speed. A Ski Nautique ski boat operating at 10 mph will produce a wave 17 inches tall at 100 feet, which is as large as a wakeboat at 200 feet. This is a more appropriate benchmark. Similarly, a fishing boat at 10 mph (a speed recommended for tubing with small children) generates a 12.5 " wave at 100 feet. A 2024 Crownline 22SS, has a dry weight of 4,370 pounds. When fully loaded with a full tank of fuel and four adults exceeds 5,000 pounds. When operated at a slow speed, this or any other boat will produce a large wake. These are currently acceptable and are appropriate benchmarks.

In summary, this report used uncalibrated measurement techniques, which generated data inconsistent with all prior measurements, including the author's own study. This, combined with an inappropriate reference case , invalidates any of their conclusions on wave dynamics.

Propeller Down Wash

ISSUES:

- Utilizes nonquantitative video imagery without calibration.
- Claims are inconsistent with previous quantitative studies
- The claim of increased phosphorus lacks appropriate controls on total variability.

The study only compared wakeboat results to a ski boat at a much higher speed, 22-24 mph, at plane, which is inappropriate. A more appropriate comparison would be a heavy deck boat

operating at tubing speeds (10-15 mph). As can readily be seen from the pictures below, all watercraft can present a downward thrust. It is inappropriate to single out wake boats. Furthermore, as explained below 15-foot wakeboats do not disturb the lake sediment.



The studies employ video cameras to detect water movement, which is an inadequate method compared to other research, such as that by Raymond and Galvez-Cloutier, who measured actual

water velocities. The authors fail to provide any explanation or images illustrating the natural variations or the water velocity needed to move the streamers. Previous studies have shown that water velocities exceeding 12 cm/sec are necessary to disrupt fine silt and over 25 cm/sec for sand. A free-hanging streamer responds to any changes in water, but without quantifying actual water velocity or having data on variations in natural currents, it's impossible to determine whether fluctuations in streamers are relevant to sediment resuspension. Without quantification and a baseline, evaluating the effects claimed by the authors is not feasible. The report mentions an effect reaching 26 feet based on a single image of sediment on a brick, yet it offers no explanation for how long it took for the sediment to develop. There was no control to verify that this effect was solely due to the wake boat passage. There is no time-lapse or baseline to track changes. The authors also recognize that the propellers on their drone displaced sediment. Superior techniques directly measure actual water quality indicators, such as suspended solids or water turbidity. These methodologies yield quantitative data that contradict the findings presented in this study.

The most conclusive study on lakebed disturbance was conducted by Daeger et al. in 2022. They measured suspended solids, phosphorus, SiO_2 , and nitrates, finding that after 10 to 15 feet, a ballast wake boat does not disturb the lakebed, even for fine sediment. In shallow waters (3 to 5 feet), all types of boats can resuspend sediment. Raymond and Galvez, in 2015, used acoustic probes to measure water speed down to 10cm/s at 15 feet and speculated that this would be sufficient to disturb lake beds, but their diver “did not notice any material suspended as a result of boat passage.” In addition, using multiparametric probes, they tested for turbidity, conductivity, and dissolved oxygen. They concluded that there is no significant variation in the results at a depth of 15 feet. The conclusion is that the study's required water velocity to resuspend sand didn't even reach a depth of 15 feet. Both of these studies are more quantitative than Terra Vigilis, yet the authors never reference or discuss why their data is inconsistent.

The authors reference a study by Ray (2020) and a figure suggesting that boats create an impact below 30 feet; however, this figure is a hypothetical calculation, unverified by actual data and not peer-reviewed. The author lacks credentials in fluid mechanics, and the study relies on models that diverge from more rigorous finite element analyses. It calculates water velocity and asserts an impact, despite empirical studies demonstrating otherwise. Lacking experimental evidence, the study also contradicts previously published research

The authors claim that phosphorus levels doubled after the passage of a wake boat at 20 feet, yet they provide no quantitative data and fail to discuss normal variation, making it impossible to assess whether this result is statistically significant. Their only remark was that there was no increase following the ski boat, but readers have no data for comparison. They also cautioned that “this finding is preliminary in nature, was not the primary focus of the project, and warrants additional study.” If it is preliminary and lacks a baseline, why report it? To qualify their data on

phosphorus, they reference the results of their previous study. In that study, they tested throughout the summer, with phosphorus levels varying by up to 48%. They also conducted a one-day phosphorus test on a Tuesday in August, disregarding specific boat traffic, and collected samples from seven sites at four-hour intervals throughout the day (a total of four times). The results showed a 23-47% variation in phosphorus levels at individual sites and up to 200% across all sites in a single day. This data from the authors' earlier study raises questions about whether any conclusions can be drawn from this singular data point.

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Wake Boat Regulation: A Science-Based Assessment

Why Setbacks Beyond 200 Feet and Depths Beyond 15 Feet Constitute Regulatory Overreach

Professor William Banholzer, University of Wisconsin–Madison

Executive Summary

This white paper presents a comprehensive, science-based evaluation of the environmental impacts of recreational wake boats, with a focus on shoreline erosion, wave energy, sediment resuspension, aquatic invasive species (AIS), safety, and enforceability. The analysis integrates peer-reviewed literature, original statistical analysis, and fundamental hydrodynamic principles to assess whether wake boats pose a unique or disproportionate threat to inland lakes when operated responsibly.

Key Findings

#	Finding	Summary
1	No Unique Erosion Risk	More than 40 years of research show that shoreline erosion is driven primarily by natural forces—wind-generated waves, ice action, water-level fluctuations, runoff, and shoreline development. Boat wakes, except for large commercial vessels in confined waterways, are a minor contributor. Wake energy decays rapidly, with more than 70% dissipated within 200 feet.
2	Comparable at 200 Feet	Wave-height data from six independent studies, analyzed with Welch's t-tests, show that wake boats surfing at 200 feet produce wave heights statistically indistinguishable from fishing/ski boats at 100 feet, wake boats without ballast at higher speeds at 100 feet, and other large recreational boats. Cross-validation with all six studies directly addresses any claim of cherry-picking.

#	Finding	Summary
3	Wave Energy Confirms Height	Wave energy (proportional to H^2T^2) at 200 feet is statistically equivalent to fishing/ski boat energy at 100 feet ($p = 0.82$). By 300 feet, wake surf energy equals or falls below that of wakeboard boats. Trendline extrapolations suggesting 400–500 ft setbacks overstate the raw data.
4	Flawed 500–700 ft Benchmarks	Studies citing large setbacks compare wake boats at ~11 mph to ski boats at high planing speeds (24–30 mph)—fundamentally different hydrodynamic regimes. When compared using appropriate benchmarks and volumetric Froude numbers, wake boats are indistinguishable from other heavy recreational boats already permitted near shore.
5	Wind Dominates Shoreline Energy	Even the highest estimates place boat-wake contributions at no more than 10% of annual wave energy—only in narrow basins with heavy traffic and minimal fetch. On typical Wisconsin lakes the contribution is far lower. Wind energy is not merely larger—it is orders of magnitude more persistent.
6	No Lake Bed Disturbance >15 ft	The most rigorous experimental study (Daeger et al., 2022) shows no reproducible sediment disturbance beyond 10–15 ft. No peer-reviewed study documents repeatable resuspension beyond 14–15 ft. A 20-ft threshold is precautionary policy, not an evidence-based finding.
7	Scouring Claims Unsupported	Frequently cited reports rely on speculative modeling, uncalibrated video, or indirect proxies. These studies lack replication, calibration, statistical analysis, or peer review—and their conclusions conflict with higher-quality experimental work.
8	AIS Risk Not Unique to Wake Boats	Fishing boats, runabouts, and pontoons pose a substantially higher aggregate AIS risk. Wake boats are typically used on a single home lake. Fishing boats carry an 11-fold higher risk; sterndrives trap 85% more residual water than ballast tanks. Singling out wake boats is arbitrary and unsupported by data.
9	Depth Rules Are Unenforceable	Lakebed contours shift, depth maps carry accuracy disclaimers, and onboard sounders lack foot-level precision—making depth-based rules difficult to enforce and vulnerable to legal challenge. Distance-based rules achieve the same protective outcome without these vulnerabilities.

Conclusion: The scientific evidence does not support claims that wake boats, when operated at least 200 feet from shore and in water deeper than 10–15 feet, pose a unique or disproportionate threat to shorelines, lake beds, or water quality. Policies calling for 500–700-foot setbacks are built on a flawed benchmark: comparing wake boats at semi-displacement speeds to ski boats at full planing speed—a scientifically invalid comparison. When boats are compared correctly, the case for extraordinary restrictions collapses. A consistent, statewide, science-based regulation—such as a 200-foot setback applicable to all wake-producing boats—offers a balanced approach that protects natural resources while preserving fair and reasonable recreational access.

Benefits of Wake Boating

Wake surfing significantly broadens access to water sports in Wisconsin, particularly for seniors and individuals with physical limitations. It provides a valuable alternative for those unable to participate in activities like water skiing. Unlike traditional water skiing or wakeboarding, wake surfing does not require towing, making it well-suited for individuals with shoulder or upper body injuries. Operating at slower speeds and without bindings minimizes the risk of injury while improving balance and flexibility. This inclusivity not only enhances access to water sports but also serves as a unique attraction for visitors to Wisconsin.

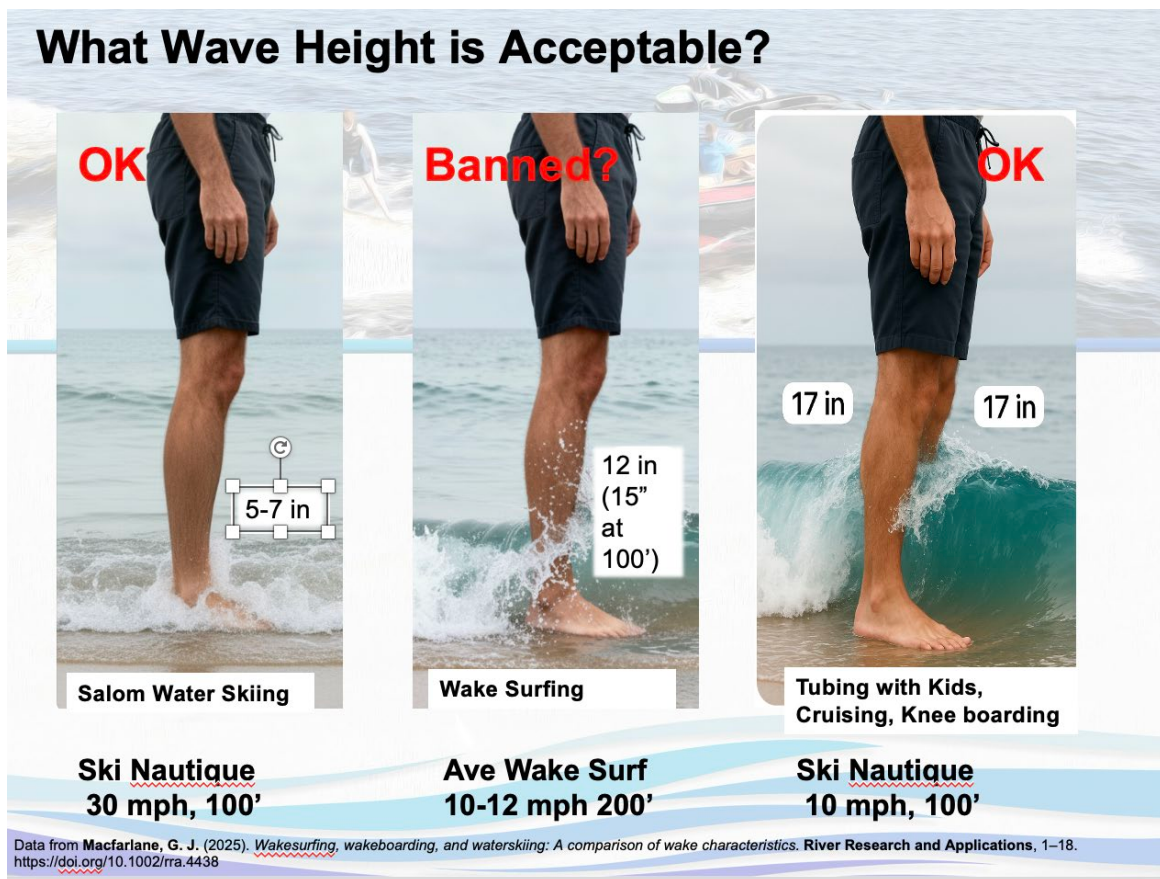


Figure 3: Visual comparison of wave heights at shore from three common activities. Slalom water skiing at 30 mph at 100 ft produces 5–7 inch waves (widely accepted). Wake surfing at 10–12 mph at 200 ft produces ~12-inch waves (proposed for banning). Tubing/cruising with a Ski Nautique at 10 mph at 100 ft produces 17-inch waves (widely accepted). Data from MacFarlane (2025).

Extreme Restrictions Would Be Unprecedented

Efforts to ban or severely restrict wake surfing—such as requiring a 700-foot setback, limiting the activity to lakes larger than 1,500 acres, or mandating a minimum depth of 30 feet—would constitute the most extreme regulations in the country. No state has adopted a 700-foot restriction. Only Vermont has enacted a 500-foot setback, and Maine stipulates a 300-foot distance. Of the 48 continental U.S. states, 46 either have no specific statewide regulations or adhere to the widely accepted 200-foot standard, particularly in southern states where wake surfing is common (see Appendix, Table 1).

States like Tennessee, Alabama, Georgia, South Carolina, and Virginia—where wake surfing takes place year-round on large, environmentally sensitive reservoir systems—have embraced balanced, statewide rules. Even other Midwestern states with ecosystems similar to Wisconsin, such as Minnesota, Michigan, and Indiana, have not adopted the type of onerous restrictions proposed by certain interests.

No Scientific Basis for Restrictions Beyond 200 Feet

No peer-reviewed study documents unique or disproportionate harm from wake boats operated at 200 feet and in water deeper than 10–15 feet. Proposals for larger setbacks rely on studies that compare incompatible hydrodynamic regimes or extrapolate far beyond what the underlying data supports. Due to misleading claims, some towns in Wisconsin have enacted local ordinances banning wake surfing while neighboring towns with similar lake conditions have not. This inconsistency creates confusion, unfairly targets water sports enthusiasts, and conveys a message that Wisconsin is unwelcoming to recreational boating.

A statewide law establishing clear, science-based regulations is essential to resolve these inconsistencies. Expanding the current 100-foot no-wake zone to 200 feet is a balanced and effective measure that will protect natural resources while ensuring fair and responsible regulation of recreational water sports.

Claims of Shore Erosion Are Unfounded

Shoreline erosion has been extensively studied for over 40 years. Research consistently shows that the primary drivers are natural and environmental factors—ice movement, runoff, fluctuating lake levels, natural wave action, and shoreline development—rather than boat wakes, except for large vessels like ferries operating on narrow rivers (WDNR, MDNR).

Water naturally seeks equilibrium, and the energy from a boat's wake dissipates quickly through gravity and wave physics. As the wake travels outward, it breaks into smaller, less energetic waves. Research shows that after 100 feet, maximum wave heights are similar regardless of whether a boat uses ballast (MacFarlane 2018, Marr 2022). Shore erosion assessments focus on wave energy, which depends on wave height and period, with wave period being the more significant factor (Cox and MacFarlane 2019). Over 70% of a wake's energy dissipates within 200 feet (Goudey and Girod 2015). At that distance, measured wave heights are comparable to those produced by moderate winds—the same natural conditions shorelines are already adapted to withstand.

At slow speeds, all boats operate near their maximum displacement. MacFarlane (2025) found that a Ski Nautique 200 traveling at 10 mph produces a 17-inch wave 100 feet from shore, reducing to 14.5 inches at 200 feet. Similarly, a 4,000-pound fishing boat operating at tubing speeds generates a 12.5-inch wave. These findings confirm that any common heavy boat traveling at slow speeds produces significant waves. Notably, at 200 feet, wake boat waves diminish to levels comparable to those of other heavy boats at 100 feet.

Shorelines Are Adapted to Their Natural Environments

Maintaining a distance of 200 feet from shore ensures that wake energy decays sufficiently so that waves do not differ significantly from natural conditions. At 200 feet, the minimum wave height measured across six studies was 6.7 inches and the maximum was 17 inches (Marr et al. 2022). The average wave height at 200 feet from all six studies was 11 inches—the size of a small iPad—with a 2-second period. This is similar to waves produced by a 20 mph wind over a mile (~8 inches) and smaller than wind waves on large lakes, which can exceed 12 inches with periods over 2.4 seconds.

Cox and MacFarlane (2019) conclude: "Wave wake studies are inevitably a study of orders of magnitude and not small percentages." While smaller fetches result in lower energy waves, wake boat wakes are not orders of magnitude different from those generated by other boats 100 feet from shore—the current state regulation.

While the wave period for wake boats and wind-driven waves are similar, the total energy a shoreline receives from wind is dramatically higher. On Wisconsin lakes, winds exceeding 20 mph occur on

more than 20% of spring days—each such event generating wave action that lasts for hours, not the 45–60 seconds of a single boat pass. To match the energy of a 20 mph wind, a wake boat would need to pass 200 feet from shore every minute—an unrealistic scenario. Long-term studies have shown that boat wakes contribute less than 5% of the total wave energy impacting shores (Knudson 1990).

Nanson et al. (1994) determined erosion conditions on the Gordon River in Tasmania, establishing thresholds of 9.8-inch wave height and a 2.7-second period for protected shorelines. Wake surfing boats at 200 feet produce wakes below these thresholds (1.8–2 seconds). Notably, the Nanson thresholds were derived from protected Tasmanian riverbanks—among the most erosion-sensitive environments studied. If wake boats fall below even those conservative standards, the safety margin on typical Wisconsin lakeshores is wider still.

Large recreational boats—deck boats, cruisers, pontoons pulling tubers—operate in the same semi-displacement regime and produce comparable wakes. Singling out wake boats while exempting these activities is not a science-based distinction.

Wave Height Analysis: AMC Data and Multi-Study Confirmation

The AMC Dataset: Most Internally Consistent

The Austrian Maritime College (AMC) has conducted over 30 years of rigorous research on boat wakes, producing the most comprehensive and internally consistent dataset. Their studies compare the wakes of four wake boats, a fishing boat, and a ski boat, with notably low variability in results. Because every measurement was taken on the same lake, with the same instruments, under controlled conditions, the AMC data eliminates confounders that plague cross-study comparisons—different hull forms, ballast loads, bathymetry, and sensor placement. It is the cleanest scientific comparison available, producing within-group standard deviations of approximately 1.5 inches.

Three Valid Benchmarks for Comparison

The following benchmarks are especially relevant because family-friendly activities like tubing or cruising at 8–12 mph within 100 feet of shore are widely accepted. National organizations and manufacturers often recommend tubing speeds of 8–12 mph for small children.

- Wake boats operating without ballast or wave-enhancing devices at 10–12 mph
- Wake boats traveling at higher speeds (20–24 mph)

- Fishing or ski boats operating slowly (10–12 mph), such as when tubing, teaching someone to water ski, or kneeboarding

Figure 1 presents the AMC data for these four comparison groups. The results are compelling: wave heights in all scenarios are comparable, providing no scientific basis for singling out wake boats as a unique threat.

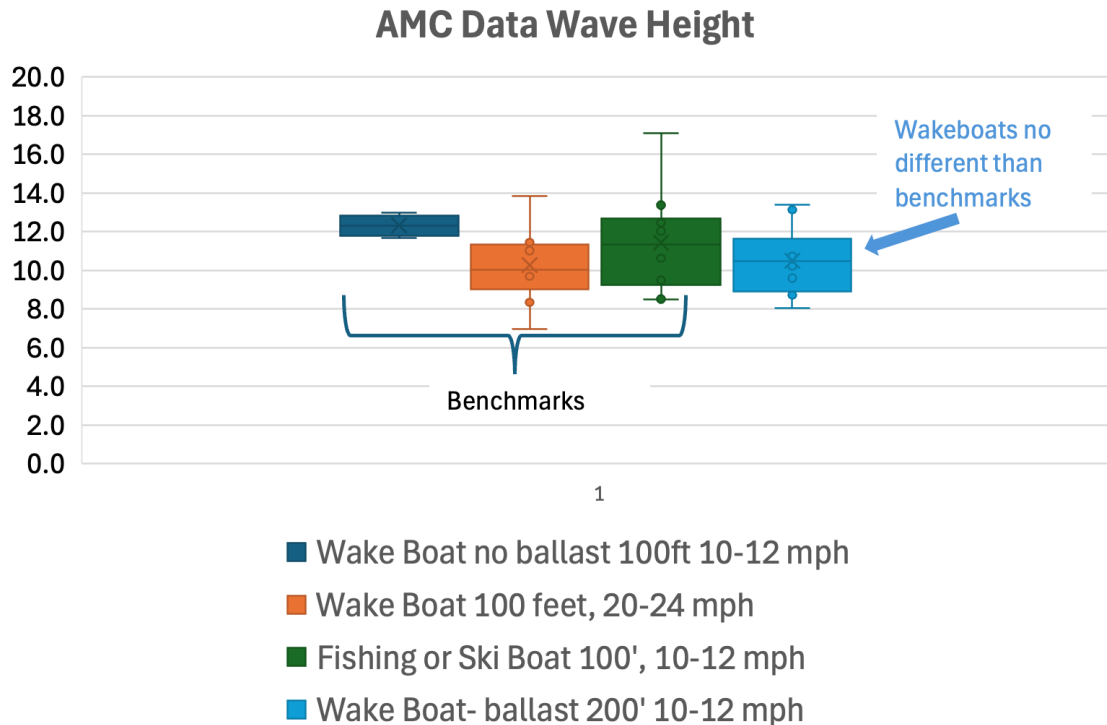


Figure 1: Box Plot of AMC wave height data (inches) for (1) a wake boat with no ballast at 100 feet, 10–12 mph; (2) a wake boat at 20–24 mph at 100 feet; (3) a fishing or ski boat at 10–12 mph at 100 feet; and (4) a wake boat surfing with ballast at 200 feet. The AMC dataset is the single most internally consistent source, with within-group standard deviations of approximately 1.5 inches. Wake boats at 200 feet are no different than the benchmark activities.

Pairwise Welch's t-Tests — AMC Data Only

Comparison	p-Value	Interpretation
Wake Boat 10–12 mph (100 ft, no ballast) vs. Wake Boats 200 ft (with ballast)	0.012	Significantly different — unballasted boat at 100 ft is LARGER
Wake Boat 20–24 mph (100 ft) vs. Wake Boats 200 ft (with ballast)	0.817	Not significant — similar wave heights

Comparison	p-Value	Interpretation
Fishing/Ski Boats (100 ft) vs. Wake Boats 200 ft (with ballast)	0.359	Not significant — no meaningful difference

Interpretation: Wake boats surfing with ballast 200 feet from shore produce waves no different from fishing/ski boats at 10–12 mph, are equivalent to a wake boat without ballast at 100 feet going 20–24 mph, and are statistically smaller than a wake boat without ballast at 100 feet going 10–12 mph. The data leave no scientific basis for singling out wake boats as uniquely threatening—a conclusion that holds whether one uses the most rigorous dataset alone or pools every available study.

Multi-Study Confirmation: Same Conclusion, Wider Confidence Intervals

Some may claim that focusing on the AMC data constitutes cherry-picking. That criticism misunderstands the purpose of using the AMC dataset as a primary analysis tool. AMC's wave height data for wake boats operating at 200 feet has a standard deviation of just 1.5 inches, remarkably tight and reliable.

To address the cherry-picking concern directly, the analysis was repeated using data pooled from all six available studies. Pooling all six studies increases standard deviations to approximately 3.2 inches. This wider spread actually makes the finding more conservative, not less. Even with that added uncertainty, wake boats at 200 feet remain statistically indistinguishable from other accepted boating activities. The conclusion is robust across both the tightest and most inclusive analyses.

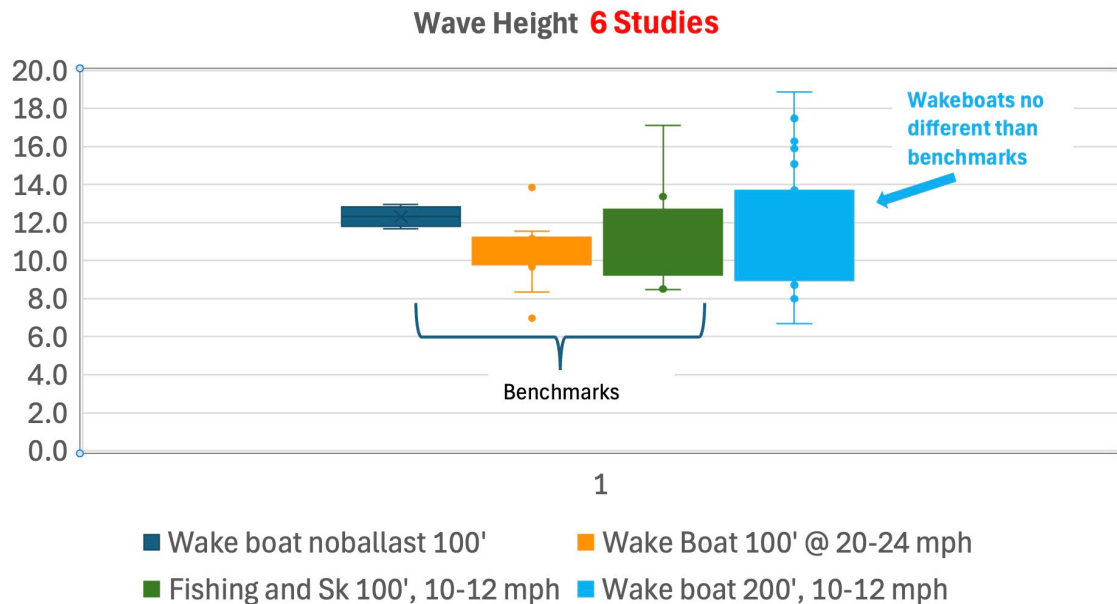


Figure 2: Box Plot of wave height data from all 6 studies (inches) for (1) wake boat no ballast at 100 feet, 10–12 mph; (2) wake boat at 20–24 mph at 100 feet; (3) fishing or ski boat at 10 mph at 100 feet; and (4) wake boat surfing at 200 feet. Variability is higher than Figure 1 due to different boats and conditions across studies, but the conclusion is unchanged: wake boats at 200 feet are no different than the benchmarks.

Pairwise Welch's t-Tests — All 6 Studies

Comparison	p-Value	Interpretation
Wake Boat 10–12 mph (100 ft, no ballast) vs. Wake Boats 200 ft (with ballast)	0.545	Not significant
Wake Boat 20–24 mph (100 ft, no ballast) vs. Wake Boats 200 ft (with ballast)	0.051	Borderline — wakes are similar
Fishing/Ski Boats (100 ft) vs. Wake Boats 200 ft (with ballast)	0.645	Not significant — no difference

These results confirm what the AMC-only analysis showed: wake surfing at 200 feet does not pose a unique or disproportionate threat to shorelines compared to other common boating practices. The increased variability from pooling six heterogeneous studies widens confidence intervals but cannot overcome the absence of a statistically meaningful difference.

MacFarlane 2025 Full-Scale Trial Data: Wake Boat at 200 ft Matches Fishing/Ski Boat at 100 ft

The MacFarlane (2025) full-scale trials dataset—the most comprehensive available—directly demonstrates the equivalence. Figure 3 plots wave height vs. lateral distance for all boat types and speeds. The annotated convergence point shows that wake surfing at 200 feet produces the same average wave height as a ski or fishing boat at 10–12 mph at 100 feet (both approximately 11 inches).

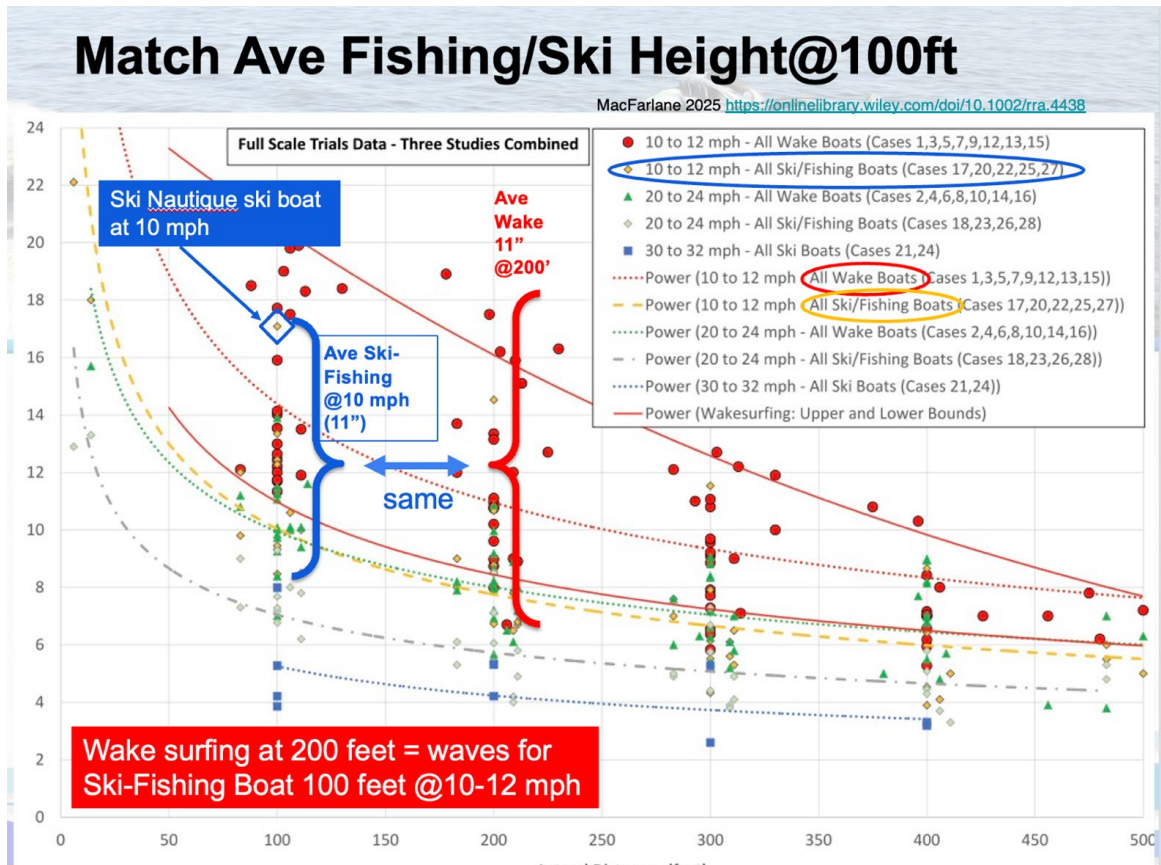


Figure 3: MacFarlane (2025) full-scale trial data showing wave height (inches) vs. lateral distance (feet) for all boat types and speeds. The red bracket at 200 feet for wake boats and the blue bracket at 100 feet for ski/fishing boats at 10–12 mph converge at the same average wave height (~11 inches). This directly refutes the claim that wake boats require greater setbacks than other recreational watercraft. Source: MacFarlane, G.J. (2025), *River Research and Applications*.

Wave Energy Analysis: Height Findings Confirmed

Critics have argued that wave height alone is insufficient to evaluate shoreline impact and that wave energy—which incorporates both height and period—should be used. This is a fair theoretical point, and the analysis has been extended to address it directly.

