

Lake Redstone Protection District Redstone Watersports Club Wake Enhancement Meeting

Saturday April 12, 2025



Lake
Redstone
PROTECTION DISTRICT

FRIENDS OF
LAKE REDSTONE

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Agenda

1. Call meeting to order, verify compliance with the Open Meeting Law.
2. Approval of Agenda
3. Introductions
4. Lake Redstone Protection District Presentation
5. Redstone Watersports Club Presentation
6. Discussion of issues regarding the proposed Artificial Enhanced Wake ordinance
7. Adjourn

Introductions

The Case for Support of the Ordinance

The logo for the Lake Redstone Protection District features a large orange circle with the text "Lake Redstone Protection District" in white. A smaller purple circle is positioned at the bottom left of the orange circle.

Lake Redstone Protection District

The mission of the Lake Redstone Protection District is to protect and rehabilitate the water quality of Lake Redstone for its residents and the public.

- Formed in 1976
- Lake Management Plan 2022
- Aquatic Plant Management Plan 2023
- Monthly Water Testing – May to October
- Annual Plant Surveys

Other Boats and Watersports

The LRPD is not aware of any person nor organization that might want to “come after” regular boats now or in the foreseeable future.

Regular boats, even with large engines, do not create unusually large waves nor disturb the bottom below a few feet.

Water skiing doesn't destroy pristine lakes, but...

WAKESURFING? That's a whole new story!

The bow comes up and the stern goes down to increase the wake, so it's hard to see ahead.

3 to 4 foot high wakes are created so people can wakesurf, without a rope, like surfing in the ocean.

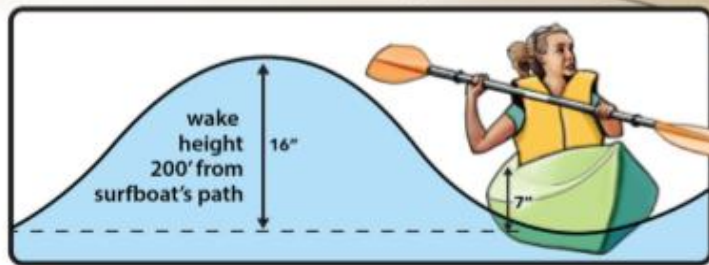
Algae blooms are fueled by nutrients freed from disturbed sediment. Some can kill fish and pets, and make people sick.

Fishermen have been knocked over, pontooners drenched, and small craft capsized by the massive wakes.

If fishermen, pleasure boaters, paddlers, and others can't enjoy our lakes, then tourism, property values and business income will plummet.

Loon nests are just inches above water in calm areas. Big wakes can destroy eggs.

Is the boating industry's 200 feet from shore rule enough?



16" = Height of wake 200' from wakesurf boat's path (per industry)

7" = Typical kayak freeboard

10" = Typical canoe freeboard

12" = Typical small fishing boat freeboard

9" = Height of waves. 25 mph wind. 30 minutes. 1 mile wide lake

Sediment is stirred up and plants are damaged 20 feet deep by the powerful motor and deep downward angled propeller.

Little fish live among the plants. Fewer plants means fewer little fish for big game fish to eat.

Loons, otter and many fish can't see prey in murky water.

Ballast tanks don't drain completely and can bring invasives from other lakes.

Invasive plants spread easily in damaged areas.

Spiny waterfleas can upset the entire ecosystem, resulting in fewer game fish and murky water.

As the wake enters shallow water, plants are damaged, sediment is churned, and fish eggs can be destroyed.

When the big wake crashes on shore it can cause erosion and damage docks and moored boats.

How do they make those huge wakes?

- Add ballast water, up to 5000 pounds (600 gallons)
- Operate at speeds that bring the bow up and stern down
- Use wake enhancing fins
- The wake is 6 to 12 times more powerful than ski boat wakes!

For More Information See: LastWildernessAlliance.org

Re IMG 3803 1 png at DNR's anonymous 24/7 hotline: 1-800-TIP-WDNR



How The Majority of Lake Users Feel About Wake Boats

A sampling of stories



BOW UP
.... being
UN-SEEN

Many people said that they have almost been hit by a wake boat

"The operation of wake boats in the bow-up displacement mode wake prevents the operator of the boat from seeing what is in front of them. I have witnessed numerous unsafe situations and close calls. The bow height has been of serious concern with these wakeboard boats. They are so incredibly high, we've had several scary moments where we knew they couldn't see in front of them."

"Kayakers have reported raising and waving their paddles into the air in order to be seen."

"A fisherman said "***I nearly got killed*** by one that didn't see me due to the bow of their boat being up so high."

"Wake boats are a safety issue as well as contributing to the destruction of the lake. Our biggest concern is the limited visibility when ballasts are used and the 3-4 foot waves putting other boaters, fishermen, kayakers, **our children** and shorelines in harms way."

"Using boat for **grandchildren** tubing, we must continually lookout for other boaters, kayakers, and paddle boarders. We change course to avoid coming close to other boats. HOWEVER: Wake boat operators can't see what is directly in front of them, thereby causing serious safety issues. It is only a matter of time **before someone is seriously injured or killed** by the operation of a wake boat in displacement mode."



Swamping

More than a dozen people reported being swamped or nearly so

“In 2024, our pontoon boat was swamped by a wake, causing significant damage to its front.”

“The extra large wake completely overcame our pontoon boat with water, washing personal belongings and towels off the boat. These boats negatively affect every boat on the lake within hundreds of yards of their operation. Their wakes pound the boats and piers that are docked behind everyone's lakefront property.”.

