



With a goal to scientifically measure the energy produced by towboat wakes and waves, the first-ever Towed Water Sports Wave Energy Study was conducted in the Spring of 2015 in Orlando, Florida.

Clifford Goudey, ocean engineer and naval architect, is one of the most distinguished experts on wave science in the field today. Mr. Goudey commissioned the assistance of Lewis Girod, PhD, who is an accomplished software and sensing engineer. On March 23-27, 2015, the pair conducted an extensive study on the Conway Chain of Lakes at two different sites to measure energy at a shallow-water profile and deep-water profile, while also monitoring the effects of wind-driven waves.

A 2015 Nautique G23 was used for testing with 2,850 pounds of factory ballast with an additional four sacks weighing 350 pounds each for a total of 4,250 pounds of ballast and a total vessel weight of 10,150 pounds.

What did WSIA learn from the scientific conclusions that emerged from the wave energy study?

1. Wakeboard and wakesurf wakes/waves, when operated at least 200 feet or more from shore, do not carry enough energy to have a significant impact on most shorelines or on properly maintained docks and other man-made structures.
2. The maximum wake/wave height associated with wakeboarding and wakesurfing drops 27 to 56 percent in the first 100-150 feet of its travel from the boat path.
3. Boat wakes/waves from cruising boats, recreational boats included, dissipate more slowly and lack the initial drop in size associated with wakeboard and wakesurf wakes/waves.
4. A Wakesurfing boat passing a section of shoreline every nine minutes is less damaging than naturally occurring waves from a 10 mph wind with one mile of fetch.
5. A wave loses the most significant amount of energy upon its initial break. This happens very quickly in wakeboarding and wakesurfing due to the wakes steepness, while a wave created by a boat at cruising speed with less displacement can fail to break while moving towards the shore, preserving its energy.

While the study has demonstrated that, in most conditions, wakesurfing and wakeboarding are far less destructive than naturally occurring waves, the WSIA still strongly recommends the following:

1. Always try to wakeboard or wakesurf in the center of any given body of water, and avoid narrow channels or thoroughfares, if possible.
2. Always try to stay at least 200 feet away from any shoreline, dock, or fixed objects.
3. Maintain a reasonable sound level on your stereo.
4. Always respect the shoreline you are using and if the property owner asks that you leave, do so immediately, and always be gracious with the property owner.
5. Repetitive passes result in an accumulation of energy reaching the shoreline. Repetition is never a good idea and can lead to risk of waterway conflicts.
6. The non-surfing side of a wakesurfing boat creates waves that are 10% to 23% smaller with 23% to 33% percent less energy than the surfing side. When possible, present the non-surfing side of the boat to the closest shoreline.
7. Waves tend to increase in height on the inside of a gradual turn. Avoid such maneuvers close to shore.
8. Glass calm water is not a requirement for wake surfing, be respectful and operate as far from shore as you can.