

5). Turtle basking is the primary mechanism used by many freshwater turtles to maintain their body temperature in a range that maximizes physiological performance. Reduction in metabolic rate decreases the rate of energy assimilation which could translate into reduced growth and reproductive output (Jain-Schlaepfer). In the 6 hours following disturbance of basking behavior by a motorboat wake, basking was 43.8% less than before the disturbance (Bulte).

PWCs are designed to be extremely maneuverable (See video - 04262025 Maneuvers: <https://youtu.be/cLZL15pQms>). Many of the PWCs will circle midstream waiting for their group to assemble, resulting in increased turbidity and a virtual brown out of the otherwise crystal clear river (See video – Shriners Convention: <https://youtu.be/7FbT3z2dMQY>). They are built for quick, sharp turns, low radius circling, and rapid acceleration. PWCs are only maneuverable with the throttle engaged. To maintain steerage, throttle must be applied (Boat U.S. Foundation). This design feature poses an inherent risk on the lower Ichetucknee where tubers, paddle craft, and swimmers share a narrow channel with motorized vessels, including PWCs (See Figure 6). The design of PWCs in which the vessel must accelerate on a narrow, often crowded river to maneuver around tubers is exceedingly dangerous.

PWCs impact macrophytes both directly through contact with the boat hull or jet intake and indirectly through turbidity and wave damage. Whole plants can be uprooted by operation in shallow water. Beaching PWCs, a practice commonly observed on the lower Ichetucknee, can crush or damage macrophytes and cause damage to the shoreline (See Figure 7 and see video - 04262025 Beaching in macrophytes: <https://youtu.be/DCp7SBDCYmA>). Boat U.S. Foundation urges PWC users to avoid beaching where macrophytes are located, educating users that these plants are essential to the ecosystem because they control erosion and provide a nursery ground for animals vital to the food chain, such as crustaceans, mollusks, and small fish. In spite of this urging from within the industry, PWCs commonly beach on the lower Ichetucknee, causing damage to this fragile ecosystem.

Due to the vessel design and observed operator's behavior, PWCs are prohibited in units of the National Park System except in certain designated areas (Federal Register). Likewise, the Monterey Bay National Marine Sanctuary has restricted the use of PWCs within the sanctuary because they pose a unique and significant threat to sanctuary habitats and wildlife. Frequently observed PWC behavior on the Ichetucknee warrants restricting PWCs from this fragile spring run for the same reasons (See video - Jet Ski Crashes into Dock: <https://youtu.be/ZIjTmGkgZ44>). It is significant that when environmental concerns were raised following a group sponsored ride on the lower Ichetucknee that involved over 100 PWCs, Jet Rider Nation Florida, members responded with laughing emojis and shrugs (See Figure 8), evidence that the PWC community is unwilling to police itself.