“You have to turn your pontoon to hit the wakes to avoid having water come aboard, immediately turn to maneuver the next one. My adult kids attempted to send the message to wake boats that they are too close, remembering the 100 foot rule from boater safety 30 years ago.”



Other
watersports
negatively
impacted.

Kids safety
stories.

Many people stated that Redstone has limited area for tubing, water skiing, and wake boarding

“2-4 foot waves are dangerous for Kayakers: I’ve seen kayakers and paddle boarders dumped into the water from large wakes, difficult to keep upright when the wake boats are in displacement.”

“I have heard 4 reports involving **children and grandchildren**: going to Eagle Point where we could stand in the water and let the kids play - the waves now too strong for safety; **Grandchildren** swimming in the bay area (with life vests) pulled out when wake boat’s large waves traveling at least 300 feet to the bay.”

“I have had to rescue **my 3 young grandsons** playing in our bay near me from being washed up onto our rip- rap.”

“Wakeboat wakes create dangerous conditions for our lake activities. We have had several close calls when the kids were tubing: **I fear for my children’s neck and spine** as they get thrashed about from these waves as they get pulled behind our pontoon. Large wakes from these boats created dangerous conditions for my children on the tubes, but also seniors on the boat. The waves are so intense that we all have to halt to a complete stop for the waters to calm.”



Swamping the kids

The most heartfelt stories are about kids

“The waves produced by these boats are dangerous- our tritoon pontoon boat has been rocked and swamped, creating a hazardous situation for **small children** who could easily be knocked into the water. Water has rushed over our entire pontoon floor, It seems no matter how slow we go, these waves are just too violent to allow us to safely share any lake space with these boats.”

“Twice, our boat has had wakes come over our bow and swamp our pontoon, we had **grandchildren** under five years old on board. Our **children** are being knocked by the waves.”

“Last summer, while out in the pontoon, we encountered waves caused by a wake boat that were large enough to push water over the bow and throw our young **granddaughter** off balance.”

“We have had 2 frightening experiences involving wake boats with our young **grandchildren**, in the last couple of years. Both times the wake boats came too close to our pontoon, and sent a wave of water from the bow, all the way out the back. In both cases, the drivers of the wake boats appeared oblivious to the effects their boats had on us.”




More swamping involving kids

"The wake boat waves have swamped our pontoon and washed our **grandsons** to the back, with several adults leaping for them and being knocked down themselves."

"We have had wake boats travel within 50 feet or less of the pontoon, throwing water up over the front of the boat, tossing **kids** from side to side and having to pick things off the floor to avoid them getting soaked."

"A wake boat was coming up behind us, bow in the air, and less than 50 feet from us in a pontoon of 12 people including **kids**. It was obvious they didn't see us or didn't care. We attempted to have a conversation with them. They responded with foul language and increased their speed and then looped the lake at a speed with complete disrespect."

"We have had countless bad experiences with boats creating large wakes. Our **granddaughter** was sitting on her mom's lap when we hit a wake from a passing wakesurfer, that sent us all bunching around the boat with my **granddaughter hitting the floor very hard and ended up with bruises** on her head. This also knocked the gauges out of my dashboard."



Property damage due to enhanced wakes

Eight people described damage to their property from wake boat waves

“Wakes pound the boats and piers that are docked behind everyone's lakefront property as well swamping boats while trying to enjoy the lake.”

“In 2023 I had to install \$6,000 in new rip rap because the large waves were quickly eroding the steep shoreline on my property and undercutting the bank that supports large trees.”

“Last year – a large wave lifted my boat as I was loading it to my lift and when the boat dropped down off the wave, the sudden drop broke the lift bunk and damaged my boat.”

“I know someone who had significant damage to the front of their boat. And a flat bottom boat was capsized.”



Pontoon boat impacts

Many people reported their pontoon boats being impacted:

"The waves continuously affect the side-by-side rocking of our pontoon boat. We saw many smaller boats struggling when waves hit their boats. In the past 3 years concern for erosion and wake boat waves have become a real issue for us. The waves have made it difficult to enjoy riding in the pontoon boat and driving it.."

"We love to pontoon. Since the growing number of wake boats, we find ourselves getting off the main body as quickly as possible. We attempt to stay close to the shoreline with a no wake and still find our pontoon being rocked."

"Lots of wakeboat traffic in front of the bay make it difficult to leave the bay in our pontoon boat sometimes."

"We leave the boat by the dock because the waves make it difficult to put the boat on the lift. Kayaking out of Canary inlet is very difficult on weekends, if not dangerous."




Water quality concerns

Many people said they are concerned about water quality

“I am supportive of the ordinance prohibiting the use of ballasts in boats operating on Lake Redstone primarily due to the potentially adverse impact on the water quality of the lake and related effects on plants, fish and animals”

“We chose Lake Redstone because it had no algae blooms like we saw in Lake Petenwell. Lake Redstone is taken care of, the water is tested and people work diligently to make sure no invasive species issues infiltrate and water quality stays clear. Since the wake boats have arrived, we have seen the water quality diminish due partly to the sediment being disturbed from the lake bottom due to the wake boats which will lead to the algae blooms.”

“Chlorophyll readings on Redstone are at an all-time high, meaning massive blue-green algal blooms may be just around the corner. One of our residents sent me a picture showing algal scum of his dock last August 10th ... something he hadn't seen before on this lake.”



Fishing – habitat and haul is decreasing

More than a dozen fishing folks said that they are frustrated. And fishing isn't as good.

"I have noticed a rapid decrease in the quality of the lake: clarity of the water quality of fishing, & enjoyment on the lake itself. I've seen a loss of natural weed structure and habitat for game fish over the past 4 years. Size and quantity of game fish is noticeably down."

