

Vermont Agency of Natural Resources
Use of Public Waters Rules
Responsiveness Summary for Wakeboat Rulemaking
January 2024 (rev. March 2024)

On March 9, 2022, an ad-hoc group of individuals using the name “Responsible Wakes for Vermont Lakes,” (RWVL) submitted a petition to the Agency of Natural Resources (the Agency), requesting an amendment to the Vermont Use of Public Waters Rules (UPW Rules) under 10 V.S.A. § 1424. The Agency reviewed the petition, relevant scientific studies, legal precedent, operational considerations and extensive public comment obtained during the pre-rulemaking phase and determined that while the petitioners had correctly identified a use of public waters conflict, the proposed rule in the petition did not manage this conflict in a manner that: (1) allows for the various uses to be enjoyed in a reasonable manner (10 V.S.A. § 1424(c); UPW Rules § 2.2(b)); (2) provides for all normal uses to the greatest extent possible (UPW Rules § 2.6(a)); and (3) manages the use conflict using the least restrictive approach practicable that adequately addresses the conflicts (UPW Rules § 2.6(b)). The Agency therefore modified the petitioner’s proposed rule, by proposing a rule that requires a 500-foot distance from shore, and 50 minimum contiguous acres, while adding a wakeboat decontamination and “home lake” provision to help reduce the risk of wakeboats spreading aquatic invasive species.

The Agency submitted the proposed rule and associated definitions to the Interagency Committee on Administrative Rules (ICAR), which was unanimously approved by ICAR on June 12, 2023. The draft rule was published on the Secretary of State’s website on June 28, 2023, opening a public comment period until August 10, 2023. Written comments were accepted during this period, as well as verbal comments taken at two public meetings held during this time frame. The Agency received 759 comments on the proposed rule.

Following comment, the Agency made four revisions to the proposed rule, summarized as follows:

1. Clarified that wakesports zones are not exclusive to wakeboats (§§ 3.8.b. and 5.18).
2. Revised the “wakesports” definition to clarify conditions on using wakeboats without wake increasing devices enabled and on lakes without wakesports zones (§ 5.17).
3. Struck use of words “similar” and “enhance” in description of wake-related devices within “wakeboat” and “wakesports” definitions (§§ 5.16. and 5.17.A.).
4. Eliminated areas of “wakesports zones” that are less than 200 feet wide which would not be able to accommodate a wakeboat while maintaining the required 200 feet from other users (§ 5.18).

Many comments requested an extension of the wakesports distance from shore to greater than 500 feet. The Agency determined that at this time, the evidence does not support a conclusion that such an increase is necessary to achieve the regulatory objectives of the proposed statewide rule while aligning with the statutory and UPW Rule parameters to allow for various uses and manage use conflicts using “the least restrictive approach practicable that adequately addresses the conflicts.” A few studies provide information on wakeboat wave energy in comparison to other motorized vessels and wind induced waves. While the studies do not reach a single, conclusive finding, they generally support a distance from shore in the 500-foot range. Therefore, the 500-foot distance from shore remains in the Final Rule.

In conjunction with proposing this statewide baseline rule, the Agency anticipates receiving and responding to several waterbody-specific wakeboat rulemaking petitions. The Agency expects that such petitions will demand particular focus on aquatic recreation and related safety planning—areas where current Agency staff does not have deep professional expertise. Therefore, in preparation for consideration of waterbody-specific petitions, the Agency will explore retaining services of consultants with relevant expertise.

The following is a summary of comments received and the Agency’s responses to those comments. Where appropriate, comments have been consolidated or split into multiple comments for clarity. The Agency received many relatively duplicative comments. In order to make the responsiveness manageable for the Agency and readers, the Agency has selected representative comments or combined comments where appropriate. The original comments are available upon request to the Agency’s Lakes and Ponds Program and on the Program’s rulemaking website. For the purposes of this response summary, operating a wakeboat in wakesports mode, wakesurfing, and wakeboarding are used to describe the activity regulated under the proposed rule.

Comment 1: Vermont ANR is urged to take a prudent course for conservation. A minimum depth of 25 feet is recommended, along with the 1,000-foot distance from shore.

Response 1: The Agency reviewed the proposed rule in the petition, the scientific literature cited in the petition, operational considerations, and additional scientific literature to establish proposed regulations for the operation of wakeboats. Vermont statute directs the Agency, in establishing use of public waters rules, to “attempt to manage the public waters so that the various uses may be enjoyed in a reasonable manner, in the best interests of all the citizens of the State. To the extent possible, the Secretary shall provide for all normal uses.” 10 V.S.A § 1424(c). The Use of Public Waters Rules requires that “[w]hen regulation is determined to be necessary, **use conflicts shall be managed using the least restrictive approach practicable that adequately addresses the conflicts.**” (Section 2.6(b) (emphasis added)).

A study by Marr et al. (2022) measured wave energy from wakeboats and “traditional” waterski boats operating both in maximum wake generating mode or while under normal operating conditions. Maximum distances from 425 to more than 600 feet were needed to let waves from wake boats in wake surfing mode dissipate to energies comparable with the reference condition (a ski boat operating at 200 feet from shore), depending on whether the ski boats were producing maximum possible wake (plowing) or driving under normal operating conditions (planing). This is consistent with a study by MacFarlane (2018) which found that wave height took over 400 feet to reach a reference condition of other motorized craft operating at 100 feet from shore. A study by Mercier-Blais and Prairie (2014) found that distances of 300 meters (984 feet) were needed to dissipate wave energy from wakeboats to the point where they were similar to wind-induced waves, but the study did not compare to other forms of motorized boats. Additionally, a 2023 literature review by the Michigan Department of Natural Resources recommended a wakeboat operating depth of 15 feet and a minimum distance of 500 feet from shore (Francis, J, J. Nohner, J. Bauman, and B. Gunderman 2023).

Based on the available literature reviewed and criteria to review petitions filed pursuant to 10 V.S.A. § 1424(e) (criteria at Use of Public Waters Rules Section 2), the Agency determined that current evidence does not support the 1000-foot distance from shore recommended in the petition. However, the Agency concluded that it was appropriate to regulate the use of wakeboats while in wakesports mode to minimize shoreland erosion and associated phosphorus loading, littoral habitat degradation, lake

sediment resuspension, and property damage, while aligning with the current status quo established by the 200-foot Shoreland Safety Zone in the Use of Public Waters rule with respect to wave energy. To achieve this, the Agency proposes to regulate the use of a wakeboat while in wakesports mode so that they may only operate in wakesports mode at a distance of 500 feet from shore to prevent additional shoreline degradation beyond the level of wave disturbance currently allowed under existing rules. The petition did not propose a minimum depth of 25 feet for wakeboat operation. Based on a review of the available literature, the Agency concluded that the rule should require a minimum of 20 feet of depth for operating a wakeboat in wakesports mode.

Comment 2: First, the 500 foot from shore margin now required must be expanded to 1000 feet, as research has proven, in order to minimize shoreline erosion and threat to public safety of those on shore, swimmers, and boaters in small and/or unmotorized craft. As written, the 500 foot margin is justified as being the distance it takes for the wake boats' four-foot waves (!) to diminish to the degree that minimizes shoreline damage or threat to waterfowl or wildlife.

Given that though, what about the safety of recreational users- swimmers, or those in small craft, who will still be rocked and swamped by these monstrous waves within 500 feet of shore, or as now written, 200' from swimmers and non-motorized boats in open water?

Extending the margin to 1000 feet would be safer, yet still restrictive of the non-wake boaters' rights to use our public waters safely. The additional 500 feet from shore would allow freer use for non-wake boaters, but still would limit navigation or swimming to 500 feet from shore. No longer could a kayaker, canoeist or small-boat fisherman dare to venture across the lake if a \$150,000 wake boat was carousing within the 1000-foot margin or within 200 feet in open water. Where is the equity in that? Why should even one wealthy individual be permitted to steal rights to access public waters by the vast majority? And why is the responsibility to adhere to this regulation entrusted to the boat owner, with near zero opportunity for enforcement?

Response 2: Please see response to comment #1 regarding the distance from shore requirement of the proposed rule. Under the proposed rule, out of Vermont's 800+ inland lakes, only 30 lakes are eligible for wakesports and in many multi-basin lakes (e.g. Waterbury Reservoir, Joes Pond) wakesports are only eligible in some sub-basins, leaving areas where wakesports are prohibited and non-wakesport uses will be exclusive.

Vermont statute 23 V.S.A. § 3311 states that:

(c)(1): An individual shall not operate any vessel, seaplane, racing shell, or rowing scull, except a sailboard or a police or emergency vessel, within 200 feet of the shoreline; an individual in the water; a canoe, rowboat, or other vessel; an anchored or moored vessel containing any individual; or anchorages or docks, except at a speed of less than five miles per hour that does not create a wake.

Because all motorized vessels must be 200 feet away from other boaters, swimmers, and docks to travel at wake-generating speed, over 5 miles per hour, the Agency updated maps of wakesports zones to eliminate sections that were less than 200 feet wide, where it would be impossible for a wakeboat user to be in the wakesports zone and also be 200 feet away from another person or vessel also in that zone.

The wakesports zones identified in the proposed rule are not exclusively for wakeboat use. The Agency has modified the definition of wakesports zones (Section 5.18 of proposed rule) and the use of this term in the wakeboat regulation language (Section 3.8.b) to eliminate any potential confusion. Proposed new language for 5.18 “Wakesports zone” means an area of a waterbody that has a minimum of 50 contiguous acres that are at least 500 feet from shore on all sides and at least 20 feet deep located on a lake, pond, or reservoir on which, per Appendix A, vessels powered by internal combustion motors are allowed and may be used at speeds exceeding 5 miles per hour. Wakesports zones are open to all uses permitted on the subject waterbody.

Comment 3: The second amendment to the regs as written must be to close the loophole on the Home-Lake rule, which is designed to eliminate the transport of aquatic invasive species in the gigantic ballast tanks required to produce gigantic waves big enough to surf on. As written, the Home Rule can be disregarded, and wake boats allowed to travel from one lake to another and home again, as long as the boat owner thoroughly drains and rinses the ballast tanks away from the shoreline of any water body. This leaves the responsibility to prevent further degradation of our water bodies from the irreversible damage caused by milfoil, zebra mussels or any number of destructive, invasive species, including harmful microalgae.

Response 3: Proposed rule section 3.8.d. states:

Prior to entering a Vermont waterbody other than the wakeboat’s home lake, and prior to reentering the waters of the home lake after use of the wakeboat at any other waterbody, the wakeboat must be decontaminated at an Agency-approved decontamination service provider.

Comment 4: One more requirement in the regulations should be to require buoys to demarcate the 1000- foot margin, and the 20- foot depth requirement for wake boats to operate in in order not to stir up and release degrading phosphorus from the lakebed. Who among us can estimate these distances and depths without GPS or a fish finder or buoys to guide us? Strengthening the right of any lake community to ban wake boats from operating on their lake is also essential.

Response 4: Maps delineating the wakesports zones will be publicly available on GPS-enabled mapping applications (that work without access to cellular data) for mobile devices and posted at public access areas. The Agency does not install buoys for recreational purposes.

Lake communities and individuals may install buoys, provided they are installed in accordance with 29 V.S.A. § 403, 10 V.S.A. § 1424, and any other applicable laws and regulations. Individual lakes, lake associations, and municipalities may petition the State under 10 V.S.A. § 1424, Use of Public Waters, to propose a wakesports ban on an individual lake that would allow wakesports under the proposed rule.

Comment 5: The definition of a wakeboat must include any ancillary, after market device that can be stowed and/or attached to a vessel to enhance a wake.

Response 5: The Agency revised the definition of wakeboat and wakesports in the proposed rule to provide additional clarity.

Original definitions:

5.16 “Wakeboat” means a motorboat that has one or more ballast tanks, ballast bags or other similar devices used to enhance or increase the size of the motorboat’s wake.

5.17 “Wakesports” means: A. to operate a wakeboat with ballast tanks, bags, or similar devices engaged to enhance the boat’s wake or with someone riding the wake directly behind the boat; or B. to use a surfboard, wakeboard, hydrofoil, or similar device to ride on or in the wake directly behind a wakeboat with or without a rope.

Revised definitions read as follows:

5.16 “Wakeboat” means a motorboat that has one or more ballast tanks, ballast bags or other devices used to increase the size of the motorboat’s wake.

5.17 “Wakesports” means:

A. to operate a wakeboat with ballast tanks, bags, or other devices engaged to increase the size of the boat’s wake; or

B. to use a surfboard, wakeboard, hydrofoil, or similar device to ride on or in the wake:

- i. directly behind a wakeboat without a rope; or
- ii. directly behind a wakeboat with or without a rope, when the wakeboat has ballast tanks, bags, or other devices engaged as described in 5.17.A.

Comment 6: I am concerned after attending the in- person hearing and listening to the virtual hearing that the distance from other boaters and swimmers is not going to be reflected in whatever is decided on in regards to the distance from shore. (I hope it is 1000 feet.) If it is not safe or prudent to be at least 1000 feet from shore then it is certainly not safe or prudent to be less than 1000 feet from another boat or swimmer. As I believe I heard Oliver say, it would remain at 200 feet. This must be changed to match the 1000 feet from shore delineation.

Response 6: Please see the responses to comments #1 and #2.

Comment 7: Because of user “remote” expectations, these rules should consider limiting Wake Boat use on any Vermont lake to daylight hours, from one hour after sunrise and to one hour before sunset.

Response 7: Evaluating time of day restrictions was beyond the scope of this review. Time of day restrictions were not proposed in the petition as submitted.

Comment 8: It is not realistic to develop rules and regulations for Wake Boats based on surface-water acreage - one size does not fit all.

