



Position Statement – Prevention of Aquatic Invasive Species – Risk Analysis

The Lake Minnetonka Association has adopted (April 7, 2008) a position statement on the Prevention of Aquatic Invasive Species (AIS). In that position, the Lake Minnetonka Association recommended:

“The overall risk of AIS introductions be reduced by at least 90% compared to the present baseline.”

Here, we provide an analysis of the baseline risks of AIS introductions.

Risk Assessment

The risk assessment estimates the volume of boats/trailers entering Lake Minnetonka and weighs this against the relative risks of various access and use categories. The rationale is that boats/trailers are the primary known vector for carrying and introducing AIS into lakes. While the recent emphasis and focus of AIS prevention efforts have been on zebra mussels, in this assessment, we consider all AIS – plants, animals and viruses.

Volume

The volume of boat/trailers entering Lake Minnetonka from various sources has been estimated¹ as:

<u>Source</u>	<u>Percent</u>
Public Access	30%
Commercial Access	35%
Municipal Docks	10%
Riparian (lakeshore)	25%

The percentages reported above refer to the source of boats on the lake in the referenced study.

Relative to AIS concerns, not all of these sources are weighted equally. For example, most boats from commercial facilities and all boats from municipal docks and riparian residents do not enter the lake from outside (except through public access or commercial facilities once per season). In other words, these are resident boats, which do not carry AIS threats. Thus, these volumes are discounted or eliminated relative to AIS concerns. Here, we assume 10% of boats/trailers using commercial facilities and no boats/trailers (0%) from municipal docks or riparian residents are included in the volume estimates. Thus, the volume estimates from the above sources are (number metrics):

¹ Boating Trends on Lake Minnetonka, 1984 to 2004.



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<u>Source</u>	<u>Number Metrics</u>
Public Access	30
Commercial Access	3.5 (10% are non-resident watercraft)
Municipal Docks	0
Riparian (lakeshore)	0

Additional sources of boats/trailers relative to AIS concerns are Special Events and tributary lakes. Special events include fishing tournaments and sailing regattas. Because absolute numbers of boats/trailers using Lake Minnetonka are not known precisely, we have estimated that boat/trailer volume for Special Events to be 2% of the above total number metric (= 0.7) and tributary lakes to be 10% of the above total (= 3.3). Thus the overall boat/trailer volume is (Metric and percent):

<u>Source</u>	<u>Metric (percent)</u>
Public Access	30 (80%)
Commercial Access	3.5 (9%)
Municipal Docks	0
Riparian	0
Special Events	0.7 (2%)
Tributary Lakes	3.3 (9%)

Risk Weighting Factors

We are not aware of any quantitative risk assessments for various boat/trailer user types. Thus, we use a relative risk weighting (1 to 5 scale) as follows:

- 1 Minimal risk due to inherent oversight of users or facility operators
- 3 Average AIS risk
- 5 High risk due to boats tending to come from long distances or visit many lakes and rivers

Overall Risk

Overall risk is estimated by multiplying the volume metric percentages by the risk factors:



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<u>Source</u>	<u>Volume</u>	x	<u>Risk Factor</u>	=	<u>Overall Risk</u>
Public Access	80		3		240 (84%)
Commercial Access	9		1		9 (3%)
Municipal Docks	0		-		-
Riparian	0		-		-
Special Events	2		5		10 (3%)
Tributary Lakes	9		3		27 (9%)
TOTAL					286 (100%)

These overall risk factors serve as a baseline for evaluating prevention programs.