"There is a loss of structure on a marked fishing spot in 8 feet of water in the main body of the lake, frequented by wake boats. In the last year I noticed that tree branches and vegetation where they usually are gone, resulting in no habitat for fish."

"Several years ago I notified the LRPD of round fish nests in the sandy shallow waters (about 1-2 feet deep) of our property, they were creating nests for their eggs. The last two years or so we have seen only about two nests, not only because of the poor water clarity but because the waves are washing them away."



Fishing difficulties

Many fishermen have said they nearly got knocked out of their boats.

"When wake boats are out, canoeing and fishing are difficult even along the shoreline. Waves from wake boats make it difficult and even dangerous."

"Fishermen safety is impacted; fishing boats anchored in one spot along the shore are bouncing around, several have reported to me that they have been knocked off balance and nearly being thrown off the boat from a wake from across the lake."



Property value concerns

Some people are afraid their property values will go down if wake boats aren't banned.

“We have invested heavily in our home, property and shoreline and do not want our property value to decline due to the damaging effects of wake boats. These boats have already negatively impacted our beautiful lake and as more wake boats arrive, the problems will only increase. Our lake is too small and shallow to accommodate them.”

“If even more wake boats arrive, turning our lake in to an algal-blooming mess and into a washing machine especially on weekends, property values will may well go down.”



General statements

“The lake is just too narrow for the waves to dissipate so they are quite large by time they reach the shorelines. Wakesurf boats require distances greater than 500 feet from the shoreline/docks and other boats (or the distance of a little less than 1.5 football fields) to decrease their wake wave characteristics to levels similar to the non-wakesurf boats.

“Simply put, Lake Redstone is too small for wake boats with ballasts.”

“There are 1041 property owners on the lake. The large majority should not have to sacrifice enjoyment and safety due the 25ish people who own wake boats. The bottom line is that the enjoyment of the lake by many residents is being negatively impacted by the operation of wake boats by the few folks who own them.”

"As I see it, these boats are a safety issue, cause shoreline erosion, stir up the bottom, cause environmental problems, and make the lake difficult to enjoy. I'm suggesting the Board vote to regulate these boats so everyone can enjoy our beautiful lake. **Who will be liable** should there be an accident or drowning as a result of a wake boat mishap?"

"I feel for those who have wake boats, but this lake is simply too small to accommodate the large wakes. Many local farmers have adjusted their plans to reduce runoff from their fields and property owners have added shoreline buffers based on recommendations from LRPD to protect our water. The ordinance against the large wakes would be another step in the right direction."



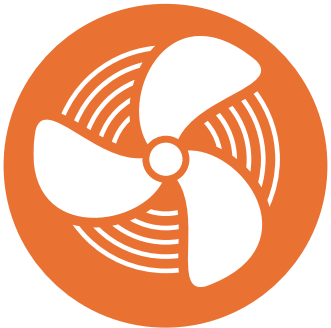
Water Quality

**Research including
on Lake Redstone**

The AI Overview

When you Google ...

Wake boat propeller wash:



“Wake boat propeller wash can disturb lake bottoms and stir up sediments, with studies indicating significant bottom effects up to 20 feet deep when wake surfing, and some recommend operating in water at least 15-20 feet deep.”

When you Google ...

Wake boat distance from shoreline:



“To minimize shoreline impacts and ensure safe wake surfing, wake boats should operate at least 500 feet from shorelines and docks, and ideally in water depths of at least 20 feet.”

Industry Research Regarding Wake Boats

The Best Summary of the dozens of research studies is found in:

Effects of Wake Boats on Lake Ecosystem Health: **A Literature Review**. Wisconsin Greenfire in conjunction with the UW-Madison Department of Limnology. May 2024*
https://wigreenfire.org/2019/wp-content/uploads/2024/05/WakeBoatsLakeEcosystemHealth_WGF-May2024_Final.pdf

“Wisconsin's Green Fire's mission is to advance science-informed analysis and policy solutions that address Wisconsin's greatest conservation challenges.”

Wisconsin's Green Fire is nonpartisan and independent.

Key Points from the Greenfire Summary

Sediment resuspension:

“Compared to motorized non-wake boats, wake boats had the largest disturbance of sediment and release of nutrients after driving past sampling locations once (Daeger et al., 2022)”

Aquatic Invasive Species per research:

“Currently, pumps cannot completely drain internal ballasts, leaving behind an average of 8.37 gallons, but in some cases, up to 22.9 gallons (86.8L) (Campbell et al., 2016)”