Response 8: The Agency reviewed the proposed rule in the petition, the scientific literature cited in the petition, and additional scientific literature to establish a “wakesports zone,” where wakeboat operation could be carried out with minimal environmental impact while also managing the impact on near shore uses, as described by the available science. Section 5.18 of the proposed rule defines a Wakesports zone as:

“Wakesports zone” means an area of a waterbody that has a minimum of 50 contiguous acres that are at least 500 feet from shore on all sides and at least 20 feet deep located on a lake, pond, or reservoir on which, per Appendix A, vessels powered by internal combustion motors are allowed and may be used at speeds exceeding 5 miles per hour.

Comment 9: Since the purpose of Wake Boats is to create wakes, all no-wake zones should be left out of the calculations for contiguous acreage, especially the northern and eastern arms. If a Wake Boat is hugging Vermont’s current 200’ no-wake zone is meaningless.

Response 9: Please see the response to comments #1 and #8.

Comment 10: The Friends of Waterbury Reservoir has invested a significant amount of money, time, and energy mitigating the spread of invasive species. The organization is very concerned about the possibility of ballast from wake boats emptying into the reservoir and depositing invasive species into the water. We would like to see some measures installed to ensure that no invasives are brought into the reservoir with Wake Boat ballast. The “home lake” rule, which is designed to help mitigate the spread of aquatic invasive species will be impossible to enforce. All boats coming and going into this lake must be either carried or trailered in and could easily come from neighboring bodies of water.

Response 10: Please see the response to comment #3.

Comment 11: For lakes that do not have GPS service available to them, showing designated Wake Boat zones, buoys with approved use clearly marked on them should be required and set up at the expense of the users or “user groups”. It is difficult enough for most people to judge distances, especially out on the open water. This will ensure the safety of low-impact users who cannot get out of the way of Wake Boats or the wakes emanating from them in time. This would be one way for users and law enforcement to be able to ensure safety.

Response 11: Please see response to comment #4.

Comment 12: Current rulemaking should anticipate future Wake Boat goals and construction, and larger boats that are out there that we have yet to experience. New construction Wake Boats are being designed to create much larger wakes than current model Wake Boats.

Response 12: Assessment of speculative or future wakeboat designs is beyond the scope of this review. The Agency reviewed the petition in accordance with Section 2 of the Use of Public Water Rules: Consideration of petitions filed under 10 V.S.A. § 1424. The Agency reviewed the proposed rule in the petition, the scientific literature cited in the petition, and additional scientific literature to establish guidelines for regulations of the operation of wakeboats.

Comment 13: Along with science-based data, we ask for more emphasis on public safety. Those of us in non-motorized boats cannot safely hug the shore when we paddle. Even within the proposed 500’ buffer, strong wakes can shove us without mercy against stumps, logs, and boulders that can easily damage and capsize our small boats, and injure us. Many of the proposed lakes have rocky, stumpy debris left over from glaciers and long-ago logging of former cedar swamps. There are few bits of gradual, sandy shorelines on northern lakes we visit. If we paddle or swim within 500’ feet of shore we need to be able to navigate that area with care. We can’t understand why you would downplay the safety risks. The State has already catered to fast boat/jet ski users over the many more of us paddlers,

swimmers, and slow-boat fishermen. We are a broad population of diverse ages, incomes, and abilities who impose little impact to our lakes' natural resources. We can't help but be considerate and aware of swimmers, loons and their chicks.

Response 13: Please see response to comment #2.

Comment 14: I have reviewed the proposed wake boat definitions in the proposed changes to the VT Use of Public Water Rules and would like to express my concerns with the wakeboat and wakesports definitions. My understanding is that some wakeboats create enhanced waves for surfing with hull design features and/or wake plates, and that some of these boats do not require ballast tanks or bags. For this reason, I believe both definitions should be modified to remove the words "similar".

Response 14: The Agency acknowledges the comment; the proposed rule includes revised definition language for wakeboat and wakesports. Please see the response to comment #5.

Comment 15: I'm sure the Department is aware of the University of Minnesota's recent study regarding wake boat impact. The proposed operating distance from shore of 500 feet is the minimum range deemed sufficient to decrease wake wave characteristics to that of non-wakesurf boats. Researchers actually summarized their findings as distances required being "greater than" the proposed 500 feet. Regardless, this is the bare minimum needed to protect our delicate shorelines and one can easily imagine enforcement being inconsistent enough that this will not accomplish that goal.

In addition, 500 feet distance - were it strictly adhered to - would only minimize the effects to the shoreline. Other watercraft: paddleboards, kayaks, rowboats, canoes, sailboats, etc. would be at the mercy of non-minimized wake waves. A paddleboarder operating even 200 feet from shore on a normally navigable lake would be subject to wake waves deemed unsafe (even by the Department's minimal requirements) for the shoreline. The University of Minnesota's study includes "other boats" in their minimum distance required to mitigate wake waves - "the data indicated that wakesurf boats require distances greater than 500 feet from the shoreline/docks and other boats". This dramatically decreases the safe operating area for these boats in some of our smaller lakes - and pushes the safe operating area for all other craft operators to small margins closer to shore.

- I respectfully request that the Department of Environmental Conservation increase the proposed minimum operating distance for these wake boats to 1,000 feet.
- In addition, because of this 2K foot operating area, the Department needs to evaluate what compliant implementation of this rule would look like for each of the lakes in question. There are several lakes I can think of where wake boats should be flatly prohibited due to compliant operation being non-practical.
- Further, I request that the DEC include language allowing for local lake associations or governing groups to restrict wake boat operation beyond the Department's rules. The asymmetrical beauty of our lakes may, at times, allow for someone to operate a wake boat technically within the proposed rules - but to the detriment of the ecosystems, inhabitants, and other recreationists in practice. We should allow them to evaluate the impact and make that decision.

Response 15: The Agency did review the University of Minnesota study referenced in this comment. Please see responses to comments #1, #2, and #4.

Comment 16: As a member of a 70+ year old family camp on Shadow Lake I remain highly concerned about the proposed rules on the use of wake boats. The lakeshore has seen more shoreline infringement from a number of factors from clearing to mowing, to building and renovations, to more impervious surfaces and longer driveways. As landowners we know this and have observed it for decades. Adding wake boats to this mix will only serve to provide fossil-fuel powered recreation for a few while having significant ecological impacts and create user conflicts on the lake. Wave action from existing motor boats already rock docks off their moorings and pound the shore despite a non-enforceable "no wake zone". We all have many times had to fix our docks after a heavy weekend of motor boating and waves bashing the shoreline. Adding a 500-foot "no wake boat zone" will only amplify the damage to property and the land and the lake.

ANR scientists know this to be true. "Management for the few" does not uphold Vermont values nor promote "environmental conservation", the name of the Department proposing these rules. Wake boat recreation and the political pressure to allow it is anathema to the mission. Wake boats are built to create wakes PERIOD. Wake boat operators will have no way to know where the 500-foot exclusion zone is at the speeds they are traveling while spotting their riders. Confining high speed operation of multiple boats in a narrow strip of water will exponentially increase danger, shoreline erosion, disrupt aquatic life, and compromise other recreational activities such as swimming, kayaking, canoeing, fishing, diving, snorkeling, and merely sitting on a dock. Wake boat operators are motivated to create the largest possible wakes for the most exhilarating experience...as with any sport speed, distance, height are goals to be met and exceeded. A 5-foot wake record begs to be challenged by a bigger, faster, better designed boat to get to 6 feet, then 7 feet...it is human nature to strive for bigger, better, faster, and more challenging and that is clearly where the industry is already headed. These rules are clearly not forward thinking.

Response 16: The Agency acknowledges this comment, and notes that it makes a general characterization that the rule is inadequate to address speculative, future boat designs. Petitions for Use of Public Waters Rules are for rules that "attempt to avoid, where possible, and resolve, when necessary, conflicts in the use of public waters in a comprehensive and integrated manner so that the various uses may be enjoyed in a reasonable manner, considering the best interests of both current and future generations of the citizens of the State and ensuring that natural resource values of the public waters are fully protected." UPW Rules § 1.1(c). Based on reliable evidence that the nature of wakeboats or use of wakeboats is indeed likely to change, the rule may be further amended to address this. Also see Response to Comment #4 (maps delineating wakesports zone).

Comment 17: How many wake boats will be allowed in a narrow strip of water at a time? How will that be managed when 20 of them show up on the same day? How big or strong will wakes from 5 boats be? or 10? How will that affect kids in kayaks or long-distance swimmers? What about water supplies for the homes, camps and cottages on the lake? Has the Vermont climate council weighed-in on the increase in fossil fuel powered recreation? Who monitors the buffer zone and how often? Will wake boat registration fees cover the cost of conservation officers to monitor their activity and for scientists and engineers to measure impacts? When wake boats are operating in the approved zone all other uses will be curtailed because of safety and incompatible uses (did we not see this on Hosmer Pond? do we need to go there again?), loons will be pushed closer to land and humans, divers and swimmers will be in endangered, etc.

Response 17: Please see the response to comment #2.

Comment 18: Another consideration is that any minimum setback distance should be increased by 25% to help assure that minimum setback distances are maintained. As an example, in a 2021 Minnesota Bill lobbied for by the boating industry, while they continued to promote their 200' setback, the Bill would have required a minimum 500' wide waterway. This additional 25% recognized the potential for human error and/or loss of focus while operating in wake surfing mode.

Response 18: Please see response to comment #1.

Comment 19: With documented studies confirming that the distance from shoreline safety is 650 feet. To arbitrarily select a 1000 ft. distance, the number of eligible lakes is reduced by 50%, and puts undo stress on the 16 lakes.

Response 19: Please see the response to comment #1. The Agency also recognizes the effect that overexpanding the required distance from shore could have on the remaining “eligible” waterbodies and their users, through potential increased use pressures.

Comment 20: When a lake is in a critical and compromised state due to Cyanobacteria and eroding bottom compounding the health of the lake, a provision must be in the regulations for a moratorium on wake boating activities while the impaired status exists.

Response 20: The Agency acknowledges this comment. Currently there are no provisions for a moratorium on any motorized recreation during cyanobacteria blooms, or other hazardous conditions, like flooding.

Comment 21: The rule should have a maximum engine size and thrust produced for these vessels on the inland lakes. With no upper limit, the damage to the shoreline and bottom layer is in serious jeopardy.

Response 21: The definition for wakeboats used in the proposed rule is described in response to comment #5. Regulating engine size restrictions was beyond the scope of review for this petition.

Comment 22: I'm a 71 year old native Vermonter. I've lived year round at Joe's Pond since 1999. I've enjoyed summers at Joe's since the 1960's with open water swimming, kayaking, canoeing, sunfish sailing, paddle boarding and relaxing lakeside. The only instances I've been overcome and swamped by water here at Joe's was by wake boats ...Once while an occupant in a master craft ski boat and once while swimming. Thank goodness I wasn't a vulnerable precious young child! If we cannot ban wake boats altogether, then I support a minimum of a 1000 foot offset. It's critical for safety, shoreline protection and water quality!

Response 22: Please see responses to comments #1 and #2.

Comment 23: I live on Lake Fairlee, in Fairlee, VT, and I am writing to encourage you to live up to the title of your department. We have a real issue with wake boats interfering with the enjoyment, safety and environment of our smaller Vermont lakes.

- These boats are getting larger and more powerful over time and the current regulatory proposals do not cater to that expanding threat.

- Small boats, kayaks and paddleboards are at extreme danger when operating anywhere near these wake boats due to the size and severity of the wakes that they throw up. Just because technology can create huge waves, doesn't mean that this sport is appropriate for all waters.
- I have been on a large pontoon boat when it was dangerously swamped from front to back by a wake boat wave. We had seen the wave coming and tried to maneuver to deal with it.
- Lake swimmers are endangered by these waves.
- From an environmental perspective, these boats are extraordinarily impactful. The engines throw more carbon dioxide into the air than any normal boats, the waves erode shorelines, and the noise pollution is extreme for animals, birds and fish alike.

Wake boats should only be allowed to operate on very large lakes where fewer species are likely to be disturbed. Even there, limits should be in place for when they can operate. Lake Morey and Lake Fairlee are good examples of lakes totally inappropriate for wake boats. I have been boating on lakes for 44 years, and I know how Vermont lakes can be enjoyed with a fair sharing of lake resources. I agree with the outline of the proposed regulation but believe that it should be strengthened so that:

1. wake boats are banned from operating closer than 1,000 feet to the shore.
2. all wake boats operating in Vermont waters be limited in engine size to 400hp.

Response 23: Please see responses to comments #1, #2, and #21.

Comment 24: I am writing to submit my opinion feedback on the proposed rule for enhanced wake operation in Vermont. I support NO ADDITIONAL REGULATION/RESTRICTION beyond the proposed raft rule as it stands at 500ft & other requirements. I believe the science presented by Oliver is sufficient to protect against any potential effects. I am a lake front owner in VT and a wake boat operator.

Further, clarification is needed on the proposed rule as it currently prohibits other actions that do not use enhanced wake operation. 5.17 Part B below includes overreach for operations that can be done and are typical on non-enhanced or "normal" wakes. I believe the "OR" between 5.17 A & B should be an "AND"

I also propose that there should be qualification regarding operation with enhanced wake operation whether or not there is someone riding behind the boat.

Here are a few examples of operations that do not use enhanced wake operation that would be illegal. I believe the spirit of the rule is for enhanced wake operation whereas this definition covers other operations that do not use enhanced wake operation.

1. It is typical to ride a wake board behind a typical ski or runabout boat of any type, with a rope without the use of enhanced wake operation..... Per the proposed rule, this would be deemed illegal.
2. One can ride a hydrofoil behind a typical ski boat or runabout without the use of enhanced wake operation..... Per the proposed rule, this would be deemed illegal.
3. Waterski behind a ski boat or runabout with a rope without the use of enhanced wake operation. If waterskis are "similar devices" then per the proposed rule, this would be deemed illegal.

Response 24: Please see response to comment #5. The use of “or” ensures that either of those activities in subsection (A) or (B) will be considered “wakesports” and may only take place within a designated wakesports zone.

