<table>
<thead>
<tr>
<th>Lake</th>
<th>Area (Acres)</th>
<th>Perimeter (Miles)</th>
<th>County</th>
<th>Township &amp; Range</th>
<th>Section</th>
<th>Date surveyed</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finger Lake</td>
<td>59.8</td>
<td>1.52</td>
<td>Gogebic</td>
<td>T43NR38W</td>
<td>13</td>
<td>8/27/2012</td>
<td>Low use. Doesn’t seem to support much vegetation.</td>
</tr>
<tr>
<td>Fortune Lakes (First, Second, &amp; Third Lake)</td>
<td>421.9</td>
<td>9.65</td>
<td>Iron</td>
<td>T43NR33W</td>
<td>27</td>
<td>8/13/2012 &amp; 8/19/2012</td>
<td>Several sites of purple loosestrife. High potential for EWM &amp; zebra mussel.</td>
</tr>
<tr>
<td>Glidden Lake</td>
<td>32.2</td>
<td>1.41</td>
<td>Iron</td>
<td>T42NR31W</td>
<td>6</td>
<td>8/19/2012</td>
<td>Low potential for AIS; low, very little vegetation and extra stained water.</td>
</tr>
<tr>
<td>Hannah Webb Lake</td>
<td>64.1</td>
<td>1.33</td>
<td>Iron</td>
<td>T46NR35W</td>
<td>30</td>
<td>7/30/2012</td>
<td>Low potential for EWM or CLP; very few large plants in lake, low nutrients.</td>
</tr>
<tr>
<td>Lake Mary</td>
<td>272.9</td>
<td>4.98</td>
<td>Iron</td>
<td>T42NR31W</td>
<td>5</td>
<td>8/19/12 &amp; 8/20/12</td>
<td>High potential for EWM, from adjacent waterbodies.</td>
</tr>
<tr>
<td>Lake Sainte Kathryn</td>
<td>165.8</td>
<td>3.57</td>
<td>Iron</td>
<td>T46NR35W</td>
<td>8</td>
<td>9/1/2012</td>
<td>Low-medium potential for AIS. Not much use and small boat usage and no adjacent AIS.</td>
</tr>
<tr>
<td>Little Smoky Lake</td>
<td>86.2</td>
<td>1.62</td>
<td>Iron</td>
<td>T43NR37W</td>
<td>33</td>
<td>8/27/2012</td>
<td>Low potential for AIS. Too hard to access and location of campers hinders use.</td>
</tr>
<tr>
<td>Norway Lake</td>
<td>51.9</td>
<td>1.27</td>
<td>Iron</td>
<td>T46NR35W</td>
<td>4</td>
<td>9/1/2012</td>
<td>Low potential for EWM or CLP. No AIS adjacent &amp; moderate use.</td>
</tr>
</tbody>
</table>

Total: 1154.8 25.35
AIS Lake Survey Record

Surveyor(s) Bill Artwock Date 8/27/12 Time on survey 2 hrs

Lake Finger Lake Township N Range W Section

Weather Clear skies, low wind, no precip

Boat launch description/condition Unimproved, sandy beach, high erosion

Dominant substrate (circle one) Mud Sand Rock Gravel Muck Debris Unknown Other

Present lake level relative to average (circle one) Lower Higher Average Don't know Very low

Survey area description (also sketch on topo map) GPS Track File Meander

Water color Clear Turbidity Clear

AIS observed

circle NONE or use lines below

Species Location (in lake)
Abundance Location (in lake)
GPS

Sample taken (circle one) Yes No

Species Location (in lake)
Abundance Location (in lake)

Sample taken (circle one) Yes No

Species Location (in lake)
Abundance Location (in lake)

Sample taken (circle one) Yes No

Vulnerability assessment

Apparent usage of lake (low, medium, high, type) Low, poor road & launch condition

Shoreline development None besides 2 access sites

Connection to other waterbodies No

Potential for AIS establishment (low, medium, high, why, likely invaders) Low, use & doesn't seem to support much vegetation

Do you think an annual AIS check is needed or could the interval be less frequent? No annual survey

Explain Low use & hard access
LAKE FLORA QUICK CHECK CARD

Observer(s) Bill Artwich Date 8/27/12 Time on survey 2 hrs

Lake Finger Lake Township N Range W Section or County Iron

General description of lake (setting, nutrient level, obvious concerns):
low nutrient, remote setting undeveloped

Vegetation data- canopy cover (extent of entire lake occupied by layer) and species:
Floating leaved plants (% ) Emergents (% ) Submergents (% )

Check which species you see. If you can, assign D for dominant, C for common, O for occasional, T for trace. Circle one if multiple species listed on line.