Key Points from the Greenfire Summary

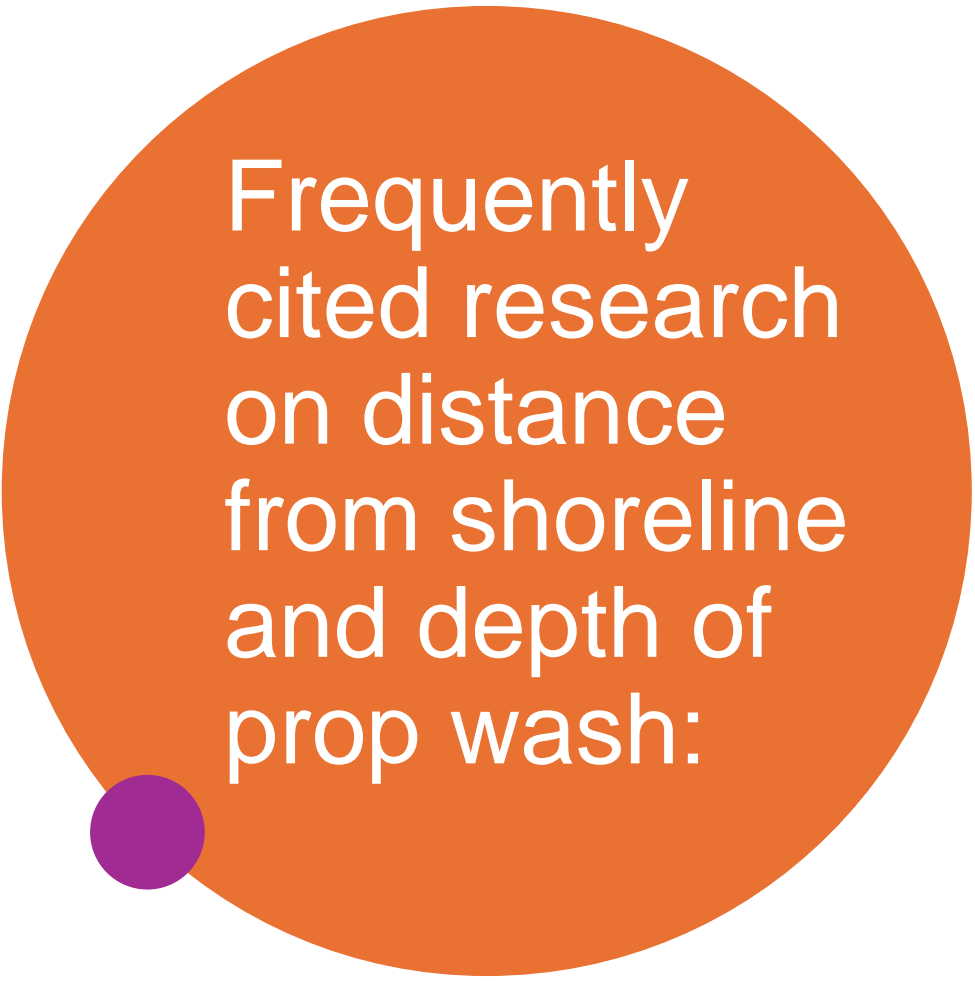
Shoreline Erosion per research:

“Compared to motorized non-wake boats, recreational wakes can transfer more energy to the shore and accelerate shoreline erosion (Goudey & Associates, 2015; Ray, 2020; Ruprecht” et al., 2015)

Key Points from the Greenfire Summary

Plants and Fish:

Studies have shown that decreases in aquatic plants in lakes can lead to negative cascading effects, ultimately causing decreases in fisheries (Hansen et al., 2019; Hawkins et al., 1983)



Frequently
cited research
on distance
from shoreline
and depth of
prop wash:

“Analyzing Threats to Water Quality From Motorized Recreation” Western Colorado University 2020

- Downward angle of propellers disturb bottom to 33 ft

University of Minnesota/St Anthony Falls Lab 2022

- Wave dissipation after 500 feet from shoreline

“Boat Wakes and the Consequences of Slow Speed Powerboat Activities” Kezar Lake Watershed Association 2021

- No less than 500 feet from shoreline and no less than 20 feet in depth

Water Environment Studies, Georgia 2020

- Wave dissipation by 950 feet from shoreline

Journal of Water Resource and Protection Summary 2021

- Wave dissipation after 200 feet from shoreline

Videos showing the impact of wake boats on water quality

Lake Waramaug Wave Impact Study 2025

A 2 1/2 minute video showing the impacts of wake surfing on Lake Waramaug

Are wake boats causing bottom craters on Wisconsin Lakes?

This is a shocking two-minute video from Lake Beulah, WI

Wake Surfing - A Threat to Our Lakes

Six-minute video produced by the Last Wilderness Alliance about the damage wake surfing inflicts on lake bottoms, focusing on Big Cedar Lake, Wisconsin.

Ballast Tank Decontamination

Produced by the Pacific States Marine Fisheries, this two-minute video shows how to decontaminate ballast tanks to minimize the chance of transferring invasives between lakes using “fake a lake” (WDNR also links to on its AIS site).

Invasive Mussels Fuel Deadly Algae

Utah DWR Decontamination Using Dip Tank

News story showing how dip tanks are being used to more efficiently clean ballast systems.

