EMPIRE TOWNSHIP

ORDINANCE NO. 2007-2

AQUATIC NUISANCES ORDINANCE

An ordinance to prevent the introduction of non-native invasive species into the Glen Lake Watershed by requiring the washing of watercraft, motors, trailers or other gear prior to launching same into the waters of the watershed; to prohibit the dumping of bait boxes or aquariums into the watershed; and to provide a municipal civil sanction for the violation thereof.

The Township of Empire Hereby Ordains:

Section 1. Findings.

The cleanliness of the waters of the Glen Lake Watershed are critical to the health, safety, and welfare of the residents of Empire Township as well as to the economic well-being of the residents of the township.

Glen Lake and the other water bodies in the Glen Lake Watershed are still relatively free of most invasive non-native species, which now threaten waters throughout the Midwest. Once introduced these plants and organisms could substantially affect the health, quality and enjoyment of our water related experiences in this area

Two such invasive non-native species are the Zebra mussel and the Quagga mussel. These organisms attach themselves to most hard submerged surfaces, including boats, rocky shoals, water intake pipes, navigational buoys, docks, piers, and native species such as clams. They affix themselves to shells of their own species and are able to form dense layered colonies of over one million per square meter. Because they are filter feeders they consume much of the plant plankton (phytoplankton) on which animal plankton (zooplankton) feed. Forage fish depend greatly on animal plankton as a primary source of food. Thus the larger game fish are ultimately affected by the loss of their primary food source. Subsequently the recreational fishing of Glen Lake could be severely impacted. Additionally, Zebra mussels are sharp and are potentially hazardous to swimmers and young children playing in the water. These mussels are metabolically active throughout the year and their feces feed aquatic plants and the filamous algae, Cladophora. As the masses of Cladophora increase and form mats of growth near the shoreline of the lake they can harbor e.botulism which can cause death in sea birds and fish feeding in the area.

Invasive plants including Eurasian watermilfoil and hydrilla can grow both vertically and horizontally in the lake forming dense thick mats that are non navigable for boaters and prevent recreational swimming. A small piece of just

one plant or one microscopic organism can infest our entire lake. Curly leaf pondweed can also be invasive. These aquatic plants can crowd out our native plants. As these large masses of aquatic plants die they sink to the bottom of the lake and use precious oxygen in the decomposition process.

Blue-green alga blooms, Microcystis Aeruginosa, are a cyanobacteria found in our lake with increasing density. Its hepatotoxin, microcystin, can have harmful effects on animals and, potentially, on humans, and on the aquatic ecosystem. Microcystis increases the foam and surface scum on the lake as cyanobacteria reduce the surface tension of the water, acting as surfactant. Zebra mussels consume the good plankton in our lake but return the blue- green algae to the lake undigested. Microcystins have been implicated globally in lethal and sub-lethal poisoning of humans, livestock, pets, fish and other indigenous aquatic species. Any large algal bloom has the potential to kill fish and shellfish by depleting the water of oxygen. As these blooms die and sink to the bottom of the lake they release chemicals that can produce a foul odor and musty taste.

Invasive, non-native plankton, the spinney water flea and the fishhook water flea, are large zooplankton that are found in Lake Michigan. Because of their size they out-compete other plankton and feed on our native zooplankton. They may eventually be the predominant plankton in the lake as well as other large zooplankton. Our native plankton such as scuds, diporeia, is important food for many game fish. Smaller forage fish, the base of our fishery, cannot feed on the spinney water fleas or the fishhook water flea because they are too large to take into their mouth. Viral haemorrhagic septicaemia, an invasive virus affecting fish, came to the great lakes Ontario via ballast water from the maritime islands and was first seen in the spring of 2002 in Lake Ontario. It is one of the pathogens that cause hemorrhaging in the internal organs of fish and causes osmotic regulation failure resulting in large fish kills. This, among other fish viruses, parasites and bacteria are organisms we want to prevent from entering our lakes.