___ yellow water lily (spatterdock) ___ 3-way sedge ___ chara or nitella
___ white water lily ___ sedge (other than 3-way) ___ watermilfoil: Eurasian, northern
___ water shield ___ rush ___ variable-leaf, other
___ bur-reed ___ wild rice ___ coontail
___ pondweed: ribbonleaf, largeleaf, ___ grass (other than wild rice) ___ water buttercup
___ floatingleaf, variableleaf, other ___ arrowhead ___ bladdernwort
___ duckweed ___ spikerush ___ elodea (waterweed)
___ water knotweed ___ water horsetail ___ pondweed: CLP, robbins, small,
___ water starwort ___ iris ___ claspingleaf, flatstem, other
___ _____________________ ___ cattail ___ naiad
___ _____________________ ___ wild calla ___ pipewort
___ _____________________ ___ pickerel weed ___ quillwort (Isoetes)
___ _____________________ ___ _____________________ ___ shoregrass (Littorella)
___ _____________________ ___ _____________________ ___ water lobelia
___ _____________________ ___ _____________________ ___ water bulrush
___ _____________________ ___ _____________________ ___ water marigold
___ _____________________ ___ _____________________ ___ golden hedgehyssop

Specimens collected? Yes ___ (give to Botany staff)

Water clarity (circle one) Clear Stained Turbid with sediment Turbid with algae
Dominant substrate (circle one) Mud Sand Rock Gravel Muck Debris Unknown Other

Present lake level relative to average (circle one) Lower Higher Average Don’t know Very Low
Aquatic flora distribution (circle one) Evenly distributed Widely scattered Clumped in 1-2 few locations Nearshore only
INVASIVE SPECIES SEEN EWM CLP (Complete weed form) Other None, rye, thistle

Threats/concerns:

* No zooplankton found on Tows
AIS Lake Survey Record

Surveyor(s)  Bill Artwich  Date 8/13+8/19  Time on survey 6.5 hrs
Lake Fortune Chain  Township N  Range W  Section
Weather Clear skies, Sunny, low wind, no precip, mornings
Boat launch description/condition gravel boat dock USA, nice cement with dock @ Rehoboth
Dominant substrate (circle one) Mud Sand Rock gravel Muck Debris Unknown Other
Present lake level relative to average (circle one) Lower Higher Average Don't know
Survey area description (also sketch on topo map) GPS Track file in folder

Water color Clear  Turbidity Clear

AIS observed
Species Purple Loose Strife  Location (in lake) 1st 2nd Hole
Abundance patchy to sparse  GPS Excel file for all locations
Sample taken (circle one) Yes No
Species  Location (in lake)
Abundance  GPS
Sample taken (circle one) Yes No
Species  Location (in lake)
Abundance  GPS
Sample taken (circle one) Yes No

Vulnerability assessment
Apparent usage of lake (low, medium, high) Fishing + Rec
Shoreline development 1st + 2nd Developed 3rd + 4th 1st+4th development
Connection to other waterbodies Chain
Potential for AIS establishment (low, medium, high) why, likely invaders EWM + Zebra mussels
High Nutrient + adj.  EWM + Zebra mussels
Do you think an annual AIS check is needed or could the interval be less frequent? Yes annual adjacent
Explain AIS and lots of boat traffic

Ottawa NF Ecology Team 3/2010
LAKE FLORA QUICK CHECK CARD

Observer(s)  Bill Artwich  Date 8/13-8/14/12  Time on survey 8:30 hrs

Lake  Fortune Chain  Township  N  Range  W  Section  or County  Iron

General description of lake (setting, nutrient level, obvious concerns):
Campground and heavy fishing & recreational use, mostly developed on 1st Fortune, 50% developed on 2nd Fortune, >75% on third
High nutrient load

Vegetation data - canopy cover (extent of entire lake occupied by layer) and species:
Floating leaved plants (>5%)  Emergents (>10%)  Submergents (>85%)

Check which species you see. If you can, assign D for dominant, C for common, O for occasional, T for trace. Circle one if multiple species listed on line.

