

**Survey of Eurasian Watermilfoil (*Myriophyllum spicatum*)
in Wolfe Lake, Westport, ON, Canada**

Prepared for:
Westport Association

Prepared by:



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INTRODUCTION

Eurasian watermilfoil (*Myriophyllum spicatum*; herein referred to as milfoil) is an invasive aquatic plant that has become widespread throughout North America including many inland lakes of southern Ontario. This submersed aquatic plant grows to the surface of the water and branches profusely subsequently creating dense stands of milfoil. If left unmanaged the milfoil will continue to expand, posing a considerable long-term threat to the ecological health, recreational and aesthetic quality of the waterway, and reduce the property value. At the request of the Westport Association, Milfoil Solution LLC performed a presence/absence survey of milfoil in Wolfe Lake.

DESCRIPTION OF SURVEY AND RESULTS

On August 30, 2012, two members of the Milfoil Solution survey team undertook a presence/absence survey of Eurasian watermilfoil in Wolfe Lake with volunteers of the Westport Association. The survey consisted of tracing along the extent of the shoreline, islands and shallow points located in open water to identify Eurasian watermilfoil populations. Due to the depth of Wolfe Lake much of the milfoil population was located within 30m of the shoreline and in shallower bays.

Once located, the density of the milfoil stand was visually estimated and recorded as sparse, moderate or dense (see Figures 1.1-1.3). Sparse stands were noted where milfoil consisted of less than 50% of the plant community. Moderate stands consisted of milfoil that was the dominant plant present (roughly 50-75% of the plant community). Dense stands included populations where milfoil appeared to consist of greater than 75% of the plant community; in most cases dense stands reached the surface of the water and often the only species present.

Milfoil was present throughout Wolfe Lake with dense populations occurring in narrow beds roughly 10m from shore. In many areas along the eastern and western shoreline in the southern half of the lake (See Figure 1.3), milfoil growth was limited by a rocky lake bottom, steep drop-offs and deep water close to shore. Conversely, the northwest end of Wolfe Lake consisted of many shallow bays providing suitable habitat for aquatic plant growth. Although milfoil stands were observed throughout this section of the lake, milfoil density was often moderate in comparison to communities along the eastern and western shorelines discussed above.

In addition, many larger bays in the northwest section of the lake including the outflow from Barr's Creek, Mire Bay and the bays east of Mire Bay/north of Whitefish Island consisted predominantly of native plant communities heavily populated by muskgrass (*Chara sp.*) and water crowfoot

(*Ranunculus longirostris*). Other native aquatic plants identified throughout Wolfe Lake include: Canada waterweed (*Elodea canadensis*), coontail (*Ceratophyllum demersum*), eelgrass (*Vallisneria spiralis*), large-leaf pondweed (*Potamogeton amplifolius*), Richardson's pondweed (*P. richardsonii*), northern watermilfoil (*Myriophyllum sibiricum*), water marigold (*Megalodonta beckii*). Although these native plant communities exist throughout Wolfe Lake, there is the possibility that milfoil beds may expand into these areas.

FUTURE WORK

Milfoil Solution, LLC. offers the use of a native insect, the milfoil weevil (*Euhrychiopsis lecontei*) as a biological control agent of Eurasian watermilfoil in Ontario known as **Milfoil Solution®**. The milfoil weevil is a native insect that is found naturally occurring on milfoil throughout most of the northern states and provinces across North America.

Milfoil Solution's customized Milfoil Solution® includes stocking milfoil weevils into a lake, pond, or river over the course of two or more years, depending on the size of the lake and the milfoil infestation. Although every lake responds somewhat differently, experience has demonstrated that the length of time needed for the weevils to achieve lake-wide control depends on the total number of weevils stocked. Faster results and lower management costs in subsequent years are expected if the milfoil infestation is addressed more aggressively in the first two years.

In addition to the milfoil survey, the Westport Association established a pilot milfoil weevil stocking project in 2012 along the western shoreline south of Camp lawah. Quantifying the success of a weevil-stocking program is best observed over several seasons. However, preliminary data including the observation of a healthy native weevil population prior to stocking is suggestive of the potential success a wide-scale stocking program could have at Wolfe Lake. This survey provides vital supplementary data to developing a milfoil management program for Wolfe Lake including amount of weevils needed and location of stocking sites. Following this survey, a proposal outlining a Milfoil Solution® program tailored to Wolfe Lake will be sent to members of the Westport Association.