200 Feet is Not Responsible

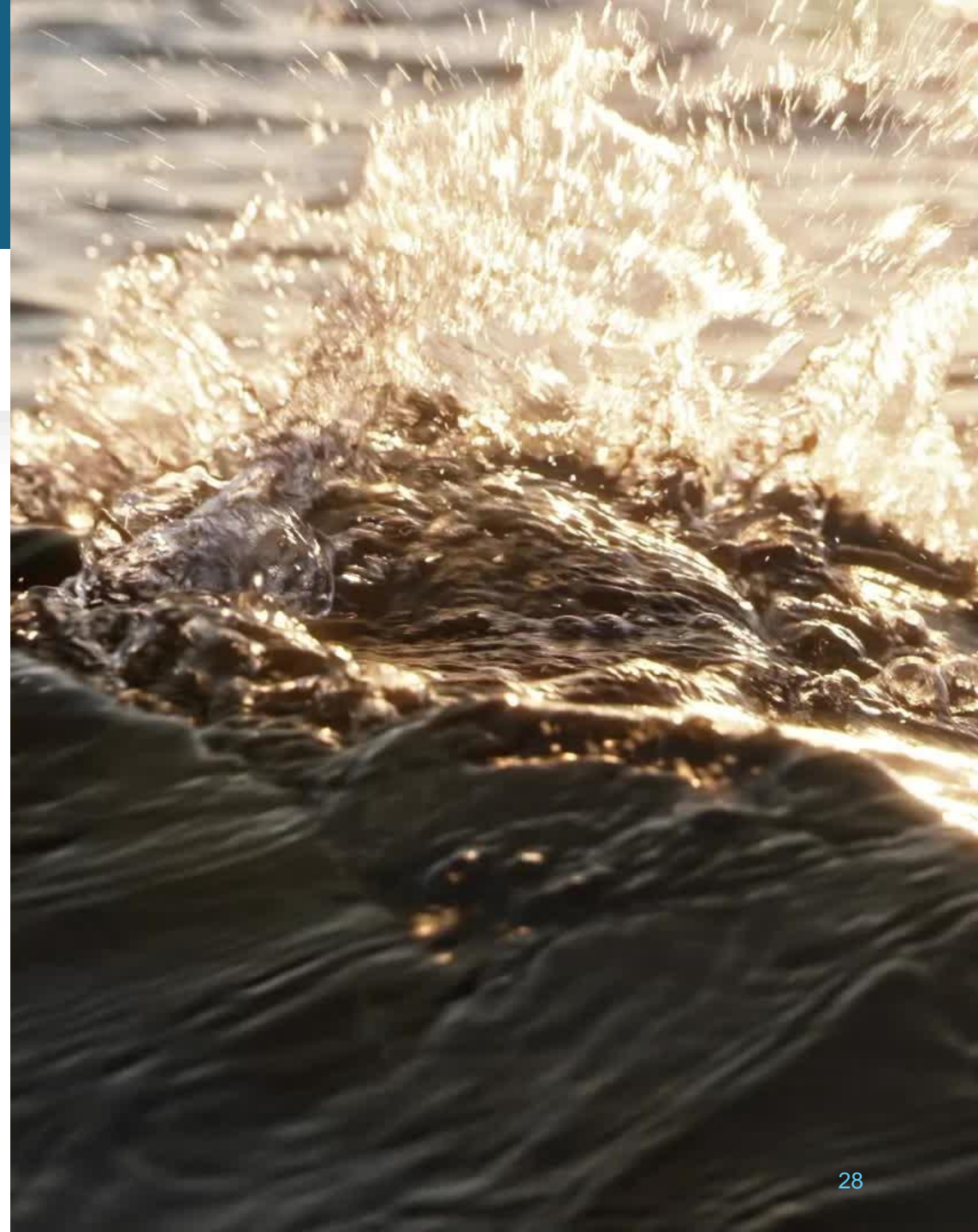
Seven-minute video rebutting the wake sports industry’s claim that 200 feet from shore is sufficient. Reviews industry surveys to university studies and actual experience.

Lake Raponda/Wake Boat Issues

Brief video on the wave damage and AIS threats of wake sports.

The Multiple Wake Boat Problem

4.5-minute video that explores wave energy and the impact that occurs when multiple wake boats are operating on the same waterway.

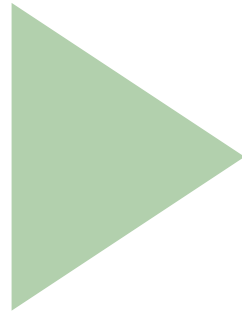


Research Most Frequently Cited Supporting The Contrary Position

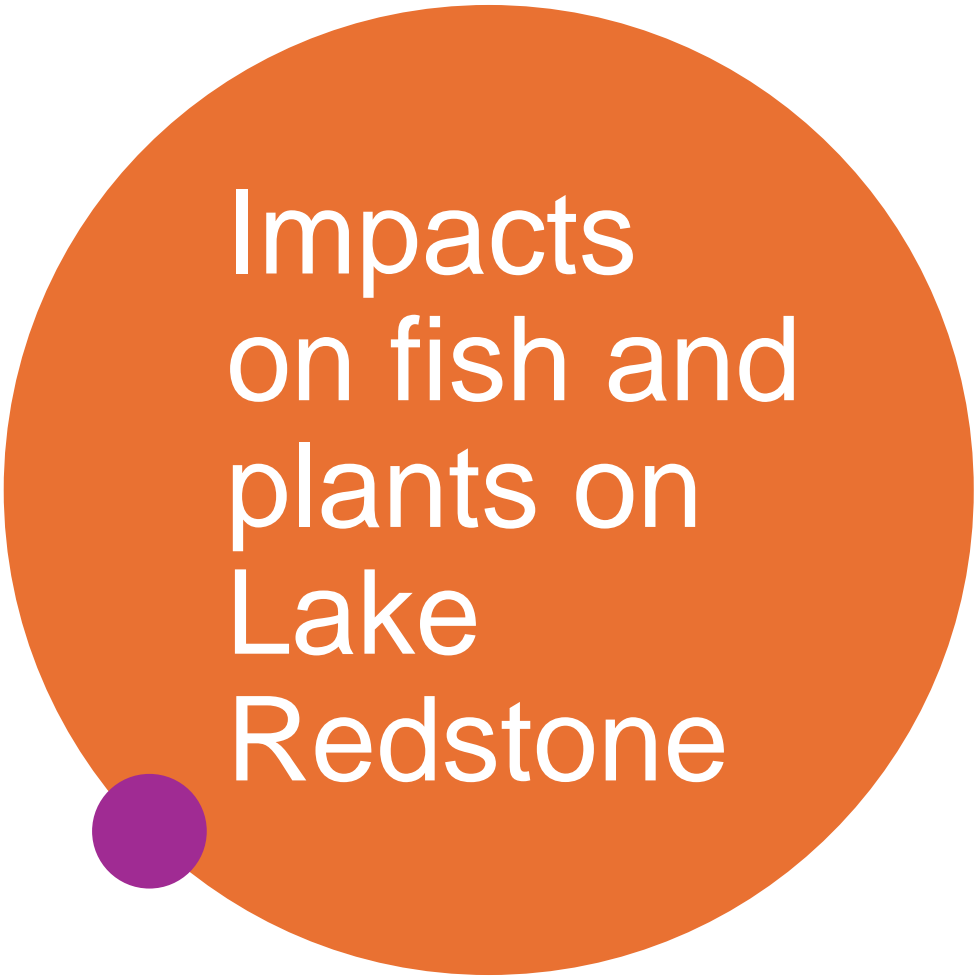
	Who Performed the Study and Peer Review	Method	Recommended Distance from Shore
National Marine Manufacturers Assoc	Faye, et al. No reviewers.	Computer only	Greater than 200 ft
Water Sports Industry Assoc (WSIA)	Engineer Goudey collected data. WSIA analyzed data. No reviewers.	Real boat on a real lake	The engineer made no recommendations. WSIA said >200 ft.