___ yellow water lily (spatterdock)  ___ 3-way sedge  ___ chara or nitella
     0 white water lily  ___ sedge (other than 3-way)  D  watermilfoil: Eurasian, northern
     0 water shield  ___ rush  variable-leaf, other
     0 bur-reed  ___ wild rice
     0 pondweed: ribbonleaf, largeleaf,  ___ grass (other than wild rice)
       floatingleaf, variableleaf, other  ___ arrowhead
     ___ duckweed  ___ spikerush
     ___ water knotweed  ___ water horsetail
     ___ water starwort  ___ iris
     ___ __________________________  ___ cattail
     ___ __________________________  ___ wild calla
     ___ __________________________  ___ pickerel weed
     ___ __________________________  ___ __________________________
     ___ __________________________  ___ __________________________
     ___ __________________________  ___ __________________________

Specimens collected? Yes (No) (give to Botany staff)

Water clarity (circle one)  Clear  Stained  Turbid with sediment  Turbid with algae
Dominant substrate (circle one)  Mud  Sand  Rock  Gravel  Muck  Debris  Unknown  Other
Present lake level relative to average (circle one)  Lower  Higher  Average  Don't know
Aquatic flora distribution (circle one): Evenly distributed  Widely scattered  Clumped in 1-2 few locations  Nearshore only
INVASIVE SPECIES SEEN EWM CLP (Complete weed form) Other  Purple loosestrife
Threats/concerns: lots of use and adjacent to water bodies with  zebra mussels + EWM

* No zooplankton found on tour
<table>
<thead>
<tr>
<th>Waypoint</th>
<th>Weedsite</th>
<th>Lat</th>
<th>Long</th>
<th>Acres</th>
<th>Cover</th>
<th>Count</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>FC01</td>
<td>4385</td>
<td>46.09397</td>
<td>-88.41618</td>
<td>0.004</td>
<td>&gt;5</td>
<td>&gt;10</td>
<td>Purple Loosestrife</td>
</tr>
<tr>
<td>FC02</td>
<td>4386</td>
<td>46.09378</td>
<td>-88.41656</td>
<td>0.004</td>
<td>&gt;5</td>
<td>&gt;10</td>
<td>Purple Loosestrife, 2 clumps on bank</td>
</tr>
<tr>
<td>FC03</td>
<td>4387</td>
<td>46.09319</td>
<td>-88.41569</td>
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<td>&gt;5</td>
<td>&gt;10</td>
<td>Purple Loosestrife on shore</td>
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<tr>
<td>FC04</td>
<td>4388</td>
<td>46.08905</td>
<td>-88.41853</td>
<td>0.200</td>
<td>&gt;5</td>
<td>&gt;100</td>
<td>Purple Loosestrife throughout little bay</td>
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<tr>
<td>FC05</td>
<td>4389</td>
<td>46.08717</td>
<td>-88.42033</td>
<td>0.004</td>
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<td>1</td>
<td>Purple Loosestrife in yard</td>
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<tr>
<td>FC06</td>
<td>4390</td>
<td>46.08349</td>
<td>-88.42410</td>
<td>0.200</td>
<td>&gt;5</td>
<td>&gt;50</td>
<td>Purple Loosestrife on both sides of channel</td>
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<tr>
<td>FC07</td>
<td>4391</td>
<td>46.08274</td>
<td>-88.42413</td>
<td>0.200</td>
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<td>&gt;50</td>
<td>50 yd area of shore with purple loosestrife mixed in</td>
</tr>
<tr>
<td>FC08</td>
<td>4392</td>
<td>46.07270</td>
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<td>&gt;10</td>
<td>Small Patch of Purple Loosestrife</td>
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<tr>
<td>FC09</td>
<td>4393</td>
<td>46.08106</td>
<td>-88.42455</td>
<td>0.100</td>
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<td>&gt;10</td>
<td>30 yd area of Purple Loosestrife</td>
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<tr>
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<td>46.08600</td>
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<td>Small clump of Purple Loosestrife</td>
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<tr>
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<td>46.08651</td>
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<td>25</td>
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<td>Small but dense clump of Purple Loosestrife</td>
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<td>FC12</td>
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<td>Purple Loosestrife mixed with cattail</td>
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<td>FC13</td>
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<td>0.004</td>
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<td>&gt;10</td>
<td>Purple Loosestrife on shore</td>
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<tr>
<td>FC14</td>
<td>4398</td>
<td>46.09128</td>
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<td>0.004</td>
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<td>&gt;10</td>
<td>Purple Loosestrife on shore</td>
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<td>46.09159</td>
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<td>0.004</td>
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<td>&gt;10</td>
<td>Purple Loosestrife on shore</td>
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<td>FC16</td>
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<td>46.09340</td>
<td>-88.41803</td>
<td>0.200</td>
<td>&gt;5</td>
<td>&gt;50</td>
<td>Purple Loosestrife on shore, some along US-2 as well</td>
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<tr>
<td>FC17</td>
<td>4401</td>
<td>46.08627</td>
<td>-88.42925</td>
<td>0.004</td>
<td>&gt;5</td>
<td>1</td>
<td>Purple Loosestrife, one plant</td>
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<tr>
<td>FC18</td>
<td>4402</td>
<td>46.08569</td>
<td>-88.42953</td>
<td>0.004</td>
<td>&gt;5</td>
<td>&gt;10</td>
<td>Purple Loosestrife</td>
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<tr>
<td>FC19</td>
<td>4403</td>
<td>46.08615</td>
<td>-88.42809</td>
<td>0.004</td>
<td>&gt;5</td>
<td>&gt;10</td>
<td>Purple Loosestrife</td>
</tr>
</tbody>
</table>
AIS Lake Survey Record