Comment 25: This activity (wakeboarding) is not a normal use that existed on January 1, 1993 when normal uses were defined and anything not a normal use on any body of water by that date was banned. A wake boat being used as motor boat would certainly be allowed. But when that boat used for wakeboarding which is not a normal use and therefore should be prohibited from all Vermont lakes and ponds. Easy discussion and resolution.

Response 25: The Agency notes that wakeboating and wakesports are subject to the Use of Public Waters Rules pertaining to “vessels powered by motor” and the use of “internal combustion motors to power vessels.” These include express prohibitions on waterbodies where motorized vessels or motorized vessels exceeding certain speeds did not occur on a specific public water on a regular, frequent, and consistent basis as of January 1, 1993. UPW Rules §§ 3.2(a), 3.5.

The comment incorrectly asserts that any use that is not a “normal use” “was banned” or “should be prohibited.” The UPW Rules direct the Agency to protect and provide for all “normal uses” (UPW Rules §§ 1.1(a); 2.6(a)); this does not necessarily require that the Agency prohibit anything that does not qualify as “normal use,” though that option is available when necessary to adequately protect a normal use. In other words, even if “wakesports” as a motorized vessel subcategory does not qualify as a “normal use,” a specific ban on wakesports is not mandatory.

Comment 26: Please reconsider your interpretation of the research on wake dissipation. It is wrong.

The leading hydrologists, environmental scientists, and aquatic researchers disagree with your conclusion that 500 feet is adequate to dissipate surfing wakes to a safe level. Rather the research findings and the experts in the field point to a safe distance closer to 1000 feet.

The scientific literature includes four studies of wake dissipation from wakeboats. Each of them ran a wakesurf boat and measured the height and energy of the wake at various distances. All of them found pretty much the same thing: that the farther away you get from the wakesurfer, the smaller and less powerful the wake becomes. The graphs and tables in their reports show remarkable similarities.

Even the industry-funded Goudey study found that the height of a surfer’s wake at 500 feet is 10” tall.

This is a dangerous wake. It would swamp my kayak, submerge a swimmer, knock over my granddaughter, and flip an angler out of a jonboat. It would erode many shorelines. A paddleboard wouldn’t have a chance.

This is why the knowledgeable experts recommend safe distances of “over 600 feet” to 983 feet. This is why Oregon banned wake surfing on the Willamette River. This is why many lake governments have done the same, or set offsets of 700 or 1000 feet.

Your proposal of a 500-foot offset would subject all of us normal lake-users to dangerous wakes. It flies in the face of the research findings, of the expert recommendations, and of your duty to “protect normal uses on all lakes, ponds, and reservoirs...so that [they] may be enjoyed in a reasonable manner, considering the best interests of both current and future generations ... and ensuring that natural resource values of the public waters are fully protected.”

Response 26: Please see the response to comment #1.

Comment 27: I have written this email to compel you to develop a law that will result in the elimination of wakeboats from essentially all Vermont lakes. This, for the obvious reasons which are widely known, including the negative impacts on the quality of our lakes and safety of people and property. In addition, I want to respectfully challenge the thinking that in light of your mission to protect the rights and welfare for the public good by balancing recreational interests with responsible stewardship, that consideration for a very small number of wakeboat owners against the wishes of the general public as well as those citizens who have spent much time and energy to preserve the quality of Vermont lakes over the years, is somehow considered as balanced, fair, equitable, and responsible.

You are clearly pushing the issue of the "greater good" to a new a new, precedent-setting standard with regards to your current policy on wakeboats. As environmental lawmakers, your responsibility is to base policy on sound, scientific facts and evidence, and then back your decisions by educating the public on this rationale and enforcing the law.

To appease the small minority of those who advocate for wakeboating, it is helpful to not only validate their concerns and wishes, but to provide information and education based on scientific evidence for a restrictive wakeboard policy. And to also offer suggested options for alternatives to wakeboating, i.e., other types of less invasive watercraft, other recreational alternatives, other states and larger lakes where wakeboating is allowed, etc.

With growing numbers of those recreating on Vermont lakes, it is not a stretch to recognize that in Vermont, we will only face much more significant problems in the future if wakeboating is allowed, including potentially irreversible shoreline erosion, destruction of wildlife habitat, and the natural life-cycle of our pristine lakes through the disruption of the existing, natural state of nutrient and sediment distribution. The point here is, we pay now, or we pay more later.

For example, Echo Lake in Charleston, Vermont is one of Vermont's only oligotrophic lakes and is being considered for A1 water quality classification, and yet this small lake remains open to wakeboating at this point in time. Why put one of our most pristine, flagship lakes at risk?

Again, we come back to the issue of balance. Respecting the rights of a few individuals who have the power to significantly impact the quality of the environment and the quality of life for the other 95%+ of our citizens does not seem balanced.

Response 27: Please see response to comment #1.

Comment 28: The matter of enforcement should be considered when writing a UPW Rule. There is no question that the regulation of the use of Vermont's lakes and ponds is important. But writing rules is one thing; enforcing those rules is quite another.

This was a consideration that the WRP often struggled with as it wrote its rules. Some rules can be enforced more readily than others. For instance, a rule restricting certain uses to certain times (such as the months that airplanes are permitted to land on Vermont's waterbodies or the hours that waterskiing is allowed on Sunset Lake in Benson and Orwell) draws clear lines which can be easily determined. Likewise, the breach of a rule that absolutely prohibits certain uses (such as internal combustion motors or jetskis) on a particular lake is readily apparent. Even a rule that restricts certain activities in specific

areas of a waterbody can be viable, but only if such an areas can be easily determined. See, e.g., the lake-specific rule for Lake St. Catherine, Rule b(3)-(6) in Appendix A of the UPW Rules.

However, any rule that sets a limit or restriction that is not clearly and easily determined is more problematic; even rules that limit speeds, as many of the existing lake-specific rules do, are difficult to enforce. As an example, the WRP struggled to write rules that set standards and restrictions even when those standards or restrictions might be, of necessity, less defined. For example, the panel was sometimes asked to write rules with “no wake zones.” Since every vessel creates a wake to some degree, the panel settled on a restriction on “disturbing wakes,” and it defined that term in Section 5.3 of the UPW Rules. Certainly, the rule is not perfect - even a duck creates a wake - but, based on my research at the time, the panel decided that it had written the best definition that exists, and, because violations of the rule can be determined, it can be enforced.

The restrictions in the proposed rule are not readily determinable. Here, if a rule applicable to the use of wake boats on Vermont’s waters requires such boats to maintain a distance of 500 feet (or even 1000 feet) from a lake’s shoreline, how can such a rule be effective if such distances are not easily determined? Certainly, if a wake boat operates only a few feet from a shoreline, a violation of a 500 or 1000 foot restriction might be apparent. But can anyone state with any certainty that any boat, operating at some distance, is only 400 feet or 950 feet from a shoreline?

The proposed Appendix E to the proposed rules sets out “Wakesports Zone Areas” for each of the lakes on which wakeboats are proposed to be allowed; the WZA has evidently been established to protect the lake, its sediment, and its shorelines. The WZA for Caspian Lake is 461.2 acres in size, based on the configuration and varying depths of the lake. But no amount of bouys or other guidance devices can possibly delineate that area with any accuracy. How can anyone, - the operator of the wake boat or someone in a canoe or standing on the shore - determine with any degree of certainty that a wake boat is or is not operating within that zone, even with a WZA map in hand?

If violations of a proposed rule that sets distance restrictions or zone restrictions on the operation of wake boats cannot be readily and easily determined, then such a rule cannot be adequately enforced. And this means that the rule is, unfortunately, mostly toothless and useless.

Response 28: The Agency acknowledges that implementation and enforcement of a new rule can have challenges. The Agency has been in communication with the Vermont State Police Marine Division and the Vermont Fish and Wildlife Game Wardens regarding enforcement of the proposed wakeboat rule. In addition, if the proposed rule is adopted, a public outreach campaign will be incorporated into the implementation of the rule. The outreach campaign will include the identification of decontamination service providers and decal-issuance procedures to support the “home lake” section of the proposed rule, development of wakesport zone maps that are accessible through a GPS-enabled mapping application on mobile devices, and the installation of maps and informational signage at access areas. Individuals or other entities may install buoys to better delineate a wake sports zone provided they are installed in accordance with 29 V.S.A. § 403, 10 V.S.A. § 1424; please see response to comment #4. Additional training will be provided for enforcement staff as part of the Rule implementation.

Based on the Agency’s proposed rule and aforementioned efforts to provide the public with various tools for compliance with the rule, the Agency disagrees with the assumption that the rule is inadequate. However, if at a later time additional evidence or a better scientific understanding of this subject shows

that the rule does not meet the intended purpose or would benefit from modification to improve compliance and enforcement efforts, additional rulemaking could be initiated.

Comment 29: What are we doing here!? Why are we catering to people that have nothing better to do than complain! 200 feet is plenty of space! Did you know that the large wave is only thrown from one side of the boat, while someone is surfing. It really comes down to just being responsible when making a surf wave. We need more education and trials before rolling out a ridiculous 500ft rule. Also, what will be doing about fishing boats that have live-wells? Will they also need a home lake sticker? and what about basically any boat that has a built in bilge? We all know when you're out on the water, your boat can take on a little bit of water. Your bilge pump may not kick on until you're at another lake, and at that point you would be potentially spreading invasive species. What about the other 700 protected lakes/ponds people can go to! Why would you take away what little we already have? If it's going to 500 ft for one, it's needs to be for all. There's nothing "Vermont Strong" about this proposed rule.

Response 29: The decision to require a 500-foot setback for a wakesports zone is explained in the response to comment #1. Wakeboats have ballast systems, which have been found to be difficult or impossible for a boater to completely drain, wake boats maintain and transport relatively large volumes of residual water (mean water volume 31.7 L) in comparison with other vessels, even after drain pumps run dry. Live organisms can be found in residual water of wake boat ballasts for at least a week after use (Campell et al 2016). For example, Ballast tanks from wakeboats operated on a lake infested with the Zebra Mussel (*Dreissena polymorpha*) typically carried 247 Zebra Mussel veligers per sample (Doll 2018), which was much greater than stern drive motor compartments (13 veligers per sample), outboard motor lower units (1 veliger per sample), live wells, or bilges. In conjunction with the requirements of 10 V.S.A. § 1454 (prohibition on transport of aquatic plants and aquatic nuisance species), the proposed wakeboat "home lake" and decontamination provision (proposed UPW Rules § 3.8.d) helps minimize the risk of wakeboats transporting aquatic species between waterbodies.

Comment 30: That wakeboats are damaging to water, shorelines and aquatic life is not just a data set; we can see this in action as large wakes have already affected loon habitat and visibly eroded shorelines especially in narrows, weaves, curves and open inlets. The propeller wash from the boats uproot vegetation and stir up sediment fueling algae growth, say nothing of the effluence from their giant ballasts. Lake configuration in addition to 1000-ft setback should be considered. Beyond the massive wakes, they produce a disproportionally high level of noise, destroying the peace paddlers, swimmers, fishers, hikers, campers and wildlife seek. Noise and Hour restrictions are imperative. If we cannot ban wake boats altogether, I support time, sound, home waterway and 1000-foot offset rules and a plan for funding enforcement and education funded by the wakeboaters themselves.

Response 30: The decision to require a 500-foot setback and a minimum of a 20-foot depth to operate a wakeboat in wakesports mode, in a designated wakesports zone is explained in the response to comment #1.

Comment 31: We have personally witnessed non-motorized users being thrown from their craft when a wake boat has passed by (and we helped one of these individuals reach safety) and personally witnessed numerous "confrontations" between wake boat drivers/owners and other users of the lake (both motorized and non-motorized). In these confrontations, we have yet to witness and wake boat operator taking responsibility for the situation. The users of wake boats, in general, are a greater thrill-seeking group. This group, generally, is less respectful of other users. Although it is not my intent to paint all

wake-boat users as disrespectful, I am simply stating what we have observed. Wake boat owners know of the disruption caused to others, but choose to participate in the activity nonetheless. Even by the very nature of a wake boat, it is difficult for a responsible user to operate safely in the presence of other lake users.

Personally, I believe wake boats should not be allowed on Vermont lakes and ponds. As I understand the statistics, currently less than 5% of craft are wake boats. We have survived happily and safely until now without this risk being introduced to our lakes and ponds here in Vermont. At the VERY LEAST, there should be a limitation of operation at least 1000 feet from shore and 250 feet from other users on the body of water. If you have been around wake boats, you understand the absolute need for these distances. If you have not, I would suggest the Committee position themselves 100 feet from a large wake boat and experience it for yourself. I would suggest a PFR if this is done. And that is for the wake boats being manufactured today...they will grow their wakes over time and become even more destructive.

Response 31: The Use of Public Waters Rules requires that “when regulation is determined to be necessary, use conflicts shall be managed using the least restrictive approach practicable that adequately addresses the conflicts” (Section 2.6(b)). Based on the evidence reviewed, the Agency believes that current evidence does not support the 1000-foot distance from shore recommended in the petition. To prevent shoreland erosion and associated phosphorus loading, littoral habitat degradation, lake sediment resuspension, and property damage, and to maintain the current status quo established by the 200-foot Shoreland Safety Zone in the Use of Public Waters rule with respect to wave energy, the Agency proposes requiring that wakeboats may only operate in wakesports mode at a distance of 500 feet from shore to prevent additional shoreline degradation beyond the level of wave disturbance currently allowed under existing rules. Additionally, Vermont statute 23 V.S.A. § 3311 states that:

(c)(1): An individual shall not operate any vessel, seaplane, racing shell, or rowing scull, except a sailboard or a police or emergency vessel, within 200 feet of the shoreline; an individual in the water; a canoe, rowboat, or other vessel; an anchored or moored vessel containing any individual; or anchorages or docks, except at a speed of less than five miles per hour that does not create a wake.

Because all motorized vessels must be 200 feet away from other boaters, swimmers, and docks to travel at wake-generating speed, over 5 miles per hour, the Agency updated maps of wakesports zones to eliminate sections that were less than 200 feet wide, where it would be impossible for a wakeboat user to be in the wakesports zone and also be 200 feet away from another person or vessel also in that zone.

