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Linda Lacroix, Committee Clerk
Cross Building, Room 206
c/o Legislative Information Office
100 State House Station
Augusta, ME 04333

RE: In support of Bill LD56 "An Act to Ban the Use of Personal Watercraft on Lower Wilson Pond and Upper Wilson Pond".

Dear Senator Dill, Representative Nadeau, Ms. Lacroix and Distinguished Members of the IF&W Committee:

I am a 71 year-old retired physician. Our family fell in love with the Greenville area and Wilson Pond in the summer of 1983. We purchased Teasdale Island with its rustic camp, along with a 4 acre lot on the north shore of Lower Wilson at the end of that summer. My wife and I, our two children, their spouses and our 5 grandchildren are all deeply attached to the unspoiled beauty of the pond and its surroundings. And as the years have passed, we have grown attached to our neighbors and the community of Greenville. While I was working in a safety-net hospital and clinic in the Boston area, every summer (and the occasional winter) weekend I was not on call we would leave at 8 pm Friday evening to arrive at the pond at 1 am. We would leave Sunday afternoon at 3, refreshed by the power of the natural surroundings to rejuvenate us for another week. Now that my wife and I are retired we spend over 3 months a year on the pond. We have contributed to the preservation of a 3-mile shoreline conservation easement around Rum Mt, and have kept all but 300 feet of our ¾ miles of island shoreline undeveloped. I believe there are 4 reasons why personal watercraft (PWC, aka jetskis) should not be permitted on Upper or Lower Wilson Pond.

ANNOYANCE

I have nothing against personal watercraft (PWC, aka jetskis). What bothers me is the way they are used. If they went straight, at a constant engine speed, at say, 15 mph, I would have no problem. But of course, nobody drives them that way – it would be no fun. Rather they go back and forth, round and round with abrupt changes in direction, speed and engine sound, amplified as they chase each other, and the jets leave the water in wake jumps. At 60 plus mph. For hours. Last summer there was a group that had two jetskis and a speedboat. They would come around Birch Point and set up at a small beach on the north shore of Rum Mt and spend hours each day roaring around across from our camp on Teasdale Island. Their favorite game was to chase each other and the speedboat, weaving back and

forth across the pond and each other's wakes. Every now and then they would throw a loop around our island. At 60 mph, to cross that section of the pond, about ½ mile wide, takes 30 seconds.

If I were deaf and blind it might not bother me, but as my vision is good and my hearing still good enough to be bothered, I can't seem to take my eyes off them. I try to read, and at the end of every sentence I look up to see what the heck that is out there. I try to work around the camp but still keep looking up, feeling my blood pressure rise. I feel like some giant horsefly is buzzing around my head. Why? Am I just an irritable old grouch unable to let folks have their fun?

Turns out there is a large body of scientific literature that explains why I can't ignore jetskis driven that way. I include below references to a few articles that I think are informative, but I will summarize here. We humans seem to have evolved very sophisticated mechanisms to alert us to the presence of prey and predators. It's easy to see why but seeing how has taken a lot of experiments. The phenomenon is called "attentional capture", and the primary thing that captures our attention is the possibility that something is alive, as opposed to inanimate. This is called in the literature "perceptual animacy". What makes us perceive that something might be an animate being we could eat, or that could eat us, and is therefore demanding of our attention? 6 factors have been shown so far to be critical, as documented in the attached articles:

1. Abrupt changes in direction that are not typical of an inanimate object, suggesting a live being able to cause its own motion and direction
2. Abrupt changes in speed, including starting and stopping
3. Looming or receding – suggesting that the object is coming toward or going away from the observer
4. Chasing – behavior that suggests one object is chasing another, such as following.
5. "Wolfpack" behavior – the perception that entities are continuously focused on something
6. Abrupt changes in sound volume or pitch

These factors have been repeatedly shown to draw an observer's attention to an object – even when the observer is not conscious or desirous of their attention being drawn. And that unconscious capture of attention disrupts the ability to perform other tasks. This certainly describes my experience of a lovely afternoon on Wilson Pond with jetskis roaring around. Anyone who has spent time in the woods as a naturalist, photographer or hunter can attest that these factors, along with smell (did I mention the gasoline smell?) are what alarms deer and other wildlife.

