WAKE BOATS-NOT JUST ANOTHER BOAT

Wake boats are specially designed to generate large, powerful wakes for recreation purposes (e.g. wake-surfing & wake boarding):

- The stern sits lower in the water than other boats. Built-in ballasts filled with lake water significantly increase the weight of the stern (2,000-6-000 lbs). Deep V-shaped hulls and hydrofoils can lower the wake boat stern under operation.
- Propellers are powerful and given the boat's pitch angle reach deep into the lake's water.
- Studies show that wake boat waves can generate up to 17 times the energy of comparable-sized powerboats.

Wake boats cause the same negative environmental effects that 'non-wake" powerboats cause but are *significantly more profound, cascading and complex*.

- Propellers and deep hulls can directly damage a lake's bottom: uprooting roots of mass vegetation, damaging aquatic plant communities and harming near shore habitats of aquatic life including near-shore nests.
- Propellers and hulls scour the lake's bottom. Generating significant turbulence. Sediments stored on the bottom are lifted and suspended in the lake's water column. Nutrients (phosphorus and nitrogen) are released into the lake's water column where they act as fertilizer contributing to more frequent and expansive toxic algae growth.
- Increased turbidity (cloudiness) from the turbulence. Difficult for birds, fish and other suspension feeders to find food. Turbidity reduces sunlight, limits photosynthesis and inhibits the growth of microscopic life and algae (an important food source). Suspension feeders help maintain water quality by filtering particles, increasing nutrient recycling through excretion. With diminished food for these feeders, the overall sustainability of aquatic life is threatened. The lake's temperature rises from the energy of the wake boat further disrupting the sensitive balance of nutrients, sunlight and oxygen, with vegetation, flora and fauna growth reduced and aquatic habitat structures degraded,
- The transport of wake boats between water bodies dramatically raises the risk of introducing aquatic invasive species and pathogens to different water bodies; particularly given the difficulty in thoroughly draining/cleaning ballasts before transport.
- Powerful waves cause shoreline erosion, leading to the degradation of water quality due to the physical disruption of plants and increased storm water runoff.
- Powerful waves arise the risk of physical damage to shoreline habitats and docks.
- Powerful waves may compromise the safety of swimmers, fishermen, kayakers and other boaters.

Save the Lakes has concluded that given the size and depth of the 300 lakes it tracks, 98.5% are not acceptable for wake boat use. A true risk assessment of wake boat operation on lakes must consider a myriad of factors, including the design features of the boat, the unique characteristics of the lake, such as its size, depth, topography, shoreline (e.g. hardened, plant growth), current contaminants.