Surveyor(s) Bill Artwich Date 8/19/12 Time on survey 1 hr

Lake Golden Lake Township N Range W Section

Weather clear skies, low wind, no precip

Boat launch description/condition gravel launch but deep & easy to use

Dominant substrate (circle one) Mud Sand Rock Gravel Muck Debris Unknown Other

Present lake level relative to average (circle one) Lower Higher Average Don't know

Survey area description (also sketch on topo map) GPS Track meander survey

Water color very stained Turbidity Slight

AIS observed circle NONE or use lines below

Species Location (in lake) GPS

Abundance Location (in lake) GPS

Sample taken (circle one) Yes No

Species Location (in lake) GPS

Abundance Location (in lake) GPS

Sample taken (circle one) Yes No

Species Location (in lake) GPS

Abundance Location (in lake) GPS

Sample taken (circle one) Yes No

Vulnerability assessment

Apparent usage of lake (low, medium, high, type) low

Shoreline development None except for campground

Connection to other waterbodies No

Potential for AIS establishment (low, medium, high, why, likely invaders) low, very little vegetation

Do you think an annual AIS check is needed or could the interval be less frequent? No

Explain little use & very little aquatic vegetation

Ottawa NF Ecology Team 3/2010
LAKE FLORA QUICK CHECK CARD

Observer(s) Bill Artwich Date 8/19/12 Time on survey 1 hr

Lake Glidden Lake Township N Range W Section or County Iron

General description of lake (setting, nutrient level, obvious concerns):
Campground, lake receives very little use. Not much vegetation and very stained water.

Vegetation data - canopy cover (extent of entire lake occupied by layer) and species:
Floating leaved plants (60%) Emergents (30%) Submergents (10%)

Check which species you see. If you can, assign D for dominant, C for common, O for occasional, T for trace. Circle one if multiple species listed on line.

- yellow water lily (spatterdock)
- white water lily
- bur-reed
- pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
- duckweed
- water knotweed
- water starwort

- ____________
- ____________
- ____________
- ____________
- ____________
- ____________
- ____________

Specimens collected? Yes (No) (give to Botany staff)

Water clarity (circle one) Clear Stained Turbid with sediment Turbid with algae Very Stained

Dominant substrate (circle one) Mud Sand Rock Gravel Muck Debris Unknown Other

Present lake level relative to average (circle one) Lower Higher Average Don't know

Aquatic flora distribution (circle one): Evenly distributed Widely scattered Clumped in 1-2 few locations Nearshore only

INVASIVE SPECIES SEEN EWM CLP (Complete weed form) Other

Threats/concerns:

* No zooplankton found on Toxins
AIS Lake Survey Record

Surveyor(s) Bill Artwick Date 7/30/12 Time on survey 2:15 hrs

Lake Hannett Web Township N Range W Section

Weather clear skies, low winds, high sun, afternoon survey

Boat launch description/condition gravel, very shallow, hard to use, large rocks

Dominant substrate (circle one) Mud Sand Rock Gravel Muck Debris Unknown Other

Present lake level relative to average (circle one) Lower Higher Average Don’t know Very low

Survey area description (also sketch on topo map) GPS map meander

Water color Clear Turbidity Clear

AIS observed circle (NONE) or use lines below

Species Location (in lake)

Abundance Location (in lake)

Sample taken (circle one) Yes No

Species Location (in lake)

Abundance Location (in lake)

Sample taken (circle one) Yes No

Species Location (in lake)

Abundance Location (in lake)

Sample taken (circle one) Yes No

Vulnerability assessment

Apparent usage of lake (low, medium, high, type) low, hard to launch

Shoreline development About 50% or less

Connection to other waterbodies No

Potential for AIS establishment (low, medium, high, why, likely invaders) EWM - CPL very few large plants, low nutrients

Do you think an annual AIS check is needed or could the interval be less frequent? No, annual check

Explain not necessary; low use from water level, no adjacent AIS

Ottawa NF Ecology Team 3/2010
LAKE FLORA QUICK CHECK CARD

Observer(s) Bill Artwick Date Time on survey 2.5 hrs

Lake Hannah Web Township N Range W Section or County Iron

General description of lake (setting, nutrient level, obvious concerns):
largely undeveloped, medium nutrient load. Boot launch is extremely shallow & hard to use

Vegetation data - canopy cover (extent of entire lake occupied by layer) and species:
Floating leaved plants ( ≥5 %) Emergents ( ≥5 %) Submergents ( ≥50 %)

Check which species you see. If you can, assign D for dominant, C for common, O for occasional, T for trace. Circle one if multiple species listed on line.

__ yellow water lily (spatterdock) ____ 3-way sedge ____ chara or nitella
__ white water lily ____ sedge (other than 3-way) ____ watermilfoil: Eurasian, northern
__ water shield ____ rush variable-leaf, other
__ bur-reed ____ wild rice ____ coontail
__ pondweed: ribbonleaf, largeleaf, ____ grass (other than wild rice) ____ water buttercup
__ floatingleaf, variableleaf, other ____ arrowhead ____ bladderwort
__ duckweed ____ spikerush ____ elodea (waterweed)
__ water knotweed ____ water horsetail ____ pondweed: CLP, Robbins, small,
__ water starwort ____ iris claspingal, flatstem, other
__ naiad
__ piperwort
__ quillwort (Isoetes)
__ shoregrass (Littorella)
__ water lobelia
__ water bulrush
__ water marigold
__ golden hedgehyssop

Specimens collected? Yes ☐ No (give to Botany staff)

D Dwarf

Water clarity (circle one) Clear Stained Turbid with sediment Turbid with algae
Dominant substrate (circle one) Mud Sand Rock Gravel Muck Debris Unknown Other

Present lake level relative to average (circle one) Lower Higher Average Don't know
Aquatic flora distribution (circle one): Evenly distributed Widely scattered Clumped in 1-2 few locations Nearshore only
INVASIVE SPECIES SEEN EWM CLP (Complete weed form) Other

Threats/concerns:

* No Z. americanus found on Tows
AIS Lake Survey Record

Surveyor(s)  Bill Artwich  Date  8/19-8/20  Time on survey  4 hrs

Lake lake Mary  Township N  Range W  Section

Weather Clear skies, low wind + no precip.

Boat launch description/condition  Nice developed launch with cement pads + dock

Dominant substrate (circle one) Mud  Sand  Rock  Gravel  Muck  Debris  Unknown  Other

Present lake level relative to average (circle one) Lower  Higher  Average  Don't know

Survey area description (also sketch on topo map) GPS Track

Water color Clear  Turbidity Clear

AIS observed  circle NONE or use lines below

Species  Location (in lake)

Abundance  GPS

Sample taken (circle one) Yes  No

Species  Location (in lake)

Abundance  GPS

Sample taken (circle one) Yes  No

Species  Location (in lake)

Abundance  GPS

Sample taken (circle one) Yes  No

Vulnerability assessment

Apparent usage of lake (low, medium, high, type) High - Fishing & Recreational Boating