Wave energy per unit crest length scales as $E \propto H^2 T^2$ (proportional to the square of wave height times the square of wave period). Using period and height data from MacFarlane (2025) and AMC measurements:

- At 200 feet, wake surf boat wave energy is statistically equivalent to fishing/ski boat energy at 100 feet ($p = 0.82$)
- By 300 feet, wake surf wave energy equals or falls below that of wake boat energy at 20–24 mph at 100 feet ($p = 0.79$)
- At 200 feet, wake surf energy is statistically higher than wakeboarding energy at 100 feet ($p = 0.029$), but this difference disappears by 300 feet

Key Point: Critics who argue wave height is insufficient have actually strengthened the case: when energy—the more comprehensive metric—is analyzed, wake surf boats at 200 feet are statistically equivalent to fishing and ski boats at 100 feet ($p = 0.82$). The energy metric, introduced as a challenge to the analysis, ends up confirming it. Trendline extrapolations suggesting 400–500 foot setbacks overstate what the underlying data actually supports (MacFarlane letter, 2025).

It is accurate that wake surf boats generate waves with longer periods than some other recreational vessels at the same height. Longer-period waves carry more energy per wave and decay more slowly with distance. This physical reality is acknowledged. However, at 200 feet—the distance already required under standard setback rules—the measured energy equivalence holds. The theoretical concern about period does not translate into a measurable difference at the relevant regulatory distance.

Flawed Benchmarks and the Froude Number

Groups advocating for 500–700 foot setbacks for wake boats often compare them to boats operating at high speeds (24–30 mph)—conditions that minimize wave production. This

comparison is flawed: it ignores other common boating activities and mixes fundamentally different hydrodynamic regimes.

A boat at 10–12 mph is in displacement or semi-displacement mode (volumetric Froude number $Fr_V \approx 0.3\text{--}0.5$). A boat at 20–24 mph is transitioning toward planing. A boat at more than 30 mph is fully planing. Comparing a wake surf boat at 10–12 mph to a ski boat at 30+ mph is scientifically invalid—it mixes fundamentally different flow regimes with qualitatively different wake structures, energy distributions, and wave characteristics.

The proper way to compare different boats is by matching their volumetric Froude number (Fr_V), which normalizes speed to the cube root of the vessel's displacement volume: $Fr_V = V / \sqrt[3]{(g \cdot \nabla^{1/3})}$. This ensures that comparisons account for differences in hull size, weight, and displacement—all of which strongly affect how a boat interacts with the water.

To date, no study has directly compared boats within the same operating regime when recommending setback distances. Yet tubing—one of the most popular water sports—typically occurs at 8–12 mph, placing most boats squarely in the semi-displacement regime. Regulations that prohibit semi-displacement operation while explicitly exempting tubing are internally inconsistent. Boats towing tubers at 10–12 mph operate in the same hydrodynamic regime as wake boats and produce comparable waves—yet face no restriction. This is not science-based policy; it is arbitrary distinction dressed in scientific language.

Data Quality and Methodological Rigor

Research on boat wakes is not uniformly reliable. Alongside a few peer-reviewed studies, there is a large amount of self-published reports, advocacy documents, and technically flawed analyses. In the public debate, these varied sources are often given equal weight—blurring the line between solid evidence and speculation. Further complicating matters, even the best peer-reviewed papers often fail to complete comprehensive statistical analysis. Simply comparing averages without variance analysis is insufficient, yet most current studies rely only on mean values.

Table 2: Comparison of Methodological Rigor in Boat Wake Studies

Reference	# Wake Boats	# Non-Wake Boats	Repeat Meas.	Calibration	Varied Speed	Semi-Disp. Non-Ballast	Statistical Rigor	Match Froude #	Overall
MacFarlane 2025 ¹	8	4	±	±	✓ (AMC only)	✓–	X	X	Notable
MacFarlane AMC 2018	5	2	✓	✓	✓–	✓–	X	X	Notable
Goudey & Girod 2015	1	0	✓	✓	X	X	X	X	Moderate
Ruprecht 2015 ¹	3	0	✓	✓	✓	X	X	X	Low
Marr 2022 (SAFL) ²	2	2	±	±	X	X	X	X	Low
WEC 2021	1	0	±	±	X	X	X	X	Low
Terra Vigilis 2024	2	2	X	X	X	X	X	X	Very Low
Terra Vigilis 2022	1	2	X	X	X	X	X	X	Very Low
Terra Vigilis 2021	1	–	X	X	X	X	X	X	Very Low
Ray (Payette Lake)	Uncontrolled	0	X	X	–	X	X	X	Very Low

Notes: ✓ = Yes, ✓– = matched speed but not Froude number, X = No, ± = Partial/Inconsistent or not reported. ¹ completed a rigorous peer review. ² Sent to reviewers but did not follow the standard process requiring all reviewer comments be addressed before publication.

EXPLANATION OF TABLE COLUMNS

Repeat Measurements refer to repetitive measurements performed under the same conditions to evaluate measurement variation.

Sensor Calibration refers to calibrating the sensor to assess its accuracy.

Varied Speed refers to study measurements made at several speeds within the same regime (e.g., 10 & 12 mph, which are both in semi-displacement mode).

Semi Displacement Mode-non-ballasted boat data refer to whether the report measured any non-wake boats in semi-displacement mode. As noted above, the proper comparison is between boats at equivalent Froude numbers.

Statistical Rigor refers to whether authors use variance to determine whether differences in means are statistically significant.

Benchmark Uses Similar Froude # refers to whether the authors used a benchmark that compared wake boats to non-wake boats when both were operated at the same Froude number. To date, no study has directly compared boats within the same operating regime when recommending setback distances. Instead, some authors justify their benchmarks by referencing activities such as cruising or water skiing. Yet, tubing—one of the most popular water sports—typically occurs at speeds of 8–12 mph (with a maximum of 15 mph), placing most boats in the semi-displacement regime ($Fr = 0.5–0.7$). Despite this, no paper has explicitly recognized tubing as a benchmark case.

The lack of statistical rigor creates inconsistency in policy discussions. Some proposed ordinances prohibit operation in the transition or semi-displacement regime yet explicitly exempt tubing or teaching children to ski—activities that generate similar wake characteristics. Such selective exemptions are scientifically indefensible: boats towing tubers at 10–12 mph operate in the same semi-displacement regime as wake boats, producing comparable waves, yet face no restriction.

Water Turbidity and Sediment Resuspension

The Indiana Academy of Science published the most conclusive experimental study measuring lake bed disturbance in 2022 (Daeger et al., 2022). This work examined sediment resuspension from several different boat types, including a ballasted wake boat, at multiple sites with varying substrates including fine silt. The results showed that all boat types can disturb lake beds in 3 to 5 feet of water; however, once wake boats operate at depths of 10 to 15 feet, lake sediment does not resuspend.

Sediment Resuspension

2022. Proceedings of the Indiana Academy of Science 130(2):112-122

IMPACTS ON NUTRIENT AND SEDIMENT RESUSPENSION BY VARIOUS WATERCRAFT ACROSS MULTIPLE SUBSTRATES, DEPTHS, AND OPERATING SPEEDS IN INDIANA'S LARGEST NATURAL LAKE²

Adrienne Daeger, Nathan S. Bosch^{1,2} and Ryan Johnson: Lilly Center for Lakes & Streams, Grace College, 1 Lancer Way, Winona Lake, IN 46590 USA

ABSTRACT. While a key component of lake recreation, watercraft are capable of impairing water quality, including via resuspension of nutrients and sediments from the lake bottom. As water quality influences the ecological, economic, and recreational capacities of a lake, this study set out to investigate nutrient/sediment resuspension by watercraft on Indiana's largest natural lake, Lake Wawasee. Four experiments were performed to test the following variables in substrate resuspension by watercraft: (1) lake bottom substrate type, (2) water depth, (3) watercraft type, and (4) operating speed. Nutrient/suspended sediment samples were collected before and after the watercraft passed through the sampling area and their averages were compared using t-tests. **Nutrient resuspension was observed after the wake boat in 5 ft of water, and no resuspension by any watercraft in 10–15 ft of water.** Resuspension was observed after plowing (near plane) in 5 ft of water or idling in 3 ft by multiple watercraft. The results suggest that recreationalists use high impact watercraft and operational styles in water ≥ 10 ft in Lake Wawasee. Differences in macrophyte assemblage (including non-native invasive starry stonewort, *Nitellopsis obtusa*) likely had a large impact on the resuspension potential of one testing area. Boating restrictions based on speed and water depth can support the recreation that draws people to lakes while protecting the lake from some damage by that recreation. Lake managers should also consider variation in bottom substrate across their lake to identify areas particularly sensitive to boating and nutrient resuspension.

Keywords: boat recreation, sediment and nutrient resuspension, lake bottom substrate, water quality

Nutrient resuspension was observed after the wake boat in 5 ft of water, and no resuspension by any watercraft in 10–15 ft of water

Ballasted Wake Boat
10 mph

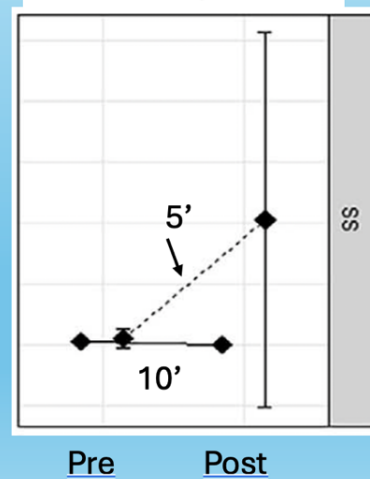


Figure 4: Daeger et al. (2022), Proceedings of the Indiana Academy of Science. The highlighted abstract conclusion states: "Nutrient resuspension was observed after the wake boat in 5 ft of water, and no resuspension by any watercraft in 10–15 ft of water." The diagram (right) shows the measurement layout. This is the most methodologically rigorous study of its kind on sediment disturbance.

Depth Thresholds: What the Data Actually Shows

Sediment disturbance from boat wakes does not stop abruptly at a single depth. The available evidence describes a continuum: effects are strongest in very shallow water, diminish continuously with increasing depth, and become undetectable beyond a threshold the data consistently places in the 10–15 foot range.

Depth	Finding	Source
≤5 ft	Measurable resuspension, all craft types	Daeger et al. 2022
5–10 ft	Detectable resuspension, wake boats elevated	Daeger 2022, SAFL 2025
10–12 ft	Weak, inconsistent signals; some studies show no effect	Daeger 2022, Raymond & Galvez 2015
12–14 ft	Near or below detection limit in most studies	SAFL 2025, Beachler & Hill 2003
>14–15 ft	No reproducible evidence of disturbance in any published study	All studies reviewed

Critical Point: No peer-reviewed study documents repeatable, statistically significant sediment resuspension beyond 14–15 feet. The SAFL (2025) report recommends a 20-foot threshold as a precautionary measure—not supported by direct field evidence of disturbance at 16–20 feet in any published study. It is a policy judgment, not an empirical finding. Regulations requiring operations in water deeper than 15 feet go beyond what the science actually supports.

Experimental Evidence from Velocity Measurements

Raymond and Galvez-Cloutier measured water velocities of approximately 10 cm/s (0.2 mph) near 10 feet—too slow to move sand but near the threshold to mobilize small silt—yet the diver present did not observe any material suspended as a result of boat passage. Beachler and Hill reported water velocity at depths of 4, 5, and 6 feet from a 150-horsepower boat at various speeds. Maximum

water velocities occurred at boat speeds of 6–8 mph (significantly below wake surfing speeds of ~11 mph), and velocity dropped sharply between 4 and 5 feet.

The water velocity required to displace small silt particles (50 microns) is 12 cm/sec (0.28 mph), while moving larger sand particles (0.3 mm) requires 25 cm/sec (0.56 mph). At 11 mph, Beachler and Hill recorded water velocities of approximately 16 cm/sec at a depth of 5 feet. Beyond 10 feet, viscous dissipation confirms that propeller wash does not disturb sediment.

Wave Orbital Motion and the Deep-Water Definition

There are potentially two sources of water disturbance that could impact lake beds: propeller wash and the waves from wind or boat wakes. Water waves transfer energy rather than mass, with water particles moving in nearly circular orbits beneath the wave. These orbital motions decay rapidly with depth. When orbital velocity near the lakebed exceeds the threshold for sediment motion, particles can be resuspended.

A wave is considered in deep water when the water depth d is greater than half the wavelength: $d > \lambda/2$. MacFarlane (2025) measured periods for wake boats of 1.8–2.2 seconds. Typical wake boat waves have a wavelength of approximately 20 feet. The wave is practically in deep water at $20/2 = 10$ feet. Beyond 10 feet, the bulk of wave energy does not interact with the lakebed. This physical principle explains why the 10–15 foot depth threshold has scientific grounding rather than being an arbitrary regulatory choice.

Wind Is the Dominant Driver of Sediment Resuspension

Anthony and Downing (2003) conducted one of the most detailed field investigations of sediment resuspension in a shallow Midwestern lake and found that wind-driven waves—not recreational boating—are the dominant driver. Moderate wind events exceeding approximately 22 mph can mobilize nearly half of the lake bottom, while stronger winds exceeding approximately 45 mph can disturb almost the entire bed. The correlation between boat traffic and turbidity was weak ($r = 0.23$), meaning boat activity played a minor role compared to natural wind mixing.

Why Anthony and Downing Applies to All Lakes

A common objection is that Clear Lake, Iowa, has up to 4 miles of fetch—supposedly making the findings inapplicable to smaller Wisconsin lakes. This argument is scientifically incomplete:

- The Physical Mechanism Is Universal. Wave orbital motion and sediment transport thresholds apply to any water body—not just Clear Lake. The study quantifies and confirms what the physics predicts.
- Baseline Context Is the Key Contribution. Natural wind-driven forcing routinely delivers far more sediment disturbance energy than recreational boat traffic. In Wisconsin, winds exceeding 25 mph occur several times per year.

- **Smaller Lakes Have Proportionally More Shallow Area.** On a lake 0.3 miles across, ~33% of the lake lies within a 150-foot disturbance-prone shallow zone; on a 1.25-mile lake, only ~9% does. Reduced fetch decreases wave height but proportionally more shallow area increases susceptibility.
- **Prop Wash vs. Continuous Wind.** Boat propeller wash is localized, brief, and depth-limited. Wind-driven orbital motion acts simultaneously across the entire shallow portion of a lake for hours during wind events.

Assessment of SAFL Phase 2 Study (Riesgraf et al., 2025)

The SAFL Phase 2 study presents detailed acoustic measurements of wake-boat hydrodynamics. It documents clear sediment disruption below approximately 10 feet and a weaker, highly variable signal extending to approximately 14 feet, with propeller-wash velocities decaying to near zero by approximately 15 feet.

These findings are broadly consistent with the literature. However, the recommendation of 20 feet reflects a conservative, precautionary endpoint (near-zero velocities) rather than a demonstrated threshold for ecologically meaningful lakebed disturbance. The evidence presents a continuum tapering from clear disturbance below 10 feet to marginal signals at 12–14 feet to nothing reproducible beyond 15 feet. The 20-foot recommendation goes beyond what the measured data robustly supports.

The SAFL study's ADCP echogram analysis relies on a subjectively chosen 10 dB threshold and aggressive percentile filtering, detects sediment only approximately 1.5 feet off the bed, and reports plume height rather than sediment concentration or mass flux. Fay's 2025 technical review concluded that turbidity spikes observed during wake-boat tests were actually caused by preceding wind and rain events—nearly 2 inches of precipitation and sustained winds of 15 mph with gusts to 24 mph in the three days prior—making the data inconclusive.

The presence of aquatic vegetation significantly enhances the attenuation of propeller wash. All studies referenced above were conducted in vegetation-free water—meaning their estimates of disturbance depth are likely conservative upper bounds for vegetated conditions.

Claims that wake boats are degrading water quality are not supported by Wisconsin's own long-term water quality data. Over a decade after wake boats became common on Wisconsin lakes, the state's water quality remains excellent, with no measurable decline in clarity or rise in turbidity.

Spread of Aquatic Invasive Species

The spread of invasive species is a real concern—but empirical risk assessments consistently show that fishing boats, pontoons, and runabouts, which move between lakes far more frequently, pose a substantially greater aggregate AIS risk than wake boats, which are typically used on a single home lake. Targeting wake boats for AIS regulation while leaving higher-risk craft unrestricted inverts the logic of evidence-based policy.

Modern wake boats are designed to expel nearly all of their ballast water, retaining only about 0.1%—approximately 2 quarts. By comparison, sterndrive boats (inboard/outboards) can retain up to twice as much water, and their systems are also difficult to inspect (Doll, 2018). Unlike fishing boats, which often travel between multiple lakes, wake boats are primarily used on their owner's home lake, significantly reducing AIS risk.

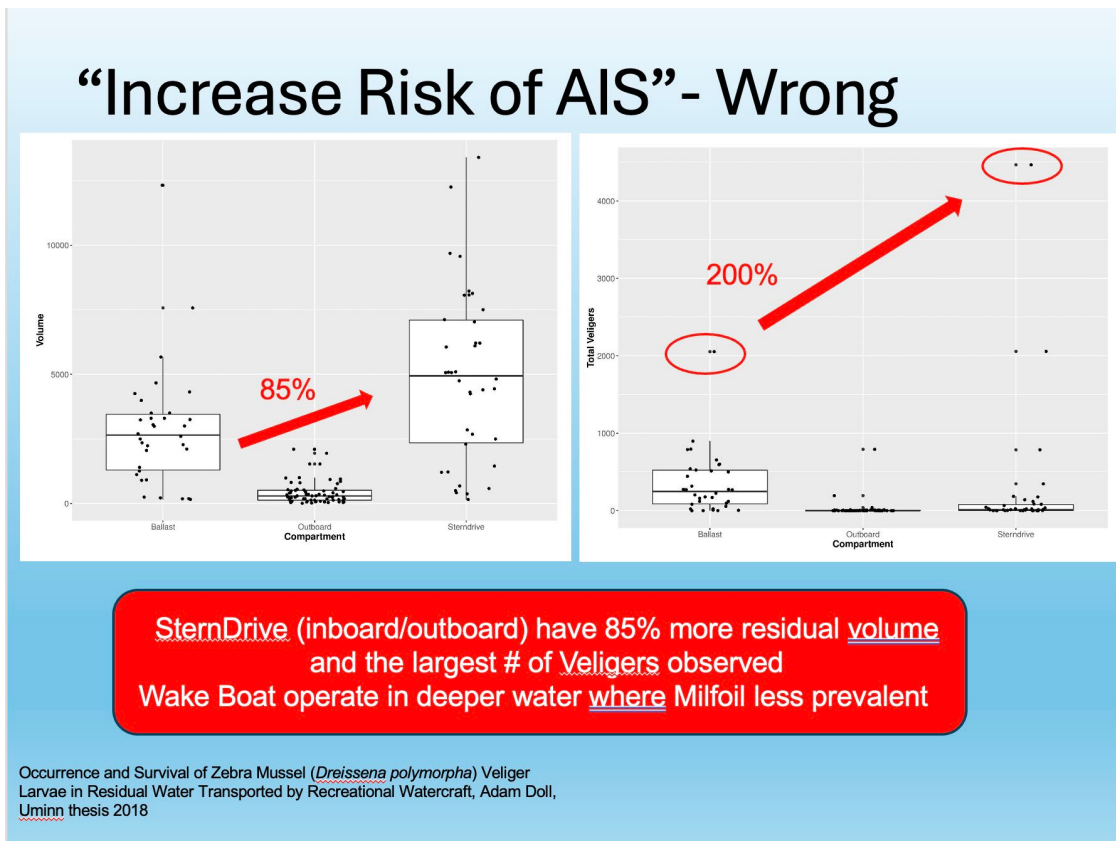


Figure 5: Doll (2018), University of Minnesota. Left panel: Residual water volume by boat type (ballast, outboard, sterndrive). Sterndrives retain 85% more residual water than ballast tanks. Right panel: Total zebra mussel veligers found, by

compartment type. Sterndrives contained the highest concentrations—not wake boats. Wake boats also operate in deeper water where milfoil is less prevalent. Source: Doll, A. (2018), M.S. Thesis, University of Minnesota.

Doll's 2018 study analyzed over 11,000 boats on a typical lake, showing that wake boats account for just 3–5% of watercraft, while fishing boats, runabouts, and pontoons exceed 90%. Using risk value analysis, fishing boats emerge with an 11-fold higher risk than wake boats, while runabouts are 4.5 times higher. When adjusted for the fact that fishing boats often move between lakes on the same day, fishing boats pose 17 times more risk than wake boats. A Minnesota study found that sterndrives—not wake boats—had the highest concentrations of zebra mussels. Milfoil, often found in shallow water, is not commonly ingested by wake boats, which typically operate in deeper areas.

Safety

The U.S. Coast Guard has approved wake boats as safe. Wake boats have operated safely in Wisconsin for over 10 years with no reports of accidents or citations attributable to wake boat operation, in contrast to many reports involving fishing boats, personal watercraft, and pontoon boats.

Wake from any boat can cause damage. All wake boats are certified by the NMMA, a third-party organization ensuring boats meet safety standards, including visibility. Wisconsin already has laws holding boaters responsible for any damage caused by their wake. The bow-up operating attitude that some cite as a safety risk affects all boats operating at low speeds; there is no record of safety incidents specific to wake boats. Inattentive driving is an issue with any boat.

Enforceability

The Vilas County and Oneida County Sheriffs have explicitly stated they will not enforce local ordinances unless the town has a specific contract with them to do so. The DNR will also not enforce an ordinance, leaving the Town responsible. If a Town enacts an ordinance it does not enforce, it creates a liability in the event of an incident.

Depth-based regulations face serious, practical enforcement barriers. Lakebed contours shift over time. The DNR states that its depth maps cannot be used in court proceedings. Onboard depth

sounders lack the precision required for legal enforcement. Without court-admissible depth data, violations cannot be prosecuted. Distance-based rules—measurable, observable, and already enforced in analogous contexts—achieve the same protective purpose without these vulnerabilities. Choosing depth over distance as the regulatory trigger is not a more protective choice; it is a less enforceable one.

Protecting Minority Rights in the Regulation of Public Waters

Local input can play a constructive role in managing lakes. But local control only works when decisions are grounded in objective evidence and policymakers are willing to follow the facts wherever they lead. When regulations restrict lawful access to public waters—resources held in trust for all citizens—those decisions must be based on demonstrable scientific evidence, not on political pressure or the preferences of the loudest voices in the room.

In the debate over wake surfing, activists often cite surveys or claim that "dozens" or even "over 100 organizations oppose wake surfing." Such statements may give the appearance of consensus, but they are not a valid reason to restrict lawful activity on public waters. Public policy should not be based on counting organizations or collecting petitions. As James Madison warned in Federalist No. 10, one of the main dangers in democratic governance is the "tyranny of the majority."

A simple example illustrates the principle. If shoreline residents were surveyed about closing a public boat landing to reduce AIS risk and boat traffic, the vast majority would likely support it—yet we would never accept such a policy because it would deny citizens lawful access to public waters. Public lakes are not private amenities for shoreline residents; they are resources held in trust for everyone.

The experience in Manitowish Waters demonstrates why local decisions that limit access to public waters should undergo objective review. The town board chairman publicly cited preventing AIS spread as a primary reason for banning wake surfing. However, the Wisconsin DNR—the agency responsible for protecting Wisconsin's waters—clearly stated that AIS has been spreading for decades across all types of watercraft and that science does not show wake boats pose a unique AIS risk. The situation is further troubling when open-records emails reveal that the two supervisors who voted for the ordinance coordinated with advocacy groups early in the process to push for a ban—suggesting policy outcomes were set in advance and justified afterward.

Abuse of local authority does occur. As personal watercraft gained popularity, complaints arose that they were loud and posed safety concerns. While it was illegal to ban a specific watercraft type outright, the Town of Summit adopted an ordinance on Lake Lower Nashota restricting personal watercraft operation to only 5–7 PM on Fridays—effectively a two-hour window per week. Wake boats face similar dynamics today.

These examples highlight a structural problem: most local governments simply do not have the technical expertise, time, or resources required to evaluate complex hydrodynamic research. When lakes with similar physical characteristics are regulated in completely different ways depending on the political dynamics of a particular town, the determining factor is not environmental science but

local sentiment. This is precisely why minority rights must be protected in the regulation of public waters. Wisconsin's Constitution and longstanding public trust doctrine make clear that navigable waters are held in trust for all citizens of the state—not just for shoreline property owners or the most vocal participants in a town hall meeting.

Protecting minority rights does not mean ignoring environmental concerns. It means ensuring that regulations are proportional to demonstrated impacts and based on rigorous, peer-reviewed science. Restrictions that effectively eliminate a lawful activity should only be imposed when there is clear evidence of substantial environmental harm that cannot be addressed through less restrictive measures. When regulation is driven by evidence, it protects both the environment and the rights of citizens. When it is driven by surveys, petitions, or the pressure of advocacy groups, it risks undermining both.

Common Claims vs. Scientific Facts

CLAIM	SCIENTIFIC FACTS
MacFarlane's 2025 paper suggests setbacks of 250–550 feet.	MacFarlane's setback statement is based on data from high-speed boat operation (>20 mph) as a reference—fundamentally different from wake surfing at ~11 mph. This is a flawed comparison of two distinct hydrodynamic regimes. When using appropriate benchmarks—fishing boat data and slow-speed ski boat measurements at 10 mph—the evidence supports a 200-foot setback. MacFarlane's data, while the most rigorous available, reports lower wave heights than other studies and is the only source to include slow-speed data. High-speed benchmarks misrepresent the actual risk. His trendline extrapolations to 400–500 feet overstate what the raw measured data supports.
Wake boats cause shoreline erosion.	Shoreline erosion research over 40 years consistently shows it is primarily caused by ice, runoff, changes in lake levels, natural wave action, and development—not by boat wakes. At 200 feet the waves impacting a shore have the same energy as a fishing boat or ski boat at 100 feet operating at the same speed and less than the total energy from a 20 mph wind blowing over a mile.
Wake boat waves destabilize shorelines.	200 feet from a wake boat, the waves are very similar to what the shoreline experiences naturally. The average wave height for wake boats at 200 feet is ~11 inches vs. ~8 inches on a small lake and ~12 inches on a large lake for a 20 mph wind. The periods for both boat and wind waves are ~2 seconds. Destabilization of shorelines requires waves with dramatically longer periods (e.g., 2.7 seconds) and significantly greater height—conditions wake boats at 200 feet do not produce.
Wake boats generate a 16-inch wave 200 feet from the boat. ("The industry's own data show at 200 feet the wave is 16 inches tall.")	This statement lacks context. A ski boat going 10 mph produces a 17-inch wave 100 feet from shore and a 14-inch wave 200 feet from shore—yet this is never mentioned. The 16-inch figure represents an extreme case: an overloaded boat with more ballast than factory configuration in deep water. The same study found only a 9-inch wave in shallower water. Six independent studies measured wave heights of 6 to 17 inches at 200 feet; across 20 measurements, the average was 11 inches—40% lower than the cited outlier.

CLAIM	SCIENTIFIC FACTS
Wake boats generate waves 3–9 times the energy of other boats.	This energy comparison applies at the boat. Wake energy degrades rapidly as it breaks into multiple smaller waves—the larger the initial wave, the faster it attenuates since taller waves break or curl. At 200 feet, wake boat wave energy is statistically equivalent to fishing or ski boats at similar speeds. The SAFL study claims 3–9x more energy at 100 feet, but its energy calculations are 2–8 times higher than those of more experienced researchers, and its data has massive variability (9-inch and 17.5-inch readings from the same boat at 200 feet).
You cannot compare wind waves to wake boat waves. The form of the energy is different.	Wind and recreational boat wakes are similar in form. Statements about incomparable energy forms refer to large commercial ferries—not recreational boats. A 20 mph wind over a mile creates an ~8-inch wave with a ~2-second period. A wake boat 200 feet from shore generates 45–60 seconds of waves averaging 11 inches with a ~2-second period. These waves have similar energy. The total energy from wind is orders of magnitude greater because wind waves impact every 2 seconds continuously vs. a 40–60 second packet from a single boat pass.
Cox and MacFarlane say comparing annualized boat and wind wave energy is meaningless.	This was meant to address attempts to compare the wake from large ferries to wind—not recreational boats. On Wisconsin lakes, wind and boat wakes ARE similar in form, so energy comparison is reasonable. Cox and MacFarlane (2019) themselves conclude: "Wave wake studies are inevitably a study of orders of magnitude and not small percentages"—supporting the conclusion that boat wakes are not orders of magnitude different from wind waves.
The Houser study in Canada showed more than 60% of wave energy was from boats.	This study is inconsistent with the extensive prior literature showing boat wakes contribute less than 5% of the energy a shoreline experiences. The study's own authors admit their findings are not consistent with prior work and offer no explanation for the discrepancy.
Adding ballast makes large waves that cause shore erosion.	Adding ballast increases the size of the initial wave at the boat, but larger waves decrease faster. By 100 feet, the wave produced by a boat with and without ballast are the same (SAFL, MacFarlane). The effect of ballast is not detectable at 200 feet.
The St. Anthony Falls Study showed wake boats need to be 700 feet from shore.	The SAFL study was severely flawed and criticized by its own reviewers. Its data has massive variability—wave heights of 9 and 18 inches from the same boat at 200 feet. There should not be more than 10–20% variance for data to be considered acceptable. The 700-foot recommendation uses an inappropriate benchmark of a ski boat at high speed; slow-speed (10–15 mph) operation of other watercraft types was

CLAIM	SCIENTIFIC FACTS
	not measured. The paper did not follow standard peer review protocol. At 200 feet a wake boat produces an average 11-inch wave—equivalent to fishing or ski boats at 100 feet at similar speeds.
Wake boats scour lake bottoms, resuspending sediment and destroying plants.	Daeger et al. (2022) in the Proceedings of the Indiana Academy of Science is the most conclusive experimental evidence. Direct measurement of suspended solids, phosphorus, silica, and nitrates showed that after 10 feet, a ballasted wake boat does not create any measurable disturbance of the lake bed even for fine sediment. In shallow water (3–5 ft), all boat types can resuspend sediment. No published peer-reviewed study documents reproducible resuspension beyond 14–15 feet.
Terra Vigilis, Ray (2020), and Raymond & Galvez speculate prop wash impacts lake beds down to 33 feet.	Daeger et al. (2022) is the definitive experimental test. Raymond and Galvez used acoustic probes to measure water speed down to 0.1 m/s at 15 feet and speculated this would be sufficient to disturb lake beds—but the diver present did not notice any material suspended. Ray (2020) was not peer reviewed, performed no actual measurements, has no credentials in fluid mechanics, and uses simplified models inconsistent with rigorous finite element modeling. Terra Vigilis stated a 25% increase in phosphorus 30 minutes after a boat passed, but their own reported normal variation was 50%—making that increase statistically insignificant. The authors even acknowledged "sediment deposition could not be solely attributed to only wake boats."
The 2024 Terra Vigilis study at Lake Waramaug (CT) says it takes 500 feet for waves to dissipate and props can impact lake beds down to 26 feet.	The Terra Vigilis Lake Waramaug report is self-published with no peer review, no quality control, and no adherence to accepted research standards. It relies on drone video footage to estimate wave height—a method with zero validation against standard measurement tools. Its wave height results contradict its own prior findings: it reports 12-inch waves at 300 feet while an earlier Terra Vigilis study reported 8 inches at 200 feet, an unexplained contradiction. Six peer-reviewed studies show the average wake height at 300 feet is ~9 inches. The comparison baseline uses a 26-year-old ski boat at high speed. Prop wash conclusions are based on subjective video of streamer movement without measuring actual water velocity. No reputable journal would publish this report. Citing it to guide policy is irresponsible.
Press coverage of Terra Vigilis study on Lake Beulah reports divers feeling a large push when a wake boat went by.	This sensation is not scientifically significant. Divers feel water velocity at levels far below what is required to suspend sediment. People can sense currents as low as ~2–5 cm/s; at 10 cm/s the sensation is unmistakable. However, 12 cm/s is the minimum needed to mobilize sediment. Divers feeling motion at 20 feet is fully compatible with

CLAIM	SCIENTIFIC FACTS
	measurements showing ~10 cm/s at 10–14 feet and no sediment resuspension at 20 feet.
Anthony and Downing is irrelevant because Clear Lake has 4 miles of fetch.	This argument confuses the magnitude of an effect with its mechanism. Anthony and Downing identified universal physical processes—wave orbital motion and sediment transport thresholds—that apply to any lake. It establishes the critical baseline: natural wind forces routinely disturb far more lakebed over far larger areas than boat traffic. Furthermore, smaller lakes have proportionally more shallow area, partially offsetting their reduced fetch. The mechanism is valid across all lake sizes; what changes is magnitude, not the physics.
Not being able to inspect wake boat ballast tanks will cause the spread of invasive species.	Wake boats are not unique. The residual water in any sterndrive cannot be inspected, and sterndrives have been shown to trap 85% more water than ballast tanks. Bilges, pumps, and lines of livewells also cannot be inspected. Fishing boats pose a higher risk since they are more prevalent and frequently transfer between lakes—up to 30% visit multiple lakes on the same day. A Minnesota study found sterndrives, not wake boats, had the highest concentrations of zebra mussels.
The bow-up boat attitude impairs vision and is a safety risk.	All boats operating at low speed experience some rise in the bow. There are no records of safety incidents for wake boats, but there are many for personal watercraft, fishing, and pontoon boats. The U.S. Coast Guard has certified wake boats as safe to operate. Inattentive driving is an issue with any boat.
Wake boats hog the lake and everyone else has to get off.	Wake boats operate at ~11 mph vs. ski boats that travel in excess of 30 mph. Ski boats cover 3 times the distance of a wake boat in the same time. Even pontoons towing tubers travel twice as far. At 200 feet, the waves of a wake boat are the same as a water ski boat at 100 feet—but the ski boat will travel 3 times the distance, affecting a much larger portion of the lake.
Wake boats are the only issue.	Any large, heavy boat will generate similar waves. Pontoon and other watercraft manufacturers have or are developing products that incorporate wake surfing capabilities. Deck boats, cruisers, and pontoons towing tubers at 10–12 mph operate in the same semi-displacement regime and produce comparable wakes. Singling out wake boats while exempting these activities is not a science-based distinction.

