AIS Lake Survey Contract 2014
Purchase Order # AG-54A7-S-14-0061
Flambeau Engineering

Tiffiney Kleczewski surveyed 27 lakes for aquatic invasive species.

Lake	Area (Acres)	Perimeter (Miles)	County	Township & Range*	Section	Date Surveyed
Barb Lake	66.4	1.32	Gogebic	45N42W	5	8/4/2014
Birch Lake	208.0	3.25	Gogebic	43N39W	2	8/4/2014
Black River Harbor	11.8	1.10	Gogebic	49N46W	3	7/25/2014
Chamberlain Lake	34.2	1.83	Iron	46N36W	28	7/21/2014
Deer Lake	78.4	2.17	Iron	45N32W	4	7/23/2014
Elbow Lake	26.1	1.17	Gogebic	46N44W	26	7/24/2014
Fire Lake	125.2	3.97	Iron	44N33W	19	7/23/2014
Holmes Lake	27.6	1.04	Iron	43N31W	24	7/23/2014
King Lake	15.0	0.86	Gogebic	45N43W	27	8/4/2014
Lake Ellen	139.9	3.40	Iron	44N31W	35	7/23/2014
Little Pomeroy Lake	30.9	1.01	Gogebic	45N42W	28	Not surveyed
Long Lake	59.8	1.77	Iron	43N33W	17	7/23/2014
Mallard Lake	176.9	7.67	Iron	45N37W	16	8/5/2014
Marell Lake	22.1	1.12	Gogebic	45N45W	9	8/4/2014
McDonald Lake	463.4	6.39	Gogebic	46N46W	14	7/24/2014
Misty Lake	14.2	0.71	Gogebic	45N41W	31	7/25/2014
Moosehead Lake	51.0	1.56	Gogebic	44N42W	6	7/24/2014
Ormes Lake	51.7	2.42	Gogebic	45N43W	26	7/24/2014
Paint Lake	238.2	4.79	Iron	46N37W	36	7/21/2014
Paulding Pond	10.1	0.70	Ontonagon	46N39W	15	7/25/2014
Perch Lake	1037.9	7.19	Iron	46N35W	22	7/21/2014
Plymouth Lake	29.2	1.11	Gogebic	45N44W	12	8/5/2014
Sandy Lake	100.9	2.62	Houghton	51N36W	3	7/20/2014
Stager Lake	109.5	2.36	Iron	41N32W	5	7/23/2014
Sudden Lake	39.2	1.22	Ontonagon	50N37W	10	7/20/2014
Sunday Lake	225.0	3.54	Gogebic	47N45W	9	7/25/2014
Taps Lake	11.3	0.71	Gogebic	45N44W	12	8/5/2014
Tepee Lake	122.6	2.41	Iron	46N37W	13	7/21/2014
Total:	**3526.5**	**69.41**				

* The township, range, and section refer to the location of the boat access.

She found more Eurasian watermilfoil in Paint Lake.