See also response to comment #1.

Comment 32: We have a home on Lake Raponda and enjoy the clean lake with the loons, ducks and other water wildlife. We also canoe and paddleboat on the water. It is challenging to be in small boats with water skiers, but allowing wake boats make it more likely that we will be swamped by the large wakes. Given that the lake is narrow at some spots, allowing a 500' restriction means we have no safe path to get away from the wakes.

Response 32: Under the proposed rule, Lake Raponda would not have an eligible wakesports zone.

Comment 33: Please ban wakeboats from all VT lakes except Champlain where they can only be used when out at least 1000 feet. In smaller lakes, the risks for swimmers, paddle boarders, kayakers and canoers, nesting birds, shorelines, and bottom sediment have all been documented. That the state would nonetheless allow these risks for the recreational satisfaction of a few people with such boats is baffling. How will the state respond when the first swimmer is hit and dies? There will always be bigger toys with human and environmental risks coming along. Sometimes compromise is not possible, or in order to manage this properly would require expensive regulation, including lake patrols with fast boats and trained personnel.

One can only wonder what vested interests are driving this. Where is the money coming from and who is benefitting? Doubtless all will be revealed in due course, but the answers to these questions should be absolutely clear and thoroughly publicized as part of this discussion, before any vote is taken.

Response 33: Please see responses to comments #1 and #31.

Comment 34: Last month, the Vermont DEC posted on their Facebook page that July was Lakes Appreciation Month. You went on to state that lakes and ponds are among Vermont's most valuable natural resources, further saying they offer countless benefits from drinking water and recreation to crucial fish and wildlife habitat. This spring and summer I have watched a constant stream of anglers, paddlers, swimmers and boaters taking advantage of the valuable asset that Peacham Pond is to many Vermonters, as well as the many tourists that visit the Pond. I am a loon volunteer and this year we had four nesting pairs and four chicks born. I believe this is a first for Peacham Pond. I have watched the eagles and osprey catch fish and marveled at all the other wildlife that is on or around the Pond. Under your proposed rule, with a buffer of only 500 ft, almost one quarter of Peacham Pond will be open to wake surfing. To think that Vermont, which we say values the environment, would allow letting a very small number of lake users dominate its use at the expense of all other users of Peacham Pond is unconscionable to me. How is that in the best interest of the other 99+% of people that utilize the Pond? How is that in the best interest of the environment and wildlife? Vermont Use of Public Waters Rules state "public waters shall be managed so that the various uses may be enjoyed in a reasonable manner, considering safety and the best interests of both current and future generations of citizens of the State and the need to provide an appropriate mix of water-based recreational opportunities on a regional and statewide basis". I have yet to hear the State explain how the current proposed rule is in the best interest of current and future generations of Vermonters.

Response 34: Please see responses to comments #1 and #31.

Comment 35: I am writing in SUPPORT of a minimum 1000' buffer on small lakes for Wake enhancing boats. It makes no sense why Vermont DEC would even allow the wave making monsters on smaller lakes. As a day user of Sunset Lake in Benson, I witness daily the families with small children playing along the shore, kayakers & paddle boarders and sometimes several small sail boats all using the lake in harmony. How is it fair to every other user of Sunset Lake that one wake boat can occupy nearly 40% of the total lake surface (according to your published map)? For one use driving the rest of us to the periphery is unfair. Its time for VT DEC to be a leader and not a follower in this rule making effort. Sunset Lake is a jewel along with several other small lakes in Vermont that deserve better treatment.

Response 35: Please see response to comments #31, #1 and #2.

Comment 36: The new presence of at least 7 resident wake boats on Lake Dunmore has changed the dynamic of the lake, making it very difficult to enjoy these sports when the wake boats are active nearby. The waves from a wake boat easily cross from the center of the large end of the lake several thousand feet to shore, disrupting swimmers, other boaters, loons and other wildlife. We have noticed a substantial increase in shoreline erosion along our shore on West Shore Road in the last few years as wake boats have become more common.

Over the decades, we see the warden on Lake Dunmore less and less often. I am concerned that if wake boats continue to be allowed on the lake, there will be no enforcement of wake boat rules. It is not uncommon to see motorboats start up from shore, driving right past the white 200 foot buoys at full speed with impunity. The wake boats produce much more damage than other motorboats. What will keep the wake boats in a small circle in the center of the lake?

Response 36: Please see the response to comments #1, #31 and #28.

Comment 37: I was actually very surprised and a little disappointed at how little of Joe's Pond could be used for wakesurfing under the proposed DEC regulation but I suppose that the 20' constraint (which is am very skeptical of the "science" on) eliminates substantial area towards the north end of the big pond that is over 500' from shore but less than 20' deep. I would prefer no regulation at all on wakeboats as I believe that all Vermonters should be able to enjoy Vermont's public waters, but at the same time, 500' would seem to be a common sense compromise sufficient to protect lakefront owner's interests without going to the extreme advocated by the RWVL zealots.

Response 37: The 20-foot depth criteria was developed based on a review of the scientific literature, as described in the response to comment #1. The Agency acknowledges the comment.

Comment 38: WAVE PHYSICS DEMANDS 1000 FEET. The science of how ocean and lake swells turn into breaking waves has long fascinated physicists. The key element of their complicated equations is simply: The high energy of wave trains approaching from deep water and colliding into the rising floor of shallows near the shore must disperse quickly upwards. Many VT lakes scooped out by the glaciers have shallow areas near shore that drop off abruptly into significant depths. Waves propagating through the deeper water (wake boats drive surface waves and deep waves) will hit the "walls" of shoreline drop-offs and push their deep energy very rapidly upwards into hugely powerful waves near the shore. Boats, kayaks, canoes and paddle boards will get wildly thrown around. Near-shore big wake-boat-driven waves will initially blast upward and then re-magnify in the many small coves around our lakes as the huge waves bounce off shoreline curves to re-combine dramatically at the cove center. Such wildly tossed cove centers are often the nesting sites of loons and other wondrous aquatic life. Coves are also the quieter areas where young & old can enjoy tranquil canoeing or safely working to master their kayak and paddleboard skills. The incredible wave energy of wake-boats requires tremendous space to avoid creating destructive high waves in the coves of VT lakes. Let's provide that necessary space at least 1000' from the precious lives, ecosystems and activities near the shore.

Response 38: Please see response to comment #1.

Comment 39: I am deeply concerned about the impacts that wakeboats would have on Lake Willoughby. Just one wakeboat would affect the wellbeing of all the other recreational users that enjoy it, not only

locals but tourists that come from far away. That includes all the hikers who summit Mount Pisgah and Mount Hor for those special tranquil view from above.

It would be impossible to regulate the 1,000 foot buffer zone. There is no cell service at Lake Willoughby to call Fish and Wildlife from afar. Besides the current plan to offer citations for violations would be a mere slap on the wrist. The regulations should be clearly posted along with the steep fines for disobeying them.

The low-paid workers at the Public Access Greeter Program would have the disagreeable task of confronting wakeboat owners about their home lake certification, the cost of which would be borne by all taxpayers rather than owners of these costly boats. As one of the 15 lakes that would remain open to wake boats after the 1,000' buffer rule, Lake Willoughby stands to lose much of what has made it iconic. Please work to strengthen regulations to keep our lakes pristine.

Comment 39: Please see response to comment #28.

Comment 40: One further restriction I would recommend is to require two spotters in addition to the driver. Everyone watches the person behind the boat, but with an elevated bow, the ability of a wake boat's operator to see others in the water is limited. A second spotter is clearly required to assure the path ahead is clear. And while the downloadable wake boat zone app is ingenious, it is also another distraction for the boat's operator.

Response 40: The requirement of adding a second spotter during wakeboat operation in the proposed rule was beyond the scope of review for this rulemaking process.

Comment 41: A major problem with the DEC proposal is lack of enforcement. Is the State going to hire additional Fish and Game personnel, as well as DEC personnel to patrol all 31 lakes for compliance?

Response 41: Please see response to comment #28.

Comment 42: If a lake meets the depth and offshore distance requirements but it's not 50 acres it's 15.7. Shouldn't we be allowed to wake surf in that area? A person's "run time" is not predicated on length and you can indeed turn inside this zone.

Response 42: Based on conversations with wakeboat operators, to understand the mechanics of wakeboating, the Agency determined that because wakesports generate a larger wake than conventional motorboats, a larger zone than the 30 contiguous acres outside of the shoreline safety zone required for motorized boating above 5mph, as identified in the Use of Public Waters Rules § 3.2(a), is needed.

Wakesports are conducted in linear manner, and a typical "run" length is between 2,000 and 4,000 feet, but can be longer. Based on actual Vermont Lake geomorphology, a 50-acre zone will allow for a minimum wakeboarding run of 3,000 feet (an average of the typical run length), which allows for a 3-minute run at 11.5 miles per hour (16.7 feet / second) before leaving the area eligible for wakesports and allows for the wakeboat to remain 200 feet from other vessels or swimmers, as required by 23 V.S.A. § 3311(c)(1), without leaving wake-eligible area.

Comment 43: My family and have a house on Lake Rescue, in Ludlow VT. As I'm sure you know the town, lake, and neighboring communities were devastated by the recent flooding. It will take a very long time for everything to return to normal.

And now, on top of that we are recently finding out through our Lake Rescue Association that Vermont is trying to pass a new rule to prohibit Wake Surfing effectively across most lakes in Vermont with the exception of the 31 largest ones. Lake Rescue is the 10th deepest lake and 23rd largest lake out of close to 800 lakes in Vermont. I don't understand why Lake Rescue is not on the approved list?

My wife is from Vermont and we spent years looking for our special place which we found on Lake Rescue and purposefully chose this lake because the lake provided all water sports with the exception of personal watercraft. The first thing we bought when we arrived at Lake Rescue was a Wake Surfing boat. We understand the waves that are created when wake surfing but there are numerous other ways to help control and regulate Wake Surfing besides blanketly prohibiting it. For example, Lakes and Lake Associations can restrict the hours or even dates for wake surfing and also mandate that wake surfing be done 500' or more offshore which allows any wake to dissipate to a normal wave caused by any other boat or boating activity.

I think the other element that is not being considered is the fact wake surfing is inherently less dangerous than water skiing, tubing or wake boarding. The speeds for wake surfing are 10 mph versus 15-17mph for wake boarding, 18-22mph typically for tubing and 23+mph for waterskiing.

I would also propose that current owners of wake boats be "grandfathered" under this new rule meaning, new home owners should know they are not allowed to wake surf. The reason is that the price of wake surfing boats is much higher than typical water-skiing boats. Lake associations should also have some degree of flexibility in listening to their constituents and seeing how they feel before one group in one remote part of Vermont forces a new rule that affects ALL of Vermont.

I would also like to know what study was done to determine "Wakesport zones?" How does one wake surfer who is wake surfing 500 to 1000 offshore differ on a small lake versus a large lake? It's the same. This wakesport zone is clearly a legislative technique to ensure the prevention of wake surfing without justification. Wake surfing is ~5% of the water activity in Vermont, yet the new rule will essentially prohibit the activity across 97% of the lakes in Vermont.

As a lover of Vermont, a veteran, conservationist, the outdoors, safety, and a lifelong boater, hunter and fisher, we must not pass this new rule. I am in favor of providing tighter controls on how and when people can wake surf but not prohibiting it. These types of rules ultimately will push people out of Vermont to neighboring states and a loss of major tax revenue of which we are one and our tax money should be used to enhance activities in Vermont, not prohibit them.

Ludlow and Lake rescue was just devastated. There was more erosion of our rivers, brooks, and Lake Rescue in 48 hours than wake surfing will ever do in a lifetime. Vermont needs to focus on building back better culverts, roads, water ways to ensure that the next 100 year flood that seems to happen every 10 years does not destroy more of Vermont. Please stop trying to take away simple safe boating activities. I will help lead a petition and exemption for Lake Rescue if this new rule passes. Lake Rescue should be on the approved list right now and this new rule should continue to be debated to find a better solution that is the right compromise.

Response 43: The eligibility criteria are based on a review of available peer-reviewed scientific literature on the impacts of wakeboats on shoreline erosion, lake bottom sediment disturbance, spread of aquatic

invasive species from one water body to another, and public safety and shoreline infrastructure. Please see the response to comment #1.

Lake Rescue is not eligible for wakesports under the proposed rule as it does not have 50 contiguous acres that are at least 500 ft from shore on all sides as well as 20 feet deep.

Comment 44: What I still can't find or understand is if there was any study or science to the required size of the wakesports zone being >50 acres? Below was all that I found in the link you sent on the matter. Do you have a link to a specific geomorphology study specific to a required minimum size being 50 contiguous acres for a wakesports zone? As you show on the Lake rescue map we have 15.7 contiguous acres which happens to be the area that people wake surf today. It meets the depth and offshore distance requirements but it's not 50 acres it's 15.7. Shouldn't we be allowed to wake surf in that area? A person's "run time" is not predicated on length and you can indeed turn inside this zone. Again, we fully support restrictions on offshore distance, depth and more to prevent lake erosion etc. issues. I just don't understand the >50 acres?

Response 44: Please see response to comment #42 and comment #2.

Comment 45: If we cannot ban wakeboards altogether we strongly support keeping them at least 1000 feet from shore, and ask, who will enforce regulations?

Response 45: Please see responses to comment #1 and comment #28.

Comment 46: DEC is using data from a Minnesota study that does not represent the topography of Vermont's lakes. These smaller deep lakes have rapidly rising shorelines that will not slow or dissipate the energy of these large waves as was described in public hearings. The friction simply does not exist of long gently sloping shoreline provides. Your position is based on bad science, in my opinion.

Response 46: Wakesports zones must include a minimum of 50 contiguous acres that are at least 20 feet deep and at least 500 feet from shore to adequately dissipate wave energy. Please see the response to comment #1.