Supplementary Data: Wave Height Measurements

The following tables present the underlying wave height data used in the statistical analyses in Figures 1 and 2. Table 2 shows wake boat measurements at 200 feet from AMC and SAF studies. Table 3 shows fishing/ski boat measurements at 100 feet from AMC studies. These raw data points make clear that wake boats at 200 feet fall squarely within the range of other accepted boating activities at 100 feet.

Table 2: Wave Height Data — Wake Boats at 200 Feet (AMC and SAF Studies)

10-12 mph				
WAKE BOATS SURFING				
MacFarlane 2025				
	100		200	
AMC	17.7		13.4	
AMC	15.9		13.1	
AMC	14.1		11.1	
AMC	14.0		10.9	
AMC	13.6		10.7	
AMC	13.0		10.2	
AMC	12.6	Ave	9.6	Ave
AMC	12.4	13.2	9.0	10.5
AMC	12.2		8.7	st dev
AMC	12.0		8.0	1.6
AMC	11.7			
AMC	11.3			
AMC	11.2			
SAF	20.2		17.5	
SAF	19.8		13.7	
SAF	18.5	Ave	12.7	Ave
SAF	17.5	16.9	12.0	11.6
SAF	13.5		12.0	st dev
SAF	12.1		9.0	3.4
SAF			8.9	
SAF			6.7	
Goudey Deep	20.8		18.9	
Goudey Deep	19.9	Ave	16.3	Ave
Goudey Deep	19.0	19.3	16.2	16.5
Goudey Deep	18.3		15.9	
Goudey Deep	18.3		15.1	
Goudey Shall	12.0		10.9	
Goudey Shallow		Ave	9.5	Ave
Goudey Shallow		12	9.6	10.0
Goudey Shallow				
Ruprecht 70				
ft from boat, 10				
mph	15			
Ray	9		8.4	Red =
Tera Vigilis 2	14		13	Interpolation
Tera Vigilis 2021			8	
WEC			16	
WEC 17.5" @ 162' & 14.4" @ 266' reported formulat @200'= 16.25				
AVERAGE	15.0		11.8	
StDev	3.4		3.2	

Table 2: Wake Boats at 200 ft (AMC ave = 10.5", SAF ave = 11.6", Combined ave = 11")

AMC Ski 2025	17.1
AMC Ski 2025	13.4
AMC Ski 2025	12.5
AMC Fishing 2018	12.3
AMC Ski 2025	12.0
AMC Ski 2025	10.6
AMC Ski 2025	9.8
AMC Fishing 2018	9.5
AMC Ski 2025	8.5
AMC Fishing 2018	8.5
Average	11.4

Table 3: Fishing/Ski Boats at 100 ft, 10-12 mph (AMC ave = 11.4")

Key Takeaway: The combined average wave height for wake boats at 200 feet is 10.4 inches (Table 2), while the average for fishing/ski boats at 100 feet is 11.4 inches (Table 3). These figures are nearly identical—supporting the statistical conclusion that wake boats at 200 feet produce waves no different from other accepted boating activities at

100 feet. Note: SAF Pads show systematically higher values than AMC and other SAF measurements; AMC 2018 = MacFarlane 2018; AMC 2025 = MacFarlane 2025.

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Appendix: Table 1 — Summary of State Laws on Wake Surfing

State	Distance from Shore	Min. Depth	Lake Size	Comments
Vermont (VT)	500 ft	20 ft	50 acres	"Home Lake Rule"; decontamination before switching lakes
Maine (ME)	300 ft	15 ft	Lakes may opt out	Civil fine up to \$100; may escalate to Class E crime
Oregon (OR)	Prohibited in Newberg Pool	N/A	N/A	Wake boats over 5,500 lbs restricted
Pennsylvania (PA)	200 ft	None	None	No-wake speed within 200 ft
New Jersey (NJ)	200 ft	None	None	Treated like water skiing
Alabama (AL)	200 ft	None	Lakes <50 acres banned	Applies to certain named reservoirs
Georgia (GA)	200 ft	None	None	Night surfing prohibited; only in specified areas
Tennessee (TN)	200 ft	None	Lakes <50 acres banned	Based on WSIA model law; life jackets required
South Carolina (SC)	200 ft	None	Lakes <50 acres banned	No night surfing; WSIA model law
Virginia (VA)	Advisory: 200 ft	None	None	Civic associations advocate restrictions
Connecticut (CT)	100 ft (as water skiing)	None	None	Treated like water skiing

State	Distance from Shore	Min. Depth	Lake Size	Comments
Indiana (IN)	Proposed: 200 ft	None	Lakes >300 acres (pending)	Includes definition of wake surfing and night bans
Mississippi (MS)	None statewide	None	Pending for part of MS River	Senate considering partial ban
Minnesota (MN)	None statewide	None	None	Boater education required; only a recommendation of 200 ft, no state law
Michigan (MI)	None	None	None	HB 5532 never got out of committee
New Hampshire (NH)	None active	None	None	Proposed 20 ft depth and 500 ft distance bills both failed
Illinois (IL)	None statewide	None	None	No statewide rules; local rules vary
Ohio (OH)	None statewide	None	None	No dedicated state law
Iowa (IA)	None statewide	None	None	Local lake rules may apply
Wisconsin (WI)	100 ft (statewide)	None	Lakes <50 acres	30+ local ordinances creating confusion and inconsistency

About the Author

Professor William Banholzer

Professor of Practice, Department of Chemical and Biological Engineering, University of Wisconsin–Madison

Professor Banholzer is a distinguished chemical engineer with over 30 years of industry experience, including leadership roles at GE and Dow Chemical. Following his retirement, he joined the University of Wisconsin–Madison, where he holds the unique title of Professor of Practice—reserved for individuals with a significant track record of engineering accomplishments complementing their academic contributions.

Professor Banholzer's achievements include election to the National Academy of Engineering, a distinction shared by only three chemical engineers in Wisconsin and 250 nationwide. He has expertise in fluid mechanics grounded in the same Navier-Stokes equations used by marine engineers, has conducted fluid flow analysis, computational modeling, and an innovative study using CT scanning to investigate flow dynamics in fluidized beds—principles analogous to sediment and sand movement in aquatic environments. He is also a certified Master Black Belt in Six Sigma with expertise in statistical analysis and robust design.

Disclosure: Professor Banholzer owns a multiuse boat capable of wake surfing activities. His family, with six generations rooted in Northern Wisconsin, engages in wake surfing activities sparingly (fewer than 10 hours annually). His primary concern remains the preservation of his lake's ecological quality. He is unaffiliated with any boat manufacturers or industry groups.

From: [Cathy Conniff](#)
To: [DEEP Boating](#)
Cc: [Cathy Conniff](#)
Subject: Wake Boat & wake Surf Study
Date: Tuesday, April 21, 2026 10:43:17 AM
Attachments: [DOC042026-04202026144241.pdf](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hello, thank you for letting the Harbor Commission of West Haven weigh in on this topic.

Catherine Conniff
City Planner

From: Prism <prism@WestHavenCT1.onmicrosoft.com>
Sent: Monday, April 20, 2026 5:42 PM
To: Cathy Conniff <conniff@westhaven-ct.gov>
Subject: COWH Planning Scan 04/20/2026 14:42

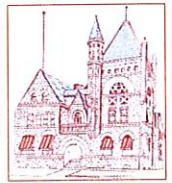
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Date:04/20/2026 14:42
Pages:1
Resolution:200x200 DPI



CITY OF WEST HAVEN, CONNECTICUT

HARBOR MANAGEMENT COMMISSION

City Hall | 355 Main Street | West Haven, Connecticut 06516



April 20, 2026

RE: Department of Energy and Environmental Protection (DEEP),

Dear Connecticut Department of Energy and Environmental Protection (DEEP),

I am writing on behalf of the West Haven Harbor Commission regarding the ongoing Wake Boat and Wake Surf Study.

Given that the boating season for wake boats and wake surfing in our region is limited to approximately four months each year, it is important that any regulatory considerations reflect the realities of this short seasonal window. Boaters have a limited time to enjoy their investment, and policies should balance access with safety and environmental stewardship.

The Harbor Commission of West Haven strongly believes that safety must remain the highest priority. For this reason, we recommend an emphasis on enforcement through increased police presence or dedicated safety patrols. Visible oversight helps ensure responsible operation without unnecessarily restricting lawful recreational use.

Additionally, we would like to address concerns related to invasive species. Boat owners have a vested interest in maintaining their vessels, which represent significant financial investments. Proper cleaning and maintenance are essential not only to prevent the transfer of invasive species between waterways, but also to preserve the condition and longevity of the boats themselves. Given that these vessels are often stored for up to eight months of the year, regular cleaning and care are critical practices that responsible boaters already recognize and follow.

We encourage DEEP to consider solutions that promote education, responsible boating practices, and targeted enforcement rather than broad restrictions, especially in light of the short boating season and the importance of supporting recreational boating in our community.

Thank you for the opportunity to provide input on this matter.

Sincerely,


Gene Pacapelli Commissioner and Commissioners

West Haven Harbor Commission

From: [James Fischer](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Wednesday, April 29, 2026 4:35:49 PM
Attachments: [20260429 CFL Comments to Wake Boat Study Draft.pdf](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

April 29, 2026

Commissioner Katie Dykes
Deputy Commissioner Mason Trumbull
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106

Re: Comments on Draft Wake Boat & Wakesurf Study

Dear Commissioner Dykes and Deputy Commissioner Trumbull,

On behalf of the Connecticut Federation of Lakes (CFL), thank you for the opportunity to comment on the Draft Wake Boat & Wakesurf Study. We appreciate the substantial effort that DEEP staff has invested in developing this report. The study reflects a careful and balanced assessment of the peer-reviewed scientific literature, and we commend DEEP for its transparency in presenting sources, including acknowledging limitations and funding contexts. This approach strengthens the credibility of the report and provides a strong, fact-based foundation for decision-making.

The draft clearly demonstrates that wake boats operating in wake-surfing mode produce disproportionately large and energetic wakes compared to traditional recreational boating, with documented impacts to shoreline stability, aquatic habitat, water quality, infrastructure, and public safety. It also appropriately frames this issue as one of balancing environmental protection, shared use, and recreational access. However, while the study is a strong synthesis, it does not yet provide the level of clarity and practical guidance needed by municipalities and lake associations. If the intent of the report is to inform local and state policy, it must go further in translating well-established impacts into clear, implementable management recommendations.

The most significant gap is the absence of a lake-suitability framework. The report documents impact but does not provide a structured method for determining whether a given lake can support wake-surfing. Acreage alone is insufficient, as the draft acknowledges, and must be considered alongside depth, basin configuration, shoreline sensitivity, habitat constraints, and patterns of use.

When these factors are evaluated together, CFL's assessment (based on both the literature and experience across Connecticut) is that very few, if any, lakes in the state can accommodate wake-surfing while maintaining ecological integrity and public safety. The draft identifies distance and depth as key management tools, but does not establish clear standards. CFL believes this is a missed opportunity. Setbacks must reflect the true zone of impact, not simply the shoreline. This includes docks, swimming areas, and the effective extension of private and public use into the waterbody. Based on available research, setbacks on the order of 500 to 1,000 feet are necessary to meaningfully reduce shoreline erosion and nearshore disturbance.

Depth-based restrictions are equally critical. While the report notes enforcement challenges, it is well established that wake boats in surf mode can disturb sediments and vegetation at substantial depths. As such, minimum depth thresholds are essential to protecting water quality and lake habitat. Other states, such as Vermont and Minnesota, have successfully implemented these approaches, demonstrating that they are feasible.

Importantly, when realistic setback and depth criteria are applied together, the remaining usable area on most Connecticut lakes becomes extremely limited. This reinforces that lake suitability—not simply operator behavior—must be central to management decisions.

The study acknowledges safety concerns but should more clearly distinguish between the safety of the wake-surfer and the safety of all other lake users. While wake-surfing may provide a controlled experience for participants, it increases risk for others, particularly paddlers, anglers, swimmers, and operators of small craft. Additionally, wake boats operating in surf mode often run at steep angles that can reduce forward visibility, creating avoidable navigation risks. This operational reality is not fully addressed in the draft and should be considered in any safety evaluation.

CFL also recommends that wake-surfing and wakeboarding be clearly distinguished from traditional water skiing. These activities rely on fundamentally different vessel types and produce markedly different environmental and safety impacts.

The draft appropriately identifies ballast systems as a vector for aquatic invasive species (AIS). However, this issue warrants stronger emphasis and clearer recommendations. Connecticut is currently managing a serious and expanding hydrilla infestation across multiple recreational lakes. In this context, reliance on voluntary industry measures or general education is insufficient. The widely promoted "Clean, Drain, Dry" protocol is inherently difficult to implement for wake boats, which are specifically designed to retain and redistribute water through complex ballast systems. While industry groups have suggested that self-guided practices are adequate, the physical design of these vessels presents a clear and persistent risk of AIS transport. CFL recommends that the final report more directly evaluate operational controls beyond education, including inspection, decontamination, and lake-specific

restrictions where appropriate.

The report emphasizes local management but does not provide sufficient guidance on how municipalities can implement or enforce regulations. Practical considerations—such as mapped operating zones, signage, monitoring, and enforcement authority and levels of fines—are essential and should be addressed directly. Without this level of detail, local governments are left with uncertainty around both the effectiveness and defensibility of potential regulations.

CFL supports the scientific foundation and balanced approach of this draft study. At the same time, the available body of evidence leads to a clear conclusion: when realistic environmental protections and safety considerations are applied, wake-surfing is not compatible with the physical and ecological characteristics of most Connecticut lakes.

We respectfully encourage DEEP to strengthen the report by providing clearer, more actionable guidance that reflects this reality and supports municipalities in making informed, defensible decisions.

CFL views this as an opportunity for continued collaboration and stands ready to assist DEEP, municipalities, and lake associations in advancing practical, science-based lake management.

Thank you for your time and consideration.

Sincerely,

James Fischer, President
Connecticut Federation of Lakes

James Fischer
Research Director
The White Memorial Conservation Center, Inc.
P.O. Box 368
80 Whitehall Rd.
Litchfield, CT 06759

Phone: 860-361-1025
<https://whitememorialcc.org/>

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Deputy Commissioner Mason Trumbull
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We respectfully encourage DEEP to strengthen the report by providing clearer, more actionable guidance that reflects this reality and supports municipalities in making informed, defensible decisions.

CFL views this as an opportunity for continued collaboration and stands ready to assist DEEP, municipalities, and lake associations in advancing practical, science-based lake management.

Thank you for your time and consideration.

Sincerely,
James Fischer, President
Connecticut Federation of Lakes

From: [John Elizandro](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Draft Study
Date: Thursday, April 30, 2026 3:17:21 PM
Attachments: [Banholzer SAFL Technical Critique.pdf](#)
[NASBLA Safe Practices for Boat Towed Watersports Model Act for Adopted 092821.pdf](#)
[2026.4.28 JE to Dykes CT DEEP.pdf](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Good afternoon,

Please see the attached comments and enclosures. Thank you for the opportunity to provide feedback.

If you have any questions, please don't hesitate to let me know.

Sincerely,

John Elizandro
Government Relations
Water Sports Industry Association

April 28, 2026

Ms. Katie Dykes
Commissioner
Connecticut Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106

Dear Commissioner Dykes,

My name is John Elizandro and I write on behalf of the Water Sports Industry Association (WSIA), the nation's leading voice for the towed water sports community.

Thank you for the opportunity to provide comment on the Department's draft "Wake Boat & Wakesurf Study", dated March 3, 2026. We appreciate the Department's thorough investigation of this matter. The boating industry shares the Department's commitment to protecting and preserving Connecticut's waterways. Across Connecticut and the nation, our members and partners rely on safe, healthy lakes and rivers to recreate, spend time with loved ones, and earn a livelihood.

However, we are concerned by the draft's perceived analytical bias. The review accepts, at face value, studies that support calls by activists for boating restrictions, while studies that support more reasonable approaches are marginalized and subjected to skepticism or criticism. Our hope is that the below feedback will help lead to a final report that is fair, objective, and impartial in its assessment of the body of existing data and research.

Are there any additional scientific studies, technical reports, or data sources that DEEP should review before finalizing this study?

The draft report relies heavily on, and cites often, a pair of studies conducted by the Saint Anthony Falls Laboratory of the University of Minnesota. The studies are cited variously in the report as *Marr et al. 2022* (Phase I of the study) and *Riesgraf et al. 2025* (Phase II), and its data informs the bulk of the report's findings.

In our initial comments in advance of the review draft's publication, we raised concerns about the studies' "methodological flaws and poor comparisons". In the months since those comments were submitted, the public has learned even more about the study that further calls into question its usefulness as a tool to inform public policy.

As noted previously, the study was never peer reviewed, and instead the authors opted for a less-rigorous “technical review” process. Through this “technical review”, the authors sent the study draft to handpicked experts and sought input.

But even one of the authors’ two handpicked experts – Dr. Gregory Cox – panned the study’s validity. His verbatim quote is below:

*“The study you are referring to here wasn’t really properly scrutinized. I did a review as did someone else, but we were never asked to re-review the modified document. I don’t think many of my comments were addressed, largely because there were glaring errors in their experimental methods as well as their understanding of the science. They thanked me for my comments and went ahead anyway. **From my perspective it was experimental and scientific rubbish.**”*

Attached is a technical critique of the Saint Anthony Falls study by Professor William Banholzer, a Professor of Chemical Engineering at the University of Wisconsin-Madison with extensive experience in hydrodynamics and fluid mechanics.

Dr. Banholzer’s technical credentials are impeccable: one of just three engineers in Wisconsin elected to the National Academy of Engineering, Banholzer holds Master’s and Doctorate degrees from the University of Illinois and has published peer-reviewed papers on particle movement. He also holds a Master Black Belt in Six Sigma statistical analysis.

A lakefront property owner himself, Banholzer became aware of this topic and investigated the matter independently. He has not been paid or compensated by the boating industry.

“The report’s central policy conclusions are not supported by scientifically valid evidence, and rest on deficient peer review, unacceptable data variability, inflated energy calculations that are 3 to 8 times higher than all prior independent studies, and a fatally flawed comparison of two incompatible hydrodynamic regimes,” Dr. Banholzer writes. His critique proceeds to identify multiple independent deficiencies – sixteen in all – that lead him to conclude the study “does not rise to the level of scientific rigor required for policy decisions.”

Banholzer’s and Cox’s criticism echoes that of Endicott M. Fay, a nationally-recognized marine architect whose [technical review](#) of the study was included with our previous submission. The critical questions raised by these experts in their field merit discussion and exploration in any holistic review of boating research.

Our previous comments also noted the study’s unique funding model, which initially utilized “crowd-funding” by anti-boating activists across the nation. But while the Department’s draft noted that specific studies were funded by the boating industry, no mention of the Saint Anthony Falls’ funding source is noted. This selective transparency undermines confidence in the report’s impartiality.

The section on “Impacts to Water Quality” similarly cites the Saint Anthony Falls study extensively, but contradictory data from Adrienne Daeger’s 2022 study, published by the Indiana Academy of Science, was mentioned only in passing at the end of the section. *Riesgraf et al. 2025*’s findings are further echoed throughout the review, but the existence of Daeger’s study – and its divergent data from the flawed Saint Anthony Falls methodology – is forgotten.

We appreciate that any review of the academic and scientific literature would include the Saint Anthony Falls study, but we ask that you better reflect both the study’s shortcomings and the wide criticism it has received from nationally-recognized experts.

Are there additional examples of management approaches from other states that DEEP should include or evaluate?

The Department’s review of existing state approaches to water safety and boating regulation is thorough and consistent with our understanding of current state statute.

It is worth noting, however, that the National Association of State Boating Law Administrators (NASBLA), the law enforcement personnel tasked with keeping public waters safe around the nation, has endorsed a workable framework for regulation. NASBLA’s Model Act, among other provisions, restricts wake surfing to 200 feet or more from any shoreline, dock, or in-water fixed object. Reflecting concerns noted in the draft by EnCon Police, the NASBLA model does not include a minimum depth restriction.

This 200-foot restriction is consistent with statewide rules enacted in several states, as the draft notes. The model act is attached. The views and perspectives of NASBLA’s law enforcement professionals should be reflected in the Department’s study.

Are there topics or impacts related to wakesurfing that are not addressed in the draft?

Boater Education: The draft provides a thorough review of Connecticut’s existing boater education requirements. “Education and outreach campaigns are an important component of a comprehensive approach to protect various water bodies and all users from the impacts of enhanced wakes,” the draft says. We agree.

As an industry, we believe strongly that boater education is the foundation of safe and responsible recreational boating. That is why WSIA created the nationwide Wake Responsibly campaign, which teaches practical, common-sense practices for enjoying towed water sports. The program encourages operators to follow three straightforward guidelines: maintain at least 200 feet from shore, avoid repetitive passes in the same area, and keep music volume at considerate levels.

Each year, dozens of Wake Responsibly events take place across the country, while Connecticut's watersports dealers and retailers actively promote these best practices to their customers. We have seen in states across the nation that more boater education leads to fewer on-the-water conflicts.

We would appreciate the opportunity to partner with you to modernize Connecticut's boater education curriculum and ensure boaters have the information they need to operate safely and responsibly on the water. We also encourage an expanded focus in the final report on how stronger, broader boater education can play a meaningful role in reducing user conflicts.

Economic Considerations: The report notes the size and importance of Connecticut's outdoor recreation economy, the second largest in New England. But the economic implications of arbitrary restrictions on boating are not assessed or addressed. Punitive rules targeting an important on-the-water activity will have serious, material downstream effects: not just to dealers, marinas, and other businesses that service vessels directly, but to the broader recreation and tourism economy so important to many Connecticut towns and cities.

A more thorough exploration of the economic impact of bans or restrictions on boating would better reflect the on-the-ground reality many Connecticut small businesses and communities would face.

Conclusion

We thank the Department for its work and diligence in gathering information about this topic. We hope the final draft better reflects concerns about the validity of the studies it cites, and provides a full and fair account of the body of data that does not support draconian restrictions on boating.

The Department's review does include important considerations: uniform statewide standards, rather than a patchwork of local rules, are easier for boaters to understand and for EnCon Police to enforce.

The boating industry has consistently supported legislation that would enact a science-backed, 200-foot shoreline setback requirement for wake surfing, consistent with the NASBLA model. We hope to have the opportunity to partner with you to enact such a standard in the future.

Sincerely,

John Elizandro
Government Relations
Water Sports Industry Association

TECHNICAL CRITIQUE

Marr et al. (SAFL 2022) — Phase 1 Wake Boat Study

"A Field Study of Maximum Wave Height, Total Wave Energy, and Maximum Wave Power Produced by Four Recreational Boats on a Freshwater Lake"

SAFL Project Report No. 600, February 2022

Prepared by: Professor William F. Banholzer — Professor of Practice, Department of Chemical and Biological Engineering

Affiliation: University of Wisconsin–Madison — National Academy of Engineering
March 2026

Executive Summary

The 2022 report by Marr, Riesgraf, Herb, Lueker, Kozarek, and Hill at the University of Minnesota's St. Anthony Falls Laboratory (SAFL) is the most frequently cited document by advocacy groups and legislators seeking to impose 500–700 foot setback requirements on wake boats. This critique demonstrates that the report's central policy conclusions are not supported by scientifically valid evidence, and rest on deficient peer review, unacceptable data variability, inflated energy calculations that are 3 to 8 times higher than all prior independent studies, and a fatally flawed comparison of two incompatible hydrodynamic regimes.

Sixteen independent deficiencies are documented across six categories: (I) peer review and publication standards failures; (II) sensor and data quality failures; (III) flawed energy calculation methodology; (IV) the invalid reference case and what the correct benchmark shows; (V) what the study does and does not establish; and (VI) the superior AMC dataset and broader scientific context. Most critically: one of the named expert reviewers confirmed that the study's peer review process was incomplete and that substantial technical criticisms were not adequately addressed before publication. **When the study's own data is analyzed using the scientifically and legally correct benchmark — non-wakesurf boats operating at slow speed at 100 feet from shore, the condition explicitly permitted by existing law for all recreational boats — it supports a setback of approximately 150–250 feet, not 500+ feet.** The study's 500-foot figure is a mathematical artifact of comparing wake boats at their maximum wave-generating speed to non-wakesurf boats at the speed that minimizes their wave output — a comparison the study's own authors acknowledge is not a typical operating scenario for non-wakesurf boats near shore.

Summary of Findings

#	Category	Finding	Severity
1	Peer Review	One named reviewer confirmed the review was incomplete and substantial technical criticisms were not addressed before publication	

2	Peer Review	SAFL laments the absence of peer-reviewed journal articles on wakesurf boats, cites a conference paper in its own literature review, yet presents itself — a non-peer-reviewed technical report — as policy-authoritative. Most critically, the two most directly relevant prior field studies (Goudey & Girod 2015; MacFarlane 2018) are not cited or mentioned anywhere in the SAFL report	
3	Data Quality	Two incompatible sensor types (pressure transducers + ADCPs) combined with no cross-calibration; ADCPs consistently measured higher values	
4	Data Quality	Wave heights at 200 ft for Malibu MXZ varied by 100% (9" vs 18") from same boat; standard requires ≤20% relative range	
5	Data Quality	R ² for energy regressions: Malibu VLX = 0.42, MXZ = 0.69 — well below the 0.8 minimum; trendlines cannot reliably predict wave behavior	
6	Data Quality	All ADCP data for Malibu Response LX lost to equipment failure on test day; key non-wakesurf boat analysis incomplete	
7	Energy Calculations	Energy values 3–8× higher than prior studies; even compared to Goudey & Girod (2015) — the most methodologically similar study using cumulative packet energy — SAFL values are 2–5× higher	
8	Energy Calculations	Internally inconsistent energy values at 100 ft for Malibu MXZ: both 9,000 J/m and 4,800 J/m reported; neither reconciled	
9	Energy Calculations	SAFL's cumulative packet energy is not directly comparable to AMC's maximum-wave energy metric; even vs. Goudey's cumulative approach SAFL values are 2–5× elevated; SAFL's implementation further inflates values by accumulating ambient noise and reflections as the packet grows from 8–9 waves near the boat to 20+ waves at the farthest sensors	
10	Energy Calculations	Wave power calculation squares wave height, amplifying the 100% data variability into approximately 400% variability in the primary policy metric — rendering the 600-foot recommendation completely unreliable	
11	Reference Case	The 500-ft recommendation compares wake boats at 11 mph surf mode ($Fr_v \approx 1.2$, semi-displacement) to non-wakesurf boats at 20 mph planing ($Fr_v \approx 2.7$) — a fatal regime mismatch confirmed by calculation from SAFL's own boat specs. Non-wakesurf boats towing tubes at children's recommended speeds (8–12 mph) operate at the same $Fr_v \approx 1.1$ –1.3 semi-displacement regime as wakesurfing	
12	Reference Case	The legally correct benchmark — any recreational boat at slow speed (10 mph) at 100 ft from shore — is the condition permitted by law for all boats. Under this benchmark the study's own data supports approximately 150–250 ft, not 500+ ft	

13	Reference Case	No Froude-matched comparison performed; study acknowledges this as the scientifically appropriate tool and explicitly declines to use it	
14	Scope Limitations	Study explicitly does not assess environmental impacts; no ecological threshold established to justify any specific setback distance	
15	Scope Limitations	No wind wave comparison; dominant sediment disturbance driver absent from analysis	
16	AMC Comparison	MacFarlane (2018/2025) reports wake boat wave heights 30% lower and ski boat wave heights 50% higher than SAFL at comparable distances — a double error that inflates the apparent required setback	

Section I: Peer Review and Publication Standards Failures

Finding 1 — The Peer Review Process Was Not Completed

The peer review process involves experts evaluating a paper, requesting revisions, and confirming that all substantive criticisms have been addressed before an editor approves publication. The reviewers for this study were Dr. Gregor MacFarlane and Dr. Gregory Cox — both recognized authorities with over 30 years of experience in the field of boat wakes. One of these reviewers was contacted directly to obtain a candid assessment of the peer review process, methodology, and publication worthiness of the study.

That reviewer directly contradicted the characterization provided in the SAFL report. He indicated that the study did not undergo a rigorous or complete re-review following revisions, and that substantial technical criticisms were not adequately addressed. These concerns included fundamental flaws in experimental methodology and misunderstandings of the underlying science. Despite these issues being clearly identified during review, the study proceeded without meaningful correction, leading the reviewer to characterize the work as lacking scientific rigor.