Shoreline development  Development almost around whole lake

Connection to other waterbodies

Potential for AIS establishment (low, medium, high, why, likely invaders) High, EWN from adjacent water bodies

Do you think an annual AIS check is needed or could the interval be less frequent? It would be good

Explain if it could be monitored annually
LAKE FLORA QUICK CHECK CARD

Observer(s) Bill Artwich Date 8/19/12
Time on survey 2 hrs

Lake Lake May Township  S Range  W Section or County Iron

General description of lake (setting, nutrient level, obvious concerns):
Busy campground and active fishing & boating activity

Vegetation data- canopy cover (extent of entire lake occupied by layer) and species:
Floating leaved plants (>10%) Emergents (20%) Submergents (70%)

Check which species you see. If you can, assign D for dominant, C for common, O for occasional, T for trace. Circle one if multiple species listed on line.

- yellow water lily (spatterdock)
- white water lily
- water shield
- bur-reed
- pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
- duckweed
- water knotweed
- water starwort
- __________________________
- __________________________
- __________________________
- __________________________

- 3-way sedge
- sedge (other than 3-way)
- rush
- wild rice
- grass (other than wild rice)
- arrowhead
- spikerush
- water horsetail
- iris
- cattail
- wild calla
- pickerel weed
- __________________________
- __________________________
- __________________________
- __________________________

chara or nitella
watermilfoil: Eurasian, northern variable-leaf, other coontail
water buttercup bladderwort
elodea (waterweed)
pondweed: CLP, robbins, small, claspingleaf, flatstem, other naiad
wild celery pipewort quillwort (Isoetes)
shoregrass (Littorella)
water lobelia water bulrush water marigold
golden hedgehyssop

Specimens collected? Yes No (give to Botany staff)

Water clarity (circle one) Clear Stained Turbid with sediment Turbid with algae
Dominant substrate (circle one) Mud Sand Rock Gravel Muck Debris Unknown Other Muck covered Bays
Present lake level relative to average (circle one) Lower Higher Average Don't know
Aquatic flora distribution (circle one): Evenly distributed Widely scattered Clumped in 1-few locations Nearshore only

INVASIVE SPECIES SEEN EWM CLP (Complete weed form) Other Non
Threats/concerns: EWM is in waterways in adjacent area

* No zooplankton Sound on Tows
AIS Lake Survey Record

Surveyor(s): Bill Artwohl Date: 9/11/12 Time on survey: 3 hrs

Lake: St. Kathryn Township: N Range: W Section:

Weather: Clear skies, sunny, low winds, no precip. 45°F

Boat launch description/condition: Gravel launch, deep & easy to use

Dominant substrate (circle one): Mud Sand Rock Gravel Muck Debris Unknown Other:

Present lake level relative to average (circle one): Lower Higher Average Don't know

Survey area description (also sketch on topo map): GPS Track 1

Water color: Clear Turbidity: Slight

AIS observed (circle one) or use lines below:

Species: Location (in lake):

Abundance: GPS:

Sample taken (circle one): Yes No

Species: Location (in lake):

Abundance: GPS:

Sample taken (circle one): Yes No

Species: Location (in lake):

Abundance: GPS:

Sample taken (circle one): Yes No

Vulnerability assessment:

Apparent usage of lake (low, medium, high, type): Medium Campground was full last year. Only 1 motor boat.

Shoreline development: 2 small cabins & campground

Connection to other waterbodies: No

Potential for AIS establishment (low, medium, high, why, likely invaders): Not much use and small boat usage. Odd. No adjacent AIS.

Do you think an annual AIS check is needed or could the interval be less frequent? Every other year

Explain:

Ottawa NF Ecology Team 3/2010
Observer(s)       Bill Artwich       Date       9/11/12       Time on survey       3 hrs

Lake           St. Kathryn       Township       N       Range       W       Section       or County       Iron

General description of lake (setting, nutrient level, obvious concerns):
F.S. Campground was full, soft sediment with lots of
vegetation and large mud flats

Vegetation data - canopy cover (extent of entire lake occupied by layer) and species:
Floating leaves plants (> 2 %)       Emergents (> 15 %)       Submergents (> 40 %)

Check which species you see. If you can, assign D for dominant, C for common, O for occasional, T for trace. Circle one if multiple species listed on line.