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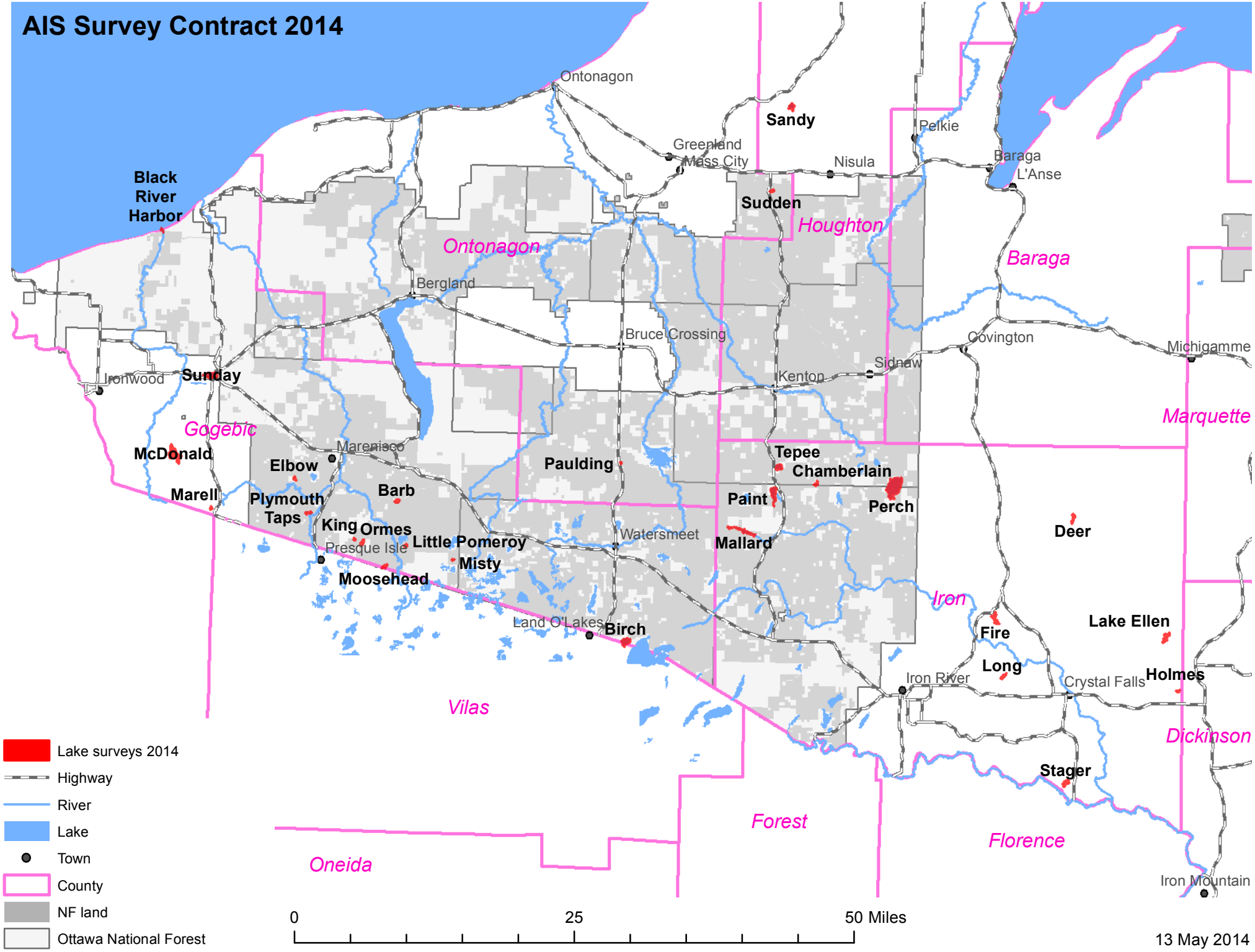
She collected eight plants:

- Kleczewski 7/20/2014 Sandy Lake. Potamogeton confervoides.
- Kleczewski 7/21/2014 Chamberlain Lake. Utricularia geminiscapa.
- Kleczewski 7/22/2014 Paint Lake. Potamogeton vaseyi.
- Kleczewski 7/22/2014 Paint Lake. Myriophyllum spicatum.
- Kleczewski 7/24/2014 Elbow Lake. Myriophyllum farwellii.
- Kleczewski 8/4/2014 Barb Lake. Calllitriche heterophylla. Sue and Ian think this is C. palustris.
- Kleczewski 8/4/2014 Marell Lake. Potamogeton vaseyi.
- Kleczewski 8/4/2014 Marell Lake. Utricularia geminiscapa.

She collected fourteen GPS points:

#	IDENT	Taxon	Date_	Lake	Latitude	Longitude	Remarks
1	1606	Potamogeton confervoides	7/20/2014	Sandy Lake	46.849429	-88.866254	Near shore in sandy sediment, 1-2 ft deep, stained water with few plants.
2		Utricularia geminiscapa	7/21/2014	Chamberlain Lake	46.366218	-88.806294	North basin, northwest slope.
3	1610	Myriophyllum spicatum	7/21/2014	Paint Lake	46.352917	-88.886841	
4	1611	Myriophyllum spicatum	7/21/2014	Paint Lake	46.354029	-88.887067	
5	1612	Myriophyllum spicatum	7/21/2014	Paint Lake	46.354469	-88.887735	
6	1613	Potamogeton vaseyi	7/21/2014	Paint Lake	46.354097	-88.883322	North basin, east side.
7	1614	Myriophyllum spicatum	7/21/2014	Paint Lake	46.357796	-88.884383	
8	1615	Myriophyllum spicatum	7/21/2014	Paint Lake	46.357502	88.888349	
9	1616	Myriophyllum spicatum	7/21/2014	Paint Lake	46.357503	-88.889133	
10	1617	Myriophyllum spicatum	7/21/2014	Paint Lake	46.357395	-88.890399	
11	1621	Myriophyllum farwellii	7/24/2014	Elbow Lake	46.352103	-89.781149	At boat landing on north basin east side.
12	1622	Utricularia geminiscapa	8/4/2014	Marell Lake	46.310775	-89.937147	Only two plants found floating in lake.
13	1623	Potamogeton vaseyi	8/4/2014	Marell Lake	46.309989	-89.934611	Only one floating plant found, did not observe stand.
14		Callitriche heterophylla	8/4/2014	Barb Lake	46.325858	-89.593292	Sue & Ian think this is Callitriche palustris