The Round Goby is a non-native invasive species of fish which is an aggressive and voracious feeder eating the eggs and fry of native fish. They vigorously defend spawning sites thus restricting access of other less aggressive fish to prime spawning. They are capable of rapid population growth. The Ruffe is a relative new invasive threat to our fisheries. The Ruffe is considered a serious threat to sport fishing because is grows very fast, has a high reproductive rate and feeding efficiency and can adapt to a wide variety of environment replacing our native fish. Livewells, bilge water and transom wells should be drained before leaving a water access. Bait buckets should never be emptied in the water, but on land well back from the shore and bait buckets should not be dipped into the lake if it has water in it from another lake.

The Empire Township Board finds it necessary, therefore, to prohibit the launching of boats and equipment into the lakes and other water bodies in the

Glen Lake Watershed which may harbor such invasive non-native aquatic nuisances and introduce same into the watershed.

Section 2. Definitions.

"Aquatic nuisance" shall mean any invasive, non-native plant or animal organism which threatens the cleanliness and health of the waters within the Glen Lake Watershed and the native plant and animal species residing in said waters. Aquatic nuisances include, without limitation, the Zebra mussel, the Quagga mussel, plants such as the Eurasian watermilfoil, hydrilla, and curly leaf pondweed, non-native plankton such as the spinney water flea and the fishhook water flea, and non-native fish such as the Round Goby and the Ruffe.

"Glen Lake Watershed" shall mean that area of land drained by Glen Lake and the Crystal River and as more particularly described in the Glen Lake/Crystal River Watershed Management Plan prepared by the Leelanau Conservancy and dated January, 2003.

"Township water body or water bodies" shall mean Big and Little Glen Lake, South Bar and other navigable bodies of water within Empire Township.

"Watercraft" shall mean a boat, canoe, kayak, pedal boat, jet ski or any other similar craft, whether motorized or not, designed for use by persons to navigate a lake, stream or other body of water.

Section 3. Prohibited Conduct.

It shall be unlawful for anyone to knowingly introduce any aquatic nuisance into any waters of the Glen Lake Watershed in Empire Township.

Section 4. Launching watercraft.

It shall be unlawful for any person to launch any watercraft into any township water body unless such watercraft has been washed in such a manner so as to clear it of any aquatic nuisances; provided, however, that watercraft which have been out of any water bodies for the ten days immediately preceding such launching do not have to be washed before launching into a township water body so long as any live wells and bilges have been cleaned and water has been blown out of the engine of any such watercraft.

Section 5. Trailers; related equipment.

It shall be unlawful for any person to place any watercraft trailer, motor or related equipment into any township water body unless such trailer, motor or related equipment has been washed in such a manner so as to clear it of any aquatic nuisances; provided, however, that watercraft which have been out of

any water bodies for the ten days immediately preceding such placement do not have to be washed before placement into a township water body.

Section 6. Emptying bait boxes or aquariums.

It shall be unlawful for any person to empty any bait box or aquarium into any of the waters in the Glen Lake Watershed within the Township.

Section 7. Enforcement.

A violation of this ordinance is a municipal civil infraction and shall be enforced in the manner provided by Chapter 87 of the revised Judicature Act [MCL 600.8701 et seq]. Violations of this ordinance shall be enforced by an agent of the township who is authorized to issue municipal civil infraction notices and citations pursuant to the authority of and as provided in applicable state law.

Section 8. Sanctions.

A violation of this ordinance is a municipal civil infraction and any person or firm found responsible for such violation shall be subject to a maximum civil fine of $500.00 plus costs. Commencing thirty (30) days after receiving notice of a violation, unless said violation is abated, each day the violation continues shall constitute a separate violation of this ordinance.

Section 9. Severability.

Each of the provisions of this ordinance is severable and, if any provision is held invalid for any reason by a court of competent jurisdiction, the remaining provisions shall remain in full force and effect.

Section 10. Effective Date.

This ordinance shall take effect thirty (30) days after publication in the manner provided by law.

Adoption of the foregoing ordinance was moved by Noonan and supported by Deering.

Voting for: Deering, Neiswonger, Bolton, Pendleton, Noonan.

Voting against: None.

The ordinance was declared adopted.

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William B. Bolton
Township Supervisor

CERTIFICATION

The above is a true copy of ordinance No. 2007-2 which was duly adopted by the Empire Township Board of Trustees at a regularly scheduled meeting held on July 10, 2007.

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Christine M. Neiswonger
Township Clerk