WILDLIFE

What about the wildlife? Is there scientific evidence that this kind of continuous noisy behavior in the immediate environment causes problems for wildlife? It is pretty hard to get dozens of loons or fish to sit in a lab and participate in experiments, even if they are offered course credit. But there is solid evidence. For example, a study published last year in the Proceedings of the National Academy of Sciences demonstrated that birds exposed to sustained motor noise showed multiple effects on health and reproduction, including low levels of corticosterone analogous to what is seen in humans with PTSD. I would point out that the end points we can observe in wildlife are extreme – decreases in reproduction, stunted growth, relocation of populations, etc. To me, the question is, since we know that activities like jetskis alarm humans, and in the woods, anyone who generated this kind of movement and noise would alarm every animal for miles, why do we have to prove that it alarms waterfowl and fish? Why is it not the obligation of those who would like to introduce new environmental disturbances that are known to disturb humans, other mammals and birds to prove that it will not disturb the various creatures on Wilson Pond?

Here I'd like to draw a distinction between jetskis and seaplanes, since some of the supporters of jetskis claim that banning them would be a slippery slope to banning seaplanes. Anyone who has spent time on a pond with planes, loons and eagles, like Wilson Pond, is familiar with the alarm shriek that the loons emit when either a plane or an eagle is overhead. So it is clear that planes alarm loons, probably because they trigger the sense that there is a large predatory bird overhead. But planes take about 3 minutes to taxi and take off. And 30 seconds to land. And then they are done. They don't (usually) go back and forth for hours in the same area. So the loons stop shrieking and calm down quickly. Jetski noise is different – it goes on for hours, often repeatedly visiting the same locations.

SAFETY

The third reason I do not believe jetskis belong on Wilson Pond is safety. There is a reason jetskis are way overrepresented in boating accidents, particularly ones that involve injuries. Most jetskis are capable of traveling 60 mph, and some up to 70. The engines in current models are up to and over 300 hp. And only the highest end of the most recent models have any kind of braking mechanism. This means that not only can't you stop a jetski, if you cut the throttle in an attempt to slow down, you can no longer steer. And a speeding jetski, which has no prop to exert drag in the water, takes over 300 ft (longer than a football field) to stop. The only way to avoid colliding with someone or something in front of you is to accelerate and steer away, perhaps endangering another person. Many of the fatal accidents between jetskis, other jetskis, boats and swimmers are due to this design feature.

A jetski travelling 60 mph and requiring 300 ft to stop, during which time it cannot be steered, creates a semicircular unsafe zone of about 140,000 square feet, or over 3 acres ($\pi r^2/2$ = (3.14x300x300)/2 = 141,300 sq ft = 3.2 acres). That 3-acre zone itself is traveling 60 mph, so over a period of 1 minute, long enough to cross the pond at its widest point, an area of about 1.5 million sq ft, or 36 acres, is rendered unsafe by a single jetski for swimmers, kayakers, canoers, kids floating on tubes, paddle boards, sailboats and fishermen. Avoiding that 36 acres is impossible, as it shifts instantly depending on the whims of the jestskier. This may be fine in the middle of Moosehead, or off the coast beyond the range of swimmers, but on a small pond lined with camps full of people of all ages who love to swim, fish, sail, kayak and canoe, it is not fine. Even if we halve this estimate, it is still unreasonable for one person to render that much of the pond off-limits to everyone else. The effect on many of us is that we lose access to activities that are important to us during the time jetskis are on the water. And if you happen to be swimming across the pond, which I do several times a week, you may not notice that they have come zooming around the corner at Birch Point and are heading straight for you. Common sense suggests that vehicles pursuing erratic paths at 60 mph should not be permitted on smaller bodies of water, any more than a NASCAR race car should be run at full throttle on residential streets.