Comment 47: Shore erosion is the most often quoted damage caused by wake boats; however, it is always anecdotal evidence, not based on any empirical study. It is hard for me to believe that (for example) 10-15 wake boat waves hitting a shore from some passes of a wake boat do as much damage to the shoreline as an extended rain and wind storm that causes a continual buffeting of wind-driven waves against the shore;

Response 47: The evidence that wakeboat waves lead to enhanced shoreline erosion is documented in several scientific studies (Bilkovic et al. 2019 and Francis et al. 2022).

Comment 48: I have to take issue with allowing wakesports to take place on Vermont's lakes and ponds. This use is inconsistent with other, existing uses of state waters, is detrimental to the ecosystem health of our lakes, increases the risk of spreading aquatic invasive species (AIS) and is yet another impact on aquatic wildlife. Wakesports should be banned on Vermont's lakes and ponds, and only allowed on large interstate waters, e.g., Lake Champlain and Lake Memphremagog.

In fact, much of the language in the May 17 filing would seem to point to a prohibition, as the document describes Vermont's policies and programs to avoid or mitigate shoreline erosion, resuspension of

nutrients, impacts to aquatic wildlife and spread of AIS. Paradoxically, the rule allows wakesports to continue, in spite of the obvious impacts. In doing so, the interests of a tiny fraction of those who recreate on Vermont's lakes and ponds have been given priority.

Response 48: Please see response to comments #1 and #31.

Comment 49: Section 5.6 defines "normal use" as "any lawful use of any specific body of public water that occurred on a regular, frequent, and consistent basis prior to January 1, 1993."

With that definition in mind, Section 1.1(a) states "[t]he Rules establish a number of general management rules to protect normal uses on all lakes, ponds, and reservoirs."

Later in the rule, Section 2.3 reads, "[i]n evaluating normal recreational and other uses, the following uses shall be among those considered: fishing, swimming, boating, waterskiing, fish and wildlife habitat, wildlife observation, the enjoyment of aesthetic values, quiet solitude of the water body, and other water-based activities.

Wakesports were not regular and frequent in 1993 (Section 5.6) , so it appears they are not a "normal use." Normal uses, listed in Section 2.3, are to be protected, and several of those uses are threatened (i.e., not protected, as required in Section 1.1) by wakesports.

Taken together, these sections establish the importance of protecting uses that "occurred on a regular, frequent, and consistent basis prior to January 1, 1993." There is nothing that guarantees that new uses will be allowed. Wakesports are a new use.

Response 49: Please see response to comment #25.

Comment 50: With respect to protection of natural resources, Rule Section 1.1(c) speaks to "ensuring that natural resource values of the public waters are fully protected." The design and function of wakeboats means there is a much higher likelihood of shoreline damage from their large wakes and resuspension of sediments and nutrients by their angled prop wash. The proposed rule tries to address these problems by delineating "wakesport zones" based on water depth and distance from shore. While good in theory, compliance is primarily voluntary and enforcement resources limited. The result is shoreline erosion, diminished water quality and increased nutrient availability. And, the large wakes will have great potential to harm aquatic wildlife, e.g. loons.

Response 50: Please see the response to comments #1 and #28.

Comment 51: The potential spread of AIS in wakeboat ballast tanks is a significant risk. The rule attempts to address this problem through the home lake rule, but, again, that approach relies heavily on voluntary compliance by boaters who trailer their craft. Even if a greeter is on duty at the boat ramp and informs a boater of the need to decontaminate the boat prior to launch, the boater can simply launch and go on their way. Sure, law enforcement will be informed and there may be consequences, but that won't happen until after the damage is already done. Given the monumental efforts in recent years to prevent the spread of AIS, it seems counterintuitive to open up another avenue for AIS spread.

Response 51: The proposed rule includes a requirement for certified decontamination before moving a wakeboat from one waterbody to another to help prevent the spread of aquatic invasive species between lakes.

Comment 52: Regarding impacts on other users, the 500 foot distance from shore for wakeboat operation would not adequately protect normal uses of Vermont’s public waters. In many deeper lakes, the mapped wakesport zone covers much of the lake, so small craft and swimmers will have to avoid these areas when surfing or boarding is taking place. Further, they will have to stay hundreds of feet from the zone boundary to avoid the largest wakes.

Think of the people on the water in small craft: canoeists, kayakers, paddleboarders, sailors and anglers. And, of course, swimmers. How can these folks enjoy Vermont’s waters, and appreciate “aesthetic values” and “quiet solitude” if they dare not venture away from shore to avoid being swamped, capsized or drowned? The large wakes produced by wakeboats will put them at risk, effectively closing off much of the lake to their use.

Response 52: Please see response to comment #2.

Comment 53: I ask that you also give ample consideration to the exclusionary impact wake sports have on kayaking, canoeing, paddle boarding, angling, swimming and sailing (what is described as traditional uses). And perhaps the rules should also require that wake boats be at least 500’ from traditional users while making wakes, so we’re not confined to a narrow corridor around the perimeter of our lakes.

Response 53: Please see response to comment #2.

Comment 54: I urge you to opt for educating all boaters on proper boating ethics and use. If you still feel that restrictions need to be put on boats, it should follow the guidelines of the WSIA at 200 feet. Long term, if this method does not work, then revisit it at a later date, rather than jumping to extreme restrictions right out of the box and not addressing the education piece.

Response 54: In response to the submission of a petition submitted by the public to amend the Use of Public Waters Rules, the Agency determined that the petitioners had correctly identified a use conflict and the Agency made the decision to engage in formal rulemaking to address the conflict. The decision-making process for a 500-foot setback from shore is described in the response to comment #1. If the wakeboat rule is adopted, education of the boating public will be a key step to implementation. Additional rulemaking on wakeboats is possible to address future conflicts not resolved by this rule.

Comment 55: I believe that these craft must be regulated, should be equipped by the manufacturer or aftermarket installer with a tracking device similar to those used by UAVs, operators must be required to demonstrate knowledge of the regulations, and must be required to obtain authorization from some entity similar to “Before-you-fly,” each time before they are operated on Vermont’s waterways. I believe that is the only way to ensure some compliance with regulations, and some reasonable course of action for enforcement.

Response 55: Separate training and licensure for wakeboat operation is beyond the scope of review of this rulemaking process.

Comment 56: Speaking to the 500 ft rule from shore. This creates another huge list of problems that doesn’t need to be created. If you confine all the wake boats to just a few lakes as the 500ft rule would create you have pushed everyone that has a wake boat to a confined area. This will create a toilet bowl effect where the wave crash against each other and create bigger rouge waves. This brings each boat closer to each other increasing accidents to boats and the potential rider behind the boat. There are

places in Colorado that have this kind of rule not because of wakes but because of number of lakes to boat on. In Colorado on some waterways, you must boat between designated buoys if you want to enjoy watersports. In this area to inform you have a rider in the water you must display an orange flag. This is total controlled chaos at its finest. I will only ride early morning in fear of being run over by other drivers. For Vermont to say you must be 500ft from shore to boat they will need to provide buoys to show the area. It is almost impossible to judge a 500 ft from shore by the naked eye. I can judge 200ft, 300 ft from shore because my wakeboard rope is 95ft long and error on the safe side when judging distance.

Response 56: Please see response to comment #2 Regarding the Comment's concern about the number of wakeboats congregating in a waterbody, the Agency notes that wakeboat sales currently make up less than 5% of new motorized vessel sales nationally (as noted in the Agency's rulemaking filing forms, and according to information referenced in the Petition at page 7). The proportion of wakeboat sales may be smaller in Vermont than nationwide, according to marine industry participants.

Comment 57: I'm not opposed to wake boats. But if they continue to be part of the growing boat industry in Vermont, they belong on bodies of water greater than 1000 acres. I have become fairly knowledgeable with the science over the last several years and I like hundreds of other Vermonters, am convinced that wake boats navigating on small inland lakes and ponds in Vermont is in direct conflict with Vermont's commitment to maintaining safe access to all lakes, river and ponds by Vermont residents and those who visit, while at the same time, ensuring that shoreline is protected and the spread of invasive aquatic species is controlled.

Response 57: Please see response to comment #1.

Comment 58: While the proposed rule is a step in the right direction, I am urging you to extend the buffer zone for wake boats from 500' to 1000' feet, remove any of the lakes eligible under the proposed rule that have fewer than 1000 acres of eligible area, limit their use to non-commercial activities, or ban them altogether.

Response 58: Please see response to comment #1.

Comment 59: Science supports a 200-foot setback restriction instead, not the more stringent 500 foot that Vermont is considering and certainly not the 1,000 foot restriction that those are still calling for regarding this ruling.

Response 59: Please see response to comment #1.

Comment 60: Is it possible to include language to limit the number of wake boats operating at any one time on lakes where it is allowed?

Response 60: Although no language is included in the proposed rule to specifically limit the number of wakeboats that can operate at one time in the wakesports zone, the size of the waterbody and the required 200-foot distance from other vessels and people in the lake will prevent overcrowding.

Comment 61: Based on the cost of wake boats, it is clear that only a few people with sufficient wealth would actually purchase and use them. Therefore, permitting wake boats on small lakes would favor a small class of boaters over a much larger class of swimmers and small boaters using canoes, kayaks, paddle boards and small fishing boats which do not harm the shoreline or put other lake users in danger.

Response 61: Please see response to comment #1.

Comment 62: Vermont's lakes, ponds and wetlands are a wonderful asset. One wake boat can destroy the wonderful experience for scores of fishermen, kayakers, canoists, people out in their rowboats, kids on paddleboats, and swimmers. One boat, one driver, affecting dozens and dozens: That's just not right! In addition, lake shores are fragile, and wake boats can destroy them. Please make a decision that protects our states assets and resources for the majority.

Response 62: Please see response to comment #1.

Comment 63: Enhanced wake power and energy are more intense and destructive than personal watercraft; thus, common sense supports that the state does not allow enhanced wakes on any lake or pond less than 300 acres.

Response 63: The Agency did consider a minimum waterbody size for wakesport recreation, but opted for the delineation of a wakesport zone on lakes that have an area that is at least 50 acres in size, 20 feet deep and at least 500 feet from shore on all sides of the wakesport zone. This requirement excludes many smaller lakes from being eligible for wakesports.

Comment 64: The science supports a 1000', or at the very minimum 600'. If the DEC won't go up to 1000', the latter should be adopted. Anything less than 600', flies in the face of science.

Response 64: Please see response to comment #1.

Comment 65: I am writing to strongly encourage you to either forbid wake boats in our beautiful state of Vermont, or, at the least, limit them to a large buffer, like ½ a mile from shore with a 40 foot or greater continuous water depth.

Response 65: Please see response to comment #1.

Comment 66: I am writing to support the proposed rule limiting the recreational use of wake boats in the state of Vermont, but also to strengthen the proposal. I would like them banned altogether from use in Vermont public waters. While they provide recreational enjoyment for those who use them, they create significant hazardous conditions for other recreational water users (kayakers, swimmers, small sailboats, paddle boarders) and pose a threat to fragile lake ecosystems.

If the political will does not exist to ban them outright, they should be kept at least 1000 feet from shore and in waters of at least 20 feet deep in an area of at least 60 acres to minimize danger for other lake users and maximize safety. As an open water swimmer, I have undertaken swims across the main lake and along the shoreline of Providence Island. Sometimes the lake conditions are very rough but as I am familiar with the lake, I am able to navigate these safely. A rogue, wake boat wave risks throwing me against the rocky shores of the island around which I swim, with the clear risk of severe injury. Likewise, on open water crossings of Lake Champlain, large, unexpected waves from these boats could put both myself and my support boat crew at risk.

Response 66: The wakesports zone limitation does not apply to Lake Champlain, because the UPW Rules—pursuant to which the Petition was filed—are only applicable for waterbodies and access areas that are entirely within Vermont's borders. For all other waterbodies, please see the response to comment #1.

Comment 67: If wake boats are restricted to only the 15 - 16 lakes which remain eligible under the 1,000 foot from shore operation as wake boat restriction, the home lake rule will likely be enforceable because the larger lakes tend to have robust Greeter Programs.

Response 67: The Agency acknowledges this comment.

Comment 68: Taking it to an extreme, what do you think it would be like if there were 5, 10 or 15 wake boats on the lake at the same time cruising North to South and South to North?

Response 68: Although no language is included in the proposed rule to specifically limit the number of wakeboats that can operate at one time in the wakesports zone, the size of the waterbody and the required 200-foot distance from other vessels and people in the lake will prevent overcrowding.

Comment 69: I wake board on Bomoseen and the 500-foot rule is a good solution. If you go more than that it would just make the space much smaller and much more congested, it would be more boats in a smaller area and that is not a good solution. At the 500-foot distance it's far enough out so the wave impact is really not much of a problem.

Response 69: The Agency acknowledges this comment.

Comment 70: If we can't get the buffer to 1,000 feet — where it belongs and as is supported by the strong majority of those who have provided public comment — then please give serious consideration to adding a 3rd eligible Wakesports Zone criteria: At least 500 feet from shore, in water at least 20 feet deep, on Lakes and Ponds of at least 500 acres.

Response 70: Waterbody size was not considered as a factor in whether or not wakeboats area allowed on a waterbody. Rather, the designation is based on the ability of a waterbody to accommodate a wakesports zone that is at least 50 contiguous acres, 20 feet deep, and 500 feet from shore on all sides.

Comment 71: An offset of 500 feet for wakesurfing does not protect normal and traditional users of our lakes and ponds. 500 feet is not enough. At least 1000 feet are needed to reduce a surfer's wake to a safe level.

Response 71: Please see response to comment #1.

Comment 72: The 500-foot buffer is a compromise, and we need to realize there will be a negative impact on the ecology of our lakes with the increased wave action. Implementing a 1000-foot minimum distance for wake boats will go a long way in support of decades of work by the Vermont DEC Lakes and Ponds program and lake associations to improve and maintain lake water quality.

Response 72: Please see response to comment #1.

