



Artificial Wake Enhancement Fact Sheet

This fact sheet was created to correct the misinformation being spread online and around our community about the proposed changes to the Town of Oakland Ordinance No. 2. The information below is to help citizens understand the issues surrounding artificial wake enhancement.

Current proposed change: Section 2.5: Wake Enhancement Prohibited. No person shall operate a motorboat in a manner that artificially increases the size of the sustained wake trailing the motorboat through the use of ballast tanks, mechanical hydrofoils, uneven loading, or other device that causes a motorboat to operate in a bow-high manner, or otherwise increases or enhances a motorboat's wake. The prohibition in this section includes the operation of a motorboat at a transition speed in which the motorboat is operated at a greater than slow-no-wake speed, but less than the speed necessary to cause the motorboat to reach a planing position.

The District supports the first sentence of the proposed change, but the intent of the second sentence (highlighted above in yellow) needs to be clear before being adopted. We recommend changing the language of the second sentence to make the intent clear.

Our suggestion would be to add "continuous" in the second sentence for it to read: The prohibition in this section includes the **continuous** operation of a motorboat at a transition speed in which the motorboat is operated at a greater than slow-no-wake speed, but less than the speed necessary to cause the motorboat to reach a planing position.

We also suggest adding the following language: 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) boarding employing a tow rope at all times. iv) transition operation to empty a boat of water, or v) transition operation of a boat accelerating to a planing condition.

We believe the intent of the proposed changes to Town of Oakland ordinance No. 2 is NOT to make Lake Ripley a slow-no-wake lake or limit horsepower. We believe the purpose of proposed Section 2.5 in Ordinance No.2 is to prevent intentional artificial wake enhancement.

The District recommends that no one shall operate a motorboat on Lake Ripley in a manner that is designed to increase the size of the sustained wake trailing the motorboat through the use of ballast tanks, mechanical hydrofoil(s), uneven loading, or other devices used to enhance a motorboat's wake.

We believe there is no intent to limit tubing, wake boarding, water skiing or other water sports behind pontoons or other watercraft not producing artificial wakes. Wake boats may engage in any of these sports as long as they do not produce artificial wakes.

Information on Wake Boats

Issues Presented by Wake Boats and Enhanced Waves: Artificially enhanced wakes created by wake boats and wake-enhancing devices can cause environmental damage, degrade water quality, create safety hazards for people in or on the water and near shore, and cause physical damage to property and shorelines.

What are Wake Boats: Wake boats are motorboats designed to produce large wakes to enhance recreational activities such as wake surfing. These boats were introduced in the 1980s, became popular in the 1990s, and are now growing in popularity.

Reasons to Manage Wake Boat Usage: The wave energy of these enhanced wakes is much greater than that produced by other boats or by wind-driven waves. Wakes can be 3 to 4.5 feet in height. The thrust from a wake boat engine is powerful and angled down toward the lake bottom. The force of its disturbance can reach down 20 feet, scouring the bottom and causing significant disruptions below the surface of the water.

Environmental effects:

- Invasive species introduction (from lake-to-lake transport in ballast tanks) and proliferation through fragmentation.
- Artificially enhanced wakes produced too close to shore or in water that is too shallow contribute to:
 - Shoreline erosion
 - Increased algal blooms due to stirred-up sediment, especially phosphorous, a key nutrient for algae growth
 - Reintroduction of pollutants to the food web when previously undisturbed sediment is churned
 - Habitat and aquatic plant disruption, and threat to fish and other wildlife (nesting waterfowl, basking turtles, amphibians, etc.)

Economic impacts:

- Damage to shoreline buffers – trees, shrubs, natural borders, and homeowner plantings
- Damage to property – piers, boats, lifts, etc.
- Diminished property values
- Reduced tax base
- Threat to tourism from adverse impacts

Safety concerns:

- Personal injury to swimmers, anglers, and other boaters
- Obscured forward vision resulting from boat operation in enhanced-wave mode (heavy ballast weighs down the stern and causes the bow to rise, blocking ability to see swimmers or small watercraft in the path of the boat)

What can be done about managing artificial wakes?

The adverse impacts of artificially enhanced wakes have increased significantly over time. At least 17 states are considering artificial wake-enhancement restrictions. Wisconsin needs to address these issues before they become unmanageable. Education is essential – but not enough – to prevent the damage caused by enhanced wakes.

These efforts to manage large and enhanced boat waves are not intended to prohibit wake boats on Lake Ripley; they only seek to limit the use of certain equipment (ballast systems and mechanical foils) and operating procedures (continuous operation at transition speed) to prevent artificially enhanced wakes and their negative impacts. Wake boats can still be used on Lake Ripley, but the wake-enhancing devices used to create an artificial wake cannot. Small or shallow lakes and ponds are inappropriate for artificial wakes.

Background Information

Lake Ripley is considered the most valuable natural resource in the Town of Oakland. It is utilized by many residents and visitors throughout the year. The protection and preservation of water quality, lake and shoreline ecosystems, and lakeshore property are shared goals for many in the Town of Oakland.

Recreational boating is a popular activity and includes motorized and non-motorized watercraft. In recent years, with the growth of recreational activities including the emergence of the sport of wake surfing, there has been growing concern over the impacts of wake boat-generated waves and propeller wash on Lake Ripley. Residents in the District have reached out to us with concerns about shoreline erosion, lake bottom sediment resuspension, aquatic invasive species concerns and safety issues.

The Lake District's mission is to preserve and enhance Lake Ripley's water quality, its fish and wildlife communities, and its overall ecological health, while ensuring public access and use of the lake that is safe, fair, and practical.

Since 1994, the Lake Ripley Management District has cost-shared 7,805 feet of shoreline restoration as part of its mission to preserve and enhance water quality. Damaged or eroding shorelines damage water quality.

The Lake Ripley Management District has evaluated Lake Ripley's size and coupled with the determination of peer-reviewed articles that focus on wake boats and artificial wake enhancement, the negative impact from enhanced wakes outweighs the benefit of allowing them on the lake.

Based on the research conducted by the DNR, universities, and others, the District has determined that Lake Ripley is not a suitable lake for this activity. With the addition of clarifying language, the District supports the proposed language changes to Ordinance No. 2, Section 2.5.

For a copy of this fact sheet, please email the District at lake.manager@tn.oakland.jefferson.wi.gov or call 608-445-4536.