This is particularly significant because the SAFL report states (p. xi) that *"the authors addressed all comments provided by the reviewers and incorporated recommended changes into the final version"* and that the review facilitator *"concurred that the updated final report has sufficiently considered and incorporated feedback."* The direct account from one of the two named reviewers flatly contradicts this characterization. A standard peer review process requires that reviewers evaluate the revised manuscript before it is published. That opportunity was not provided here.

⚠ The study's claim to have undergone complete and independent technical review is directly contradicted by one of its own named expert reviewers. The assessment from the reviewer contacted for this critique — that the review process was deficient and

fundamental errors were not corrected before publication — carries exceptional weight precisely because it comes from an expert the study itself names as a validator of its scientific credibility.

Finding 2 — Publication Standard Double Standard and Glaring Omission of the Most Relevant Prior Research

The SAFL 2022 report is a university technical report funded by a crowdfunding campaign. It has never been submitted to or accepted by any peer-reviewed scientific journal. In its own Section 2.3, the SAFL study states: *"We were not able to find any journal articles within the peer-reviewed literature"* addressing wakesurf boats specifically. The report then cites a conference paper — Ruprecht et al. (2015) — in its own literature review, accepting non-journal sources as scientifically informative when they serve its purpose. The study then presents its own conclusions as a sufficient basis for major regulatory policy, applying a standard to the prior literature that it does not meet itself.

More damaging than this double standard is what the SAFL report entirely omits. The two most directly relevant prior field studies of wakesurf boat waves — Goudey and Girod (2015) and MacFarlane (2018) — are not mentioned, cited, or discussed anywhere in the SAFL report. This is not a matter of the authors examining these works and finding them wanting. They are simply absent. And their absence cannot be explained by obscurity or inaccessibility.

Both studies were published years before the SAFL report and were well established in the relevant scientific community. Goudey and Girod (2015) was published seven years before the SAFL report, involved direct field measurements of wakesurf boat waves by a credentialed ocean engineer and naval architect using state-of-the-art capacitance probes, and was the most methodologically comparable prior study to the SAFL project — both measure cumulative wake packet energy in field conditions. MacFarlane (2018) represented the Australian Maritime College's most comprehensive single dataset of recreational wake boat measurements at the time of the SAFL study, conducted under a government-commissioned process with 30+ years of methodological refinement. Both studies were part of the active scientific literature that any competent researcher entering this field would encounter during a literature review.

The most telling proof that these studies were not obscure is this: **MacFarlane himself, in his 2025 peer-reviewed journal article, cites and directly uses Goudey and Girod (2015) in his comparative analysis.** MacFarlane — one of the SAFL study's own named peer reviewers — considered Goudey's work significant enough to incorporate into his own subsequent published research. The proposition that the SAFL authors, while working in the same research space and with MacFarlane as a reviewer, were unaware of Goudey and Girod (2015) is not credible. The proposition that MacFarlane (2018) — the work of their own peer reviewer — was unknown to them is equally implausible.

The significance of this omission cannot be overstated. Goudey and Girod (2015) reports energy values approximately 2–5 times lower than SAFL for comparable wakesurf conditions using the same cumulative-packet-energy methodology. MacFarlane (2018) reports wave

heights and energy substantially lower than SAFL at comparable distances (see Finding 16). Had these studies been included, the SAFL report could not have presented its anomalously high values without confronting and explaining the discrepancy. Their omission allowed inflated results to go unchallenged within the report itself.

A study that laments the absence of rigorous prior research while omitting the most directly relevant prior research that demonstrably exists — studies known to the field, cited by its own reviewer in subsequent work — does not satisfy the minimum standard of scientific completeness. This omission, combined with the study's failure to achieve peer-reviewed publication status, disqualifies it from serving as the primary basis for significant regulatory decisions.

Section II: Sensor and Data Quality Failures

Finding 3 — Two Incompatible Sensor Types with No Cross-Calibration

The study deployed two fundamentally different types of wave measurement instruments at the same site: Campbell Scientific pressure transducers mounted on masts in shallow water (1.8–8.5 feet depth), and Nortek Signature 1000 Acoustic Doppler Current Profilers (ADCPs) deployed on pads on the lake bottom in deeper water (14 and 22 feet depth). These instruments operate on entirely different physical principles: pressure transducers measure hydrostatic pressure converted to wave height, while ADCPs use acoustic ranging to detect the water surface from below.

The ADCPs consistently measured higher wave heights than the pressure transducers at comparable locations. No cross-calibration was performed between the two instrument types, and no physical explanation for the discrepancy is offered. Both datasets were combined in the regression analyses, introducing a systematic sensor-type bias throughout every quantitative result. Neither sensor type is the gold standard for this work: capacitance probes, which physically contact the water surface, are the preferred instrument used by MacFarlane, Goudey, and every other major researcher in this field. State-of-the-art approaches now use above-surface radar, which is simpler and even more robust.

Finding 4 — Unacceptable Data Variability: 100% Spread at the Policy-Critical Distance

The most damaging single quantitative problem in the SAFL report is the variability in its wave height data. For the Malibu MXZ — the largest wake boat tested and the one that drives the 500-foot recommendation — measured wave heights at 200 feet from the boat varied between 9 inches and 18 inches across repeated passes under identical conditions. This 100% discrepancy is entirely unacceptable for scientific work intended to inform policy.

The standard for reliable experimental data in this type of study is a relative range (range divided by average) of no more than 20% for identical operating conditions. Prior wake studies by MacFarlane and the Australian Maritime College consistently achieve variability of approximately 10%. The SAFL data exceeds acceptable variability by a factor of five. Even

using only the mast sensors — eliminating the ADCP discrepancy — the variation remains above 50%.

The authors attempted to address this scatter by applying power-law regression trendlines to the data. However, averaging data with this degree of scatter yields poor R-squared values, and critically, the method cannot distinguish random noise from systematic instrument errors. Applying a regression curve to data whose variability reflects genuine instrument problems does not produce reliable predictions; it averages the errors into the results. The exponential coefficients of their regression fits are also not consistent with prior published work.

⚠ A 100% variability spread at 200 feet means the study cannot answer its own central question: how high are wake boat waves at 200 feet? The honest answer given this data is "somewhere between 9 inches and 18 inches." Depending on which data point is selected, the boat could be characterized as "comparable to other boats" or "much larger than other boats." Using data with this degree of scatter to recommend a specific setback distance is scientifically indefensible.

Finding 5 — R² Values Below Acceptable Thresholds

R-squared values for the total wave energy regressions — the metric the study uses as a primary basis for setback calculations — are well below the minimum acceptable threshold of 0.8 for the boats driving the recommendations:

Boat / Condition	Metric	R ² Value	Acceptable?
Malibu VLX (surf mode, Cond 1a)	Total Wave Energy	0.42	
Malibu VLX (surf mode, Cond 1a)	Max Wave Power	0.63	
Malibu MXZ (surf mode, Cond 1a)	Total Wave Energy	0.69	
Larson (Condition 2, planing)	Total Wave Energy	0.02	
Larson (Condition 1a)	Total Wave Energy	0.75	Borderline
Malibu MXZ	Max Wave Height	0.87	

An R² of 0.42 means the regression explains only 42% of the observed variance in total wave energy — the remaining 58% is unexplained scatter. An R² of 0.02 (Larson, Condition 2) means the trendline explains essentially nothing. These regressions cannot reliably predict wave energy at distances outside the measured range. Yet the 500-foot recommendation requires exactly this: extrapolation of these unreliable trendlines beyond the measured data range.

Finding 6 — Critical Missing Data for the Malibu Response LX

Due to equipment failure, all ADCP data for the Malibu Response LX — the non-wakesurf boat fitted with an aftermarket wake shaper — is absent from the analysis. This forces the regression for this boat to rely entirely on three shallow-water mast sensors, producing an R^2 of 0.53 for total wave energy. This is the boat most directly comparable to a wake boat operating with a wave-shaping device, and its incomplete data weakens the cross-boat comparison on which the setback recommendation depends.

Section III: Flawed Energy Calculation Methodology

Finding 7 — Energy Values Are 3–8 Times Higher Than All Prior Studies

The most consequential error in the SAFL report is that its wave energy calculations are dramatically higher than those reported by every prior independent study measuring comparable conditions. This is not a minor scaling difference — it is a 3–8-fold discrepancy that forms the quantitative foundation for the 500-foot setback recommendation.

An important methodological note is necessary to read the comparison table correctly: the three major prior studies do not all use the same energy metric, and this distinction matters. MacFarlane (AMC 2018, 2025) calculates the energy of the single maximum wave only — a per-wavelength quantity applied to the highest wave in the packet. Goudey and Girod (2015) explicitly adopted the opposite position, computing the cumulative energy of all waves in the packet. SAFL also uses a cumulative approach, making Goudey the most valid basis for direct comparison. **Even on that most favorable basis — comparing two studies that both sum packet energy — SAFL values remain 2–5 times higher than Goudey, a genuine anomaly that demands explanation and is not resolved by citing metric differences alone.** The full methodological explanation of why SAFL's values are so elevated is provided in Finding 9.

Study	Energy at ~100 ft (metric varies — see Finding 9)	Conditions
Goudey & Girod (2015)	~2,500 J/m (shallow, 10 ft standoff); ~1,800 J/m (deep, 110 ft standoff) cumulative total wake energy	Wake boat, surf mode, 10–12 mph, deep water
MacFarlane AMC (2018)	~200–450 lb·ft/ft (~270–610 J/m) maximum-wave energy only (different metric — not directly comparable)	Wake boat, surf mode, multiple conditions
Ruprecht et al. (2015)	~800–1,500 J/m	Wakeboard vessel, surf conditions
SAFL (2022) — Malibu VLX	~3,200–9,000 J/m	Wake boat, surf mode, 11 mph
SAFL (2022) — Malibu MXZ	~4,800 and ~9,000 J/m (two conflicting values — see Finding 8)	Same boat, same conditions

AMC — 118-ft, 116-ton catamaran	~14,000 J/m	Commercial vessel, 3 boat lengths
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To put the magnitude of this discrepancy in context: the SAFL study calculates energy values for a recreational wakesurf boat that approach or exceed values measured from a 118-foot, 116-ton commercial catamaran in a published Australian Maritime College study. The study offers no explanation for why its results diverge so dramatically from all prior independent work. As Cox and MacFarlane (2019) note, wake wave studies are invariably studies of orders of magnitude rather than small percentages — a finding that directly undermines conclusions built on calculations that are themselves anomalously inflated.

Finding 8 — Internally Inconsistent Energy Values

The study reports two conflicting total wave energy values for the Malibu MXZ at approximately 100 feet of operational distance: approximately 9,000 J/m in some figures and approximately 4,800 J/m in others, for the same boat under the same conditions. This 88% internal discrepancy is never acknowledged or reconciled. It reflects the underlying sensor-type incompatibility documented in Finding 3 — the ADCP and pressure transducer data are producing substantially different results, and both are included in the analysis without resolution.

Finding 9 — Why SAFL's Energy Values Are Not Comparable to Prior Studies and Are Anomalously High Even on the Same Metric Basis

There is no single universally adopted energy metric in boat wake research. The three studies most relevant to this analysis use distinct approaches that must not be conflated when making cross-study comparisons.

AMC / MacFarlane (2018, 2025) — Maximum-wave energy: MacFarlane's equation gives the energy per wavelength per unit crest width of a single wave. AMC deliberately excludes the rest of the packet and recommends comparing only the maximum (or up to three key) waves. MacFarlane (2025) argues explicitly that this metric is the most meaningful indicator of erosion potential, and critiques cumulative approaches as capable of producing comparisons that can be meaningless because the form of energy delivery matters more than the total.

Goudey & Girod (2015) — Cumulative total wake energy: Goudey explicitly adopted the opposite position, stating that the cumulative energy of all waves associated with a wake is the best measure. Their method computes wave power for each individual wave and sums over the full wake duration. This is a packet-level integrated quantity — a fundamentally different number from AMC's single-wave metric.

SAFL (2022) — Cumulative packet energy, but with implementation problems: SAFL also calculates cumulative wake energy, making it conceptually more comparable to Goudey than to AMC. However, the implementation introduces additional inflation. As the wake disperses with distance, the number of waves summed grows from 8–9 near the boat to more than 20 at the farthest sensors. This systematically pulls in ambient noise, wind chop, and reflections as a

function of distance — the opposite of what a robust energy-decay curve requires. The 1% endpoint criterion used to define the packet boundary is subjective when applied to noisy field data. Figure 12 of the SAFL report itself illustrates the study summing no fewer than 16 individual waves, with no definitive way to distinguish genuine boat wake waves from wind chop or interference from prior passes.

Cross-study comparison: Comparing SAFL to AMC involves apples-to-oranges by definition — cumulative packet energy versus single maximum-wave energy. Comparing SAFL to Goudey is the more valid basis, and even there SAFL values are 2–5 times elevated. These implementation differences, on top of the already-divergent ADCP sensor readings documented in Finding 3, fully account for the anomalously high SAFL values. Cox and MacFarlane (2019) concluded from 30 years of research that maximum wave height and period are the most useful parameters for assessing erosion impact precisely because they can be compared against site-specific erosion thresholds — something a summed packet energy value cannot do.

Finding 10 — Wave Power Calculation Compounds the Variability Problem

The study uses wave power — proportional to the square of wave height — as a third metric for setback calculations. Squaring wave height amplifies the effect of data variability. With 100% variability in measured wave height (9–18 inches), the corresponding variability in wave power is approximately 400% ($9^2 = 81$ vs. $18^2 = 324$). This means the wave power metric, which the study uses to recommend setbacks of greater than 600 feet, is based on a dataset whose variability renders the conclusions completely unreliable. Using the maximum of such a range versus the minimum can produce setback estimates that differ by a factor of four or more.

⚠ FATAL: The 600-foot setback recommendation based on wave power is derived from a metric that varies by 400% across repeated measurements of the same boat under identical conditions. This is not a finding that can be corrected by additional analysis — it invalidates the wave power metric as a basis for any specific regulatory distance.

Section IV: The Invalid Reference Case and What the Correct Benchmark Shows

Finding 11 — The 500-Foot Recommendation Compares Incompatible Hydrodynamic Regimes and Ignores the Legally Regulated Condition for All Boats

The SAFL 2022 report's primary 500-foot setback recommendation (Example 1) is derived by comparing:

Wake boats (Malibu VLX and MXZ) operating at 11 mph in surf mode — the semi-displacement regime, where wave-making resistance is at its maximum and wave generation is greatest for a given displacement.

Non-wakesurf boats (Larson LXI 210 and Malibu Response LX) operating at 20 mph in planing mode — where the boat has risen onto the plane and wave generation is at its minimum.

This comparison is hydrodynamically invalid. Using the SAFL study's own boat specifications — the Malibu MXZ at 11 mph with full ballast (11,125 lbs total) and the Larson LXI at 20 mph (3,255 lbs) — and the volumetric Froude number formula the study defines in Section 6.1.6 ($Fr_v = u / \sqrt{(g \cdot \nabla^1/3)}$), the two conditions produce fundamentally different operating regimes:

Boat / Condition	Speed	Total Weight	Fr_v (calculated)	Hydrodynamic Regime
Malibu MXZ — surf mode (Cond 1a, full ballast)	11 mph	11,125 lbs	1.20	Semi-displacement (wave-making peak)
Malibu VLX — surf mode (Cond 1a, full ballast)	11 mph	8,630 lbs	1.25	Semi-displacement (wave-making peak)
Larson LXI — Cond 1a (slow speed, no ballast)	10 mph	3,255 lbs	1.34	Semi-displacement (wave-making peak)
Larson LXI — Cond 2 (planing, no ballast)	20 mph	3,255 lbs		
Malibu MXZ — Cond 2 (planing, no ballast)	20 mph	6,240 lbs		

The table makes clear what the study obscures: at slow speed, **both the wake boats and the non-wakesurf boats operate in the same semi-displacement regime ($Fr_v \approx 1.2\text{--}1.3$)**. It is only at planing speed (20 mph) that the Larson enters a fundamentally different hydrodynamic state ($Fr_v \approx 2.68$). SAFL's Example 1 compares wake boats at the wave-making peak of the resistance curve ($Fr_v \approx 1.2$) to the Larson *after* it has climbed over that resistance peak and is riding on dynamic lift ($Fr_v \approx 2.68$). Mixing these two regimes in a single comparison produces an apparent difference between boat types that is almost entirely an artifact of speed and regime, not hull design or environmental impact. The study acknowledged the Froude framework as the correct tool to address exactly this problem (Section 6.1.6) and explicitly declined to use it.

Critically, the SAFL study itself acknowledges in Section 6.1.2 that non-wakesurf boats can operate at slow speed (Condition 1a) and that when they do, they produce substantially more wave energy than when planing. The study dismisses this by noting that such boats "spend very little time" at slow speed during tow sports. But this reasoning confuses typical recreational use with the legally regulated near-shore condition — and it ignores the most popular family boating activity on inland lakes.

Tubing — which is more popular than wakesurfing, especially among children — is recommended at 8–12 mph, the same speed range as wakesurfing (10–11 mph). Industry guidance consistently specifies slow-speed towing for young or inexperienced riders: Rave Sports recommends keeping speed under 10 mph for children; Weekend Boat Life advises 8–

10 mph for young or inexperienced children; Lakefront Living recommends 8–12 mph for young kids, with slower speeds for younger ages.¹ At these speeds the Larson LXI 210 has a volumetric Froude number of $Fr_v \approx 1.07\text{--}1.34$ — **identical to the semi-displacement regime of a wake boat surfing at 11 mph**. By the SAFL study's own logic, a Larson towing a tube with children at 10 mph is generating waves in the same hydrodynamic regime as a wakesurf boat. Yet the SAFL study uses this same boat at planing speed ($Fr_v \approx 2.68$) as its reference — the condition that most minimizes its waves, and the condition least representative of what that boat does near shore or when towing riders.

Under Wisconsin law and similar statutes across most states, all recreational boats — including boats towing tubes — must operate at slow speed when within 100 feet of shore. The condition that matters for setback regulation is not what a boat does in the middle of a lake; it is what the boat does near shore, which for all vessel types means slow-speed, semi-displacement operation — the same regime as wakesurfing. The SAFL benchmark uses non-wakesurf boats at the condition that most minimizes their waves as the reference against which wake boats at their maximum wave condition are compared.

¹ Sources: Rave Sports (<https://www.ravesports.com/blogs/life-on-the-lake/tubes-for-beginners/>); Weekend Boat Life (<https://weekendboatlife.com/towable-tube-age-restrictions/>); Lakefront Living (<https://blog.lakefrontliving.com/what-is-the-proper-boat-speed-when-towing-a-tube/>).

⚠ FATAL BENCHMARK ERROR: Calculated from the SAFL study's own boat specifications, the volumetric Froude numbers confirm that wake boats at surf speed ($Fr_v \approx 1.20\text{--}1.25$) and non-wakesurf boats at slow speed ($Fr_v \approx 1.07\text{--}1.34$, including while towing tubes at children's speeds) operate in the same semi-displacement regime. The SAFL 500-foot recommendation compares this regime to non-wakesurf boats at planing speed ($Fr_v \approx 2.40\text{--}2.68$) — a fundamentally different hydrodynamic state. The conclusion is an artifact of regime-mixing, not evidence of unique environmental harm from wake boats.

Finding 12 — The Correct Benchmark Supports 150–250 Feet, Not 500+ Feet

The appropriate scientific and legal benchmark for wake boat setback analysis is the wave characteristics of non-wakesurf boats operating at the same slow speeds — specifically, the condition that has been legally permitted for decades: heavy recreational boats operating at 10 mph at 100 feet from shore. Under Wisconsin law and similar statutes across most states, any recreational boat may operate within 100 feet of shore at displacement speed. That condition, not a planing boat at 200 feet, is the correct reference.

When the SAFL study's own data is applied using this legally correct benchmark, the conclusion changes fundamentally. MacFarlane (2025) measured a Ski Nautique at 10 mph producing a 17-inch wave at 100 feet and 15 inches at 200 feet. This is a boat that is already legal and accepted at 100 feet from shore — at slow speed, generating waves comparable in height to the wake boats the SAFL study seeks to restrict to 500 feet. Applying the same methodology used in the SAFL study — but referenced against non-wakesurf boats at slow speed at 100 feet rather than planing boats at 200 feet — the data supports a setback of approximately 150–250

feet for wake boats. This is far less than the 500+ feet the authors propose and is consistent with the existing 200-foot standard supported by six independent peer-reviewed studies.

The SAFL study's own Example 2 (comparing all boats at Condition 1a — slow speed — at a reference distance of 200 feet) yields a required distance of 425 feet. But even this comparison uses the wrong benchmark distance: 200 feet rather than the legally correct 100 feet. And Example 2 is still not Froude-matched. When correct Froude-number matching is applied using the AMC and MacFarlane (2025) datasets, wake boats at 200 feet are statistically indistinguishable from non-wakesurf boats at 100 feet at slow speed.

Key Policy Point: The 500-foot figure from the SAFL study is a mathematical artifact of an invalid benchmark. When the legally and scientifically correct benchmark is applied — any recreational boat at slow speed at 100 feet from shore, consistent with existing law — the study's own methodology supports a setback well within the range of the 200-foot standard already in place in most jurisdictions.

Finding 13 — No Froude-Matched Comparison Was Performed

The SAFL report acknowledges Froude number analysis in Section 6.1.6 as the scientifically appropriate tool for comparing vessel operating conditions across different boat types and sizes, then explicitly declines to use it: "because this report is focused on practical operational conditions and targets a general audience, we have chosen to present our results as dimensional values." This decision is not scientifically defensible. Presenting results in dimensional values without Froude normalization is precisely what enables the invalid regime-mixing comparison that drives the 500-foot figure. The study identified the tool that would expose the methodological error and chose not to use it.

Section V: What the Study Does and Does Not Establish

Finding 14 — No Environmental Impact Assessment Was Performed

The SAFL 2022 report explicitly and repeatedly states that it does not assess environmental impacts. Section 6.2.5 states that the report "only characterizes the wave height, energy, and power of a few recreational watercraft, and does not address potential environmental impacts such as shoreline/riparian erosion, water quality degradation, or alteration to aquatic habitats."

This is a critical gap that makes any specific setback recommendation scientifically unsupported. Translating from "wake boats produce larger waves at slow speeds" to "wake boats require a 500-foot setback" requires demonstrating that: (a) the identified wave characteristics cause measurable environmental harm, and (b) that harm would be prevented by the proposed setback distance. Neither is demonstrated. No ecological impact threshold is ever established. The study cannot, by its own admission, support a specific setback recommendation based on environmental protection.

Finding 15 — No Wind Wave Comparison

The study never compares wake boat wave characteristics to those generated by natural wind events. Section 6.2.6 acknowledges this as a limitation. This omission is critical for policy purposes. Six independent peer-reviewed studies — including Anthony and Downing (2003) and Valbuena, Schladow, and Bombardelli (2024/2025) — demonstrate that wind-driven waves are the dominant driver of sediment resuspension on typical inland lakes, with boat activity accounting for a minor fraction of total wave energy. Without this context, any difference measured between boat types is impossible to evaluate for environmental significance. If wind waves already routinely deliver far more energy to a shoreline than any boat type, the marginal difference between a wake boat at 200 feet and a ski boat at 200 feet is environmentally irrelevant.

Section VI: The Superior AMC Dataset Exposes the Double Error

Finding 16 — SAFL Overstates Wake Boat Waves and Understates Ski Boat Waves

The Australian Maritime College (AMC) dataset — compiled by MacFarlane over more than 30 years using state-of-the-art capacitance probes with standard protocols — provides a direct benchmark against which the SAFL measurements can be evaluated. The comparison reveals that the SAFL study makes two compounding errors in opposite directions: it overestimates wake boat waves and underestimates ski boat waves. Together these errors dramatically inflate the apparent difference between boat types and produce an artificially large setback calculation.

Measurement	SAFL Value	AMC/MacFarlane Value	Discrepancy	Direction of Error
Wake boat max height @ 200 ft (surf mode)	17.5" max (range 6.7–17.5")	13.4" max (range 8–13.4")	>30% higher	
Wake boat average @ 200 ft	11.6"	10.5"	+10%	SAFL slightly higher
Ski boat height @ 100 ft (10–12 mph slow speed)	11"	14–17" (Ski Nautique at 10 mph)	~50% lower	

The double nature of this error is what creates the exaggerated setback estimate. The SAFL study reports wake boat waves at 200 feet that are more than 30% higher than the AMC measurement. At the same time, it reports ski boat waves at 100 feet — **at slow speed, the legally relevant near-shore condition** — that are approximately 50% lower than MacFarlane's measurement of a Ski Nautique at 10 mph (17 inches vs. 11 inches). When the reference (ski boat at slow speed) is underestimated and the subject (wake boat) is overestimated, the calculated distance required for the wake boat to "match" the reference is inflated far beyond what the physical reality warrants.

MacFarlane (2018 and 2025) also showed approximately half the variability compared to the SAFL study (approximately 50% vs. 100% relative range) despite evaluating a broader range of operating speeds. The AMC dataset's superior quality is attributable to the use of calibrated capacitance probes, standardized protocols developed over 30 years, and measurement on a controlled test lake under consistent conditions. The overall conclusion from comparing the two datasets is unambiguous: the SAFL study substantially overestimates the setback distances required for wake boats — and does so by systematically mischaracterizing both sides of the comparison.

Conclusion

The SAFL 2022 report by Marr et al. is a deeply flawed technical document that cannot support any specific regulatory setback requirement for wake boats. Sixteen independent deficiencies have been identified and documented in this critique. The most critical are summarized here:

- One of the two named expert reviewers was contacted directly for this critique and confirmed that the review process was not properly completed and that fundamental technical criticisms were not addressed before publication.
- The two most directly relevant prior field studies of wakesurf boat waves — Goudey and Girod (2015) and MacFarlane (2018) — are not cited or mentioned anywhere in the SAFL report. This is not a minor bibliographic oversight; these studies report energy values 2–5 times lower than SAFL and wave heights substantially lower than SAFL, using superior instrumentation.
- Wave height data at the policy-critical distance of 200 feet varies by 100% for the same boat under identical conditions — five times the acceptable threshold for reliable scientific data.
- Total wave energy values are 3–8 times higher than those reported by all prior independent studies, including 2–5 times higher than Goudey even on a same-metric cumulative basis, with no explanation provided.
- The 500-foot recommendation is derived by comparing wake boats at their maximum wave-generating speed to non-wakesurf boats at the speed that minimizes their wave output — planing at 20 mph. This ignores the fundamental regulatory fact that all recreational boats, including non-wakesurf boats, must operate at slow speed near shore. The SAFL study's own data show that non-wakesurf boats at slow speed produce significantly larger waves than when planing. The legally correct comparison must use slow-speed non-wakesurf boats as the reference.
- When the legally correct benchmark is applied — any recreational boat at slow speed at 100 feet from shore — the study's own methodology supports a setback of approximately 150–250 feet, consistent with the 200-foot standard.
- The wave power metric, which drives the 600-foot recommendation, is based on a dataset with 100% variability in wave height — producing approximately 400% variability in wave power — rendering that conclusion completely unreliable.
- The study explicitly does not assess environmental impacts and establishes no ecological harm threshold, making any specific setback recommendation scientifically unjustified.

- The superior AMC dataset from MacFarlane shows SAFL overstates wake boat waves by >30% and understates ski boat waves at slow speed by ~50% — a double error that inflates the apparent setback requirement.

None of these findings are speculative. Every one is documented from the study's own text, its own data, direct communications from one of its named expert reviewers, or quantitative comparison with the peer-reviewed literature. The convergence of these findings across all six categories of analysis leads to a single unavoidable conclusion: the SAFL 2022 report does not rise to the level of scientific rigor required for policy decisions.

The scientifically credible literature — MacFarlane (2018, 2025), Goudey and Girod (2015), Daeger et al. (2022), Valbuena et al. (2024/2025), and the AMC 30-year dataset — consistently supports the conclusion that wake boats operating at 200 feet from shore in water at least 10 feet deep produce waves comparable to other heavy recreational boats at 100 feet at slow speed, and that wind-driven waves remain the dominant sediment disturbance driver on typical inland lakes. Given the availability of this superior research from more experienced scientists with better instrumentation, the conclusions drawn from the SAFL study should not be considered credible or used as a basis for policymaking.

⚠ Policy Standard: The SAFL 2022 report should not be cited as scientific justification for setback requirements exceeding 200 feet. Any regulatory proposal relying primarily on this study is built on deficient peer review, omission of the most relevant prior research, unacceptable data variability, inflated energy calculations, and an invalid hydrodynamic comparison that systematically ignores the legally mandated near-shore operating condition for all recreational boats. Legislators and regulators have access to superior, peer-reviewed scientific evidence that consistently supports the 200-foot standard.

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About the Author

Professor William F. Banholzer

Professor of Practice, Department of Chemical and Biological Engineering, University of Wisconsin–Madison

Professor Banholzer is a distinguished chemical engineer with over 30 years of industry experience, including leadership roles at GE and Dow Chemical. Following his retirement, he joined the University of Wisconsin–Madison, where he holds the title of Professor of Practice — reserved for individuals with a significant track record of engineering accomplishments complementing their academic contributions. Professor Banholzer's achievements include election to the National Academy of Engineering, a distinction shared by only three chemical engineers in Wisconsin and 250 nationwide. He has expertise in fluid mechanics grounded in the Navier-Stokes equations used by marine engineers, has conducted fluid flow analysis, computational modeling, and an innovative study using CT scanning to investigate flow dynamics in fluidized beds — principles analogous to sediment and sand movement in aquatic environments. He is also a certified Master Black Belt in Six Sigma with expertise in statistical analysis and robust design.

Disclosure: Professor Banholzer owns a multiuse boat capable of wake surfing activities. His family has six generations rooted in Northern Wisconsin, engaging in wake surfing activities sparingly (fewer than 10 hours annually). His primary concern remains the preservation of his lake's ecological quality. He is unaffiliated with any boat manufacturers or industry groups.

NASBLA MODEL ACT FOR SAFE PRACTICES FOR BOAT-TOWED WATERSPORTS

This act was originally adopted by the membership of the National Association of State Boating Law Administrators (NASBLA) on Oct. 29, 2003. However, an original provision prohibiting the use of a tow rope of 20 feet or less would have precluded the popular sport of wakesurfing. In response, during 2004, the NASBLA Committees on Law Enforcement and Boats and Associated Equipment revised the language and narrowed the act to apply to teak surfing and body surfing – water sports that pose potential dangers to the participant both because of proximity to the boat's propeller and because of the possibility of carbon monoxide poisoning. The amended act was approved by the membership on Sept. 15, 2004.

In April 2005, the NASBLA Boats & Associated Equipment and Law Enforcement committees reviewed proposed revisions to this model act as part of a larger NASBLA Model Act Review and Standardization Project, and subsequently approved this version.

In May 2007, the NASBLA Boats & Associated Equipment Committee added Section 6 [Operator Responsibility] to regulate the use of "kite tubes" and other towed devices that pose an extraordinary risk to users.

Some states add a provision to this legislation requiring new vessels and used vessels when sold to have carbon monoxide labels on the watercraft to better inform boaters of the dangers of carbon monoxide. The committee recommends those states which add this provision use American Boat and Yacht Council/National Marine Manufacturers standardized labels.

In February 2020, the NASBLA Enforcement and Training Committee accepted a charge to examine and update the 2007 model act based on new equipment and technologies in towed watersports activities. The act was adopted by membership September 28, 2021.