Water Quality of Our Lake

On Lake Redstone, the only place where wake boats can currently be used due to existing slow/no wake law, is the main body. The main body averages 15 feet.



Regular boats with large engines only stir water to 4 feet or less below the hull. Unlike wake boats which direct water downward, regular boats push backwards from the boat, parallel to the surface.



Impacts on fish and plants on Lake Redstone

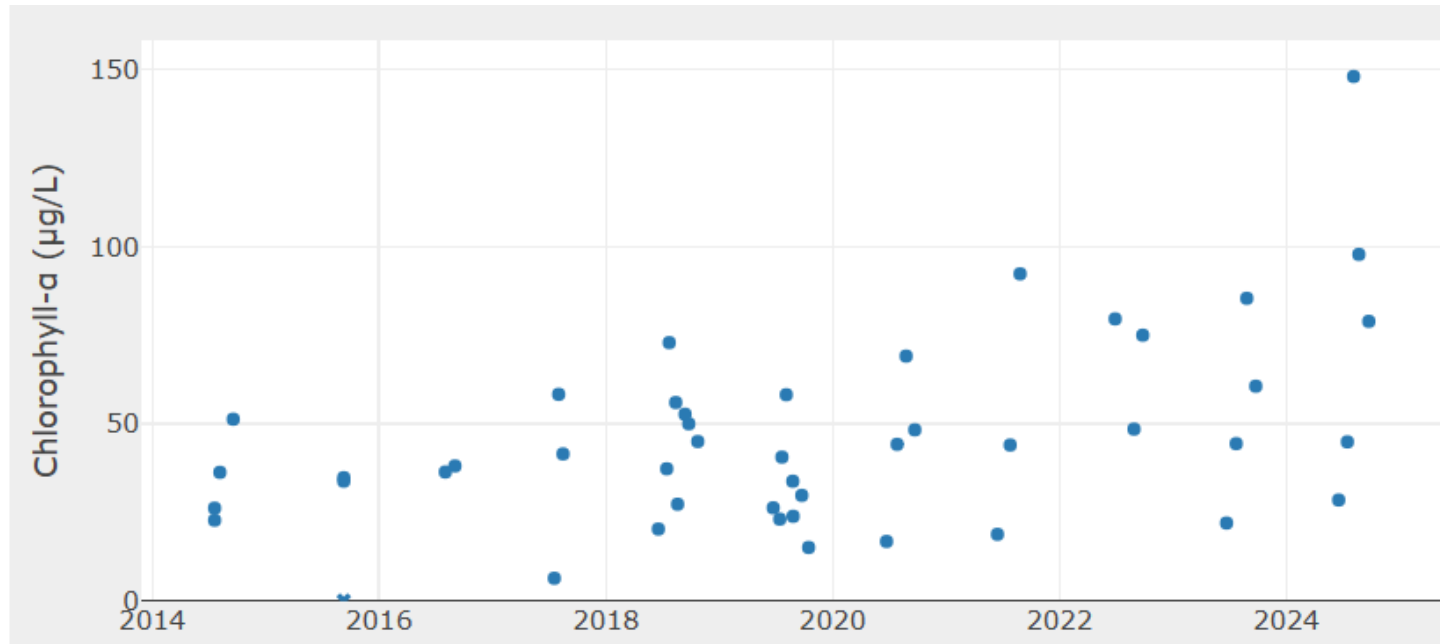
Stirring of the lake bottom negatively affects fish and plants in many ways:

- Reducing fish habitat including game fish: Per Nathan Nye, Fish Biologist with the DNR who knows our lake: “Certainly out in 15 feet you could find walleyes, musky, northern pike, walleye, bluegill, crappie, channel catfish, bullheads, suckers, carp, shad.”
- Per latest study by Sarah Hatlili, Aquatic Plant and Habitat Services LCC, who has performed numerous annual plant surveys on our lake, plants have been drastically reduced throughout the lake.
- Reduction of plants of all types reduces oxygen, reduces clarity, and reduces fish habitat.
- A healthy plant population will help plants out compete the algae for the nutrients in the water, leading to reduction of algae.

Chlorophyll-a

Chlorophyll-a is the green pigment found in plants and algae. The concentration of chlorophyll-a is used as a measure of the algal population in a lake.

Lake Redstone - Deep Hole – Chlorophyll-a



- The 2024 Chlorophyll-a were the highest ever recorded. When this data was shared at our annual Partners meeting the DNR experts indicated that with levels that high, we likely have cyanobacteria.
- The LRPD will begin a monitoring program in 2025 to test for cyanobacteria and possibly cyanotoxins.