If you have questions or comments regarding this report, please contact EnviroScience at (800) 940-4025, or e-mail at kborrowman@enviroscienceinc.com.

Milfoil Solution,
Lake Management Division

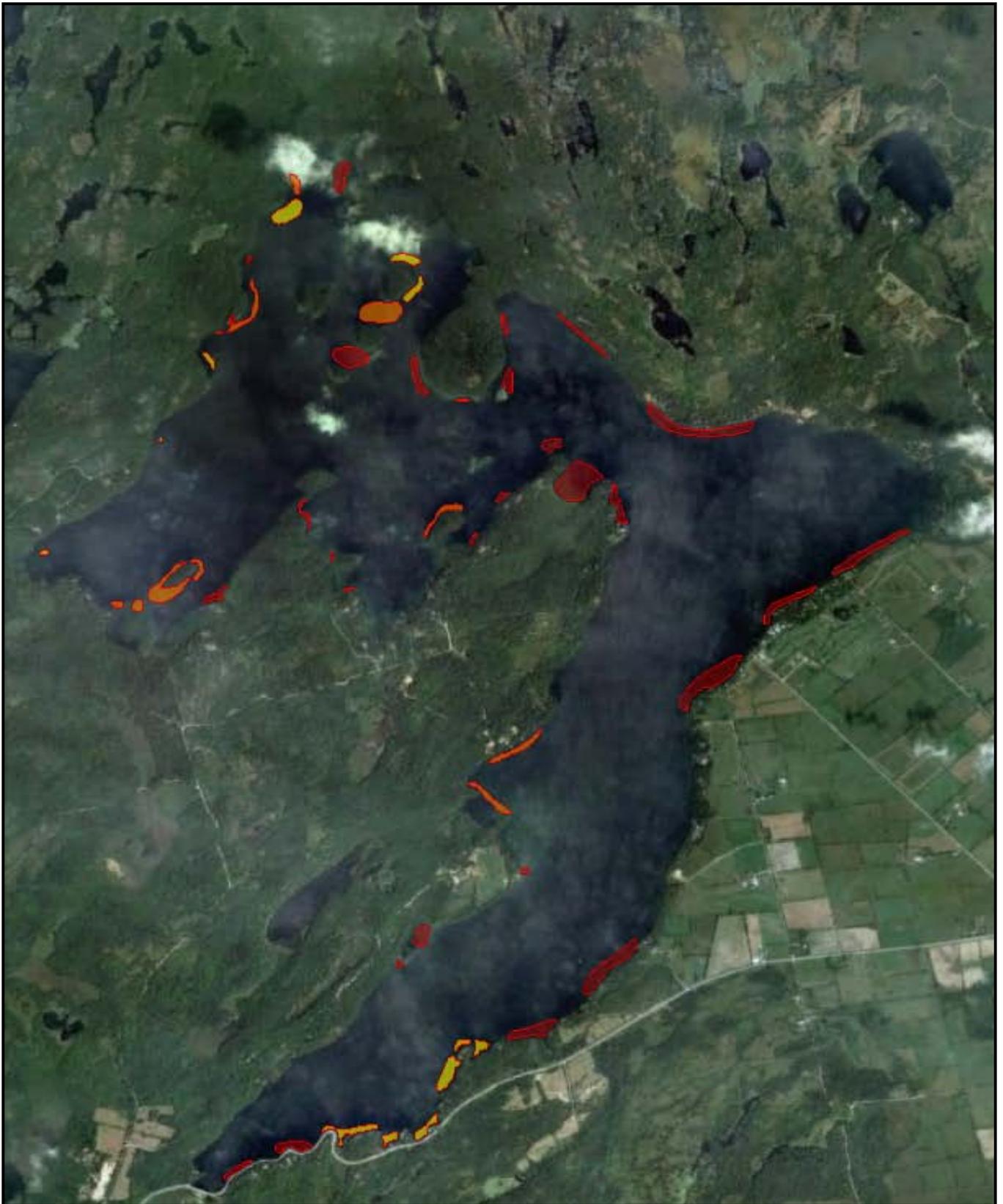