___ yellow water lily (spatterdock)       ___ 3-way sedge       ___ chara or nitella
___ white water lily       ___ sedge (other than 3-way)       ___ watermilfoil: Eurasian, northern
___ water shield       ___ rush       variable-leaf, other
C ___ bur-reed       I ___ wild rice       ___ coontail
D ___ pondweed: ribbonleaf, largeleaf,       ___ grass (other than wild rice)       ___ water buttercup
      floatingleaf, variableleaf, other       ___ arrowhead       D ___ bladderwort
___ duckweed       O ___ spikerush       ___ elodea (waterweed)
___ water knotweed       ___ water hortsetail       ___ pondweed: CLP, Robbins, small,
___ water starwort       ___ iris       claspingleaf, flatstem, other
___                              ___ cattail       ___ naiad
___                              ___ wild calla       C ___ wild celery
___                              ___ pickerel weed       ___ pipewort
___                              ___ water horsetail       ___ quillwort (Isoetes)
___                              ___ irish       ___ shoregrass (Littorella)
___                              ___ chara       ___ water lobelia
___                              ___ water horsetail       ___ water bulrush
___                              ___ chara or nitella       ___ water marigold
___                              ___ wild calla       ___ golden hedgehyssop
___                              ___ pickerel weed
___                              ___ water horsetail

Specimens collected?       Yes       No (give to Botany staff)

Water clarity (circle one)       Clear       Stained       Turbid with sediment       Turbid with algae
Dominant substrate (circle one)       Mud       Sand       Rock       Gravel       Muck       Debris       Unknown       Other
Present lake level relative to average (circle one)       Lower       Higher       Average       Don’t know
Aquatic flora distribution (circle one): Evenly distributed       Widely scattered       Clumped in 1-2 few locations       Nearshore only
INVASIVE SPECIES SEEN       EWM       CLP (Complete weed form)       Other       None
Threats/concerns: Campground had one large motor boat and very
few others. Others were canoes and kayaks.

* No zooplankton found on Tows
AIS Lake Survey Record

Surveyor(s) Bill Artwich Date 8/27/12 Time on survey 2 hrs

Lake Little Smokey Lake Township N Range W Section

Weather Clear skies, low wind, no precip. Fog quickly burned off.

Boat launch description/condition Sand/Gravel very shallow, difficult to use.

Dominant substrate (circle one) Mud Sand Rock Gravel Muck Debris Unknown Other

Present lake level relative to average (circle one) Lower Higher Average Don't know Very low

Survey area description (also sketch on topo map) GPS Truck File Map

Water color Clear Turbidity Clear

AIS observed circle NONE or use lines below

Species Location (in lake)
Abundance GPS

Sample taken (circle one) Yes No

Species Location (in lake)
Abundance GPS

Sample taken (circle one) Yes No

Species Location (in lake)
Abundance GPS

Sample taken (circle one) Yes No

Vulnerability assessment

Apparent usage of lake (low, medium, high, type) Low, no boats & campground

Shoreline development 25% developed, most of lake has been subdivided

Connection to other waterbodies No

Potential for AIS establishment (low, medium, high, why, likely invaders) Too hard to access and location of Campers hinders use

Do you think an annual AIS check is needed or could the interval be less frequent? No annual

Explain check, low use, boat launch was very difficult to launch.
Observer(s)  Bill Artwich  Date  4/27/12  Time on survey  2 hr

Lake  Little Smoky Lake  Township  N  Range  W  Section  or County  Iron

General description of lake (setting, nutrient level, obvious concerns):
Campground on lake but very poor boat launch & low lake levels. & mainly undeveloped at this point.

Vegetation data - canopy cover (extent of entire lake occupied by layer) and species:
Floating leaved plants (>5%)  Emergents (>10%)  Submergents (>85%)

Check which species you see. If you can, assign D for dominant, C for camman, O for occasionol, T for trace. Circle one if multiple species listed on line.
___ yellow water lily (spatterdock)  ___ 3-way sedge  ___ chara or nitella
___ white water lily  ___ rush (other than 3-way)  ___ watermilfoil (Eurasian, northern
___ water shield  ___ wild rice  ___ variable-leaf, other
___ bur-reed  ___ grass (other than wild rice)  ___ coontail
___ pondweed: ribbonleaf, largeleaf, ___ arrowhead  ___ water buttercup
___ floatingleaf, variableleaf, other  ___ spikerush  ___ O  bladderwort
___ duckweed  ___ iris  ___ elodea (waterweed)
___ water knotweed  ___ cattail  ___ pondweed: CLP, Robbins, small,
___ water starwort  ___ wild calla  ___ claspingleaf, flatstem, other
___ _____________________________  ___ pickerel weed  ___ naiad
___ _____________________________  ___ _____________________________
___ _____________________________
___ _____________________________
___ _____________________________
___ _____________________________