Water Quality of Our Lake

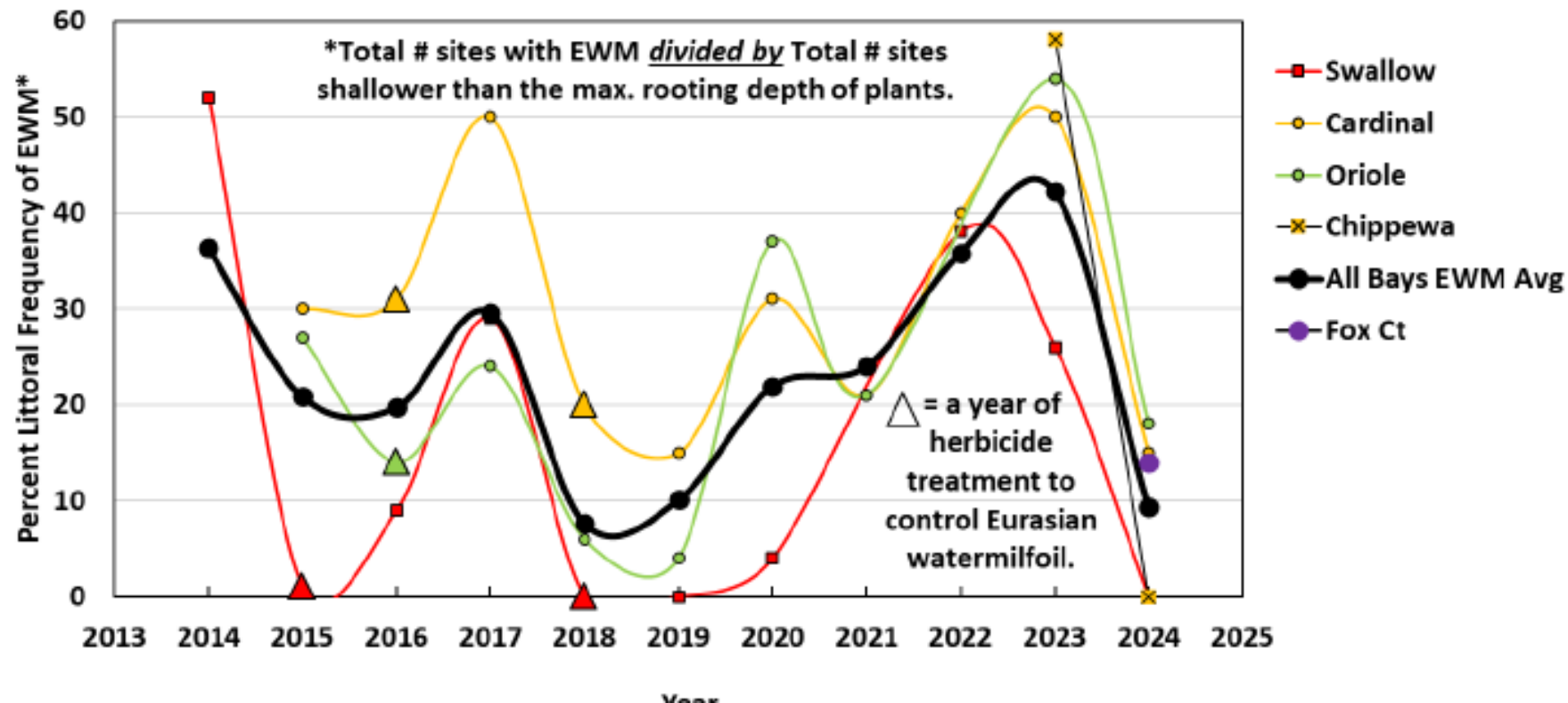
- August 10th 2024. Scum on Lake Redstone on the main body near Mourning Dove bay.
- Taken by a citizen and reported to LRPD.
- Chlorophyll levels are at an all time high.