1 Section 1. [Short Title.] This act may be cited as the Safe Practices for Boat-Towed Watersports Act.

1 Section 2. [Applicability.] The provisions of this act apply on all waters within the jurisdiction of this
2 state.

1 Section 3. [Definitions.] As used in this act:

2 (1) "Body surfing" means swimming or floating on one's stomach or on one's back on or in the wake
3 directly behind a motorboat that is underway.

4 (2). "Motorboat" means a recreational vessel propelled in whole or in part by machinery, including a
5 vessel temporarily equipped with a detachable engine.

6 (3) "Operate" means to navigate or otherwise control the movement of a vessel, including control of the
7 vessel's propulsion system.

8 (4) "Teak surfing" or "platform dragging" means holding onto the boarding platform, boarding deck,
9 boarding step, boarding ladder, or any portion of the exterior of the transom of a motorboat for any
10 amount of time while the motorboat is underway at any speed.

11 (5) "Towed device" means an inflatable tube or other device designed to be sat or laid upon with the rider

Boat-Towed Watersports – adopted September 28, 2021

having no inherent control over the device.

(6) “Underway” means the motorboat is on the water and not moored, anchored, docked or aground.

(7) “Watersports” means activities that involve being towed by or riding in the wake of a vessel such as, but not limited to, water skiing, wake boarding, wakesurfing, and tubing.

(8) “Wakesurfing” the act of using a surfboard, wakeboard, or similar device while being propelled by a boat’s wake or while riding on/in a boat’s wake directly behind a vessel that is underway.

Section 4. [*Requirements.*] (1) No person shall operate a motorboat while a person is teak surfing, platform dragging, or body surfing behind the motorboat.

(2) No person shall have the engine of a motorboat run idle while a person is occupying or holding onto the boarding platform, boarding deck, boarding step, or boarding ladder of the motorboat.

Section 5. [*Exemptions.*] The provisions of this act do not apply when a person is occupying the boarding platform, boarding deck, boarding step, or boarding ladder while assisting with the docking or departure of the motorboat, and while exiting or entering the motorboat.

Section 6. [*Operator Responsibility.*]

(1) The boat operator shall be responsible for:

(a) the safe use of any towed device, to include wakesurfing;

(b) the safety of the passenger(s) on the device or while engaged in wakesurfing;

(c) the utilization of an observer, in addition to the motorboat operator, or a wide-angle rear-facing mirror, in addition to any other specific state regulation that may be required.

(2) No boat operator shall:

(a) Operate at speeds that exceed the safe towing speed identified on the towed or wakesurfing device or in the device owner’s manual/warning label.

(b) Operate with the number of riders on the towed device exceeding the listed capacity on the towed device or owner’s manual.

(c) Operate with a tow rope that exceeds 75 feet in length.

(d) Allow towed watersport and wakesurfing participants to participate without a properly fitted USCG approved life jacket.

(e) Allow towed watersports activity within a distance of 200 feet from any shoreline, dock or in-water fixed object, unless otherwise provided in state law.

(f) Allow stereos/noise amplifying speakers to exceed a reasonable level in accordance with state and local laws.

(g) Allow any towed or wakesurfing participant to participate in a watersport while impaired or under the influence of drugs or alcohol.

(h) Operate in a manner that allows the towed device to rise more than three feet above the water surface and remain airborne for more than three seconds.

Section 7. [*Penalty for Violation.*] A violation of this act constitutes a [insert offense and penalty(ies)].

Section 8. [*Effective Date.*] [Insert effective date.]

From: [Martha Carter](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 9:57:50 AM
Attachments: [Letter to DEEP on Wake Boat Draft Report 04-30-26.pdf](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Dear Sir/Madam,

Please see attached letter with comments on the Draft Wake Boat & Wakesurf Study.

Best regards,

Martha J. Carter
34 Erdoni Road
Columbia, CT 06237

April 30, 2026

CT Department of Energy and Environmental Protection

RE: Wake Boat & Wakesurf Study

Dear Sir/Madam:

We reviewed the Draft Wake Boat & Wakesurf Study report dated March 3, 2026 issued by your department. We applaud the effort that went into preparing this well-researched and well-documented report.

We do not have suggestions for additional studies, technical reports or data sources as the report appears to be quite comprehensive, nor do we believe there is a need to evaluate management approaches from other states beyond what has been done. In that regard, Connecticut's lakes are different from many other states whose lakes are larger and deeper and therefore whose management approaches may not be relevant to us.

We would like to comment specifically on certain aspects of the report. My spouse and I are homeowners on Columbia Lake, a ~280 acre lake with an average depth of 15 feet. We are concerned about the impact of wake boats on a lake of our size, shape and depth. The data presented in your report clearly demonstrate the oversized impact that wake boats have on wave disturbance and sediment erosion. Your report states, at page 20:

Research reviewed by DEEP indicates that wake boats can pose greater adverse effects on lake water quality than other types of motorized watercraft. When ballast compartments are full, wake boats displace more water and create larger wakes than traditional boats, leading to phosphorus resuspension in the water column from lake sediments and decreased water clarity (turbidity). Also, the force of the boat propellers pushing water downwards can disrupt a lake's natural water column stratification process.

Our lake's total phosphorus concentration is at a tipping point and we are already experiencing annual cyanobacteria algae blooms in parts of the lake. Any activity that creates sediment resuspension will exacerbate the risk of more frequent and larger toxic algae blooms.

Restrictions based solely on the size of a lake without consideration for its shape (i.e., long and narrow versus relatively round) or its depth will not provide adequate protection. It is relatively straightforward to do bathymetric mapping and it has already been done on many lakes in CT. These data can be used to identify which areas of a lake are safe for wake boating based on depth or if, in fact, there are no areas suitable for wake boats on a particular lake. For the same reasons, 100 acres may not be a sufficient minimum lake size

Letter to DEEP

April 30, 2026

Page 2

to allow wake boats, nor may 200 feet from shore be adequate depending on the water depth. Taken together (which they must be), acreage, depth and distance from shore may preclude wake boats from all but the largest lakes in CT.

Lastly, the report understates the safety risks that wake boats pose to other recreational activities. The disturbance caused by the enhanced waves of wake boats is a danger to anyone in a kayak or canoe, especially to someone on a paddleboard, let alone swimmers. Our lake front is well developed with several swimming areas including a town beach that is impacted by large waves. We have skulls on our lake and wake boats are completely incompatible with skulling, where a person has their back to what is in front of them. Also, we have distance swimmers who train on our lake and large waves are a problem - indeed a hazard - for them.

While the report admirably attempts to strike a balance between those in favor of wake boats and those against them, the data on damage to shorelines, sediment disruption, and danger to other recreational activities far outweigh the benefits of having them in most CT lakes. Short of an outright ban on wake boats, they should be heavily restricted wherever they are allowed, that being on only the largest and deepest lakes in the state.

Thank you for your consideration.

Sincerely,

Martha J. Carter

34 Erdoni Road

Columbia, CT 06237

From: [Protect Lake Waramaug](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 4:53:22 PM
Attachments: [PLW WakeSurf Study Comments 4-30-26.pdf](#)
[Terra Vigilis Group Lake Waramaug Critical Flaws Response to Paul Herzan 20 April 2026.pdf](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

DEEP Officials,

Protect Lake Waramaug: Coalition to Ban Wake Surfing Association, is a non-profit organization created in May 2025 by residents of the towns of Kent, Warren and Washington to advocate for the ordinance banning wake surfing on Lake Waramaug. Please find attached our organization's comments on DEEP's March 2026 Draft Wake Boat & Wakesurf Study and comments from Terra Vigilis Environmental Services Corp., who were the consultants hired by the three towns to study the impact of wake surfing on Lake Waramaug.

We appreciate your consideration of our submission.

Kelly Williams and Bruce Birenboim
Protect Lake Waramaug

COALITION TO BAN WAKE SURFING



PROTECT LAKE WARAMAUG

www.protectlakewaramaug.org
main@protectlakewaramaug.org

To: Connecticut Department of Energy and Environmental Protection
Date: April 30, 2026

Via Email

Re: DEEP Draft Wake Boat and Wakesurf Study

Ladies and Gentlemen:

We are Protect Lake Waramaug: Coalition to Ban Wake Surfing Association, a non-profit organization created in May 2025 by residents of the towns of Kent, Warren and Washington to advocate for the ordinance banning wake surfing on Lake Waramaug. As you know, on July 31, 2025, 78% of the voters of the three towns voted to ban wake surfing on Lake Waramaug. Our website is www.ProtectLakeWaramaug.org.¹

We first wish to thank DEEP for the thoughtful Draft Study. Wake surfing is a relatively new activity on Connecticut's lakes and has proven to be extremely controversial, and we applaud DEEP for investigating and presenting its work. It is our organization's view that wake surfing is inconsistent with the topography of Lake Waramaug and threatens the environmental health of

¹ Protect Lake Waramaug was granted intervenor status in a recent petition to DEEP seeking to overturn the Waramaug ban. In April, we were granted intervenor status in an administrative appeal in Connecticut Superior Court of DEEP's decision to deny the petition. Our pleadings in these proceedings may be found on our website, [here](#).

Lake Waramaug and the safety of its users. That is why we supported a complete ban on wake surfing on Lake Waramaug.

More generally, however, the large and powerful waves created by specially-equipped and powerful wake boats threaten the environmental health of all of Connecticut's lakes and the safety of their recreational users and causes property damage to docks and shorelines. The propeller downwash and ocean-sized waves risk environmental degradation to our natural lakes, already under enormous stress from nutrient pollution, climate change and invasive species.

Our comments on the Draft Study are as follows:

- ***Inform statewide policymakers about the Waramaug and Bashan bans.*** The wake surfing ban on Waramaug is the impetus behind all of the recent legislative and DEEP activity on this issue. Yet the Draft Study does not contain any information about the nearly three-years long process behind the wake surfing ban on Waramaug and the ban on Bashan Lake. We believe this is a highly material omission that is important background and context for all state policymakers and local officials considering statewide and local rules. It is difficult to imagine a more thorough, extensive review of the environmental and safety risks of wake surfing than what occurred regarding Lake Waramaug, and much of the material developed regarding Lake Waramaug applies generally to all Connecticut lakes. We believe it is highly relevant that over 78% of the voters approved the Lake Waramaug ban after such an extensive civic educational process and that we saw the same result with respect to the Bashan ban. Legislators and the public should be made aware of these critical case studies and related citizen action.
- ***Discuss DEEP approval of the bans.*** The Draft Study should inform readers that DEEP approved both ordinances after substantive review. Wake surfing proponents worked hard to convince DEEP to overturn the bans both before and after the referendums. Wake surfing proponents even met privately with the DEEP Commissioner to make their case that the Waramaug ban should not go forward. Wake surfers' arguments to DEEP were also made in writing by a well-known Hartford law firm which prepared a lengthy and detailed legal argument against the bans, more than 150 pages of material. DEEP's view that both ordinances satisfied the legal requirements for this kind of local legislative action is a critically important fact to be brought to the attention of legislators in Hartford.
- ***Explain how local communities can regulate wake surfing.*** The Draft Study should provide clear information on the process by which local communities can enact their own regulations, including bans, and explain DEEP's review process and legal authority. "Management Strategies" on page 45 should explain the means by which Connecticut law enables local communities to enact their own restrictions and/or ban the activity as they deem appropriate. It is not necessary for localities that are struggling with the

caustic effects of wake surfing to wait for Hartford to take action. Our understanding is that one purpose of the Draft Study is as an aid to local communities.

- ***There is no “national standard” for how to regulate wake surfing – it is an inherently local matter.*** The Draft Study’s section “*Other States’ Wake Boat Management*” section, page 42, is inaccurate and misleading for multiple reasons:
 - The draft omits any discussion of events in the State of Wisconsin. More than 70 communities in Wisconsin have banned wake surfing on more than 400 lakes. The Wisconsin legislature recently rejected any effort to impose a statewide buffer zone rule in favor of its status quo, whereby local communities are empowered to ban wake surfing.
 - Though some states are listed as having statewide rules, the Draft Study omits to inform readers that local communities in those states have the power to request or impose greater restrictions (esp. Vermont, Maine) on a case-by-case basis and in many cases have exercised this power of local control. We do not have the resources to do an exhaustive analysis of every state, but it is misleading for the Draft Study to summarize state laws in a cursory and abbreviated manner and suggest that there is any precedent at all for a 200’ buffer zone that overrides local rules. We are unaware of any situation in any state where the state legislature has overridden local ordinances and the good judgment of water management officials who have enacted rules such as slow no-wake zones meant to protect important businesses like marinas, public swimming areas, environmentally sensitive areas and fueling facilities. This is a critically important procedural and historical fact which should be noted in the Draft Study.
 - The Draft Study misleadingly suggests that a 200’ buffer zone is the national standard and is supported by the relevant science. In fact, while a 200’ distance requirement has been adopted in some states (principally at the urging of the wake boat manufacturers lobby), many states have chosen not to adopt a 200’ distance requirement, and there is no consensus that 200’ is adequate. To the contrary, the factual and scientific record developed in connection with the Lake Waramaug ban—especially the independent work of Terra Vigilis—demonstrates that 200’ is wholly inadequate. If the Draft Report is going to attempt to address the specifics of a distance requirement, it should fairly canvass the scientific literature and make clear that there is no consensus, much less a dispositive view, on the appropriate distance requirement for environmentally safe wake surfing.
 - In 2026, the Connecticut General Assembly’s Environment Committee joined the Wisconsin legislature and the New Hampshire legislature in rejecting the

proposed 200' buffer. *It is highly relevant that other states, including our state, have considered—and rejected—statewide rules.*

- ***Bans exist across the country.*** The Draft Study should advise of the significant fact that localities across the nation ban or regulate wake surfing when it becomes a problem – see our previous comments to DEEP for a partial list. [Local wake surfing bans exist on lakes in California, Texas, Ohio and other places. Federal courts have upheld bans on wake surfing in Texas and Oregon.](#) ***Slow no-wake zones are another common means of banning wake surfing.*** Local slow no-wake zones especially are found nation-wide and are an important tool of local control over excessive wakes. Earlier this year, Fort Lauderdale [enacted a new no-wake zone](#) on the Intracoastal Waterway after a 14 year-old girl died after being thrown from a jet ski and striking her head in an area of excessive boat wake turbulence. The failure to discuss these measures gives a significantly inaccurate picture of how the wake surfing issue has been addressed by localities around the country.
- ***Depth Restrictions are as Important as Distance Restrictions.*** The Draft Study should make clear that distance restrictions do not address the issue of the downdraft caused by wake surfing which stirs up buried pollutants and other substances on lake bottoms, and can cause and/or exacerbate the threat of invasive plant growth and algae blooms. Distance restrictions without depth restrictions ignore the key environmental threat of wake surfing, especially on shallower lakes.
- ***Bans Eliminate Enforcement Concerns.*** The Draft Study should also explain that bans on wake surfing would eliminate the very real practical concerns about enforcing buffer zones and distance and depth restrictions. This is an especially important point to also make in the section on enforcement. If towns are concerned they do not have the technology and resources to enforce buffer zones, depth limits, time of day restrictions and other rules, the Draft Study should note that these towns may wish to consider banning the activity. Waramaug is home to three public beaches including Kent State Park, which had more than 27,000 visitors in 2025, according to our interview with the park superintendent. The Lake Waramaug Authority is tasked with safety on the Lake, but the town budgets can sustain only a single patrol boat working just a handful of shifts throughout the summer. The primary task for the lake patrol is the personal safety of these visitors. For this reason, a prohibition on wake surfing is a far more economical, practical and effective solution to the environmental and safety threats of wake surfing.
- ***Terra Vigilis Reports should be Discussed and Included.*** The Draft Study should include and discuss the findings of the Terra Vigilis reports commissioned by the Towns of Washington, Warren and Kent and by the Lake Waramaug Conservancy and performed on Lake Waramaug. The Towns and the Conservancy engaged Terra Vigilis, a reknowned environmental science consultancy, to answer questions about the impact of wake

surfing on Waramaug, a natural lake whose communities have made great sacrifices to reduce nutrient pollution and restore water quality. Terra Vigilis used accepted standard scientific methods to measure wave impact, propeller downwash, and phosphate levels. *These are the only studies ever done on wake surfing in Connecticut and they are therefore highly relevant to the central subject of the Draft Study and should not be omitted.* The science underpinning the Terra Vigilis studies is solid and widely cited, despite efforts by wake surf advocates and their paid consultants to discredit the work. Studies done on Lake Beulah in Wisconsin in 2025 are consistent with the Terra Vigilis findings on Lake Waramaug. We have attached a response prepared by Terra Vigilis to some of the wake surfer proponents' criticisms of their work. We of course have no objection to including any valid criticisms or alleged shortcomings of the Terra Vigilis work, but it is inexplicable to omit entirely a discussion of the careful work of this objective, recognized and respected scientific consultant. The fact that their reports were commissioned by the elected officials of the three relevant towns (Kent, Washington and Warren) makes their work even more pertinent.

- ***Public Access Means Access for All Lake Users.*** The Draft Study correctly recognizes that DEEP's responsibility is to ensure public access to waters and to protect our shared natural resources. Wake surfing is uniquely disruptive in public waters because it displaces large numbers of paddlers, swimmers, anglers, and small boats. The Draft Study should make clear that public access is not advanced by allowing one high-impact activity to crowd out all others; it is advanced when the greatest number of users can safely enjoy the lake.
- ***The Draft Report Should Mention the Very Significant Water Safety Issues.*** While water safety is concededly not within the central jurisdiction of DEEP, any report addressing the issue of wake surfing must acknowledge at a very minimum the very significant demonstrable safety issues to lake users of wake surfing. The reports of the wake surf advocates' own hired consultant, Water Environmental Consultants, with respect to two lakes in Georgia, unequivocally demonstrate the significant safety concerns to swimmers, kayakers, canoers, rowers, paddle boarders and other lake users caused by the enormous artificially enhanced waves created by wake surfing. This elephant in the room should not be ignored despite the fact that DEEP's principal focus is on environmental issues.
- ***The Draft Report Should Clarify that if a Lake is Not Suitable, Wake Surfing Should be Prohibited.*** The burden should not fall on local communities to prove that wake surfing should be restricted when a lake is patently unsuitable for the sport. Safe and environmentally responsible wake surfing requires multiple conditions to be met at the same time — sufficient distance from shore, watercraft, swimmers and structures, sufficient depth, adequate operating width, compatibility with other lake uses, manageable invasive species risk, and enforceable boundaries. The Draft Study should make clear that if a lake cannot identify and map a practical wake surfing zone satisfying these criteria, no such zone should be presumed to exist.

- ***The Draft Study Should Address Cumulative Impact of Multiple Passes and Multiple Boats.*** In real life, wake surfing means multiple boats making repeated passes over a confined path on multiple peak summer days. On Waramaug, we estimate we had more than 40 wake surf boats in residence. More than 60 people responded to a town survey stating that they wake surf. And indeed, every nice summer day, the lake was filled with wake surfers. The Draft Study's discussion of sediment resuspension, water column mixing, phosphorus release, and persistent sediment plumes are all single-pass comparisons, vastly understating the real-world risk.
- ***The Economic Impact Discussion Should Include the Costs that Wake Surfing Shifts to the Public.*** The Draft Study discusses the economic benefits of boating and outdoor recreation, but it should also recognize the costs borne by municipalities, lake authorities, shoreline owners, anglers, swimmers, and the broader public — including shoreline repair, dock damage, lake patrol and enforcement, signage and monitoring, water-quality treatment, algaecide use, potential beach closures, loss of quiet-water recreation, and impairment of fisheries and habitat. Where a private recreational activity increases the probability or severity of these costs, those costs should not be treated as incidental. They are part of the true economic footprint of wake surfing on Connecticut's inland lakes.
- ***The Draft Report Should Mention the Unsolvable Problem of the Inability to Inspect the Ballast Tanks of Wake Boats for Invasive Plants.*** A unique danger presented to Connecticut's lakes by wake boats is the fact that they operate through the use of ballast tanks that fill with lake water and then eject that water back into the lake. As a result, these tanks can carry invasive species from other lakes into a lake, greatly increasing the threat of spreading invasive species throughout Connecticut's lakes. We do not need to discuss the obvious long-term threats raised by the spread of hydrilla and other invasive species. To our knowledge, there is no practical solution to this very important problem—another reason why wake surfing presents deeply problematic issues for Connecticut's lakes.

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We are deeply grateful for your attention to other issues raised by wake surfing including the possible degradation of the state's fisheries, wildlife conservation and efforts to stem blue-green algae outbreaks. We are not experts in these sciences so we leave commentary to other groups who have been working hand in hand with you for decades on these vital concerns.

Sincerely,

Bruce Birenboim

Kelly Williams

Co-chairs, *on behalf of*:

Protect Lake Waramaug: Coalition to Ban Wake Surfing Association

www.protectlakewaramaug.org

main@protectlakewaramaug.org



Terra Vigilis Environmental Services Group

20 April 2026

This statement is prepared in response to materials sent to Terra Vigilis Environmental Services (TVES) by Mr. Paul Herzan. Paul is a resident of the Lake Waramaug, CT community and has been active in support of efforts to protect the waters of Lake Waramaug.

The “**Terra Vigilis 2024 Lake Waramaug Study, Critical Flaws**” document sent to us is a prepared statement authored by law firm representing the Water Sports Industry Association (WSIA). This document is a 1-page summary of alleged flaws to the 2023-2024, 3-phase projects undertaken at Lake Waramaug. The issues noted include the following: The work was not published or peer reviewed. The work “lacks rigor” and fails to support its conclusions with evidence.

TVES offers the following in response to this lobbying effort.

- 1) The contracted project was not designed for publication, rather it was a study to address concerns identified in a community survey of approximately 3,400 riparian owners and lake community residents. These concerns centered upon lake impacts from large displacement Wake Boat impacts in addition to other boater safety and lake environmental related issues.
- 2) A 3-phase project of this sort (community survey, surface and subsurface wave energy impacts) would not have been peer reviewed since a review process occurs when a study is submitted for publication to a refereed journal.
- 3) The phase 2-3 portions of the project provided final reports which included relevant literature review (other comparable wave impact studies), statement of purpose, description of methodologies, summary of findings and conclusions for consideration by the municipalities surrounding Lake Waramaug (Kent, Washington and Warren, CT). This is a standard format studies of this complexity.
- 4) Measurements of wave heights and wave propagation distances were gathered with high resolution sUAS (drone) aerial cameras and careful video analysis integrated with vertically mounted standard survey measures. This methodology is not susceptible to errors of capacitive or pressure sensor systems. All imagery captured was time-date stamped. (Explained in the methodology sections)
- 5) Measurements of comparative subsurface large wave displacement energy and related pressure forces was accomplished with pole mounted cameras on fixtures placed at staggered distances from surface to the bottom area of Lake Waramaug. These lake areas

were selected to visually display (both still shots and video) movement of water and sediment disturbance. Both baseline and comparative measures of wave energy were obtained for vessels in common use on Lake Waramaug including Wake Boats in surf mode, water ski boats, and pontoon cruising boats. The speeds for each class of vessel were selected based on typical operational speeds in actual use. This methodology was not designed for quantitative data collection, rather for visual display to reflect subsurface events. (Also explained in the methodology section)

- 6) Wave energy computations were based upon a common physics-based of wave energy (2x wave height is equal to 4x wave energy). This measurement is often used in wave physics studies reported in the literature. (Also explained in the methodology section)
- 7) The unanticipated finding of increased phosphorous levels at depth was appropriately described as a finding not included in the scope or design of the project and warranting additional investigation. This is a standard convention in science projects of this sort.

TVES has no interest in a contentious and recurring process of critical “nit-picking” with an unknown source. Our work stands on its obvious merit and the ease with which readers of the material and review of images can confirm what they see with their own eyes. We are hopeful this response is of help to your team.

Respectfully,

Timothy E. Tyre, PhD

Charles Luebke, PE

From: [Rogers Lake Authority](#)
To: [DEEP Boating](#)
Cc: [jenell65@hotmail.com](#); [tphillips@kbebuilding.com](#); [Hawkins Joel <jmh17931804@gmail.com>](#); [candace fuchs; Dick Smith](#)
Subject: Wake Boat & Wakesurf Study
Date: Friday, April 10, 2026 2:46:10 PM
Attachments: [Rogers Lake Authority response on wake boats for April 2026.pdf](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

April 10, 2026

Re: Comments on Wake Boat & Wakesurf Study

The Rogers Lake Authority (RLA) would like to provide the following response to the Connecticut Department of Energy & Environmental Protection's Draft Wakeboat and Wakesurf Study ("Study") dated March 3, 2026

The RLA is an authority authorized by the Town of Old Lyme and the Town of Lyme to promote boating safety on the lake and protect the lake's ecology. Rogers Lake is about 260 acres in size and is shaped somewhat in the form of an "L". Due to the size and shape of the lake, local ordinances require boats at speeds greater than 5 mph to operate in a counterclockwise direction, and engine horsepower is limited to 135 hp or less.

We submitted comments to the original request for information, and we affirm our conclusions that DEEP consider banning wake boat operations on lakes consisting of less than 700 acres, within 600 feet of a shoreline, or in waters less than 20 feet deep for the reasons mentioned in our letter (attached).

In the Study, DEEP addressed the three common management techniques used in other jurisdictions to address wakesurfing impacts and provided suggested limits:

1. Distance restrictions from shore and structures to reduce shoreline erosion, protect nearshore habitats and infrastructure, and minimize conflicts with other users. The Study suggests a limit of 200 feet to be consistent with PWC while acknowledging the required distance may be much greater.

2. Minimum water depth restrictions to protect lakebeds, aquatic vegetation, water quality, and fish habitat. The Study suggests a minimum of 10 to 15 feet is

required but that this limit would be difficult to enforce.

3. Prohibitions on small water bodies, where limited space increases the likelihood of environmental harm, safety concerns, and user conflicts. The Study suggests a limit of 100 acres.

We feel that if DEEP continues to consider the above limits that the limits are not applied individually but as a combined test for the safe use of wake boats. Thus, the usable size of the lake, defined as the area of the lake deeper than 20 feet and greater than 400 feet wide, should be restricted to being at least 100 contiguous acres.

DEEP already has the data to make a combine test as it maintains a list of Lake Bathymetry Maps for Connecticut that show the lake size in acres, distances between shores and depths. (A copy of the list is attached.) As an example, **Rogers Lake is 260 acres in size but has only 68 acres of surface where the depth is greater than 20 feet.** The size of the lake is further reduced if you consider areas needed to be greater than 400 feet wide.

The Study notes the enforcement difficulties with depth restrictions and distances from shore and the confusion of wake sport zone mapping. An analysis of the bathymetry maps would reveal lakes with usable surface area of greater than 100 acres, depth over 20 feet and are at least 400 feet wide.

The Study has acknowledged the harm wakeboats can cause in shallow waters and/or to close to shore. DEEP has the information to calculate which Connecticut lakes can safely support wake boat operation and which lakes cannot. We strongly urge them to do so.

Regards

Mark Hastings

Co-Chair

Rogers Lake Authority

Rogers Lake Authority
Old Lyme Town Hall
52 Lyme St
Old Lyme, CT 06371
RogersLakeAuthority@oldlyme-ct.gov

April 10, 2026

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Regards



Mark Hastings

Co-Chair

Rogers Lake Authority

From: [Sam Romano](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 1:48:47 PM
Attachments: [C2 signature signature-logos_12c8c004-c036-4c41-994d-0ac5031e0ada.png](#)
[NMMA DEEP Comments 4.30.pdf](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Good Afternoon,

We appreciate the opportunity to submit comments, please find ours attached.

If you have any issues accessing them, please let me know.

Thank you,
Sam



National Marine
Manufacturers Association



DISCOVER
BOATING

SAM ROMANO

Manager, Northeast Government Relations

o 202.737.9764 m 978.476.9594

e sromano@nmma.org

Commissioner Katie Dykes
Connecticut Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106

Re: Public Comments on DEEP's Draft Wake Boat & Wakesurf Study

Dear Commissioner Dykes:

On behalf of the National Marine Manufacturers Association (NMMA), we appreciate the opportunity to submit these comments in response to the Department of Energy & Environmental Protection (DEEP)'s Draft Wake Boat & Wakesurf literature review study.

NMMA represents the U.S. recreational boating industry, which includes nearly 1,300 businesses that manufacture recreational boats, marine engines and accessories. The industry contributes \$230 billion annually to the national economy and supports more than 812,000 American jobs across 36,000 businesses. In Connecticut, recreational boating generates \$3.6 billion in annual economic impact, supporting over 13,000 jobs across more than 600 businesses.

Connecticut can protect environmental resources while preserving public access; these objectives are not mutually exclusive. Policy decisions should be grounded in disciplined analysis and enforceable standards rather than precautionary assumptions not fully supported by the record. [1]

NMMA strongly urges DEEP to revise the draft to further reflect a disciplined and practical analytical approach that emphasizes practical, measurable tools, such as distance, operator responsibility, and effective enforcement, while ensuring that policy conclusions remain closely aligned with the strength and scope of the underlying science.

DEEP's draft conveys a high degree of certainty and, in part, relies on material that has been the subject of methodological debate. As such, it would benefit from closer alignment with the level of practical confidence required for sound policymaking.

1. Strength of Underlying Evidence

The most significant concern in the draft is its treatment of the Saint Anthony Falls Laboratory (SAFL) study and similar restrictive narratives built around it. The study cannot bear the policy weight DEEP places on it. Professor William Banholzer's testimony explains why: the central scientific error is improper benchmarking. In hydrodynamics, vessels must be compared under valid, like-for-like operating conditions. Studies used to justify 500-foot setbacks compare wakesurfing operations at roughly 10 to 11 mph to conventional boats operating at 20 to 30 mph. That does not provide a sufficiently robust scientific basis for

legislation and should be reconsidered in light of its methodological limitations. The comparison is not well matched, and as a result, it is likely to produce a distorted or unreliable policy inference if relied upon in its existing form. [2]

Professor Banholzer's critique is reinforced by Endicott Fay's technical review. Fay explains that the SAFL work tested wake boats at full load and maximum trim to maximize wake and wave energy, while comparison boats were lightly loaded and run at unrealistically slow speeds. Fay also notes that popular boat types such as pontoons were excluded, that the study relied on a misleading comparison metric, and that it lacked control data sufficient to account for natural variation caused by wind and rain. These oversights are critical methodological limitations that must be carefully recognized. **Policy recommendations that rely exclusively on the SAFL framework without explicitly recognizing its methodological limitations risks overstating the strength of the underlying evidence and may be better understood as a policy-oriented interpretation rather than a fully science-validated conclusion.** [3]

DEEP's own draft concedes that benchmark selection matters. It acknowledges that studies benchmarking wakesurfing against other motorized uses are most relevant where the policy objective is to maintain conditions comparable to traditional motorized recreation, and that "natural condition" benchmarks are only appropriate if policymakers intend to pursue a broader non-motorized management goal. That concession matters. Accordingly, natural-condition comparisons should not be used as an indirect basis for distinguishing wakesurfing in a regulatory context. [4]

2. Additional scientific studies, technical reports, and data sources DEEP should review

DEEP should give substantially more weight to materials that test the issue under valid hydrodynamic assumptions.