Comment 73: My view: Our lakes are shared public space. No one has the right to dominate this space at the expense of others. We have a rule requiring mufflers on boat motors, limiting their noise (air waves) to a certain decibel level that does not cause pain and injury to others. There should be a similar rule on the size of the wake (water waves) generated by a boat on public waters.

Response 73: Rulemaking on the size of an allowable wake generated by a boat is beyond the scope of review for this petition and proposed rulemaking.

Comment 74: Count my vote against the 1000 ft rule! Mother Nature destroys way more in one storm than all the boats combined, this proposal is unfair and dangerous.

Response 74: Please see response to comment #47.

Comment 75: By establishing a setback, regardless of length, you are creating a line of dangerous turbulence right down the center of a lake, and thus removing the lake's center from reasonable and safe use by low impact users.

Response 75: Please see response to comment #2.

Comment 76: The way I see it - if a small lake community wants to make their own rules so be it, but we don't need blanket statewide regulations which have no plan for enforcement.

Response 76: The Agency concluded that a statewide regulation was appropriate and utilized current studies to inform the regulatory parameters. As the comment notes, additional rulemaking may be approached on a waterbody-specific basis. The Agency anticipates receiving and responding to several waterbody-specific wakeboat rulemaking petitions. The Agency expects that such petitions will demand particular focus on aquatic recreation and safety planning—areas where current Agency staff does not have deep professional expertise. Therefore, in preparation for consideration of waterbody-specific petitions, the Agency will explore retaining services of an external consultants with relevant expertise .

Please see response to comment #54 for additional detail regarding the planned approach to enforcement.

Comment 77: Even at the widest section of the reservoir (almost 2000 feet wide), near the dam, my little canoe was rocked by the wakes of power boats cruising up and down the middle stretch— so much so that I had to constantly manage my position relative to their wakes when I was not more than 200 feet from shore.

Response 77: The Agency acknowledges this comment.

Comment 78: Our first concern comes from boats entering the pond using private access. Last summer we had two wake boats that operated for short periods of time on the pond. Both arrived via “private” boat ramps. This means they were not logged in or inspected by our public access greeter. We don't know where or when they emptied their ballast tanks. We don't know what waterbody they came from. Approximately 30% of our property owners have property that can accommodate launching boats. Visiting boaters could dump ballast tanks holding many kinds of invasive species. The “Home Lake Rule” is all well and good if someone is there to turn the wake boats away. Who will stop those coming in through private boat ramps?

Response 78: If the wakeboat rule is adopted, education of the boating public will be a key step to implementation. Additional rulemaking on wakeboats is possible to address future conflicts not resolved by this rule.

Comment 79: Another concern is obeying the “wake sport zone.” We have an odd shaped pond with two large bays. Great for all kinds of boating, but both of them are less that 20' deep. How will wake boats be kept out of these bays? Churning up the bottom of the pond will release phosphorus and reduce water clarity and endanger our nesting loons. How will wake boat owners know where the “wake sport

zones” are and who will be there to keep them in those zones, especially when those zones are very small?

Response 79: Maps delineating the wakesports zones will be publicly available on GPS-enabled mapping applications for mobile devices and posted at public access areas. Lake communities and individuals may install buoys, provided they are installed in accordance with 29 V.S.A. § 403, 10 V.S.A. § 1424, and any other applicable laws and regulations.

Comment 80: Our pond is a destination for paddlers. Our Greeter has been logging weekend visitors for the past five summers. For each of those years, Peacham Pond has averaged approximately 75% non-motorized boat launches vs. 25% motorized boat launches. On any day you can look out and see groups of kayakers watching the loons in the middle of the pond, or stand up paddle boarders heading toward the bay. Ski boats and tubers seem to coexist with these paddlers. The wakes from wake boats would not be so kind.

Response 80: The Agency acknowledges this comment.

Comment 81: I am writing to submit my opinion feedback on the proposed rule for enhanced wake operation in Vermont. I support NO ADDITIONAL REGULATION/RESTRICTION beyond the proposed draft rule as it stands at 500ft & other requirements. I believe the science presented by Oliver is sufficient to protect against any potential effects. I am a wake boat operator and do so safely and with concern to those around me, just as so many of us do. Further, clarification is needed on the proposed rule as it currently prohibits other actions that do not use enhanced wake operation. 5.17 Part B below includes overreach for operations that can be done and are typical on non-enhanced or “normal” wakes. I believe the “OR” between 5.17 A & B should be an “AND”

I also propose that there should be qualification regarding operation with enhanced wake operation whether or not there is someone riding behind the boat. Here are a few examples of operations that do not use enhanced wake operation that would be illegal. I believe the spirit of the rule is for enhanced wake operation whereas this definition covers other operations that do not use enhanced wake operation.

1. It is typical to ride a wake board behind a typical ski or runabout boat of any type, with a rope without the use of enhanced wake operation..... Per the proposed rule, this would be deemed illegal.
2. One can ride a hydrofoil behind a typical ski boat or runabout without the use of enhanced wake operation..... Per the proposed rule, this would be deemed illegal.
3. Waterski behind a ski boat or runabout with a rope without the use of enhanced wake operation.If waterskis are “similar devices” then per the proposed rule, this would be deemed illegal.

Response 81: Please see response to comment #5.

Comment 82: I’m a Richmond resident and lakeshore property owner in South Hero. I am not opposed to motor boats. My husband and I own a motor boat that we use regularly on Lake Champlain. I also enjoy swimming, paddling, and rowing. I am extremely concerned about the personal safety and environmental hazards caused by wake boats. Ocean-sized waves belong in the ocean. Manufactured “monster waves” have no place in any of Vermont’s lakes. I believe it is clearly in the public interest to ban wake boats from all of Vermont’s lakes. A small number of thrill-seeking wake boaters must not be

allowed to severely restrict swimmers', paddlers', rowers', sailors', and anglers' use of Lake Champlain. If wake boats are allowed to operate at 500 or even 1,000 feet from shore, other lake users will be forced to hug the shorelines to minimize the risk of getting abruptly and dangerously upended by an oversized wake. This would be akin to creating a rule that allows drag racers to zoom down the middle of our state highways, forcing all other motorists into the breakdown lanes or relegating them to smaller roads to minimally restrict drag racers' use of our highways. Please ban wake boats from our state's lakes to protect public safety and preserve the recreational rights of the vast majority of lake users. The existing research is insufficient to ensure that wake boats can be used safely in lakes rightfully enjoyed by countless other recreational users.

Response 82: In response to the submission of a petition submitted by the public to amend the Use of Public Waters Rules, the Agency determined that the petitioners had correctly identified a use conflict and the Agency made the decision to engage in formal rulemaking to address the conflict. The decision-making process for a 500-foot setback from shore is described in the response to comment #1. The Agency notes that the wakesports zone limitation does not apply to Lake Champlain, because the UPW Rules—pursuant to which the Petition was filed—are only applicable for waterbodies and access areas that are entirely within Vermont's borders.

Comment 83: I am writing to document that I am not in favor of the current rule 23P017 as proposed and written, as I do not feel additional regulation of a family and outdoor recreation in a state that prides itself on outdoor and family activities is the correct direction regarding this concern.

Through this process I have seen that those that are against the rule 23P017 have been level, fair, and willing to work together with both the state of Vermont and those for the rule. However it seems those "for" rule 23P017 have been not willing to compromise or discuss medium ground, unless it is written as proposed on March 2022.

Regarding this rule 23P017, I am opposed to ALL rulemaking regarding this matter.

However if this Rule 23P017 will not be turned down altogether, I would strongly voice that no more than 200 feet from shore for this sport, with the rule 23P017 as written otherwise being accepted.

The state of Vermont is one of the only states with the current no wake zone being 200 feet from shore, and is currently being patrolled and monitored based on the 200 feet regulation. Adding more complex and non scientific regulation at this time is not methodical or factual regarding Rule 23P017

Science supports a 200 foot setback restriction instead, not the more stringent 500 foot that Vermont is considering and certainly not the 1,000 foot restriction that those are still calling for regarding this ruling.

Lastly, I STRONGLY believe cooperation and education should come first before severe restrictions or even bans on any water activity are implemented. Vermont should focus on educating ALL BOAT operators on the current regulations through utilizing those that are certified to train and teach the Vermont boating safety license when operating all types of vessels.

Response 83: Please see responses to comments #1, #47, and #54.

Comment 84: 1. Wake boats, if operated properly, cause similar wave formations as pontoon and other motor boats on Lake Fairlee, VT. This perspective is derived from my own observations after living on the lake during the spring, summer, and fall months over 22 years. Wake boats can be used as "regular"

boats to tow floats, skiers, and wake boarders, as long as the ballast tanks are not filled. This distinction needs to be changed in the proposed regulations.

Since Vermont is a small state, with limited resources to enforce regulation, I think the best approach of the wake boat regulations should be enhanced education. From my observations, many current boaters are not educated on boat safety and operation prior to receiving their boating licenses. Mandatory boating education, as part of obtaining a license, would go a long way in curbing many observed dangerous boating behaviors on the lake. Until more studies are available on wake boat operation in VT lakes, I think that the 500 ft shoreline regulation should remain as currently written.

Response 84: In response to the operation of a wakeboat in “non-wakesports” mode, please see response to comment #5. In response to the enforcement comment, please see the response to comment #28.

Comment 85: Definition of “Wake Boat.” It is enhanced wakes of wake boats that cause damage and injury. Hence, the definition of a “wake boat” in the rule must be clear, precise, and broad enough to prevent manufacturers from skirting the new rule. Manufacturers must not have ways (“loopholes”) to develop new, novel watercraft technologies that create enhanced wakes. As such, the rule must include the prohibition of aftermarket wave-shaping fins and other wave-enhancing features that might be applied to all motorized watercraft using Vermont’s inland lakes. The importance of having the right wording for this CANNOT be overemphasized.

Response 85: Please see response to comment #5.

Comment 86: Prohibition of Wake Boats on Lakes Prohibiting Wake Sports. Vermont lakes where wake sport activity will not be permitted, i.e., all but the 15 or 16 largest lakes) should not be permitted to have “outside wake boats” on their lakes. Lake residents who already own a wake boat — and who would not be considered “outside wake boats” — will be allowed to continue to use them on their “home lake” — but only in non-wake boat mode; they will also not be allowed to take them back and forth from their home lake to other lakes during the summer. Allowing outside wake boats opens the door to problems, both inadvertent and intentional. Banning outside wake boats also simplifies enforcement. This can be accomplished simply by providing non-outside wake boat owners who are property owners on their lake with a different colored “Home Lake” permit distinguishing them from wake boats permitted to use Vermont’s lakes where wake sports are allowed and to go from lake to lake with appropriate disinfection.

Response 86: The Agency declines to engage in distinguishing between lake users based upon their ownership of lakefront property. The Agency developed the “home lake” sticker approach as a way to help minimize impacts of invasive species without placing an undue burden on those who regularly use their boat on the same lake, whether that boat is stored on the lake or trailered. The “home lake” portion of this rule applies to wakeboats regardless of whether they are operated in wakesports mode. Please see response to comment #3.

Comment 87: When is Wake Boat Operation Permitted? The new rule should include times of the day when wake boats may be operated. The primary consideration is that of safety. Thus, this should be defined during the period of daylight hours. Ideally, this should be consistent what is currently done for other motorized water sports, e.g., water skiing, tubing, etc. I am unaware whether there is currently any

statutory rule for these other water sports. If this correct, I recommend that establishing an allowed operating window during the day for wake sports is a good place to start. Because of the mountains surrounding a significant number of Vermont lakes that can have an impact on the amount of sunlight on lakes, I recommend that this factor be considered in the DEC's selection of the optimal time window to allow wake sports, e.g., from one half hour after sunrise to a half hour before sunset.

Response 87: The submitted petition did not propose time of day restrictions on wakeboat operations and this restriction was not considered during this rulemaking process.

Comment 88: While learning more about this issue, I came across the 2022 [State of Michigan Department of Natural Resources Fisheries Division's Report 37](#). Below and attached is my summary of the information included in this report. It was not included in the [original petition submitted to the Vermont ANR in March 2021](#) because it had not yet been published. This new report supplements and clarifies the data that your staff considered in the March 2021 petition. It also closely aligns with the necessity for a 1000-foot distance from shore for wake boat operation.

I ask you and the ANR staff to carefully review this report as well. When you do, I think that that you will agree with me that the 1000-foot distance from shore for wake boats will be more effective in protecting Vermont lakes and Vermonters from the problems created by this new type of watercraft. I also wish to thank the ANR for its decision to take action on wake boats and I hope that you will further strengthen your recommendations by adopting the 1000-foot distance.

Response 88: This referenced study makes four recommendations:

1. Boats operating in wake-surfing mode or wake-boarding mode, during which boat speed, wave shapers, and/or ballast are used to increase wave height, should operate at least 500 feet from docks or the shoreline, regardless of water depth.
2. Boats operating in wake-surfing or wake-boarding modes should operate in water at least 15 feet deep.
3. Ballast tanks should be completely drained prior to transporting the watercraft over land.
4. Regulatory authorities and the boating industry should implement an increased education and outreach campaign that targets wake boat operators to improve awareness and implementation of the best practices listed above.

The State of Michigan's proposed voluntary regulations are comparable to the proposed rule that has been developed in this rulemaking process. The Agency used the available science to draft a proposed rule that adequately addresses conflict in the least restrictive manner possible, as required by the Use of Public Waters Rule criteria.

Comment 89: A complete ban on wake boats could inadvertently set a precedent for restricting other activities in the future, potentially limiting the range of experiences lakes can offer.

Response 89: The review of the submitted petition and development of a proposed rule was limited in scope to the use of wakeboats and conflicts with other uses on Vermont's waters. Other recreational boating activities were not considered. As for a "complete ban," while wakesports will not be allowed on some waterbodies, the relevant rulemaking petition and the proposed rule do not include a complete ban on wakeboats.