Specimens collected?  Yes O (give to Botany staff)

Water clarity (circle one)  ___ Clear  ___ Stained  ___ Turbid with sediment  ___ Turbid with algae
Dominant substrate (circle one)  Mud  ___ Sand  ___ Rock  Gravel  Muck  Debris  Unknown  Other
Present lake level relative to average (circle one)  ___ Lower  ___ Higher  Average  Don't know
Aquatic flora distribution (circle one):  ___ Evenly distributed  ___ Widely scattered  ___ Clumped in 1-few locations  Nearshore only
INVASIVE SPECIES SEEN  EWM  CLP (Complete weed form) Other  ___ None
Threats/concerns:  ___ Campground

* No zooplankton found on tour
AIS Lake Survey Record

Surveyor(s) Bill Artwich Date 9/11/12 Time on survey 1.75 hrs

Lake: Norway Lake Township: N Range: W Section: 

Weather: Clear skies, no wind, fog burned off quickly

Boat launch description/condition: gravel launch 3 feet short, hard to use

Dominant substrate (circle one): Mud, Sand, Rock, Gravel, Muck, Debris, Unknown, Other

Present lake level relative to average (circle one): Lower, Higher, Average, Don't know

Survey area description (also sketch on topo map): GPS Track, Meander

Water color: Clear Turbidity: Slight

AIS observed: circle NONE; or use lines below

Species Location (in lake)

Abundance GPS

Sample taken (circle one): Yes  No

Species Location (in lake)

Abundance GPS

Sample taken (circle one): Yes  No

Species Location (in lake)

Abundance GPS

Sample taken (circle one): Yes  No

Vulnerability assessment

Apparent usage of lake (low, medium, high, type): medium, people camping, but few boats

Shoreline development: & campground

Connection to other waterbodies: No

Potential for AIS establishment (low, medium, high, why, likely invaders): high, EWM, CLP

No AIS adjacent + moderate use

Do you think an annual AIS check is needed or could the interval be less frequent? Every other year

Explain: would work for here. No, no need for annual survey

Ottawa NF Ecology Team 3/2010
Observer(s) Bill Arthus  Date 9/11/12  Time on survey 1.75 hrs

Lake Norway Lake  Township N  Range W  Section or County

General description of lake (setting, nutrient level, obvious concerns):
Quiet lake with FS, campground, medium nutrient load
Launched was very shallow, There was a dense carpet
of dwarf milfoil.

Vegetation data- canopy cover (extent of entire lake occupied by layer) and species:
Floating leaved plants (>2%)  Emergents (>2%)  Submergents (>95%)

Check which species you see. If you can, assign D for dominant, C for common, O for occasional, T for trace. Circle one if multiple species listed on line.
___ yellow water lily (spatterdock)  ___ sedge
___ white water lily  ___ sedge (other than 3-way)
___ water shield  ___ rush
___ bur-reed  ___ wild rice
___ pondweed: ribbonleaf, largeleaf, ___ grass (other than wild rice)
  floatingleaf, variableleaf, other  ___ arrowhead
___ duckweed  ___ spikerush
___ water knotweed  ___ water horsetail
___ water starwort  ___ iris
___  ___ cattail
___  ___ wild calla
___  ___ pickerel weed

Specimens collected? Yes No (give to Botany staff)

Water clarity (circle one) Clear  Stained  Turbid with sediment  Turbid with algae
Dominant substrate (circle one) Mud Sand  Rock  Gravel  Muck  Debris  Unknown  Other  Mainly S

Present lake level relative to average (circle one) Lower  Higher  Average  Don’t know
Aquatic flora distribution (circle one): Evenly distributed  Widely scattered  Clumped in 1-few locations  Nearshore only
INVASIVE SPECIES SEEN EWM CLP (Complete weed form) Other None

Threats/concerns: ____________________________________________________________

* No zooplankton found on Tows