Figure 1.1: Distribution of Eurasian watermilfoil in Wolfe Lake

-  Sparse
-  Moderate
-  Dense



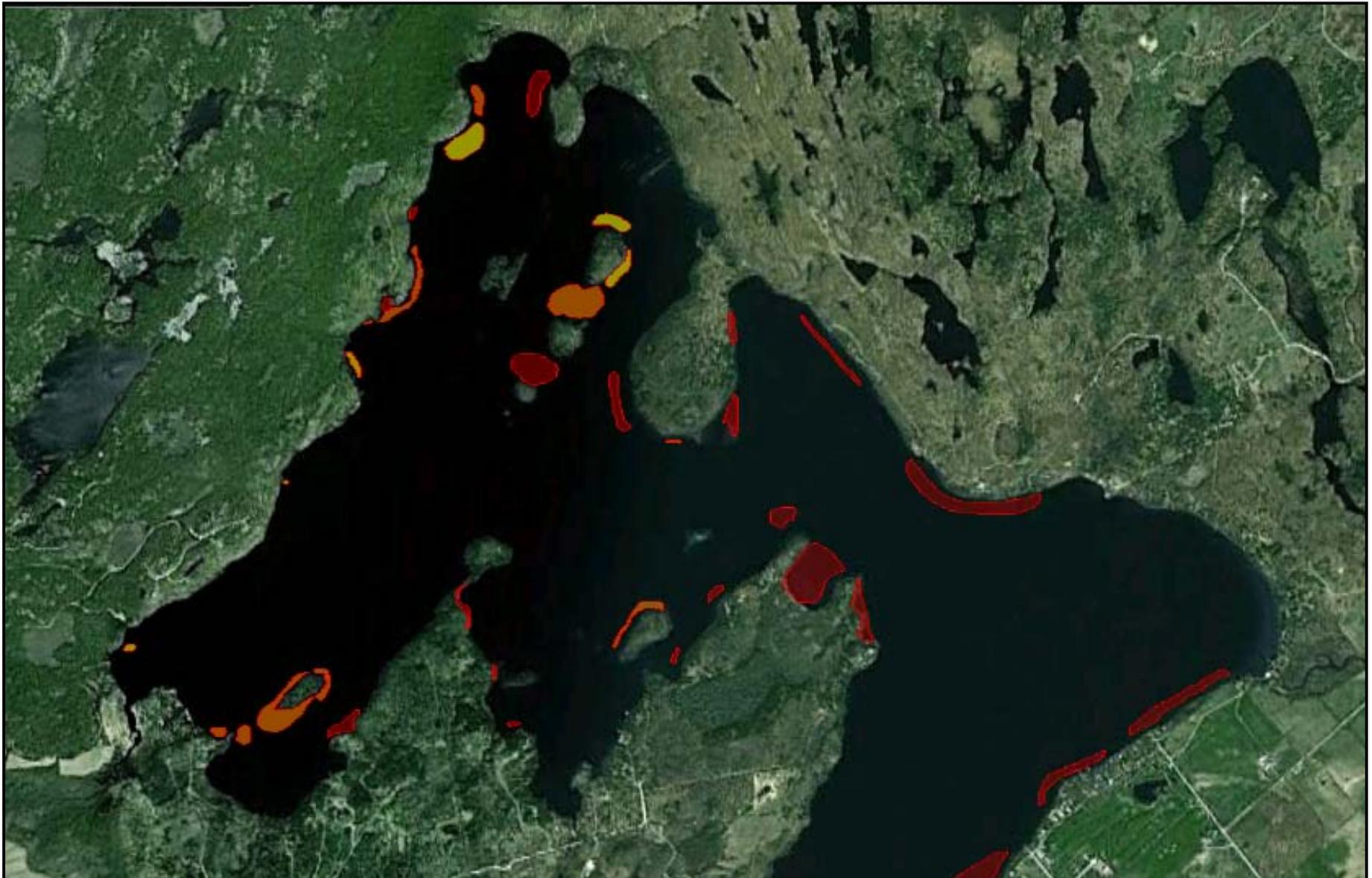
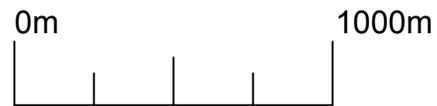
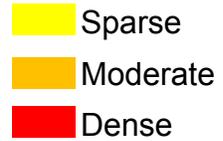