Comment 90: Firstly, it's important to acknowledge that every individual has their own way of enjoying the lakes and water bodies. Wake boating, while it may differ from more traditional lake activities, offers a unique recreational experience to enthusiasts who appreciate the excitement and challenge it brings. These individuals, like any other lake users, also value their time on the water and have a right to engage in activities they enjoy.

The proposed regulations by the ANR aim to strike a balance between allowing this recreational pursuit and ensuring the preservation of the lake's ecosystem. The eligibility rule, which restricts wake boat usage to lakes meeting certain size and depth criteria, demonstrates an effort to limit their impact on smaller and shallower lakes. By setting a 500-foot distance from shore for wake sports, the operating rule acknowledges the concerns of shoreline property owners and other lake users, offering a compromise that allows both parties to coexist.

It's worth noting that the wake boat community also has a vested interest in protecting the lakes they use. Many responsible wake boat users take care to prevent the spread of invasive species by adhering to proper cleaning and decontamination procedures. As with any recreational activity, education and cooperation among all lake users can help mitigate potential negative impacts.

While it's understandable that some may advocate for stricter regulations or even a total ban, it's important to consider the diversity of perspectives and preferences within the community. A complete ban on wake boats could inadvertently set a precedent for restricting other activities in the future, potentially limiting the range of experiences lakes can offer.

Response 90: The Agency acknowledges this comment.

Comment 91: The serene beauty of our lakes has always been a haven for those who seek solace, excitement, and a connection with nature. Recently, however, this tranquility has been disrupted by the proposed new regulations for wake boats, leaving many lake enthusiasts deeply frustrated and, in fact, quite pissed off.

The Outrageous Overreach: The Vermont Agency of Natural Resources (ANR) has taken a bold step with their proposed regulations aimed at governing the use of wake boats on our beloved lakes. While their intention to balance recreational activities and ecological preservation is noble, the extent of their proposed overreach has left a bitter taste in the mouths of many.

Picture this: a wake boat, renowned for its ability to create exhilarating waves that surfing and wakeboarding enthusiasts thrive on, is now facing limitations that border on the absurd. The proposal suggests that these boats must stay a staggering 500 feet from the shoreline at all times during wake sports. This extreme distance requirement could easily render wake sports virtually impossible on smaller lakes, severely limiting opportunities for those who adore this thrilling activity.

Comparing Apples to Oil Tankers: Adding insult to injury, proponents of the new rules argue that wake boats are capable of producing 7-foot wakes, likening them to the wakes generated by massive oil tankers. Such comparisons are not only misleading but preposterous. The comparison disregards the vast differences in scale, design, and purpose between these two types of vessels. It's akin to comparing apples to oil tankers - an absurd analogy that does not hold water.

Unintended Consequences: The fallout from these proposed regulations doesn't stop at discouraging a popular and exhilarating water activity. It also disregards the fact that many responsible wake boat users take great care to minimize their impact on the environment. Wake boat enthusiasts, like any other lake users, value the health and preservation of the lakes they cherish.

Furthermore, the proposed regulations could set a dangerous precedent. If such extreme measures are allowed, what's to stop other recreational activities from being similarly targeted in the future? This overreach could result in a domino effect of restrictions that stifles the diverse range of experiences that our lakes offer.

A Call for Rationality: It's clear that many lake enthusiasts are deeply upset about these proposed regulations. What's needed now is not an outright ban on wake boats or an unrealistic 500-foot restriction but a measured and balanced approach that respects the rights and preferences of all lake users. Instead of igniting division and discontent, let's promote education, cooperation, and an open dialogue among all stakeholders. Together, we can find a middle ground that ensures both the enjoyment of wake sports and the preservation of our lakes' ecosystems.

Conclusion: While the intentions behind the proposed wake boat regulations may be rooted in concern for our lakes' wellbeing, the execution and extremity of these rules have left a substantial portion of the lake community feeling angered and frustrated. A more rational, informed, and inclusive approach is crucial to resolving this issue without sacrificing the diverse recreational experiences that our lakes have always offered. It's time to listen to the voices of those who feel pissed off and find a solution that respects all perspectives while preserving the essence of our beloved lakes.

Response 91: Please see responses to comment #1 and comment #87.

Comment 92: The current rule seems to be directed at Vermont boat owners (home lake registrations), where and how are out of state visitors accounted for in the rule?

Response 92: The proposed rule would apply equally whether or not the wakeboat operators own lakefront property, and whether or not the wakeboat operators reside in or visit Vermont.

Comment 93: The DEC rule forces the majority of lake users to a small band at the lake's edge while placing the "least restriction" on wake boats.

Response 93: Under the proposed rule, wakeboats are limited to 30 inland lakes in Vermont. For the waterbodies that are not entirely within Vermont's borders (Lake Champlain, Lake Memphremagog, Wallace Pond, and the Connecticut River Reservoirs), only the wakeboat decal and decontamination provisions apply. Additionally, the wakesport zone is not exclusive to wakesport usage, please see the response to comment #2.

Comment 94: A 500 foot distance will severely reduce the area that is safe for traditional boaters to access for recreation.

Response 94: Please see the response to comment #2.

Comment 95: Your Proposed Rule for Wake Boats seems to completely ignore the Danger these boats pose to the Small Craft on Vermont's Lakes. The Organization "Responsible Wakes" is confusing the issue by flooding your public meetings with hordes of Parrots who ask for a 1,000 foot buffer instead of your

proposed 500 foot limit. But the issue being missed with all this blabbering is the overall SAFETY of the boating and swimming public!!

If you visit any of our Vermont's lakes on a summer's day - you will see the waters dotted with kayaks & paddleboards - Small boats fishing and families swimming; all is peaceful Until the arrival of one or many Wake Boats - where the surface of the water suddenly Explodes into monstrous 4-5 foot waves - not even normal waves - but Tsunami Waves that keep on coming, that are powerful enough to smash docks along the shore. Why? So people can Surf hundreds of miles from the ocean. Before the onset of these monster boats all the boaters (large & small) coexisted safely, respecting each other, yielding space and slowing down upon approaching the Kayaker or Paddleboarder. The Wake Boat changes this equilibrium. I am a Kayaker and the waves I experience from Power Boats are annoying but manageable and I have never felt the threat of being capsized. The WakeBoat's potential terrifies me. A responsible small boater chooses what weather to go out in - They would never choose a day when 4-5 foot waves are predicted. The Wake Boat takes this decision away from them - they appear on the waterscape with no warning and in an instant the water erupts into life threatening chaos!

Your rule accommodating the Wake Boat seems to be more concerned with protecting shoreline and lake bottom erosion. It will give these boats free rein over the lakes that meet your criteria. It impinges on the rights and safety of everybody else. Currently Vermont has 5% of registered Wake Boats. you are putting all other users of our lakes at risk. Kayakers are already being capsized and paddleboarders are being washed off their boards now is the time to put a call and end to this. You have wasted your time trying incorporate them into our boating world - you should instead be banning them. How many people will die before you realize your grave error!

By allowing these boats on our lakes you are reversing the progress made against the invasive aquatic plants plaguing our lakes - since these boats are incapable of purging their huge ballast tanks. You are catering to the wealthiest Vermonters and vacationers who can afford a boat that retails at \$100,000 to \$150,000 while putting the rest of us in lethal jeopardy.

Response 95: The Agency reviewed the petition, relevant scientific studies, legal precedent, operational considerations and extensive public comment obtained during the pre-rulemaking phase and determined that while the petitioners had correctly identified a use conflict, the proposed rule in the petition did not 1) manage this conflict in a manner that provides for all normal uses to the greatest extent possible or 2) propose regulation that managed the use conflict using the least restrictive approach practicable that adequately addresses the conflicts as required in the UPW Rules. Please see response to comment #1 and #58.

Comment 96: I am a wake boat owner. I understand, first hand, the concerns and arguments on BOTH SIDES of this issue. Regarding wake surf boat regulations here in Vermont: The only thing that can diminish the impact of a wake surf boat wake.... is DISTANCE. A responsible and/or skilled skipper makes no difference. The proposed regulations will fall short, at 500 feet. I strongly urge the following:

- 1) wake boat use be limited to 1000 feet from shore, rather than 500 feet. AND/OR
- 2) the final rule should include language to identify a process by which individual lakes can further limit or ban the use of these boats.

Response 96: Individual lakes, lake associations, and municipalities may petition the State under 10 V.S.A. § 1424, Use of Public Waters to propose a wakesports ban on an individual lake that would allow wakesports under the proposed rule. Please see the response to comment #1.

Comment 97: Per the definition of "wake boat" in paragraph 5.16 a boat that has wake enhancing devices is a "wake boat" even if those devices are not being used. So, per 5.17B if someone wants to use their "wake boat" as a traditional boat they would not be able to pull a hydrofoil or similar device. I would hope this is not the intent of the proposed regulations.

Response 97: Please see the response to comment #5.

Comment 98: Maintaining a setback of 200 feet for wake boats offers a balanced approach to ensure the enjoyment of water sports while respecting the rights of others. This setback distance helps minimize potential disturbances caused by the boat's wakes, ensuring that residents along the shoreline can maintain their peace and privacy. By creating a reasonable buffer zone, wake boat operators can still enjoy their activities without encroaching on the living spaces of others. This setback also aligns with the principles of responsible water recreation, promoting coexistence between different user groups and preserving the natural beauty of lakes and rivers. The 200-foot setback strikes a harmonious equilibrium between the recreational interests of wake boat enthusiasts and the need to uphold the well-being and rights of lake communities

Response 98: Please see response to comment #1.

Comment 99: I would encourage the department to not go beyond their current proposed regulations regarding wake boats. Requiring a setback from shore that goes over twice the distance than any other state seems very excessive. Increasing the setback to 1000' could inundate those few remaining lakes that meet this criteria. Do not bend to the vocal minority viewpoint!

Response 99: The Agency acknowledges this comment and refers to response to comment #1.

Comment 100: Maintaining the current lake setback regulations is crucial for preserving the delicate balance between recreational enjoyment and environmental conservation. These regulations have been carefully established to safeguard the health of our lakes and their ecosystems, ensuring that they remain resilient for both present and future generations. By keeping the current setback in place, we prioritize responsible and sustainable water recreation, respecting the needs of both lake enthusiasts and the ecosystems. This approach showcases our commitment to the long-term health of our lakes, maintaining their beauty and biodiversity while offering opportunities for people to enjoy them in a way that's harmonious with nature.

Response 100: Please see response to comment #1.

Comment 101: It's really too bad this had to go to petition and couldn't be worked out on more of a case-by-case basis. Wakeboat operators are obviously significantly outnumbered, and it's apparent the squeaky wheel is going to get the grease. Most of us are not out to cause harm, and we want to do the right thing to continue to preserve our bodies of water for generations to come. I can count multiple instances where I have operated at 200 feet or slightly more from kayaks and paddle boarders (most often standing) with the surf wake directed to the opposite side of them, and it's barely noticeable once the wake reaches them.

Response 101: The Agency received a petition under the Use of Public Waters Rules and found enough evidence of a use of public waters conflict to proceed with rulemaking to regulate wakeboats and wakesports. Please see response to comment #1.

Comment 102: The potential introduction of wake boats and their resulting waves would create further concerns about potential capsizing, swamping, and bodily injury to new and even highly experienced users of our lakes as they command far less powerful craft on the water.

Response 102: The Agency acknowledges this comment.

Comment 103: One additional point that is notable in this rule-making process is the complete lack of any alternative proposals from wake boat users. Our petition was filed in March, 2022; five public hearing have been held; the entire state has been aware of this process through the media and through this regulatory process. Opponents have hired a lobbyist to influence the outcome of regulations. With all of this opportunity for communication, education, and input, wake boats users have tried to maintain that wake surfing poses no conflicts on our lakes and ponds, and that no regulation is needed. Public input has demonstrated the use conflicts. The DEC has reviewed studies and all of the information and feedback that has come over the last 16 months. In all of this, opponents have not suggested a single alternative to address the impact of their activity. Alternatives could have included limiting wake sports to lakes of a certain size as was done with jet skis, limiting hours of use on various lakes, or having a shoreline buffer of 300 feet, 600 feet, 750 feet, etc.

Response 103: The Agency acknowledges this comment.

Comment 104: We believe the proposed regulation does not consider the findings of the only peer-reviewed study of wakeboat wakes. Generally termed the “Coty Fay” study, it found that wakes created by wakeboats operating 200 feet from shore dissipate to 11 inches, a size determined to have negligible impact on shorelines. Researchers also determined that the wake created by a ballasted wakeboat dissipates faster than the wake created by a typical boat.

Did DEC consider the Coty Fay study’s science-based, peer reviewed findings when writing these regulations? If so, why were they not used in setting minimum setbacks and depths? Which studies were considered scientifically supported and how were their findings reviewed?

The Coty Fay findings are conservative and may overstate the height of a wake at shore from a wakeboat operating 200 feet from water’s edge. Studies of Payette Lake in Idaho, North Lake in Wisconsin, and the University of Minnesota St. Anthony Falls found that wakes generated by wake surf boats operating 200 feet from shore were even smaller at the shoreline. At a 200-foot setback, the U of M study measured wakes at the shoreline to be 8.5 inches, Payette Lake measured wakes at less than 8 inches, North Lake at 9 inches. Based on these findings, we believe there are significant science-based findings to support a mandatory minimum setback of 200 feet. The comparative analyses presented by the U of M study frankly are skewed, as they compare wakeboat wakes to a “recreational” boat that in fact was a specialized waterski boat that is designed for one purpose – to create the smallest, flattest wake possible. Therefore, the comparisons might be similar if the comparison they made was to a personal watercraft.

In addition, Cotty-Fay detected no turbidity from wake surf boats operating at depths greater than 10 feet deep.

Observations and recommendations in these studies and many others came to little consensus regarding recommended depths. There have been no studies of appropriate dimensions for “wake zones.” The distance where researchers found the wakes did not impact shorelines range from the Coty Fay peer-reviewed study’s finding of 200 feet, to the outlier finding of a 300-meter setback. It is important to note that the researchers who determined 300 meters was an appropriate distance based their findings on a highly unusual standard, namely that in order for a wakeboat wake to completely disappear, it should operate 300 yards from shore. This is a standard not considered by any other research.