First, DEEP should treat Professor Banholzer's analysis as central to the benchmarking question. His testimony explains that the science supports a 200-foot setback and that more extreme setbacks are not grounded in valid hydrodynamic comparison. He further notes that the MacFarlane work is especially important because it compares recreational craft at the same operating speeds used by wake boats. [2]

Second, DEEP should rely more heavily on MacFarlane's methodology. MacFarlane recommends setting a suitable benchmark based on typical ski boats and runabouts operating at commonly used watersports speeds, limiting analysis to variables representative of intended vessel operations, and comparing the height and energy of the maximum wave rather than relying on oversimplified single-point comparisons. He also

emphasizes that many small-craft wake studies in the literature are of little use because of poor methodology, inconsistency, and over-simplification.[5]

Third, DEEP should engage more directly with Fay's critique of SAFL. Fay's review demonstrates that the SAFL study should not be used as the basis for public policy because its methodology exaggerated wakeboat impacts and failed to test representative real-world recreational boating conditions. That critique goes directly to the credibility of the most restrictive setback proposals.[3]

Fourth, DEEP should more fully engage with Daeger. Daeger found nutrient resuspension after wakeboat operation in 5 feet of water, but no resuspension by any watercraft in 10 to 15 feet of water. Just as important, Daeger found that impacts varied by bottom substrate, macrophyte assemblage, watercraft type, speed, and local recreation style. The study is most appropriately interpreted as supporting practical, operations-based management approaches, rather than broader narratives that treat wakesurfing as uniquely harmful in all circumstances, irrespective of operating conditions. [6]

Fifth, DEEP should more accurately use Goudey and Girod. Their work shows that wake energy diminishes rapidly with distance because of breaking, decomposition into multiple smaller waves, and bottom friction. In shallow water, total wake energy from wakesurfing dropped by 65% over the first 110 feet of offset, with a further 20% reduction over the next 100 feet. They also explain that shoreline significance depends on wave energy and shoreline condition, and that persistent wind waves may be a more important source of shoreline impact in many settings.[7]

Finally, DEEP should review the National Association of State Boating Law Administrators (NASBLA) recommendations for towed watersports as an example of a practical, enforceable framework. NASBLA's recommendation includes a 200-foot towed water sports restriction from shoreline, docks, and in-water fixed objects, along with an observer-or-mirror requirement, life jacket requirement, and operator-responsibility provisions. That is exactly the kind of usable regulatory model Connecticut should be studying: clear, enforceable, and protective without being punitive or speculative.[8]

3. Additional examples of management approaches from other states DEEP should include or evaluate

DEEP should place more emphasis on statewide models that are practical and enforceable, rather than giving outsized influence to restrictive outliers. DEEP itself acknowledges that other states use a range of distance restrictions, from 100 to 500 feet, and that distance-based rules are the most common and generally the easiest to enforce because they align with boating law frameworks already familiar to officers and the

public.[4] That reality cuts against overcomplicated or highly restrictive approaches that are difficult to justify scientifically and difficult to administer practically.

The most useful examples are the states and model frameworks that focus on measurable operating rules. NASBLA's model act is one such example. So are state approaches that pair setbacks with operator responsibility, observer or mirror requirements, life jacket requirements, and noise/courtesy rules. Those tools are concrete. They protect other users, protect shorelines, and give enforcement officers something they can actually observe and apply on the water.[8]

3. Topics or impacts related to wakesurfing that are not addressed in the draft

The draft does not adequately distinguish between valid environmental management and fear-driven extrapolation. One omission is with the weakness of the SAFL-centered case for very large setbacks. DEEP's shoreline section cites studies reporting very large increases in wave energy at short standoff distances and then moves quickly toward broad cautionary conclusions. But a large percentage increase over cruising mode at 100 feet does not answer the policy question Connecticut faces. If the underlying comparison is hydrodynamically mismatched, then the output is not reliable enough to justify far-reaching restrictions.[9]

A further limitation is the insufficient emphasis on practical implementation. DEEP would benefit from adopting a more disciplined framework that protects environmental resources while also preserving reasonable access. The record, as a whole, is more supportive of practical and enforceable regulatory approaches. It is less supportive of outcomes driven primarily by worst-case interpretations that could lead to restrictions targeting a single recreational activity without a comparably rigorous evidentiary basis.[1][4][8]

Conclusion

NMMA strongly urges DEEP to revise the draft to further reflect a disciplined and practical analytical approach. A balanced reading of the record suggests that Connecticut can both protect environmental resources and preserve access through clear, statewide measures grounded in hydrodynamic comparison and real-world enforceability. This should include placing less reliance on benchmarking approaches that have been subject to methodological questions and considering the Saint Anthony Falls study within the broader body of available evidence rather than as a primary basis for more restrictive measures. It would also be helpful to emphasize practical, measurable tools, such as distance, operator responsibility, and effective enforcement, while ensuring that policy conclusions remain closely aligned with the strength and scope of the underlying science.

Respectfully submitted,

Sam Romano
Manager, Northeast Government Relations
National Marine Manufacturers Association

Footnotes

[1] Connecticut DEEP, *Draft Wake Boat & Wakesurf Study Final*, pp. 46–47 (acknowledging that distance restrictions are the most common state approach, that states vary widely from 100–500 feet, and that benchmark selection depends on policy objectives).

[2] William Banholzer, *Testimony of William Banholzer: Scientific Analysis of Wake Boat Setbacks (Bill 1033 vs. Bill 1024)*, unpaginated uploaded testimony (arguing that the science supports a 200-foot setback, that the Saint Anthony Falls study is not properly peer-reviewed, and that 500-foot arguments rely on invalid hydrodynamic benchmarking).

[3] Endicott Fay, *Critical Review of SAFL Project Report No. 611*, pp. 3–4, 7 (stating that the SAFL study should not be used as a basis for public policy; criticizing full-load/max-trim testing of wake boats, unrealistic comparison conditions, omission of common vessel types, lack of controls for wind/rain, and misuse of benchmarking metrics).

[4] Connecticut DEEP, *Draft Wake Boat & Wakesurf Study Final*, pp. 46–47 (stating that studies benchmarked to other motorized uses are most applicable where policymakers seek conditions comparable to traditional motorized use, while natural-condition benchmarks imply a broader motorized-use policy).

[5] Gregor MacFarlane, *Wave Wake Study: HB4099 Motorboat Working Group* (2018), pp. 6–7 (explaining that rational assessment requires a suitable benchmark, representative variables, and comparison of maximum wave height and energy; warning that much small-craft wake literature is methodologically weak or over-simplified).

[6] Adrienne Daeger et al., *Impacts on Nutrient and Sediment Resuspension by Various Watercraft Across Multiple Substrates, Depths, and Operating Speeds in Indiana's Largest Natural Lake*, 130 *Proceedings of the Indiana Academy of Science* 112, 113–114, 121 (2022) (finding nutrient resuspension after wake-boat operation in 5 feet of water, no resuspension by any watercraft in 10–15 feet, and recommending boating guidance based on speed, depth, substrate, macrophytes, watercraft type, and local recreation style).

[7] Clifford A. Goudey & Lewis G. Girod, *Characterization of Wake-Sport Wakes and Their Potential Impact on Shorelines*, pp. iii, 18, 25 (2015) (explaining rapid wake dissipation through breaking, decomposition, and bottom friction; reporting a 65% drop in shallow-water wakesurf energy over the first 110 feet and another 20% over the next 100 feet; noting that persistent wind waves may be more significant than boat wakes in many settings).

[8] National Association of State Boating Law Administrators, *NASBLA Model Act for Safe Practices for Boat-Towed Watersports*, pp. 1–2, §§ 3, 6 (adopted Sept. 28, 2021) (defining wakesurfing and including a 200-foot restriction from shoreline, docks, and in-water fixed objects, plus observer-or-mirror, life jacket, and operator-responsibility provisions).

[9] Connecticut DEEP, *Draft Wake Boat & Wakesurf Study Final*, p. 33 (relying on short-distance wave-energy comparisons and stating that negative effects diminish as operation moves farther from shore).

[10] Endicott Fay, *Ensuring Fair and Science-Based Access for All Recreational Boaters*, pp. 1–2 (stating that all recreational boats can stir sediment in shallow water, that effects dissipate quickly, and that wind, rain, and watershed runoff are dominant drivers of turbidity and nutrient loading).

Bibliography

Banholzer, William. *Testimony of William Banholzer: Scientific Analysis of Wake Boat Setbacks (Bill 1033 vs. Bill 1024)*.

Connecticut Department of Energy & Environmental Protection. *Draft Wake Boat & Wakesurf Study Final*. March 3, 2026.

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From: [Debby](#)
To: [DEEP Boating](#)
Subject: "Wake Boat & Wakesurf Study"
Date: Thursday, April 30, 2026 3:25:30 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

The comments below are in regards to the 'Draft Wake Boat & Wakesurf Study' dated March 3, 2026 by State of Connecticut Department of Energy & Environmental Protection.

I am a lakefront homeowner on Coventry Lake and an avid kayaker and stand-up paddle boarder.

I see the impact of more erosion on my shoreline since the inception of wakesurf boating on Coventry Lake.

I experience the challenges of paddling when wakesurf boats are active on the Coventry Lake.

I am concerned about what I have learned about the downward thrust from the plane of the wakesurf boat disturbing the aquatic vegetation which is so beneficial to the aquatic wildlife living in and on the water. Will the lake waters become lifeless?

I am concerned about the warming waters from climate change then combining with the changes in the water column from wakesurf boats bringing cyanobacteria and nutrients upward resulting in the possibility of more frequent toxic cyanobacteria blooms occurring. Toxic blooms that shut down recreational usage of lakes need to be avoided. Climate change is harder to control but making sure wakesurf boats do not add to that battle needs to be regulated.

I have read about the difficulty of cleaning the ballast tanks of the wakesurf boats. Will these tanks bring in unwanted invasive aquatic species such as hydrilla? Coventry Lake has been dealing with hydrilla (not the CT River strain) for 10 years. The cost has been over \$100K a year. CT DEEP must stop hitchhikers whether on a trailer or in a ballast tank.

I have been following and asking questions about the impact that wakesurf boats have on lakes in Connecticut. I submitted comments last October to CT DEEP as to what I thought should be in regulations to protect our lakes moving forward. The March 3, 2026 study provided good information.

The next step to strengthen the current study would be the inclusion of documented tools and regulations to assist authorities. These tools and regulations need to be understandable by the boating community as well as manageable and enforceable by towns and CT DEEP. Most importantly they need to PROTECT OUR LAKES from any further harm.

The study need to incorporate:

1. Provide tools and regulations on best practices or wakesurf boats.
2. Define the width, depth, and acreage of CT lakes which would be suitable for wakesurf boats without causing environmental harm.
3. Define which CT lakes meet the standard of allowing wakesurf boats and create a regulation of where they can be used.
4. Define what protocols are needed for wakesurf boats to share a water body with other types of vessels safely.
5. Create a tool to assist towns in regulating the cleaning of ballast systems on wakesurf boats to avoid the infiltration of aquatic invasive species from the ballast tanks into the lakes water.

Make Connecticut a leader in best practices concerning the health of our lake waters and making safety a key component for the enjoyment for all users today and into the future. Wakesurf boating requires strong tools and strong regulations now.

Deborah Zeppa
93 W. Shore Dr.
Coventry, CT 06238
H: 860 742 7169

From: [Hilary Becker](#)
To: [DEEP Boating](#)
Subject: Against Wake Surfing Ban!
Date: Friday, May 1, 2026 11:30:39 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Please don't ban wakesurfing! As a parent, I love that my kids are exercising and engaging in wholesome activities on the lake.

This will lower the value of lakefront properties and increase the risk of more accidents from higher speed activities such as water skiing since wakesurfing is very safe.

--

Thank You,

Hilary H. Becker, CPM
www.BeckerAppraisal.com
www.BeckerRealEstate.com
516-887-0677 x-303
516-887-9354 fax

Confidentiality Note: The contents of this e-mail message and its attachments, if any, are intended solely for the addressee(s) hereof. If you are not the named addressee, or if you believe this message has been addressed to you in error, you are requested not to read, disclose, reproduce, distribute, disseminate or otherwise use this information. Delivery of this message to any person other than the intended recipient(s) is not intended in any way to waive confidentiality. If you have received this transmission in error, please alert the sender by reply e-mail. It is also requested that you immediately delete this message and its attachments, if any.

The Lord bless you and keep you:
The Lord make His face shine upon you, and be gracious unto you:
The Lord lift up His countenance upon you, and give you peace.
Numbers 6: 24-26

From: [Benjamin Schwartz](#)
To: [DEEP Boating](#)
Subject: Collusion involved in Wake Boat & Wakesurf Study
Date: Monday, April 6, 2026 9:33:05 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. The way the ban was passed on Lake Waramaug is deeply concerning especially given the collusion between local officials and community leaders. It was a dishonest process that should never have reached the point it did. Simply study the relationship between Jim Brinton and Edgar Berner as a prime example.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees. There was significant effort to suppress the alternative solution presented by the community because of the collusion mentioned.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Best,
Ben

Benjamin Schwartz
+16174130995
ben.schwartz5@gmail.com

From: [Bryan & Grace Southergill](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wake Surf Study
Date: Thursday, April 30, 2026 10:30:15 AM
Importance: High

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Dear DEEP,

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report,
Grace

Grace Southergill
Highland Lake
Winchester, CT

From: [Bryan Southergill](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wake Surf Study
Date: Thursday, April 30, 2026 10:27:00 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Dear DEEP,

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report,

Bryan

Bryan Southergill

Highland Lake

Winchester, CT

From: [Ashleigh Donovan](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wake Surf Study
Date: Tuesday, April 7, 2026 7:54:24 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

I live on the shores of Lake Waramaug and share every incentive to keep the lake healthy for current users and future generations. This is not a natural beauty in my town that I visit a few times a year, it is literally my front yard.

Thank you for listening and for the hard work that went into this report.

Ashleigh Donovan
New Preston

From: [Nancy Bordick](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wake Surf Study
Date: Thursday, April 30, 2026 12:13:12 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To whom it may concern:

I'd like to thank the DEEP for taking the time to study wake surfing and considering this issue. I am a resident of East Haddam and a wake surfer. Wake surfing is a sport that I enjoy with my family and friends. It is a sport that we enjoy safely and respectfully accounting for our neighbors and other boaters. This sport gives access to watersports because of the low stress on the body and ease of learning. As there are very few wake surfers in the state and country, I appreciate your efforts to assure that the voice of the minority is not overshadowed.

I have reviewed the draft study and have included my comments and suggestions below.

1. Assessment on magnitude of sport. There are limited numbers of wake surfers in the state. This should be factored into the analysis.
2. Definition of wakeboarding (p7)- Wake boarding does not require enhanced wake and can be performed behind any powerboat. Wake boarding is often conducted without enhanced wake. The definitions should strike the language "Wake boarders cross back and forth and use the enhanced wake to perform jumps...." or at a minimum define wake boarding to occur with both no enhancement or enhancement.
3. Definition of propeller wash (p7). In the last sentence the word "significantly" should be struck from the language. This is a leading term and is not necessary in a definition which includes data.
4. Definition of propeller wash (p7). In Wake boats, the bow-up posture is typically opposed by systems (eg NMCS in the Nautique) that will elevate the stern and lower the bow to be in a more neutral position thus adjusting the propeller wash to be closer to horizontal the surface of the water. This technology needs to be included in the assessment of the impacts of the propeller. In addition, in the definition, findings of the impacts of propeller wash should be referenced in the definition that after specific depths (eg. 20 ft) impact is negligible.
5. Municipal Ordinance Authority (p12)- that last paragraphs should reference the rulings the DEEP has made in the bodies of water referenced. Specifically, the DEEP has chosen to neither approve or disapprove of the ordinance submitted from East Haddam on Bashan Lake. (I request the DEEP commissioner disapprove of the East Haddam ordinance based on the results of this study and in line with the Commissioners rights in CGS Ch 268 section 15-136)
6. Wake Boats: Mechanism of Impact (p 15), In the Marr study referenced in paragraph 2, the comparison is between two boats in different modes of operation. The study should be between a wake boat in plowing operation and a non-wake boat in plowing operations. This is an apples to oranges comparison which does not account for the impact of a non wake boat in plowing conditions. If the data is not available to support the comparison of boats in the same mode they research should be removed or caveated appropriately.
7. Wake Boats: Mechanism of Impact (p 15), in the Riesgraf study referenced in paragraph 4 (Bow and Stern Wave Velocities), larger boats should be removed from the DEEP study (eg. 34' yacht). These size vessels are not realistic or common for lakes in CT and they skew the data.
8. Wake Boats: Mechanism of Impact (p 15), in the Riesgraf study referenced in paragraph 4 (Transverse Waves), this study is comparing boats in two different configurations and does not include a comparison of impact between both boats in plowing conditions and both boats in planing. This is an important comparison as many non wake boats in plowing conditions have the same wave impact as a wake boat. (See comment 6)

9. Impacts to Water Quality - paragraph 2 (p20). The risk of algae growth will vary with the depth of the lake and water temperature. Depth should be added as a characteristic of risk of algae growth in this paragraph otherwise it leads the reader to a biased opinion. Paragraph 3 (p21), Mixing of the water column also occurs naturally in the spring and fall with changing seasons. This should be included as facts around how the ecology of lakes thrive. Thermoclines in lake naturally occur and keep lakes healthy. This paragraph and study implies only negative impacts. Interestingly some lakes have added mechanical devise to increase circulation from the bottom of the lake to improve lake ecology. This could lead you to believe there are positive results from mixing the water column.

10. Impacts to Water Quality- paragraph 5 (p21)- Include that fishing boats (in addition to runabouts and inboards) are capable of impacting water quality in 5 ft of water. Fishing boats are the largest volume of boats in less than 5 ft of water and should be specifically included. In general, the study is missing the impact of fishing boats on lake bottoms and the studies that are referenced do not account for impact from these boats on lake ecology. Instead the studies focus on placing sole risk on lake ecology to the wake boat. Request the addition of impact of other boats on lake ecology to give the reader a balanced understanding of risk factors.

11. Impacts to Water Quality- paragraph 6 (p21)- Second sentence should be modified to say wake boats in the proper mode and speed can operate in shallow waters with no impact to the lake ecology.

12. Impacts on Fisheries Resources (p22) Aquatic Vegetation excerpt from Francis (paragraph 4)- This study is about power boats in general. Inclusion of this research implies that the impact on fisheries is related to wake boats. This is a study on wakeboats, there is no conclusion in this research specific to wake boats. The language ('significantly') in the last sentence is unsupported by data. This research should be removed.

13. Impacts on Fisheries Resources (p23) Resuspension of Benthic Sediments excerpt from Francis (paragraph 1)- This study is about power boats in general. Inclusion of this research implies that the impact on fisheries is related to wake boats. This is a study on wakeboats, there is no conclusion in this research specific to wake boats. This research should be removed or characterized with other boats (eg. Fishing boats) that have larger impact on lakebeds

14. Impacts on Fisheries Resources (p24) Shoreline Erosion (paragraph 1)- This study, states that shoreline armoring is being added because of wake boats ('is often present on lakes with wake boats'). Shoreline armoring/ seawalls have been in place since people have lived on lakes. To suggest that wakeboats are the cause of increased shoreline armoring is a gross assumption and misleading. I agree that shoreline armoring/ seawalls, etc, will reflect wave energy, AND a homeowners decision to add seawalls will be a result of a multitude of reasons from boating, environment (wind) to aesthetics. I request this quote from the study be removed and a summary of wave energy be added. At a minimum remove the section 'of often present on lakes with wake boats'.

15. Potential Direct effects on Sportfish (p24)- All boats at increased velocities will impact spawning grounds of fish. Also, on wake boats, the other research shows the impact on the bottom of the lake bed is minimal >10 feet. This section doesn't reference depth. The boat travel path of the wake boat in an enhanced wake mode will at a minimum >100 ft from the shoreline and more likely >200 ft from the shoreline, which will be unlikely to impact spawning grounds. Remove this section or state there is no increase risk from wake boats as compared to other power boats.

16. Potential Direct effects on Sportfish (p26)- The first sentence is incorrect and should be removed (In summary, based on a review of the available literature, there is strong evidence that wake boats are more impactful to the shoreline, lakebed, and water column than other recreational boats.). The research included is on powerboats, not wake boats. The summary needs to reflect the research included. The second sentence is a more appropriate summary of the section.

17. Implications for Aquatic Invasive Species (p29) - Based on the volume of fishing boats in CT and their movement across many bodies of water, the risk of AIS spreading is predominantly related to AIS is live wells and on trailers. While there is risk in ballast tanks, this is dwarfed by fishing boats. This risk should be appropriately characterized in the study. Without inclusion of the major risk, the reader is lead to believe that wake boats are the risk and should be targeted. Include a section on other high risk AIS contributors in the study.

18. Other Considerations (p48) - Paragraph 4. Per CT General Statute Ch 268 section 15-136, The commissioner

may disapprove any ordinance or part thereof that the commissioner finds to be arbitrary, unreasonable, unnecessarily restrictive, inimical to uniformity, duplicative of any state law or regulations or inconsistent with the policy of this part. In Paragraph 4, the study states that local laws vary widely based on specific geography, use patterns, or needs of the waterbody. Based on both statements above and the findings of this study, I request that the commissioner review all local ordinances on wake boats that have been submitted to the DEEP (eg. East Haddam ordinance to ban wake surfing and Lake Waramaug) and disapprove the ordinances as they are:

1. Inconsistent with the results of this study (DEEP Wake Boat & Wake Surf Study)
2. Are arbitrary, unreasonable and unnecessarily restrictive (CT General Statute Ch 268 Section 15-136)
3. and there are no features of the lake that suggest these lakes have special features to require a restriction.

Thank you for taking the time to consider these comments and incorporating them into the final study. As stated in this letter, with regard to the ordinance in East Haddam on wake surfing, I request the commissioner take action to disapprove this ordinance as inconsistent with this study and the CT General Statutes.

Regards,
Nancy Bordick
Resident East Haddam

From: [John Waldron](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wake surf study
Date: Wednesday, April 22, 2026 8:13:09 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report

Anne & John Waldron
Warren, CT
Darien, CT

Sent from my iPad

From: [Henry Ingrassia](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Tuesday, April 7, 2026 9:03:14 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Henry Ingrassia, New Preston, Ct

From: [Jennifer M](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 10:57:55 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Jennifer Mackesy
Washington resident

From: [Jessica Ross](#)
To: [DEEP Boating](#)
Subject: Comment on draft wake boat & wakesurf study
Date: Monday, April 20, 2026 2:14:59 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Jessica Ross, Greenwich, CT

From: [Katherine J. Coyner](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 9:20:22 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Kathy Coyner, Winsted CT

From: [Beth Raboin](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 6:47:06 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern,

I am a Connecticut resident and wake surfer writing to thank DEEP for the thorough study regarding wake surfing on our state's lakes. This is an activity I enjoy with family and friends, and it is important to me that it is regulated fairly.

I appreciate that the study found wake surfing can be performed responsibly with appropriate rules, such as maintaining a set distance from the shore and ensuring adequate water depth. Because wake surfing occurs at slow speeds, I believe that responsible practice prevents harm to the environment and other lake users. I agree with DEEP's conclusion that bans are not justified.

Furthermore, I support the implementation of a single, statewide rule rather than a patchwork of local ordinances. As noted by EnCon Police, inconsistent local rules are difficult to follow and enforce. A uniform standard is more effective for environmental protection and is fairer to everyone using Connecticut's waterways.

I request that the final recommendations remain grounded in unbiased, peer-reviewed science. Some studies frequently cited by proponents of a ban, such as those by Terra Vigilis and Marr et al., reportedly contain methodological flaws and do not offer fair comparisons to other watercraft. I trust that DEEP will critically evaluate the evidence and ensure that flawed research does not influence the final outcome.

Thank you for your time and for the hard work that went into this report.

Best regards,

Beth Raboin Lachance
534 Wheelers Point
Winsted CT

--



Beth Raboin
CEO & Founder

Banner



C: (860) 471-1770

W: www.GMVA.com

From: [Katelyn Bailey](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 6:46:43 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly. I also am a believer that it brings family's and community to lakes and lake towns.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Katelyn Bailey, Winsted CT

From: [Alice Baldwin](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 6:28:04 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and safe boater, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I love watching my family and friends enjoy on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Be well,
Alice Baldwin
Darien, CT

From: [Eric](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 5:34:49 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Thank you,

Eric Richard

860-469-0635 call/text

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Winsted, CT 06098

Marinahighlandlake.com



From: [Henry Baldwin](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 3:59:01 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Henry Baldwin, Washington, CT

From: [Isabelle Mann](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 3:00:25 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Isabelle Mann, Waramaug

From: [Tyler Mackesy](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 29, 2026 11:12:00 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Best,
Tyler Mackesy (New Preston, CT)

From: [Lisa Stuart](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 29, 2026 5:05:15 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

My family has owned a house on Lake Waramaug for 17 years. I am a Connecticut resident, and all six members of my family love to wake surf. We even bought a wake surf boat.

I am very grateful to DEEP for taking the time to study this issue carefully, and I was happy to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report. Elisabeth Garratt Stuart

From: [Jennifer Godward](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 29, 2026 2:25:18 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Jennifer Godward
Washington, Connecticut

From: [Klheidt](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 29, 2026 2:16:32 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Kathy & Douglas Heidt, Greenwich CT

From: [Davidson Goldin](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 29, 2026 11:30:09 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I own a home in Connecticut and want to thank DEEP for taking the time to study carefully the issue of wake surfing on lakes. I was interested to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

As the experts, DEEP should be empowered to set a single clear statewide rule rather than leaving scientific issue requiring expertise to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Sincerely,
Davidson Goldin
85 Durtiss Road
Warren, CT 06777

From: [Linda Simmons](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 29, 2026 10:40:23 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: *please make sure the final recommendations are based on solid, unbiased science*. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Linda Simmons
owner of a cottage on Bashan Lake in East Haddam, CT (Wildwood
Association)
resident of Groton, CT 06340

From: [Sheila Harley Simonian](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 29, 2026 10:09:02 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Sheila Harley
Warren CT

Sheila Harley
Sharley@familycentral.info
646 202 3506
FamilyCentral.info

From: [Gerard Francis](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 29, 2026 9:13:16 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Subject: Comment on Draft Wake Boat & Wakesurf Study

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Gerard Francis
Washington, Connecticut

From: [Lake Waramaug Friends](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Tuesday, April 28, 2026 7:36:52 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Dear Commissioner Dykes and DEEP Staff:

On behalf of Lake Waramaug Friends for Common-Sense Regulation (“LWF”), we appreciate the opportunity to comment on DEEP’s Draft Wake Boat & Wakesurf Study and commend the Department for its thorough, balanced, and multidisciplinary analysis. When we submitted comments in October 2025, we urged DEEP to take precisely this approach—evaluating all relevant considerations together rather than in isolation. The draft report reflects that effort, and we are grateful for it

We are encouraged by the report’s central conclusion that the potential environmental risks associated with wake surfing can be effectively mitigated through maintaining adequate distance from shore and operating in sufficient water depth. As we previously argued, reasonable, evidence-based restrictions—not outright bans—are the appropriate regulatory response, and DEEP’s findings support that view.

LWF also appreciates the report’s recognition, informed by EnCon Police, that uniform statewide standards are the most practical approach for enforcement. As we have seen firsthand, town-by-town regulation produces arbitrary and inconsistent outcomes driven more by local politics than science. A patchwork of municipal ordinances also can create unintended environmental consequences as displaced boaters may move to unrestricted lakes, increasing the risk of spreading aquatic invasive species. Statewide standards minimize these potential harms.

Consistent with our prior proposal, we recommend a uniform minimum setback of 200 feet from shore and operation in at least 20 feet of water. We also support a minimum lake size of 100 acres for wake surfing. These standards meet or exceed those adopted in most other states, as well as DEEP’s finding that 10–15 feet of depth is sufficient to mitigate sediment resuspension.

We do, however, urge DEEP to apply greater scrutiny to certain studies cited in the draft report. As noted in our October 2025 comments, the Terra Vigilis Environmental Services Group report—commissioned by opponents of wake surfing on Lake Waramaug—is methodologically flawed and should not be relied upon for policymaking. Similar concerns apply to other cited studies, including Marr et al. and several self-published, non-peer-reviewed reports that lack reproducible methods,

proper calibration, and statistical rigor.

Many of these studies also share a fundamental analytical flaw: they compare wake boats operating at low speeds—when all boats produce their largest wakes—to ski boats traveling at high speeds on plane, when wakes are minimal. This apples-to-oranges comparison overstates the relative impact of wake boats. Moreover, by failing to compare wake surfing with other low-speed activities such as tubing or pleasure cruising, these studies arbitrarily focus on a single use and lack necessary context.

To the extent the draft report relies on such studies to support specific thresholds—particularly those exceeding what peer-reviewed evidence supports—we encourage DEEP to ground its conclusions in the strongest available science. Doing so will make the final recommendations more durable, defensible, and equitable.

DEEP has performed a valuable public service in undertaking this study, and LWF looks forward to continued engagement as the Department finalizes its recommendations. We remain confident that science-based, uniform statewide standards will best serve Connecticut's lakes, residents, and outdoor recreation economy.

Thank you for your ongoing consideration of this important issue.

Respectfully submitted,
Lake Waramaug Friends for Common-Sense Regulation

From: [Will Kosann](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 23, 2026 2:58:58 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Will Kosann, Warren, CT

From: [James Kosann](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 22, 2026 8:46:37 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

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One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

James Kosann
Arrow Point Road
Warren

From: [Peter Kosann](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 22, 2026 4:46:15 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Peter Kosann
Arrow Point Road
Warren

Peter Kosann / Managing Partner
A5mkManagement
[914-610-4954](tel:914-610-4954)

From: [Keith Angell](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 22, 2026 2:10:19 PM

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Dear Commissioner Dykes and DEEP Staff:

On behalf of Lake Waramaug Friends for Common-Sense Regulation ("LWF"), we write in response to DEEP's request for comment on its Draft Wake Boat & Wakesurf Study and to commend the Department for the thoroughness and care it brought to this undertaking. When we submitted comments in October 2025 urging DEEP to take up this issue, we hoped the Department would produce exactly this kind of balanced, multi-disciplinary analysis that weighs all angles of consideration together, rather than in isolation. The draft report delivers on that hope, and we are grateful for the effort that went into it.

LWF is particularly encouraged by the report's central conclusion that the potential environmental risks associated with wake surfing can be effectively mitigated by maintaining adequate distance from shore and operating in sufficient water depth. As we argued in our prior comments, reasonable evidence-based restrictions are the right answer; outright bans are not. DEEP's findings confirm that view.

We are equally pleased that the report includes EnCon Police's view that statewide, uniform standards are the most workable path forward from a law enforcement perspective. As we have seen firsthand, town-by-town regulation produces arbitrary and inconsistent outcomes driven more by local politics than by science. A patchwork of municipal ordinances also creates real environmental risks of its own, as boat owners displaced from restricted lakes trailer their boats to unrestricted ones, increasing the likelihood of transferring aquatic invasive species between water bodies. Statewide standards prevent these harms. We reaffirm our prior proposal: a minimum 200-foot setback from shore and operation in a minimum of 20 feet of water, applied uniformly across the state.

We do, however, ask that DEEP apply a more critical eye to certain studies that informed the draft report's analysis. In our October 2025 comments, we flagged the Terra Vigilis Environmental Services Group ("TV") report — commissioned by opponents of wake surfing on Lake Waramaug — as deeply flawed and an unreliable basis for policy. That concern extends more broadly to several other sources cited in the draft report.

