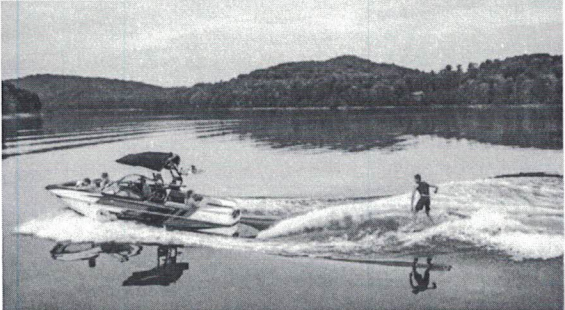


# Impacts of Wake Boats and Best Practices:

The popularity of wake sports has been on the rise over the past several years and with it the number of "wake boats" operating on lakes. Whether wake boarding or wake surfing, these boats are designed to produce large waves. Hull shape, ballast tanks, adjustable plates, and horse power are some of the technologies used. These waves are often equal to or greater than most major storm events which can increase shoreline erosion. Unlike old school/ conventional "ski" boats which typically push thrust parallel to the waters surface, wake boats tend to push thrust at a downward angle and therefore have a greater potential to disrupt bottom sediments in addition to eroding shoreline.



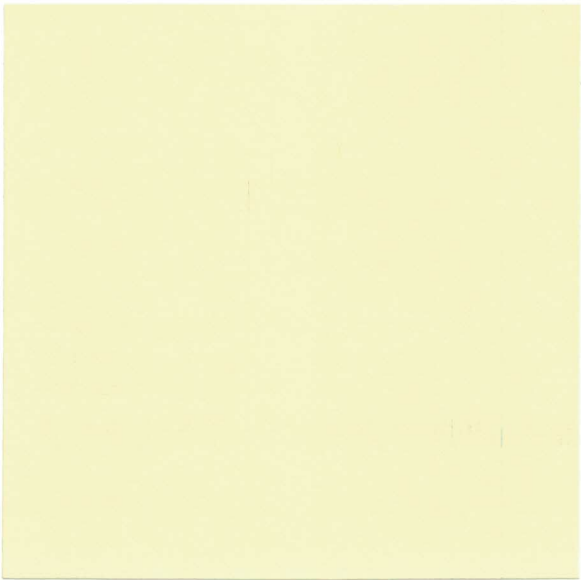
PLM staff often field inquiries about impacts of wake boats on lakes. The honest answer is that there is a shortage of research on the subject but new studies currently being done suggest that larger waves may increase the potential for shoreline erosion and deeper thrust may disrupt/resuspend sediments at the lake bottom.

**PLM would like to provide a few guidelines that can reduce the potential for adverse effects to your lake.**

- **Waves decrease in size the longer they travel. Therefore, PLM recommends operation of wake boats at least 500 ft from shore whenever possible.**
- **Studies conducted on different wake boat models suggest that thrust (depending on the trim angle) will typically reach a depth of ~12 feet. Therefore, PLM recommends that wake boats be operated in depths greater than 12 ft whenever possible.**

As time goes on there is certain to be more research done in this area and/or regulation. For the time being, be aware of potential effects on your lake and adapt boating practices to minimize impacts.

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# Starry Stonewort— Exotic Plant WATCHLIST—New Invader of Northern Michigan!

Starry stonewort has been quickly spreading throughout Northern Michigan. Starry stonewort (*Nitellopsis obtusa*) looks like a rooted plant but it is actually an algae. The plant is native to Europe and Asia and was first discovered in the St. Lawrence River in 1978. In 1983, it was found in the Detroit River and has since infested many Michigan lakes. Starry stonewort resembles the native aquatic plant Chara. Unlike Chara, which is generally considered to be a beneficial plant, starry stonewort has a tendency to inhabit deeper portions of the lake and can form dense blankets several feet thick. These mats can severely impede navigation and limit growth of more beneficial plants. Starry stonewort anchors to the sediments through rhizoids (primitive root structures) which can also absorb nutrients. Like Chara, starry stonewort also absorbs nutrients from the water through its cell walls. Starry stonewort has tiny, star-shaped, tan colored reproductive structures called bulbils that are firm to the touch when compared to its soft branches. These reproductive bulbils have been shown to stay viable for several years in lake sediments. It is unclear what effects starry stonewort may have on a lake's fishery. However, the encroachment of starry stonewort into fish spawning beds may be a cause for concern. Both algaecides and mechanical harvesting appear to be somewhat effective in controlling starry stonewort. However, given its propensity to produce massive amounts of growth, efforts to keep this invasive algae at bay will be difficult and potentially expensive. We are constantly on the lookout for new infestations of SSW for quick action. Please keep your eyes on the look out!