Based on the lack of certainty in scientific findings, we believe there is no substantiation for the proposed setbacks of 500 feet, 20’ of depth and 30 acres of size for all lakes that allow towed sports. We recommend the regulation be amended to require a 200-foot setback and a minimum of 10 feet of depth.

Each waterbody is unique.

Furthermore, we support the statement found on the DEC Lakes and Ponds website. The department states the following: “Each Vermont lake and pond were formed under unique conditions in diverse locations; no two lakes and ponds are alike. Vermont has well-known large lakes like Lake Memphremagog, Lake Champlain, and Lake Bomoseen. Hundreds of other lakes and ponds dot the state, ranging in size from tiny half-acre ponds to larger lakes that are hundreds or even a thousand acres in size. Some lakes are known for being deep and clear, like Lake Willoughby, while other lakes are shallow and teeming with aquatic plants. The Lakes and Ponds Program works with lake communities on an individual level to assess a lake’s unique features and determine how best to protect the lake and its watershed.”

We agree with this need to consider each water body individually. The proposed rule would increase regulation of towed sports on Vermont’s lakes, ponds and reservoirs without consideration of the different characteristics of each. According to DEC’s public hearing presentations, studies undertaken in Minnesota and Wisconsin were the primary sources of information and data in DEC’s to determine the 50-acre, 20-foot depth, 500-feet-from shore requirements despite the fact that they have not been peer-reviewed or published in a scientific journal.

Did the DEC study specific lakes and ponds in Vermont to determine what, if any, impacts wake boats have or may have on water quality and erosion? If not, why did it choose not to do so?

Enforcement: We believe that increasing regulation before even a modest education program was initiated will not resolve the concerns of the agency. What state and local resources does the department expect will be used to enforce these proposed restrictions? Will it propose an education program to support these new regulations?

Conclusion: Based on the lack of site-specific data, a lack of consensus for setbacks and depths by studies done in other states, and the complete lack of data on the size of “wake zones,” the NMMA, WSIA and MRAA oppose these proposed regulations as written and recommend they be amended to require a 200-foot setback and a minimum depth of 10 feet on those lakes that allow towed water sports.

Response 104: The Agency did review the paper entitled “Numerical Study of the Impact of Wake Surfing on Inland Bodies of Water,” by Fay et al., 2022, in addition to several other peer-reviewed papers found

through the Agency's literature review and papers and resources identified by the petitioners. The Fay et al. paper used a computational fluid dynamics model to estimate the propagation of waves from wakeboats. This study concluded that wakeboats operating at 200 feet from shore should have minimal impacts on lake shores, but there was limited data collected, and raw data was not presented in a way that could be easily reviewed. There were no direct measurements of wave energy at different distances from shore, nor comparisons to other watercraft. The study was sponsored by the National Marine Manufacturers Association, indicating that its findings could be partial. Please see the response to comment #1 to understand the studies that were used to set standards in the proposed rule.

The Agency agrees that all lakes are unique. The petition demonstrated that a conflict of uses exists and that the Use of Public Waters Rules is an appropriate tool to manage the conflict. For more information on enforcement, please see the response to comment #28.

Comment 105: Local towns are ill equipped to monitor the cleanliness of the wake boat water tanks or ensure that wake boats are 500 feet from shore.

Response 105: Please see the response to comment #28.

Comment 106: Hi, I am writing in regards to the ongoing issue about wake boats. I live in Waterbury 1.5 miles from the Waterbury Reservoir and am also fortunate enough to have a summer home that has been in the family for three generations on Lake Morey in Fairlee, VT. I am an avid paddler, fisher and wakeboarder. It concerns me that this limited research that is being used to make decisions about regulating a recreational sport on Vermont waters is taking place. A few points that I would like you to consider are:

1. Wake Boats and Ski Boats have the same inboard motors with the same amount of power and "downward thrust". Although when a wake boat is engaged in wake surfing it is angled slightly more downward, the most thrust and disturbance of the bottom of the lake occurs when starting or taking off either skiing, wake surfing or any behind the boat sport. Another problem with this thinking that a depth of 20ft for wake boats is the answer, is that not all wake boats have inboard engines. Due to the popularity of these growing sports, manufacturers have developed more cost effective and affordable engines that one can still wake surf behind.

I strongly agree that protecting Vermonts waters from invasive species should be a priority. I do not think that singling out one type of boat for scrutiny is the answer. There are many ways in which invasive species can be transported and ballast systems are definitely one of them, but newer model ski boats also have similar ballast systems with the same pump mechanism. Although they are not designed to create a big wake, they are designed to enhance the wake for ideal skiing either slalom or tricks. Ballast systems are not the only place an invasive species could be hiding. Live wells on fishing boats, although easier to clean still have plenty of places that could have trapped water that you can not easily get to and clean well. Singling out one type of boat for one sport should not be the answer when tackling invasive species in Vermont

These huge wake boats that are used for the studies against wake sports are very rare in Vermont Waters. I have never seen a 25ft boat on the Waterbury Reservoir or Lake Morey. The G25ft Nautique Paragon starts at \$461,746.00. There are not too many people that are going to spend this type of money on a boat that creates a monster wake for Vermonts short boating season. All the wake boats on

Lake Morey are in the 21ft range. I have never been knocked off my paddle board from a wake boat and have never felt threatened from one while fishing in my 14ft Jon Boat. There also hasn't been any studies on all the other boats with the same concerns in mind. There needs to be studies on all the sizes of wake boats, types of engines, ski boats and all other large motor boats before singling out one type that is not easily definable.

I don't think there should be any new regulations on a single sport. This fear mongering that is being used by groups opposed to wake surfing reminds me of growing up snowboarding and skateboarding in the 80's and 90's. There were groups of people trying to get snowboarding banned at some Vermont resorts using fear and danger as the reason, but they just hated the sport. Now snowboarding is an Olympic sport and Jake Burton is a Vermont legend. I think of Vermont as an inclusive state allowing all sports and forms of expression. Limiting, restricting and banning a sport is not the Vermont way.

Response 106: The Agency received a petition to regulate wake boats usage under the Use of Public Water Rules. The Agency agreed with the petitioners that a conflict of uses exists and proceeded with rulemaking using the least restrictive approach practicable that adequately addresses the conflicts. The Agency agrees with the comment that wakeboats are not the only type of vessel that may spread aquatic invasives, and the proposed rule references the broadly applicable requirements for invasives removal at 10 V.S.A. § 1454. See proposed Use of Public Waters Rule § 3.8.e.

Comment 107: When you make your wake boat ruling I would suggest that it states no wake surfing allowed within the parameters you set. If it just states that the wake boat bladders can not be filled they will just seat a few people in the back of the boat to create the wake.

Response 107: Please see response to comment #5 for updated language on definitions.

Comment 108: The DEC Draft to amend VUPW Rules represents a comprehensive effort to now include Wakesports. DEC has done their due diligence. Wakesports did not not exist when the then Water Resources Board (WRB) adopted Use of Public Waters Policy (UPW) in the 90's. It is now appropriate to regulate Wake sports under VUPW. Please be aware that waterskiing was not included as a Normal Use in the Draft under Section 2.3. Based on Green MT Water Skiers (GMWS) comments, and the fact it had existed on Public Waters the WRB included our sport. Wakesports have existed on our Public Waters for several years. It is therefore now necessary and consistent to include Wakesports as a Normal Recreational Use to be considered when conflicts occur.

VUPW Rules requires the LEAST RESTRICTIVE approach practicable that adequately addresses the conflicts (Section 2.6). The Petitioners have been adamant in demanding 1,000 ft from shore despite the fact that DEC has repeatedly documented why this is not the LEAST Restrictive approach. The Petitioners have based their demand on a Quebec Study prepared by Sara Mercia and Yves Prairie that has 300 meters (984 feet) from shore before a wake surf wake is dissipated to Normal Conditions.

Normal conditions are without boat wakes. On our Public Waters motor boats going greater than 5 mph are required to be a minimum of 200 feet from shore. A more correct comparison is to compare Wake Surf and Wake Board wakes from Wakesport boats to tournament ski boats and runabouts.

Several studies have done that. The studies concur on wake size and energy. The St Anthony Study that is referenced in the Petition does this comparison. Condition 1a documents wake height and energy at

10 mph, which is appropriate. Tournament ski boats are designed for slalom, trick, and jump. The trick skiing mode produces the largest wake.

Tricking speeds occur at approximately 11 to 21 mph. Wakes are used in performing several types of tricks including flips. Wake size matters. The skier picks the speed depending on the tricks to be performed on a trick run. The skier's size and skill level factor in the decision.

Trick skiing using tournament ski boats has been a normal use by our members for over 40 years. The Petition on pages 16 and 17 uses the 20mph speed data for the tournament ski boat in Condition 2 compared to the Wakesport boats speeds of 10 mph in Condition 1a. This is not a valid comparison. Condition 1a is absolutely appropriate. The tournament ski boat wake in trick mode at 200 ft is equivalent in size and energy at 425 ft. The Petitioner has mixed apples with oranges. The Water Sports Industry Association (WSIA) sponsored study was done by CA Goudy and Associates includes wake shore interaction both deep and shallow Lakes and includes comparisons to wind driven conditions.

Clifford Goudy and Leonard Gifford are MIT Masters in engineering highly qualified to do the analysis. The Study conclusions detail the varying effects of wake size and energy depending on deep vs. shallow lakes and wind driven conditions. WSIA recommends a distance of 200 ft. from shore. Our Lakes and Ponds do not necessarily fit a one size fits approach. The Least Restrictive approach is intended to be flexible so when conflicts arise solutions for a specific lake can be made. Based on my analysis of the various studies, I personally recommend 300 ft from shore for Wake Sport Zones. The St. Anthony study for Condition 1a shows a 2 inch wake differential between the ski boat at 200 ft. and the Wakesurf wake of the largest Wakesport boat at 300 ft. That represents less than a one inch over pond elevation. It is important to note that crowding Wake-sports into a smaller areas can have negative effects. On Waterbury Reservoir 500 ft prevents having a Wakesport zone in the North Arm because the contiguous acreage falls just below the required 50 acres. The Arm is well suited for Wake-sports. If provided, it would prevent less congestion in the Dam Area and provide better sharing of high speed motor boat activities. The East Arm's high speed area would still prohibit Wakesports.

VUPW Rules Section 2.4 requires consultation with affected recreational user groups. Section 3.7(a) states "The Petitioner shall have the burden of persuasion that the required exceptions or modifications are consistent with Section 2". The petitioner failed to consult with the GMWS and Wake Sport enthusiasts prior to submitting the Petition. To DEC's credit they did the consultation directly. The Petitioner deliberately choose The Quebec Study as their basis for the 1,000 ft. As previously stated, DEC has clearly documented why this is not the Least Restrictive approach as required. The Petitioner has clearly demonstrated their intent to override the VUPW process. This process has stood the test of time to resolve recreational user conflicts such as Waterbury Reservoir. Waterbury Reservoir conflicts festered for years between Quiet Users, Water Skiers, Fisherman, and Personal Water Craft users. After the UPW Policy was enacted, direct dialog and consultation resulted in positive atmosphere. National press commented that in Vermont water skiers, motor boaters, and quiet users can resolve their differences and coexist. DEC is now the Stewards of VUPW. It is necessary to not only make a regulation decision on Wakesports, but to have a plan promote fellowship and education between between all recreational user groups.

Response 108: Please see response to comment #1 for information on how the Agency set standards in the proposed rule. The Agency conducted outreach to affected user groups during the comment period and considered those comments during the rulemaking process.

Comment 109: Thank you for the opportunity to provide feedback on the proposed rule change to the Vermont use of public waters rule as it relates to wake boats. I have several concerns with the proposed rule, which I'm gonna focus on in my comments. As written, the rule does not provide adequate protection for other users, and our fragile and stressed like ecosystems first section 3.8 B should read as follows. Wake boat shall engage in wake sports only within the wake sport zone. This is a minor change to the word only, but I believe clarifies that passage through Wake sport zones is allowable under other operating conditions and by other users which is not currently the case.

Second, missing from the rule is currently proposed is an operational step back while operating in wakes sport mode from other users that may be in the Wake sport zone. User conflict mitigation I think is not adequately taken into consideration, and recent research suggests this set back distance from other users should be at least 500 to 600 feet, but preferably more to allow wake waves to attenuate to safer power levels and heights, and to protect other user safety and mitigate potential user conflict.

My third concern is with the definition of wakeboard zone and the use of 500 feet from shore to establish these zones. The implication is that a wake boat could operate at the edge of this boundary and not sure how these boundaries and zones are gonna be enforced, by the way, and it would be safe and fine for shorelines and other users. However, again based on that same research, at least 500 feet, this appears to be the minimum and possibly insufficient distance to attenuate wake waves, and the setback does not actually allow for other users to safely be in the water near the shore without being in potential conflict. The disadvantage here is obviously two other users and Wildlife Lake shoreland nesting birds etcetera. A better strategy would be to use the 1000 feet, as has been proposed by others, including the original petitioners. This would allow for wake attenuation and then room for others to operate.

Response 109: Please see responses to comments #1, #2, #5, and #28.

Comment 110: Please adopt a rule that supports the precepts of Act 172 of the 2014 General Assembly — the Shoreline Protection Act.

Response 110: The purpose of the Shoreland Protection Act, as defined under [10 V.S.A. § 1441](#) is to regulate shoreland development to be protective of environmental concerns while allowing for reasonable development. This petition was submitted and reviewed under the Use of Public Waters Statute [10 V.S.A. § 1424](#), Section 2 which allows for regulation of the use of public waters. Although both statutes address environmental considerations and access, they have separate jurisdictions and separate standards. This petition was reviewed in accordance with the Use of Public Water Rules only.

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