A number of the studies relied upon by DEEP are self-published, non-peer-reviewed reports that lack reproducible methodology, instrument calibration, and basic statistical

rigor. This includes the Terra Vigilis study, Marr et al., and several others.

Many also share a fundamental analytical flaw: they compare wake boats operating at slow speed (where all boats generate their largest waves) against ski boats traveling at high speed on plane (where waves are minimal). This is an apples-to-oranges comparison that systematically overstates wake boat impacts. Where the draft report uses such studies to justify specific thresholds, such as depth restrictions beyond what peer-reviewed evidence supports, we ask DEEP to ensure those conclusions rest on the strongest available science. Doing so will make the Department's final recommendations more durable, more defensible, and more equitable.

DEEP has done Connecticut a genuine service by undertaking this study, and LWF looks forward to working with the Department as it finalizes its recommendations. We remain confident that science-based, uniform statewide standards will serve Connecticut's lakes, its residents, and its outdoor recreation economy well. Thank you for your continued attention to this important issue.

Respectfully submitted,
Keith Angell
Washington, CT
Lake Waramaug Friends for Common-Sense Regulation

--

Thank you,
Keith Angell, NACD.DC
President, LWF for Common Sense Regulations
Mobile: 508.308.0958



From: [William Kunin](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Monday, April 20, 2026 1:50:59 PM

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To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Will Kunin
Stamford, CT

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From: [Scott Stuart](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Monday, April 20, 2026 12:51:20 PM

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To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

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One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Scott Stuart
Warren, CT

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our clients, and all investors are advised to consult with their tax, accounting, or legal advisers regarding any potential investment.

From: [Garratt](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Sunday, April 19, 2026 8:23:43 PM

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To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Garratt Stuart - Warren, CT Resident

From: [Benjamin Ross](#)
To: [DEEP Boating](#)
Cc: [Jessica Ross](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Sunday, April 19, 2026 8:15:22 PM

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To Whom It May Concern,

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Best,
Benjamin and Jessie Ross
Warren, CT

From: [David Better](#)
To: [DEEP Boating](#)
Cc: [Liz](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 16, 2026 8:48:22 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

David and Liz Better
Greenwich and Warren, CT

David Better
(203) 561-6397
dwbetter@gmail.com

From: [Better, James](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Thursday, April 16, 2026 12:02:44 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Dear DEEP:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on Lake Waramaug, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways. A patchwork of regulations also will have adverse environmental consequences as boats are transported from one lake to another as wake surfers migrate to places where this activity is permitted thereby significantly increasing the risk of transferring invasive species like hydrilla from one lake to another.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have read many of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) that have serious methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

James Better
Warren, CT

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From: [Daniel Price](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Tuesday, April 14, 2026 3:39:16 PM

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To Whom It May Concern,

As a resident of Connecticut and an avid wake surfer, I appreciate the effort DEEP has put into thoroughly evaluating this issue. Wake surfing is something I regularly enjoy with family and friends on our lakes, so it's important to me that it is considered in a balanced and reasonable way.

I was encouraged to read that DEEP's findings indicate wake surfing can be conducted responsibly when appropriate guidelines are followed—particularly maintaining sufficient distance from shore and operating in proper water depth. This aligns with my own experience on the water. Because the activity occurs at relatively low speeds and can be practiced responsibly, I do not believe it poses harm to the environment or other lake users, and I agree that a full ban is unnecessary.

I also support the idea of establishing a consistent statewide standard rather than relying on a patchwork of local regulations. As noted by EnCon Police, varying rules from town to town can create confusion and enforcement challenges without improving outcomes. A clear, uniform policy would benefit both compliance and fairness for all who use Connecticut's waterways.

One request I would make is that the final recommendations rely on objective, well-supported science. There have been concerns raised about certain studies cited in support of bans, including Terra Vigilis and Marr et al., which may contain methodological shortcomings and do not always provide fair comparisons to other types of watercraft. I hope DEEP continues to evaluate all evidence carefully and bases its conclusions on sound research.

Thank you again for your time, consideration, and the work that has gone into this process.

Sincerely,

Daniel Price

Warren, CT

From: [Sally Mann](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Tuesday, April 14, 2026 3:19:23 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer. I want to express my sincere gratitude to DEEP for taking the time to thoroughly examine this matter. Wake surfing is an activity that I share with family and friends— and I find immense enjoyment in doing so on our state's lakes. Thus, I so appreciate your taking the time and thought to make sure its legislation has fair consideration.

I was pleased to find that DEEP's study concluded that wake surfing can be practiced responsibly with the appropriate rules in place, such as maintaining a reasonable distance from shore and ensuring adequate water depth. This aligns with my observations on the water. Wake surfing is conducted at low speeds, and when practiced responsibly, it does not harm the lake or other users. I firmly believe that bans are not justified, and I am glad DEEP agrees.

Furthermore, I support DEEP establishing a single, clear statewide rule rather than leaving it to individual towns to decide. As EnCon Police noted, inconsistent local ordinances create confusion, hinder compliance, and do not yield better outcomes for anyone. A unified, sensible standard is more beneficial for the environment, facilitates enforcement, and ensures fairness for all users of Connecticut's waterways.

I kindly request that the final recommendations be based on solid, unbiased scientific evidence. I have heard that some of the studies cited by those advocating for a ban on wake surfing, including Terra Vigilis and Marr et al., have significant methodological flaws and do not fairly compare wake boats to other watercraft. I trust that DEEP will critically evaluate the evidence and not allow flawed research to influence the outcome.

Thank you, thank you for your attention to this matter and for the diligent work that went into this report.

Sally Mann
Warren, CT

From: [Alexandra Mann](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Tuesday, April 14, 2026 10:59:29 AM

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To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Best,
Ali Mann (Warren, CT)

From: [Brian Roberts](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Monday, April 13, 2026 6:50:20 AM

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To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Brian Roberts
South Kent

From: [Pat Smith](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Wednesday, April 8, 2026 11:04:30 AM
Attachments: [Outlook-A picture .png](#)

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To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Patrick Smith, Winsted CT

Patrick J. Smith

Partner

Office Phone: 516-248-6922 ext. 226

Email: psmith@standardvaluation.com



From: [Lucy Williams](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Tuesday, April 7, 2026 2:48:04 PM

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To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Best,
Lucy Williams
Washington, CT

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From: [elizabeth](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Tuesday, April 7, 2026 1:40:48 PM

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To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

**** I would also like to add that i live directly on the lake front and sit outside a large part of the day observing activities on the lake. there are only a few days in the summer, primarily holiday weekends, where there might be a few more than the usual 1 or 2 wake boats that are active each day.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

elizabeth and russell rising
washington township

From: [Michael Gershenson](#)
To: [DEEP Boating](#)
Cc: [Michael Gershenson](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Tuesday, April 7, 2026 8:28:24 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Regards,
Michael Gershenson
New Preston, CT

Sent from [Outlook](#)

From: [Sara Silvestri](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Tuesday, April 7, 2026 1:36:58 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Sara - Lake Waramaug

From: [Jordan Zaken](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Monday, April 6, 2026 5:17:33 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Jordan Zaken
New Preston, CT

From: [Shane Baldwin](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Friday, May 1, 2026 11:27:55 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

Lake Waramaug is not an unsafe or an endangered lake. I truly believe the only reason the grievance regarding wake boats arose from residents is because of the influx of people that stayed on the lake for weeks on end in the summer of 2020 and 2021. This is not a reality any longer, and typically, in my experience as a boat driver on the lake for the past 4 summers, there is only ever 1 or maybe 2 wake boats on the ENTIRE LAKE at a time. The lack of traffic on this lake is a major reason for why a potential ban would be insanely arbitrary. All families with wake boats also kayak on the lake. They also use paddle boards. They also go for long swims in the lake. I do all of the above activities on the lake, and I have never felt unsafe or threatened by a wake boat in my vicinity. I can think of so many compromises that families with wake boats would most likely happily agree to (better practices, creating wake zones in the lake, times of the day when wake surfing isn't allowed, etc.). The lake is already a boring lake if you compare it to all other lakes in the Northeast, and if wake surfing was taken away, the lake's identity would become one that aligns more closely with the elderly as opposed to the youth and young adults, who only get to visit their parents and grandparents a few times a summer.

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Best,
Shane Baldwin, Age 23 (Washington, CT)

From: [Kelly Winn](#)
To: [DEEP Boating](#)
Subject: Comment on draft wake boat & wakesurf study
Date: Wednesday, April 29, 2026 10:46:41 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place: specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Kelly Winn, Brookfield

From: [Daisy](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf STudy
Date: Monday, April 20, 2026 1:39:40 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Daisy, Greenwich and Warren

From: [Charlie Better](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat & Wakesurf Study
Date: Friday, April 17, 2026 6:41:44 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I appreciate the time DEEP has taken to carefully evaluate this issue. Wake surfing is an activity I enjoy with family and friends on our state's lakes, and it is important to me that it is considered fairly.

I was encouraged to see that DEEP's study concluded wake surfing can be conducted responsibly when appropriate guidelines are followed—particularly maintaining a reasonable distance from shore and operating in sufficient water depth. This aligns with my own experience on the water. Wake surfing occurs at low speeds and, when done responsibly, does not negatively impact the lake or other users. I do not believe bans are warranted, and I appreciate that DEEP reached a similar conclusion.

I also support the establishment of a single, clear statewide rule rather than a patchwork of local regulations. As EnCon Police indicated, inconsistent town-level ordinances create confusion, are difficult to enforce, and do not lead to better outcomes. A consistent, practical standard would be better for environmental protection, enforcement, and fairness for all who use Connecticut's waterways.

One request I would make is that the final recommendations rely on rigorous, unbiased science. I understand that some studies cited by those advocating for bans (including Terra Vigilis and Marr et al.) may have methodological shortcomings and do not provide fair comparisons between wake boats and other watercraft. I hope DEEP will carefully evaluate the quality of the evidence and avoid relying on flawed research.

Thank you for your consideration and for the effort that went into this report.

Charlie Better
Greenwich, CT

From: [Meredith Kosann](#)
To: [DEEP Boating](#)
Subject: Comment on draft wake boat and surf study
Date: Wednesday, April 22, 2026 5:02:28 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Meredith kosann
Arrow Point Road
Warren, CT

Meredith Kosann MD FAAD
Skinfoocused Dermatology
150 Purchase Street
Suites 10/12
Rye, New York 10580
914.908.3376

From: [Sherman Baldwin](#)
To: [DEEP Boating](#)
Subject: Comment on draft Wake boat and Wake surf study
Date: Monday, April 6, 2026 5:39:55 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

All the Best,

Sherman Baldwin, resident of New Preston, CT

From: [Jay Hoops](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat and Wake Surf Study
Date: Wednesday, April 29, 2026 2:58:48 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: ***please make sure the final recommendations are based on solid, unbiased science***. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Jason Hoops
Resident of Middletown, CT
Owner of a cottage on Bashan Lake, East Haddam, CT

From: [Katie Elvin Watkin](#)
To: [DEEP Boating](#)
Subject: Comment on Draft Wake Boat and Wakesurf Study
Date: Tuesday, April 14, 2026 10:44:17 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

As a Connecticut resident and active motorboat user, I want to thank DEEP for carefully studying this issue. While my family and I don't wake surf on our state's lakes, it matters to me that wakesurfing and all water and boating activities are treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Katie Watkin
Warren, Ct

From: [Scott Williams](#)
To: [DEEP Boating](#)
Subject: Comment on draft wake surfing study on Lake Waramaug
Date: Wednesday, April 29, 2026 9:05:13 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report. Scott Williams, 23 Loomarwick Rd., New Preston, CT 06777

Scott Williams
(914) 320-5900

From: [Ron and Linda](#)
To: [DEEP Boating](#)
Subject: commenting on the draft stuty
Date: Tuesday, March 10, 2026 9:48:24 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To whom it may concern. I have been boating for 60 years and lately I see a dangerous situation concerning dedicated wake surfing boats on the same waters as recreation vessels. These dedicated wake surfing boats are not the same as the conventional hulls for recreational boating. They have been altered to make the resulting wake much larger and harder than the wake of a boat such as the malibu wakesetter, which is used for wakeboarding. This new class of wake surfing boats are designed to make a large hard wake. I have witnesss this terrible wake lately. After looking up the modified hulls of this new class of boat I have seen that the manufacture has gone to great lengths to create this herendis wake creation, at a cost of creating property damage and emergency medical care, besides the cost of hundred's of thousand's of dollars.

I personally needed medical attention following coming across a wake of a wake surfing boat on the waters of Highland Lake in Winchester Ct. I was skiing and as I traversed this wake I felt an incredible sense of pain mostly in my middle body. I went to the emergency room and was told I would not be going home that day. My appendic had burst and I was scheduled for an immediate surgery. Statistics note that 5% of burst or ruptured appendic result in death. I understand that waters are to be shared. The conventional wake boats that use a water ballist to create a wake is one thing but these wake surfing boats should not be on the same water as conventional hulled boats, period.

I have been a waterfront property owner for 34 years and until recent use by wake surfing boats, have not seen excessive property damage by boat wakes. But in the last few years as wake surfing boats were used more often, Two large areas of my waterfront retaining walls collapsed causing a large finanical burded to me.

I obtained my boating license after completing a boating course by the coast guard auxiliary. One of the things I have learned from that course is that you are responsible for your wake. I feel that the use of a dedicated wake surfing boat cannot matct this requirement while used on a body of water that is used for recreational swimming, boating, and sailing.

These wakesurfing boats do not have the ability to share the water with a conventional boat because their wake is too large and hard. At 76 years of age, I waterski, wakeboard, windsurf and sail. Please see that my point as well taken and with merit. Wake boarding is one thing but wake surfing belongs naturally in the ocean. Please contact me if need be.

Thanks for letting me state my observations,

Ronald Pinz
818 E. Wakefield Blv. Winsted, CT 06098 cell 959 229 8060

From: [Andrew Breton](#)
To: [DEEP Boating](#)
Subject: Comments on wake surfing
Date: Thursday, April 30, 2026 3:47:46 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

CT Deep,

I am writing to provide input on the discussion around potential restrictions on wake-enhancing boats.

I recognize that concerns related to wake activity are valid and worth addressing. These typically include shoreline erosion, sediment disturbance and water quality impacts, potential effects on aquatic habitat, and safety considerations for other lake users.

From a regulatory standpoint, the key question is not whether these impacts exist, but how they are best managed. In this case, many of the identified impacts are closely tied to specific conditions, particularly proximity to shoreline, water depth, and proximity to other users.

Wake energy dissipates with distance, and the potential for shoreline interaction, sediment resuspension, and user conflict is significantly reduced when activity occurs farther from shore and in deeper water. Because of this, the mechanism driving the concern is not the presence of a specific type of boat, but where and how it is being operated.

For that reason, a targeted approach that regulates operating conditions, such as reasonable distance from shorelines, docks, and other users, represents a more proportional and effective response than a categorical prohibition.

This approach is consistent with how other states have addressed similar concerns, using distance and depth-based standards to mitigate impact while preserving reasonable access to the water for different forms of recreation.

All recreational lake use exists on a spectrum of environmental impact. The objective of regulation, therefore, should be to manage that impact in a way that is measurable, enforceable, and appropriately scaled to the level of risk. In this context, condition-based regulation offers a more precise and adaptable tool than an outright ban.

I have spent many years on Crystal Lake and have observed and enjoyed a wide range of recreational use successfully (including fishing, water skiing, and wake surfing) coexist when expectations are clear and reasonable. With thoughtful design, it is possible to address legitimate environmental and safety concerns while maintaining balanced access for users.

--

Andrew Breton
Owner & CEO, Core Ventures



☐ [\(714\) 717-5613](tel:(714)717-5613) ☐ andrewbreton@anytimect.com



From: [Nancy Williams](#)
To: [DEEP Boating](#)
Cc: Deep.boating@ct.gov
Subject: Concern about wake surfing
Date: Thursday, April 30, 2026 11:29:11 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

As a Connecticut resident and someone who spends meaningful time on our lakes with family and friends wake surfing, I want to thank DEEP for taking the time to study this issue carefully and thoughtfully. For many of us, this is not just a sport. It is time together outdoors, teaching our children responsibility on the water, and enjoying Connecticut's lakes in a respectful and active way.

I especially appreciate that DEEP's findings recognized what many responsible boaters already understand: wake surfing can be done safely and responsibly when clear guidelines are followed, including appropriate distance from shore and sufficient water depth. That balanced conclusion reflects what I have personally observed on the water. Wake surfing operates at controlled speeds and, when done properly, coexists responsibly with other lake users.

I would also strongly encourage DEEP to continue supporting one fair and consistent statewide standard rather than allowing a patchwork of local ordinances. The current push by Washington town selectmen to aggressively and quietly pursue restrictions and effective bans on wake surfing has been deeply concerning to many residents and lake users. Decisions that affect an entire recreational community should be transparent, data driven, and inclusive of all stakeholders, not advanced through selective or one sided local efforts.

This issue deserves a fresh and objective review grounded in credible science and balanced public input. I respectfully ask DEEP to step back from the pressure surrounding these local campaigns and carefully reexamine the evidence before allowing unfair restrictions to move

forward. Some of the studies frequently cited by advocates seeking bans, including Terra Vigilis and Marr et al., have been criticized for methodological weaknesses and for failing to make fair comparisons between wake boats and other common watercraft. Policy decisions with broad consequences should rest on rigorous, unbiased analysis

Nancy Sarnoff
New Preston ct
23 Loomarwick road

Nancy Sarnoff
(203) 940-2750

From: [Sarah Better](#)
To: [DEEP Boating](#)
Subject: DEEP wake surfing study
Date: Sunday, April 19, 2026 4:43:30 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Sarah Better - Warren, CT

Sarah Better
(203) 912-0304

From: [Thomas Becker](#)
To: [DEEP Boating](#)
Subject: Deep
Date: Friday, May 1, 2026 11:34:20 AM

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So your telling me you guys are trying to ban wake surfing due to the waves messing with the eco system meanwhile yall put up nets in my lake every year and kill thousands of fish while calling it researchare you guys fucking serious? DEEP kills THOUSANDS OF FISH EVERY YEAR AND YALL ARE BLAMING WAKE SURFING?Are yall being fucking serious. I hope yall go to fucking hell, Jesus doesn't want yall in heaven yall can kick fucking rocks. Whoever reads this I want you to know your organization is a bunch of horse shit, humans trying to play god never works. I hope you have a shitty year and shitty health. Fuck you. Faggots

From: [Comcast](#)
To: [DEEP Boating](#)
Subject: Draft Wake Boat and Wake Surf study
Date: Thursday, April 30, 2026 12:19:21 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To whom it may concern:

I'd like to thank the DEEP for taking the time to study wake surfing and considering this issue. I am a resident of East Haddam and a wake surfer. Wake surfing is a sport that I enjoy with my family and friends. It is a sport that we enjoy safely and respectfully accounting for our neighbors and other boaters. This sport gives access to watersports because of the low stress on the body and ease of learning. As there are very few wake surfers in the state and country, I appreciate your efforts to assure that the voice of the minority is not overshadowed.

I have reviewed the draft study and have included my comments and suggestions below.

1. Assessment on magnitude of sport. There are limited numbers of wake surfers in the state. This should be factored into the analysis.
2. Definition of wakeboarding (p7)- Wake boarding does not require enhanced wake and can be performed behind any powerboat. Wake boarding is often conducted without enhanced wake. The definitions should strike the language "Wake boarders cross back and forth and use the enhanced wake to perform jumps...." or at a minimum define wake boarding to occur with both no enhancement or enhancement.
3. Definition of propeller wash (p7). In the last sentence the word "significantly" should be struck from the language. This is a leading term and is not necessary in a definition which includes data.
4. Definition of propeller wash (p7). In Wake boats, the bow-up posture is typically opposed by systems (eg NMCS in the Nautique) that will elevate the stern and lower the bow to be in a more neutral position thus adjusting the propeller wash to be closer to horizontal the surface of the water. This technology needs to be included in the assessment of the impacts of the propeller. In addition, in the definition, findings of the impacts of propeller wash should be referenced in the definition that after specific depths (eg. 20 ft) impact is negligible.
5. Municipal Ordinance Authority (p12)- that last paragraphs should reference the rulings the DEEP has made in the bodies of water referenced. Specifically, the DEEP has chosen to neither approve or disapprove of the ordinance submitted from East Haddam on Bashan Lake. (I request the DEEP commissioner disapprove of the East Haddam ordinance based on the results of this study and in line with the Commissioners rights in CGS Ch 268 section 15-136)
6. Wake Boats: Mechanism of Impact (p 15), In the Marr study referenced in paragraph 2, the comparison is between two boats in different modes of operation. The study should be between a wake boat in plowing operation and a non-wake boat in plowing operations. This is an apples to oranges comparison which does not account for the impact of a non wake boat in plowing conditions. If the data is not available to support the comparison of boats in the same mode they research should be removed or caveated appropriately.
7. Wake Boats: Mechanism of Impact (p 15), in the Riesgraf study referenced in paragraph 4 (Bow and Stern Wave Velocities), larger boats should be removed from the DEEP study (eg. 34' yacht). These size vessels are not realistic or common for lakes in CT and they skew the data.
8. Wake Boats: Mechanism of Impact (p 15), in the Riesgraf study referenced in paragraph 4 (Transverse Waves), this study is comparing boats in two different configurations and does not include a comparison of impact between both boats in plowing conditions and both boats in planing. This is an important comparison as many non wake boats in plowing conditions have the same wave impact as a wake boat. (See comment 6)

9. Impacts to Water Quality - paragraph 2 (p20). The risk of algae growth will vary with the depth of the lake and water temperature. Depth should be added as a characteristic of risk of algae growth in this paragraph otherwise it leads the reader to a biased opinion. Paragraph 3 (p21), Mixing of the water column also occurs naturally in the spring and fall with changing seasons. This should be included as facts around how the ecology of lakes thrive. Thermoclines in lake naturally occur and keep lakes healthy. This paragraph and study implies only negative impacts. Interestingly some lakes have added mechanical devise to increase circulation from the bottom of the lake to improve lake ecology. This could lead you to believe there are positive results from mixing the water column.

10. Impacts to Water Quality- paragraph 5 (p21)- Include that fishing boats (in addition to runabouts and inboards) are capable of impacting water quality in 5 ft of water. Fishing boats are the largest volume of boats in less than 5 ft of water and should be specifically included. In general, the study is missing the impact of fishing boats on lake bottoms and the studies that are referenced do not account for impact from these boats on lake ecology. Instead the studies focus on placing sole risk on lake ecology to the wake boat. Request the addition of impact of other boats on lake ecology to give the reader a balanced understanding of risk factors.

11. Impacts to Water Quality- paragraph 6 (p21)- Second sentence should be modified to say wake boats in the proper mode and speed can operate in shallow waters with no impact to the lake ecology.

12. Impacts on Fisheries Resources (p22) Aquatic Vegetation excerpt from Francis (paragraph 4)- This study is about power boats in general. Inclusion of this research implies that the impact on fisheries is related to wake boats. This is a study on wakeboats, there is no conclusion in this research specific to wake boats. The language ('significantly') in the last sentence is unsupported by data. This research should be removed.

13. Impacts on Fisheries Resources (p23) Resuspension of Benthic Sediments excerpt from Francis (paragraph 1)- This study is about power boats in general. Inclusion of this research implies that the impact on fisheries is related to wake boats. This is a study on wakeboats, there is no conclusion in this research specific to wake boats. This research should be removed or characterized with other boats (eg. Fishing boats) that have larger impact on lakebeds

14. Impacts on Fisheries Resources (p24) Shoreline Erosion (paragraph 1)- This study, states that shoreline armoring is being added because of wake boats ('is often present on lakes with wake boats'). Shoreline armoring/ seawalls have been in place since people have lived on lakes. To suggest that wakeboats are the cause of increased shoreline armoring is a gross assumption and misleading. I agree that shoreline armoring/ seawalls, etc, will reflect wave energy, AND a homeowners decision to add seawalls will be a result of a multitude of reasons from boating, environment (wind) to aesthetics. I request this quote from the study be removed and a summary of wave energy be added. At a minimum remove the section 'of often present on lakes with wake boats'.

15. Potential Direct effects on Sportfish (p24)- All boats at increased velocities will impact spawning grounds of fish. Also, on wake boats, the other research shows the impact on the bottom of the lake bed is minimal >10 feet. This section doesn't reference depth. The boat travel path of the wake boat in an enhanced wake mode will at a minimum >100 ft from the shoreline and more likely >200 ft from the shoreline, which will be unlikely to impact spawning grounds. Remove this section or state there is no increase risk from wake boats as compared to other power boats.

16. Potential Direct effects on Sportfish (p26)- The first sentence is incorrect and should be removed (In summary, based on a review of the available literature, there is strong evidence that wake boats are more impactful to the shoreline, lakebed, and water column than other recreational boats.). The research included is on powerboats, not wake boats. The summary needs to reflect the research included. The second sentence is a more appropriate summary of the section.

17. Implications for Aquatic Invasive Species (p29) - Based on the volume of fishing boats in CT and their movement across many bodies of water, the risk of AIS spreading is predominantly related to AIS is live wells and on trailers. While there is risk in ballast tanks, this is dwarfed by fishing boats. This risk should be appropriately characterized in the study. Without inclusion of the major risk, the reader is lead to believe that wake boats are the risk and should be targeted. Include a section on other high risk AIS contributors in the study.

18. Other Considerations (p48) - Paragraph 4. Per CT General Statute Ch 268 section 15-136, The commissioner

may disapprove any ordinance or part thereof that the commissioner finds to be arbitrary, unreasonable, unnecessarily restrictive, inimical to uniformity, duplicative of any state law or regulations or inconsistent with the policy of this part. In Paragraph 4, the study states that local laws vary widely based on specific geography, use patterns, or needs of the waterbody. Based on both statements above and the findings of this study, I request that the commissioner review all local ordinances on wake boats that have been submitted to the DEEP (eg. East Haddam ordinance to ban wake surfing and Lake Waramaug) and disapprove the ordinances as they are:

1. Inconsistent with the results of this study (DEEP Wake Boat & Wake Surf Study)
2. Are arbitrary, unreasonable and unnecessarily restrictive (CT General Statute Ch 268 Section 15-136)
3. and there are no features of the lake that suggest these lakes have special features to require a restriction.

Thank you for taking the time to consider these comments and incorporating them into the final study. As stated in this letter, with regard to the ordinance in East Haddam on wake surfing, I request the commissioner take action to disapprove this ordinance as inconsistent with this study and the CT General Statutes.

Regards,
Andy Bordick
Resident East Haddam
Sent from my iPad

From: dshelberg@jpnconstructionllc.com
To: [DEEP Boating](#)
Cc: [Bill Ribida](#); [Bob Bochman](#); [Brittney Omara](#); [Gary Christopher](#); [Jim Linder](#); macmoodus@comcast.net; [Margaret Shumbo](#); mjtwboro@aol.com; [Sam Guy](#); [Stan Shumbo](#); [Wayne](#)
Subject: FW: Comment on DEEP wake surfing report TODAY
Date: Thursday, April 30, 2026 3:27:00 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

From: Protect Lake Waramaug <main@protectlakewaramaug.org>

Sent: Thursday, April 30, 2026 1:33 PM

To: dshelberg@jpnconstructionllc.com

Subject: Comment on DEEP wake surfing report TODAY

Moodus Reservoir has an average depth of 6ft. not enough depth to support this activity. Previous study did not have depth regulation which I feel is very important. Please can DEEP include me in these emails we need to communicate better. WE also want to protect our lakes, waiting for a response.



Submit your comments to DEEP today by 5pm.

Please take a moment to show your support for our Lake Waramaug wake surfing ban by writing to CT DEEP's Boating Division:

1. **WHY?** Because DEEP published its long-awaited **draft Wake Surfing Study**. Their draft Study does a good job of summarizing the harmful effects of wake surfing and the risks to wildlife, water quality, fisheries and public access. BUT the study doesn't discuss the Waramaug and Bashan Lakes wake surfing bans and doesn't mention the good Terra Vigilis reports done on our lake. We also believe there should be more emphasis on how local communities can and should be able to regulate wake surfing. The draft DEEP Study can be found [here](#).

2. **WHEN?** Comments are due by **5 pm today**, April 30. Submit your comments by email to DEEP.Boating@ct.gov with "Wake Boat & Wakesurf Study" in the subject line. All such emails will be posted on the DEEP website.

3. WHAT SHOULD YOU WRITE? Let DEEP know your thoughts about wake surfing in your own words. It would also be valuable for DEEP to hear your support for allowing communities to set their own rules for wake surfing instead of one-size-fits all statewide rules. And that you supported the Waramaug ban and your reasons. A short email is enough!

Our letter will be available on our website shortly - www.protectlakewaramaug.org.

Other news: As you may have heard, the wake surfers have brought a lawsuit seeking to overturn the Waramaug ordinance banning wake surfing. The defendant is CT DEEP, but we were granted permission to intervene so we can make sure the concerns of our towns are heard by the court, and that we have a voice in the outcome of the case. We believe this suit is frivolous and without merit. But like any lawsuit, it must be defended.

Our organization will celebrate our one year anniversary on May 1. It's been a tremendously productive year - thanks to people like you!!! We have accomplished so much but there is still work to do. Many thanks for all of your help and support.

Protect Lake Waramaug: Coalition to Ban Wake Surfing Association
www.protectlakewaramaug.org

Protect Lake Waramaug : Coalition to Ban Wake Surfing

Lake Waramaug
United States of America

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From: [Matthew Nardella](#)
To: [DEEP Boating](#)
Subject: Highland Lake, Winsted, CT
Date: Wednesday, April 29, 2026 9:59:35 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Matthew Nardella
Winsted, CT

From: [Marie Schwartz](#)
To: [DEEP Boating](#)
Subject: In Support of a Uniform Approach to Wake Surf & Wake Boat Guidelines
Date: Tuesday, April 7, 2026 2:46:57 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hello,

I am a Connecticut resident and have lived on Lake Waramaug since 2001. I want to thank DEEP for taking the time to study the impact of wake surfing and wake boating carefully. I enjoy wake surfing with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water every summer. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees. Even the fishermen, who are on the lake daily, agree that wakesurfing in the middle of the lake causes no harm.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

I was very disturbed by the undemocratic way the three towns surrounding Lake Waramaug rammed through a ban. We repeatedly submitted our voluntary guidelines to the officials (Lake Waramaug Task Force and Selectmen) but they never presented them to the public. The vote included only two options: "For" or "Against" the ban. It should have been "For the ban" or "For voluntary guidelines."

Note: The people on the Lake Waramaug Task Force and Lake Waramaug Authority lack term limits so they don't represent the cross-section of residents on the lake.

I strongly favor a single ordinance covering all lakes in CT and requiring Lake Waramaug to abide by the same rules.

Best,
Marie Schwartz
New Preston, CT

From: [Herbert Keating](#)
To: [DEEP Boating](#)
Subject: Lake Waramaug on the "WAKE SURFING" decisions
Date: Thursday, April 30, 2026 3:29:47 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Thank you for your involvement in this important issue.

I whole-heartedly agree with the ban on wake surfing boating on Lake Waramaug and would like to point out the disruptive nature of wake surfing to lakeside enjoyment, something which my family has experienced. I also applaud the rational government decision making about this issue, and emphasize that, consistent with a true democratic process, local people have spoken overwhelmingly in favor of the ban through a plebiscite/eferendum.

Again, thank you for your deliberations and good judgement, which is consistent with the evidence about general lake injury from this "niche" activity. You have been active to protect our lakes.