Figure 1.2: Distribution of Eurasian Watermilfoil in Wolfe Lake (North End)



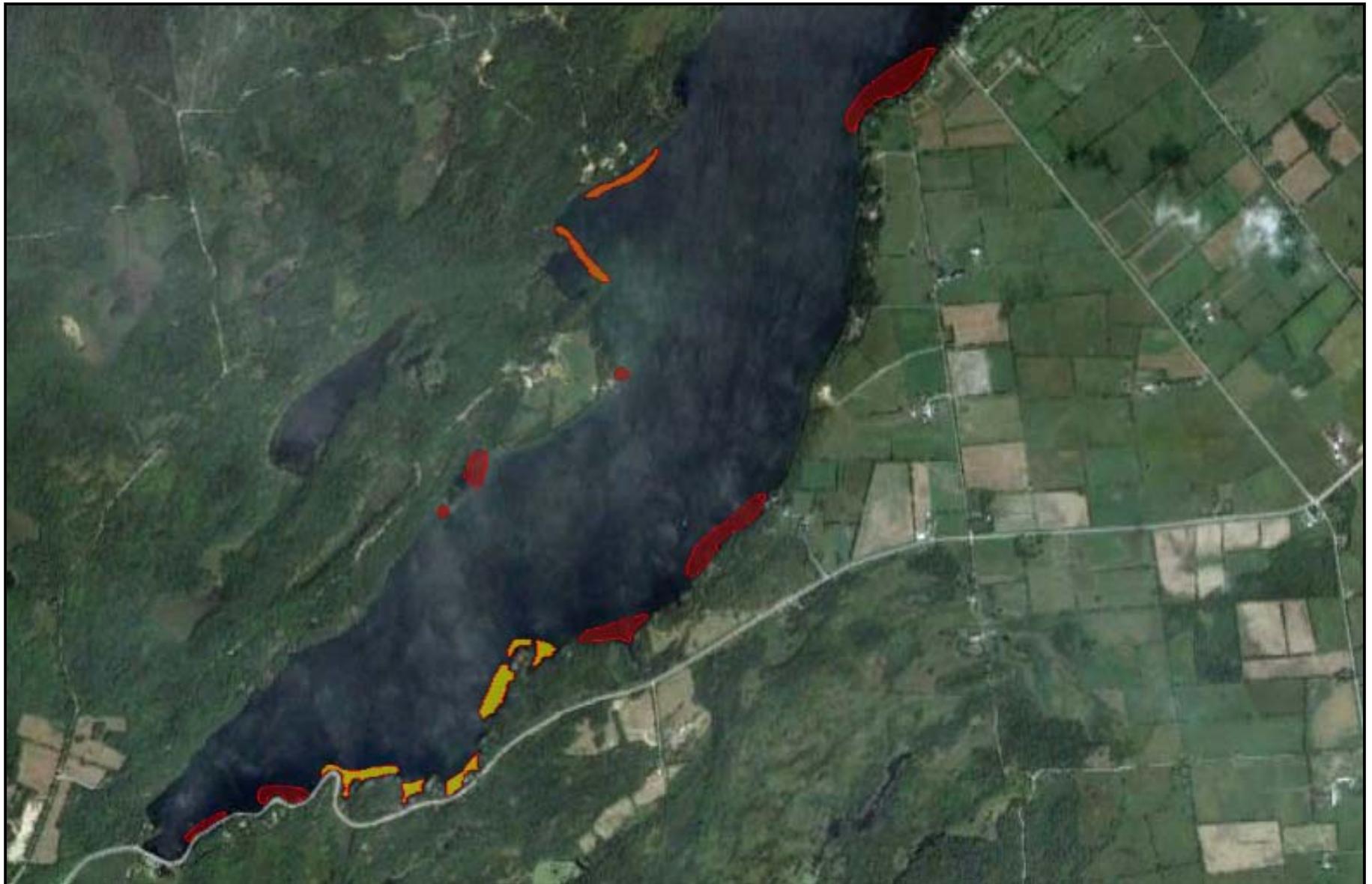


Figure 1.3: Distribution of Eurasian Watermilfoil in Wolfe Lake (South End)