POLLUTION

Early jetskis were 2 stroke engines that left about 1/4 of their oil/gas mixture in the water. Beginning in the late 1990s, with the need to meet standards, manufacturers began using fuel injected 2 stroke engines, and later on the cleaner but heavier and less powerful/pound 4 stroke engines. The older non-fuel injected 2 stroke machines are still in common use, and easily purchased (see references). Even the newest machines use 10 gallons of gas per hour at full throttle (their normal operating mode) – more than 4 times more gas per hour than a standard pickup travelling at highway speeds. PWCs are also the fastest growing segment of the boating market, with over a million in use and making up 1/3 of new boat sales. Without a ban, older machines cannot be prevented from fouling the waters of Wilson Ponds, and we will doubtless be seeing more and more jetskis.

One final comment. That group I mentioned, with the two jetskis and speedboat, does not live in the area where they play. They seem to be based much closer to the outlet dam, an area which is relatively densely populated. Why do they come a half mile up the pond and around the corner to play? I suspect that they understand that zipping back and forth for hours in front of their own camp would really annoy their immediate neighbors. The area they choose for their noisy and distracting play is one that has been preserved through the work of the Friends of Wilson Pond (FOWP), for the enjoyment of the public. The FOWP maintains 5 campsites open to all, trails and a conservation easement on about 3 miles of undeveloped shoreline that includes habitat for breeding loons, mergansers, otters and other creatures. It is a favorite destination for kayakers and canoers. This is the shoreline where the jetskiers seem to like to play the most. Perhaps they think they won't be noticed there. But noticing that pristine part of the pond is exactly why many other people love the area.

Let's be clear. This is not about a majority of property owners taking away the rights of a minority to have fun. This is about preventing a minority from taking away the rights of a majority to enjoy a quiet, peaceful, safe and clean environment hospitable to wildlife and traditional outdoor activities. I'm all for fun and freedom, but as even the most committed libertarians have observed, your freedom to throw a punch ends at my nose. The visual, auditory, safety and pollution impact of jetskis doesn't end at my nose – it goes right into my brain, and, I suspect, the brains of a lot of other creatures on the pond.

Please support Bill LD56 to ban jetskis on Lower and Upper Wilson Ponds.

Sincerely,

Hilary Worthen

References:

Annoyance:

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Wildlife:

Effects of Noise on Wildlife and Other Animals: Review of Research since 1971. Report from the Environmental Protection Agency, Office of Noise Abatement and Control. July 1980.

Kleist et al. Chronic Anthropogenic Noise Disrupts Glucocorticoid Signaling and Has Multiple Effects on Fitness in an Avian Community. Proceedings of the National Academy of Sciences, 2018. 115 (4) E648-E657. This is available free online at https://www.pnas.org/content/115/4/E648 and was summarized in the Washington Post at https://www.washingtonpost.com/news/speaking-of-science/wp/2018/01/09/some-birds-are-so-stressed-by-noise-pollution-it-looks-like-they-have-ptsd/?utm_term=.651970c43a82

Safety:

High end jet skis now have brakes – as of 2009, and only high end ones https://www.wired.com/2009/03/brakes-on-a-boa/

Jet skis are 9% of registered watercraft but account for 26% of accidents. They take 300 feet to stop. https://blog.nationwide.com/how-to-ride-a-jet-ski/

Why jetskis kill http://www.inmotionmagazine.com/opin/jetskis.html

Pollution:

The average jetski uses 10 gallons of gas per hour at full throttle https://www.steveninsales.com/far-can-jet-ski-go-tank-gas/

Older 2-stroke non-fuel injected machines are still in use and easily purchased https://www.ebay.com/itm/1992-Yamaha-waverunner-3-passenger-jet-ski-seadoo-running-NR/392211692130?hash=item5b51a37a62:g:~gwAAOSwJGdbx5M9:rk:8:pf:0

Sales are 1/3 of new boats. Fastest growing segment of market https://www.boatus.org/study-guide/activities/pwc/