Yours sincerely

Herbert Keating
Clinical Professor of Medicine, University of Connecticut School
Professor of Medicine, Quinnipiac University

From: [WILLIAM HAVEMEYER](#)
To: [DEEP Boating](#)
Subject: Lake Waramaug wake surfing ban
Date: Thursday, April 30, 2026 2:32:40 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To whom it may concern,

During the summer, I love to canoe on Lake Waramaug, even at my old age (80), and wake surfing not only makes it very difficult for me to maintain control of the canoe, it also terrifies me, as even with my life preserver on, I'm not sure what would happen if I capsized.

Last summer I strongly supported the proposed ban on wake surfing and was delighted that the ban was enormously successful.

As I don't go on any other lakes in Connecticut, so I don't think a statewide ban is appropriate, let the residents surrounding each lake make their own decisions as we did with our lake.

Please uphold Lake Waramaug ban and deny the very, very few wake boat owners who object to it.

Thank you.

Bill Havemeyer
Litchfield, CT

From: [Coulter J. Mackesy](#)
To: [DEEP Boating](#)
Subject: Let's Surf
Date: Wednesday, April 29, 2026 10:57:01 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Best,
Coulter (Lake Waramaug)

From: [Leonard Veneziano](#)
To: [DEEP Boating](#)
Subject: RE: Comment on Draft Wake Boat & Wake Surfing
Date: Monday, April 20, 2026 11:07:26 AM
Attachments: [image001.png](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is a safe, and fun activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly, and not driven by propaganda, fearmongering, and inaccurate findings.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water, and particularly my home lake which is Lake Waramaug. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways. Especially when towns want to erroneously control the water activities on a lake, when most of its residences are unaffected by such activities.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research, angry local selectman, and fearmongering drive the outcome.

Thank you for listening and for the hard work that went into this report. It is very much appreciated.

I reside at 15 Tinker Hill Road, Washington, CT.

Best regards,

Lenny Veneziano
Managing Director



2015-2025

"Optimizing recoveries since 2003..."

440 Mamaroneck Avenue, Suite 509, Harrison, NY 10528

P: (914) 306-7340

F: (914) 650-1250

E: Lveneziano@kentrecoveryservices.com

W: KentRecoveryServices.com

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From: [Warner Fite](#)
To: [DEEP Boating](#)
Subject: Wake Board and Wakesurf Study
Date: Thursday, April 30, 2026 4:15:08 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

We are writing in response to your recently-published report on wakeboarding and wakesurfing.

We very much appreciate the attention you have paid the harm and risks that arise from these activities. As your report notes, the environmental damage (water quality, fisheries, wildlife effects and propagation of invasives) is real. The property damage - which we have suffered first hand on Lake Waramaug is real. The severe effects on other users of our limited natural resources - swimmers, anglers, kayakers / canoers, and other boaters, which we have also experienced first hand - to say nothing of swimmers - is real.

It is vital that individual communities be able to set the limits on the use of resources. Your report notes 27 lakes with either wakeboard / wakesurfing bans alone (3) or with complete bans on wakeboard / wakesurfing as well as waterskiing (24). It is only the Lake Waramaug ban - with the enormous special interest group around that lake - which has garnered enormous attention and controversy. This is not about science or streamlining regulations. Those are red herrings. It is about individuals with a vested interest attempting to override an overwhelming vote of the three towns in favor of a ban (78% to 22%) and about the economic concerns of private industry. Opponents to bans - with industry support from boat manufacturers - would have you believe that wakeboarding is just another boating activity. For all the reasons cited in your report it plainly is not.

We appreciate DEEP's efforts in this regard.

Warner & Melpo Fite
375 Lake Rd
Warren CT 06777

From: [jackie schwartz](#)
To: [DEEP Boating](#)
Subject: Wake boarding
Date: Wednesday, April 29, 2026 10:14:19 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Sent from my iPhone

To Whom it May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

JACKIE SCHWARTZ
WESTON CONNECTICUT

From: [Diane Meier](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 3:01:02 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

I am a Kent resident, and have had a home here since 1997. As you may know, the town of Kent borders Lake Waramaug and has its own beach. The Town of Kent as well as the Towns of Warren and Washington, all of which share borders of this lake, gathered months ago for meetings to hear, understand, and respond to the issue of Wakesurfing on Waramaug — and we overwhelmingly voted against it.

I can't think of another issue that has brought the citizens of these town together as has this.

Lake Waramaug was threatened with a bloom of destructive algae some years ago, and has battled that problem with funding, care, and constant attention. The idea of a leisure activity that could reverse this herculean effort is unthinkable. Beyond that, we heard from representatives of conservation groups who talked about everything from the churning of the lake floor to the impact of the waves on the delicate ecology of the shoreline. Issues surrounding the safety and comfort of boaters and swimmers should certainly be added to this list.

Most of all, I can't imagine a subject that has been looked at and inspected by so very many individuals, all hoping for just and fair solutions, with findings that have been overwhelmingly against this Wakesurfing agenda. To overturn the will of citizens, who clearly wanted to add their voices in protection of their neighbors and their environment – would be a travesty.

dm
Diane Meier
diane@meier.nyc
www.meier.nyc
212 752 0794

From: [KM](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 4:52:29 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Sirs - Please protect the right of communities to form their own parameters for their own neighborhoods. Lake Waramaug is a small lake that needs protecting from the destruction that wake boating creates. The Lake belongs to an entire community, not just the selfish few who want to use it for their own destructive behavior.

Thank you,

Kathryn McAuliffe

South Kent, CT

From: [Brenda Story](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 4:10:14 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Greetings~

I am a resident of the town of Warren, and last year, I voted to BAN wake surfing on Lake Waramaug. I respectfully request that CT DEEP uphold and enforce the ban as it represents the desires of 78% of the voters in the three towns that border our shared lake. Lake Waramaug is a small lake that provides a serene natural environment for families with members of all ages. Our town beach represents the perfect example of young children learning to swim and enjoying the usually peaceful shoreline activities available to them. Voters recognized the necessarily important responsibility to preserve the safety of citizens, the ecology and beauty of the shoreline, the shallows, the wildlife habitat, and the serenity of our bucolic lake.

Please act to uphold the mandate of the resident voters, and extend that option to voters in other CT municipalities so that citizens have a voice, and can steer the preservation of their local environments.

Thank you for your consideration.

--

*Peace,
Brenda Story
196 Melius Rd
Warren, CT 06754*

From: [jane barnet](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 2:45:43 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

We support the ban on wake surfing on Lake Waramaug, enacted overwhelmingly by voters in the three towns bordering the lake: Washington, Warren and Kent. Wake surfing has been shown to damage the fragile ecosystem of the shallow Lake.

Jane and Howard Barnet

From: [David Monti](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 2:42:48 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Dear CT DEEP,

Thank you for all of the work you do to protect Connecticut's environment. My family is grateful to have a state government which takes environmental protection so seriously.

I write to you today in support of a wake boad and wakesurf **BAN** in Connecticut. Stirring up the waters of our lakes for his activity for the pleasure of just a handful of people makes no sense. Protecting the lakes for wildlife and the quiet enjoyment for the majority of the state's citizens is far more important.

My family lives very close to Lake Waramaug and we supported the ban on the lake here. It's a beautiful, shallow lake and leaving it just as it is is the right thing to do.

Yours in conservation,

David & Jane Monti
226 Melius Road
Warren

From: [Eric Gsell](#)
To: [DEEP Boating](#)
Cc: [Francis, Peter](#)
Subject: Wake Boat & Wakesurf Study
Date: Tuesday, March 17, 2026 1:59:27 PM
Attachments: [image002.png](#)
[image010.png](#)
[image011.png](#)
[image012.png](#)
[image013.png](#)
[image015.png](#)
[image016.png](#)
[image017.png](#)
[image018.png](#)
[image019.png](#)
[image020.png](#)
[image001.png](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

I am no expert on this subject but the research I have done I see no benefit to allowing this activity, especially on shallower lakes. Sounds like the props stir up lake-bed sediments down to 26 feet. Shoreline erosion, water quality & the ballast tanks, which are filled with water to increase weight, can transport Aquatic Invasive Species. I would be curious to see what people who do this recreational activity think. I'm sure it's a fun time but the negatives appear to easily outweigh the positives.

Thank you,

Eric Gsell
First Selectman – Town of Bridgewater CT
44 Main St. South (PO Box 216), Bridgewater CT 06752
e – firstselectman@bridgewater-ct.gov
o – 860-354-5250
c – 203-297-3825



From: Francis, Peter <Peter.Francis@ct.gov>
Sent: Tuesday, March 17, 2026 11:03 AM
To: Francis, Peter <Peter.Francis@ct.gov>
Subject: Connecticut DEEP *DRAFT* Wake Boat & Wakesurf Study - Opportunity to Comment (2)

To First Selectmen, Mayors, Town Managers:

This is a follow-up to my October 8, 2025 email to you regarding the Connecticut Department of Energy & Environmental Protection's (DEEP) Wake Boat & Wakesurfing Study. DEEP has prepared a draft of the study and will be taking public comment on it until **April 30, 2026**.

We would like to hear from you. Please see the following links:

- [PUBLIC NOTICE](#): contains details of the draft study and how to participate.
- [DRAFT WAKE BOAT & WAKESURF STUDY](#): a draft of the study for your review and comment.

Should you have any questions, please do not hesitate to contact us at deep.boating@ct.gov.

Peter B. Francis, CRBP

Director & State Boating Law Administrator
Bureau of Outdoor Recreation/Boating Division
Connecticut Department of Energy & Environmental Protection
333 Ferry Road, PO Box 280, Old Lyme, CT 06371



Connecticut
Department of Energy &
Environmental Protection

*Conserving, improving, and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.*

     | portal.ct.gov/DEEP

From: [Thomas Ebersold](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Monday, March 16, 2026 7:46:10 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

I am writing to comment on the DEEP's Wake Boat and Wakesurf Study and the concept of wake boating in general. I write this from the perspective of someone who enjoys flatwater kayaking on Connecticut's lakes and rivers.

I have been kayaking in Connecticut for more than 20 years. This includes leading day trips for non-profit recreational groups.

From my perspective, powerboat use is the biggest challenge we face as kayakers due mostly to the wakes they generate, whether they are caused by just a boat, from a boat towing water skiers, or from wakeboarding. These wakes make it challenging to kayak and they also pose a safety hazard to kayakers who are at risk of getting swamped and/or capsized.

There are places in Connecticut where kayaking is difficult and unpleasant to do on weekends due to powerboat use, including Lake Zoar, Candlewood Lake, and the Connecticut River in the Essex-Deep River area.

I can still remember a trip I attended about 20 years ago in the Selden Creek area on a weekend. On the way back to the launch, boats were zipping by at high speeds, kicking up two foot waves. In order to be safe, we had to turn our boats 90 degrees to take the waves head on, rather than risking getting capsized by a wake hitting us from the side. We had to do this repeatedly in the last mile between the north end of Selden Island and the launch.

Powerboat users will cite economics and their desire to be out on the water as reasons not to restrict their usage.

However, in addition to taking away from the safety and enjoyment of those who are using paddle craft, including kayaks, canoes, and paddle boards, their waves and wakes also slam into the river banks and lake sides, causing erosion.

I certainly favor reasonable restrictions on wake board operation, including minimum sizes of lakes, minimum distances from shore, and minimum lake depths. Similar regulations already apply to powerboats in general with smaller lakes not permitting motorized operation, or allowing motors but not water skiing.

I would love to see motor-free times on lakes and rivers, which could something like no powerboats between noon and 3 p.m. on the first Sunday of the month, so paddle sports people could enjoy paddling without the wake risk posed by powerboats, and also enjoy the quiet without the roar of motors.

Sincerely,
Thomas Ebersold
Milford, Conn.

From: [Diane Lanney](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Saturday, March 14, 2026 10:15:33 AM
Attachments: [image.png](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Good afternoon,

We are full-time waterfront property owners on Lake Pocotopaug in East Hampton, having first-hand witnesses to the impact and environmental damage that these vessels have had on our lake, we fully support the establishment of state-wide restrictions and common-sense published and required guidelines for these vessels and vessel operators. However, we do not believe that any DEEP/state-wide regulations/statutes should *negate or replace* any existing municipality's bans and/or regulations unless the municipality *chooses* to do so.

The volunteer and Town 'custodians' of our Lake have worked diligently and have continued to work tirelessly year after year to address all Lake issues – big and small – to preserve our Lake for many generations to come.

The damage to our Lake from these wake boats is significant every year. However, of greater concern is the safety of the manual and very small vessels and that of swimmers. We have, unfortunately, seen several incidents of wake boat operators not providing an appropriate 'give way'. In fact, two of our grandchildren and adults who were swimming (in full life jackets with our [red] double-tube towable, right next to our boat) were dangerously "swamped" by a wake boat last summer.

The erosion of shoreline, the undermining of stone/concrete walls, the obliteration of water clarity with the churning up of sediment that culminates over the summer, the disturbance of aquatic life and its habitat that currently supports a mating pair of bald eagles, and the deep disturbance of plant habitat that includes the invasive species *hydrilla* that ~two years ago and green-blue algae that has, unfortunately, invaded our Lake and is currently being aggressively treated by contracted specialists.

These wake boat specific issues being experienced every year could be significantly reduced or eliminated if there were regulations over the use of these boats on the lake.

Restrictions that:

- 1) Exclude the operation of wake boats from waterways that do not have an average depth that appropriately supports these vessels without damage to waterway beds, aquatic life and habitat and does not spread invasive species or cause increase of green-blue algae.
- 2) Exclude the operation of wake boats from waterways that do have an appropriate size and/or configuration that appropriately supports these vessels without safety issues, including "swamping" manual and very small vessels and

swimmers.

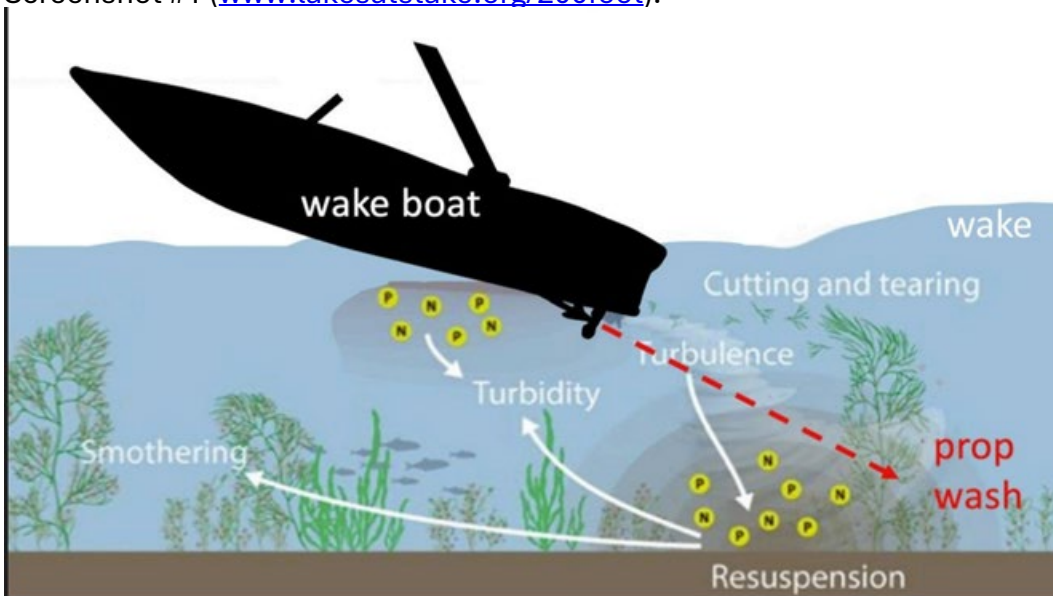
- 3) Establish appropriate shoreline distances for the operation of wake boats.
- 4) Establish regulations for appropriate ballast tanks weight/mass/depth.
- 5) Establish appropriate manual and swimmer distances for the operation of wake boats.
- 6) Establish appropriate wake zones for the operation of wake boats.
- 7) Establish regulations for appropriate no wake zone specifically from public areas – beaches, boat ramps, etc.

Additionally, we would recommend that the DEEP conduct an in-depth review of the extensive information, studies, and fact from the Wisconsin Lakes At Stake (<https://www.lakesatstake.org/200foot>), as the belief that operating 200' from the shoreline is a vast improvement when it actually is not (see Screenshot #1 below). However, implementing this requirement in CT would still be an improvement to the existing 100'.

Thank you for all the DEEP has already done to preserve the waterways in the state of Connecticut, here's to continuing those efforts.

Respectfully,
Diane and Steve Lanney
13 Sears Lane
East Hampton, CT 06424

Screenshot #1 (www.lakesatstake.org/200foot):



From: [Valerie Kasyrta](#)
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Sunday, March 8, 2026 3:24:57 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

From: [Robert Dombi](#)
To: [DEEP Boating](#)
Cc: [Claire](#)
Subject: Wake Boat & Wakesurf Study
Date: Sunday, March 8, 2026 1:24:32 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

We are residents on Highland Lake in Winsted. We support, at a minimum, restrictions on the use of wake boats. Our preference would be to ban them on Highland Lake.

Their impact to date has been destructive and dangerous.

- (1) We have incurred damage to our dock.
- (2) The ongoing negative impact on our stone seawall has been significant as the large wakes continue to displace stones and erode soil behind the wall.
- (3) we have been swamped while slowly boating. As the wakes hit our bow, our bow moved up and down so significantly that two large waves of water came over the bow and into our boat. Fortunately no one was hurt but they were soaking wet. We now purposefully navigate to avoid the wakes but avoiding all of them is not possible.
- (4) Most concerning is the danger to our grandchildren. They have been knocked down by the large wakes near our wall and steps while standing in the water. Thankfully they have not yet been injured by hitting the wall or steps. But maybe next time.....

While restricting the wake boats to 200 feet off shore might help, we do not believe it will help enough because enforcing the requirement will be difficult if not impossible. The current PWC 200 foot restriction is routinely violated and rarely enforced.

This position is not a selfish request. Our property continues to be damaged, our family continues to be at risk and our ability to use the lake is modified by the violent impact on our boat.

We hope these comments will better inform those with the responsibility for keeping us safe on the lake.

Thank you for reading this.

Bob & Claire Dombi
Sent from my iPhone

From: dmdenya1@comcast.net
To: [DEEP Boating](#)
Subject: Wake Boat & Wakesurf Study
Date: Thursday, April 30, 2026 4:59:59 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

I am writing to support the current Wake Surf/Enhancement ban on Bashan Lake, and the ability of East Haddam to govern locally and respond to will of our town's citizens.

More importantly, I believe the health and future of any Connecticut Lake should be not be ignored (and sacrificed) for a recreational activity that can be enjoyed on larger deeper bodies of water, without environmental impact.

Thankyou,

David M. Denya

From: [jane Klein](#)
To: [DEEP Boating](#)
Subject: Wake Boat &Wakesurfi Study
Date: Thursday, April 30, 2026 5:14:11 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To whom it may concern:

I am a resident of Warren Ct. and enjoy the beach and boating on Lake Waramaug. I write to you today to please ask you to respect the vote of three towns to not allow wake boats to be used in the wake boat mode. A small group of people who own wake boats and the manufacturers of wake boats are trying to over turn your ruling, the votes of three towns and the hard scientific evidence that these boats in wake boat mode stir up toxins at the bottom of the lake and knock people off docks, kayaks and paddle boards. In a word they are dangerous and harmful to the environment. Please fight back in court. Thank you.

Sincerely,
Jane Klein
335 Brick School. Rd.
Warren, CT 06754

From: [Matthew](#)
To: [DEEP Boating](#)
Subject: Wake boat and Wake surf study.
Date: Thursday, April 30, 2026 4:28:57 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Dear

As a lakeside homeowner in Sherman for over 20 years, I am writing to express my concerns regarding the impact of wake boats. Historically, wakes never breached our stone walls, but flooding our lakeside patio has now become a frequent warm weather occurrence.

Beyond the property damage, these wakes pose a significant safety risk. We must regularly warn swimmers to stay away from the stone walls to avoid being injured by the force of the waves. Furthermore, our moored boat rocks violently as these waves crash against our dock.

The destruction caused by these wakes is more than a nuisance; it results in substantial wear and tear on our docks and stone walls. This concern is compounded by the fact that we lakeside homeowners are required to pay for and receive approvals from First Light to perform necessary repairs. Wake boats represent a significant potential cost and a physical danger to those of us living on the lake.

Sincerely,

Matthew Gelfer

From: [Linda Frank](#)
To: [DEEP Boating](#)
Subject: Wake boat and Wake Surf Study
Date: Thursday, April 30, 2026 3:39:55 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

I have lived at and swum at Lake Waramaug for 52 years. What I know is that when the Wake boats are on the water they are the only ones having any fun. I am afraid to take out my paddle board or row boat, swimming is difficult with the wave action. The Lake is too shallow and narrow for these large boats to do their thing. We have worked for 50 years to make the waters of this Lake good for the public and the people who use it. Wake boating is for bigger lakes. We voted 3 to 1 to keep them off. It was our democratic right to do that.

Sincerely,

Linda M. Frank

Sent from my iPad

From: [C Perez](#)
To: [DEEP Boating](#)
Subject: Wake Boat and Wake Surfing Study
Date: Wednesday, April 29, 2026 8:42:56 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

First, thank you for the opportunity, and for your draft study. :)

In the section economic benefits of recreational boating , it does not talk about the economic costs to property owners on the shore when having to “fortify” the docks and walls from the continued 2-3’ waves. Docks \$20,000 plus. Boat Lifts 10,000. Wall repairs \$5000 to &50,000.

The report does talk about impact but needs to go further.

I think it is important include a statement on the costs. Marinas and boat manufacturers sell the boats to make a profit and home owners now pay the price.

Candy Perez
605 W Wakefield Blvd, Winsted, CT 06098
8603093972

From: [David Arzt](#)
To: [DEEP Boating](#)
Subject: Wake Boat and Wakesurf Study
Date: Monday, April 20, 2026 1:19:31 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Dear CT DEEP,

I am the President of the Crystal Lake Association in Ellington and the Chairman of the Town of Ellington Ad-Hoc Crystal Lake Milfoil Committee.

I support the continued use of Connecticut lakes for Wakesurfing in a responsible manner. I believe that all residents should be able to use the lakes for recreational activities of their choice.

I support a state wide regulation that allows and maintains wake surfing on Connecticut lakes with the following stipulations:

1. Boats engaging in wake surfing should be operated 200' from shore
2. Boats engaged in wake surfing should operate in a minimum depth of 20' of water
3. There should be no additional restrictions

Thank you for the opportunity to comment on wake surfing.

Sincerely,
David P. Arzt
President, Ellington, Crystal Lake Association
Chairman, Town of Ellington Ad-Hoc Crystal Lake Milfoil Committee
860-810-3161

From: [Stephen Morocco](#)
To: [DEEP Boating](#)
Subject: Wake Boating and Wake Surf Study
Date: Thursday, April 30, 2026 1:53:31 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

I am writing to express my concerns regarding the dangers and environmental impacts of wake boating on our local small lakes. The large, powerful waves generated by these vessels can lead to significant issues, including shoreline erosion, damage to private docks, and the disruption of local ecosystems and wildlife habitats. Additionally, there are serious safety concerns for swimmers, kayakers, and those in smaller watercraft who are frequently affected by these enhanced wakes.

I am strongly in favor of the ban against wake boating on Lake Waramaug. There are plenty of larger lakes in and around Litchfield county where wake boat owners can comfortably and happily enjoy big waves and have fun without harming a small, fragile ecosystem.

Thank you for your time and for everything you do for our community.

Best regards,

Stephen Morocco

From: [al breton](#)
To: [DEEP Boating](#)
Subject: Wake boating Input
Date: Thursday, April 30, 2026 12:52:38 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

As an owner of a wake boarding boat with a substantial investment I am very concerned with any proposal to ban wakeboarding. I am also a lake front home owner concerning any damage to my lake wall.

Having said this I would support some type of regulation as it relates to operating a certain distance from shore.

My family spends many enjoyable times with this sport and it has been instrumental in bringing our family together forming strong bonds with each other.

I expect any regulations will take into account all concerned citizens.

Thank You

Al Breton

From: [Christopher Spring](#)
To: [DEEP Boating](#)
Subject: Wake Boats & Wake Surf
Date: Thursday, April 30, 2026 2:54:43 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

> I have lived on Lake Waramaug Road for over 15 years. Our house is just north of The State Park and opposite Arrow Point. Which is only 200 yards away The water in the main part of the lake can be choppy, but for the most part this area is calm... well it was calm until the Wake Boats arrived a few years ago. Because the water is pretty flat it's the perfect spot to learn how to Wake Board. It started with the odd one or two boats and has grown from there. It's now reached the point where it's dangerous to sit on our dock on the weekends. We were wiped out a couple of times and realized that we couldn't risk it. As I mentioned we are just north of the State Park which had over 27,000 visitors in 2025. More and more people are coming to the park and hiring Paddle boards, canoes, Kayaks and swimming. They are supposed to wear safety vests but for the most part cannot swim. Everybody knows this is an accident waiting to happen.

> The people have spoken... we had a vote in the three towns that drew record numbers of people to vote and they did. Nearly 80 per cent voted to ban wake Boats. The big difference now is that corporate lobbyists are trying to overturn this ruling. The people who live on the lake or visit the lake have resoundingly said NO to Wake Boats. The vote must be honored.

Chris Spring
74 Lake Waramaug Road, New Preston, Connecticut, 06777

From: [goncalvesmichael](#)
To: [DEEP Boating](#)
Subject: Wake boats
Date: Wednesday, April 29, 2026 9:46:33 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Michael Goncalves
Highland Lake Winsted CT

From: [Mary Yankajtis](#)
To: [DEEP Boating](#)
Subject: wake boats
Date: Thursday, April 30, 2026 4:33:50 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hello

I do not live in Connecticut, but I visit here quite often on the lake in Sherman. Over the last 5 years I have watched the damage done to shorelines at my friend's house and his neighbors houses. The shoreline has eroded and the trees are bare rooted and then they fall in the water and are a hazard and obstruction, as well as causing significant expense to the landowner to remove them. We sit on the stone patio near the water where 10 years ago it would have stayed dry. Now when a wake boat comes, we have to pick up our feet and any of our belongings as the wake from the boats will now crest the wall and flood the patio.

It seems that those who enjoy the wake boats do not have shoreline property that is having issues, otherwise they would realize what is going on. The other land owners are bearing the brunt of the cost of cleaning up after the damage from the wakeboats.

I truly hope you put in a reasonable footage distance from shores 300 or 400 ft or ban them altogether.

Sincerely, Mary Yankajtis

From: [Eric Schwartz](#)
To: [DEEP Boating](#)
Subject: Wake Surfing
Date: Wednesday, April 29, 2026 5:34:38 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Eric
New Preston, CT

From: [Daniel Papernaster](#)
To: [DEEP Boating](#)
Subject: Wake Surfing
Date: Wednesday, April 29, 2026 11:49:12 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Thank you for your comprehensive study. We have a home on Highland Lake in Winsted. While there are always jerks around, the vast majority of boaters are respectful. We would support statewide regulation of wake surfing limiting the activity to 200 feet from shore and not allowing it in shallow areas. We do not support individual town regulation or the banning of wake surfing generally.

Thank you.

Dan Papermaster

From: [Alexandra Simonian](#)
To: [DEEP Boating](#)
Subject: Wake Surfing
Date: Thursday, April 30, 2026 11:12:41 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Alexandra Simonian, Warren CT

From: [Jean Taddonio](#)
To: [DEEP Boating](#)
Subject: Wakeboat and Wakesurf Study
Date: Thursday, April 30, 2026 2:58:13 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To Whom it May Concern,

Thank you for your work on the harmful effects of wake surfing and risks to wildlife. I strongly support the ban on wake surfing on Lake Waramaug due to its small size of the lake and the mixed use. I am a resident of Washington, CT and a kayaker and swimmer and in addition to supporting the health of the lake I feel safer without having to avoid large wakes.

Please mention Lake Waramaug's wake surfing ban as well as the Terra Vigilis reports done on our lake. I think the communities should decide how their lakes are used and if possible would like to see that recommendation incorporated in your response.

Sincerely,

Jean Taddonio

From: [george.szydlowski](#)
To: [DEEP Boating](#); [George S. Szydlowski](#)
Subject: wakeboating
Date: Thursday, April 30, 2026 1:42:27 PM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Wakeboating and wake surfing should be allowed on Lake Waramaug.

George Szydlowski 860-874-8559

From: [LOF Adaptive Skiers](#)
To: [DEEP Boating](#)
Subject: Wakesurf Study
Date: Thursday, April 9, 2026 11:58:28 AM

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

To whom it may concern,

Both myself and my organization, LOF Adaptive Skiers, actively take part in some wakeboarding in CT waters. This makes us quite familiar with the sport, including wake surfing. Both myself and the LOF skiers are also familiar with the differences in the boats, including performances and wakes. I honestly feel that this is a bit unfair as there are many family-types of boats that make big wakes just as big, especially at slower speeds with a boat load of people. Enforcing laws involving types of boats will be extremely difficult, and at this time, certainly not necessary. If indeed people, no matter what type of boat, come close to docks with damaging wakes, there are laws in place already to issue citations. Banning certain types of boats from certain lakes would be unfair and again, difficult to enforce. I personally don't know of any huge problems, other than at Lake Waramaug, who's users have already established no-wake zones. My vote would be to enforce the existing laws.

Thanks,
Joel Zeisler

--

LOF Adaptive Skiers

"Soaring Beyond Boundaries"

Phone: 203.426.0666

Email: LOFskiers@gmail.com

www.LOFadaptiveskiers.org

Facebook: <https://www.facebook.com/LOFAdaptiveSkiers>

Instagram: <https://www.instagram.com/lofadaptiveskiers/>

From: [Desiree Goncalves](#)
To: [DEEP Boating](#)
Subject: Wakesurfing
Date: Thursday, April 30, 2026 8:00:52 PM

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To Whom It May Concern:

I am a Connecticut resident and wake surfer, and I want to thank DEEP for taking the time to study this issue carefully. Wake surfing is an activity I share and enjoy with my family and friends on our state's lakes, and it matters to me that it is treated fairly. If it wasn't for Wakesurfing on Highland Lake in Winsted in the state of CT, my son Samuel, would not be the 2024 world champion in the sport.

I was glad to see that DEEP's study found that wake surfing can be done responsibly with the right rules in place—specifically, staying a reasonable distance from shore and in adequate water depth. That conclusion matches what I have seen on the water. Wake surfing is done at slow speeds and, when practiced responsibly, does not harm the lake or other users. I do not believe bans are justified, and I am glad DEEP agrees.

I also support DEEP setting one clear statewide rule rather than leaving it to each town to decide. As EnCon Police noted, inconsistent local ordinances are confusing, hard to follow, and do not produce better outcomes for anyone. A single, sensible standard is better for the environment, better for enforcement, and fairer to everyone who uses Connecticut's waterways.

One thing I would ask: please make sure the final recommendations are based on solid, unbiased science. I have heard that some of the studies cited by those who want to ban wake surfing (including Terra Vigilis and Marr et al.) have real methodological problems and do not fairly compare wake boats to other watercraft. I hope DEEP will weigh the evidence critically and not let flawed research drive the outcome.

Thank you for listening and for the hard work that went into this report.

Desiree Goncalves
Winsted, CT
Highland Lake Resident