2024 Plant Survey Data

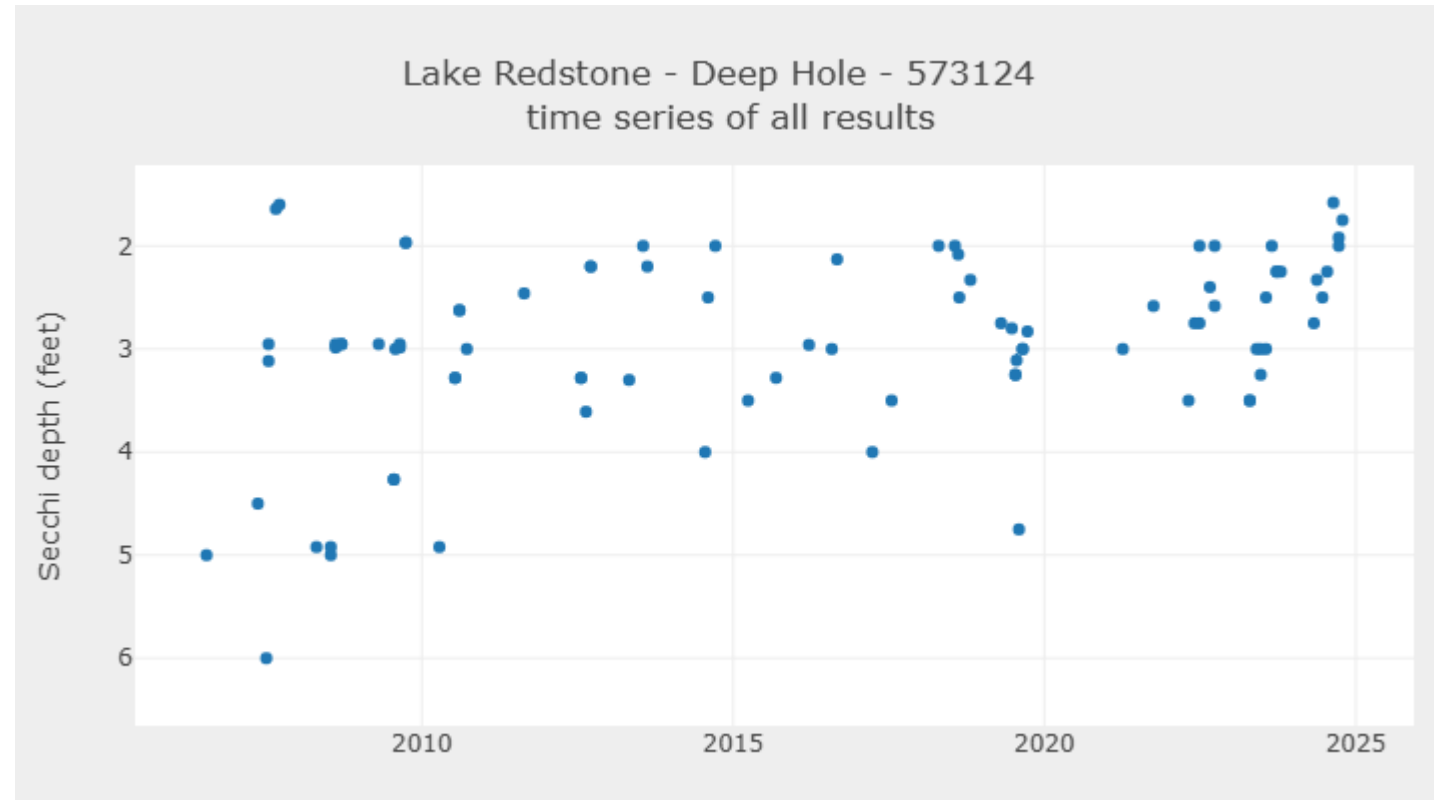
The most recent survey showed a significant drop Eurasian Watermilfoil. While a nuisance near shorelines, it is a fish habitat and an indicator of the health of a lake.

Fig. 2: Eurasian Watermilfoil Littoral Frequency



Water Clarity

The depth at which a Secchi disk can be seen has dramatically decreased the last few years.





Is it Enforceable?

Per the Last Wilderness Alliance (A Wisconsin-based information wake enhancement dissemination organization):

- While enforcement mechanisms are readily available, it is very unlikely enforcement will be needed.
- There are almost no cases of deliberate violations. Visitors sometimes need to be advised, and that typically happens with a friendly mention from someone on the lake, which nearly always causes immediate compliance.
- The proposed ordinance would not violate the Public Trust Doctrine in the Wisconsin State Constitution.
- A boat operating with the bow up and a surfer should be sufficient probable cause for the boat to be stopped and inspect to see if the ballast tanks are full.



Widespread support for ordinance

- The 2024 DNR Spring Survey showed 79% of Sauk County survey respondents favored banning boat with “wake boat ballast tanks.”

A scenic landscape featuring a calm lake in the middle ground, surrounded by lush green hills and dense foliage. In the foreground, a wooden picnic table sits on a grassy area, and a large, leafy tree with reddish-brown flowers frames the right side of the image. The sky is blue with scattered white clouds.

Closing Remarks

Summary

- The LRPD, the LRPOA, the Dutch Hollow Property Owners Association, and the Friends of Lake Redstone, have all formally come out in support the ordinance.
- All indicators are that a clear majority of lake users support the ordinance. (per DNR survey, the volume of emails received by the Town and Friends of Lake Redstone, and the 10:1 ratio of positive to negative comments on Facebook)
- The DNR, and the Town of La Valle legal counsel, have reviewed and approved the ordinance.
- 37 government bodies in Wisconsin, covering 180 lakes, have passed the ordinance with similar or identical wording. Few experienced legal challenges, none successful.
- Enforcement should not be a problem.
- There are highly compelling reasons for the proposed ordinance: Safety, Enjoyment of the lake by all, and Water Quality.

One More Look: The proposed ordinance

- **Prohibited Equipment.** No person may use or employ ballast tanks, ballast bags or fins to cause a boat to operate in a bow-high manner, or which increases or enhances a boat's wake.
- **Prohibited Operation.** No person may operate a boat in an artificially bow high manner having the effect of increasing the boat's wake. Such prohibited operation shall include wake enhancement by use of ballast tanks, or ballast bags, or fins, or continuous operation at transition speed — the speed below planing speed in which a boat is operating in plowing mode.
- **Certain Operations Excluded.** In no event shall any of the following operations be deemed a violation of this Ordinance, provided such operations do not use or employ ballast tanks, water sacks or wake enhancing fins: i) water skiing, ii) tubing, iii) wake boarding employing a tow rope; iv) brief transition operation to empty a boat of bilge water, or v) brief transition operation of a boat accelerating into a planning condition.

A scenic landscape photograph showing a rocky shoreline with dense green trees and a calm lake under a blue sky. The text "Thank you!" is overlaid in white on the right side of the image.

Thank you!

Supplemental Slides

Three videos that dispute the impact of wake boats

- They do not mention the safety and enjoyment of lakes by other lake users, which is the #1 concern of Lake Redstone residents.
- One that was posted on the Lake Redstone-La Valle Facebook site is:
<https://www.youtube.com/watch?v=mLnvCx28EUY>