AIS Survey Contract 2014
Ontonagon
Sandy
Pelkie
Greenland
Mass City
Nisula
Baraga
L'Anse
Black
River
Harbor
Sudden
Houghton
Ontonagon
Baraga
Bergland
Bruce Crossing
Covington
Michigamme
Sidnaw
Kenton
Ironwood
Sunday
Marquette
Gogebic
Marenisco
McDonald
Elbow
Paulding
Tepee
Chamberlain
Marell
Plymouth
Taps
Barb
Paint
Perch
King
Ormes
Little
Pomeroy
Presque Isle
Watersmeet
Mallard
Deer
Misty
Moosehead
Iron
Land O'Lakes
Birch
Fire
Lake Ellen
Long
Iron River
Crystal Falls
Holmes
Vilas
Dickinson
Stager
Forest
Florence
Oneida
Iron Mountain
Lake surveys 2014
Highway
River
Lake
Town
County
NF land
Ottawa National Forest
0
25
50 Miles
13 May 2014

AIS Lake Survey Record

Surveyor(s) T Klecznewski Date 8-4-14 Time on survey 3:15 – 4:15

Lake Barb Township 45 N Range 42 W Section 5

Weather Partly cloudy, warm, calm

Boat launch description/condition Carry in off ORV trail

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) Between Watersmeet + Wakefield off FR-7300, access from ORV trail.

Water color DK brown Turbidity moderate

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) fishing, paddling

Shoreline development none.

Connection to other waterbodies Gym Creek. Invadiscater

Potential for AIS establishment (low, medium, high, why, likely invaders) Low use, carry in only, Rusty + Elwin in area lakes.

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

Explain Low use, carry in access.

LAKE FLORA QUICK CHECK CARD

Observer(s) TKlecowski Date 8-4-14 Time on survey 3:15-4:15

Lake Barb Township 45 N Range 42 W Section 5 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
moderate nutrient, bog lake, access from ORV trail, carry in only, ring of Potamogeton amplifolius around lake ~ 50 feet from shore.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (3 %) Emergents (3 %) Submergents (20 %)

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.

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

___ 3-way sedge
___ sedge (other than 3-way)
D rush X
___ 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
C naiad X
___ wild celery
___ pipewort
___ quillwort (Isoetes)
___ shoregrass (Littorella)
___ water lobelia
C 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 _____
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 _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) T Kilczewski Date 8-4-14 Time on survey 12 - 1:45

Lake Birch Township 43 N Range 39 W Section 2

Weather Partly cloudy, calm, warm

Boat launch description/condition Cross country access from trail.

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) on border w/ WI near Land o Lakes

Water color brown Turbidity Low

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) Developed, many boats @ boaters landings

Shoreline development High

Connection to other waterbodies Eleanor in WI

Potential for AIS establishment (low, medium, high, why, likely invaders) High use from residents, appears to be private landing, low use from transient boaters

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

Explain High use but by residents, stained water, few plants.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleczewski Date 8-4-14 Time on survey 12-1:45

Lake Biron Township 43 N Range 39 W Section 2 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
Mixed land & lake use, highly developed shoreline, no apparent public access but cross country from trail.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (5 %) Emergents (2 %) 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)
C white water lily X
D water shield X
C bur-reed X
___ pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

C 3-way sedge X
C sedge (other than 3-way) X
C rush X
___ 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
1 elodea (waterweed) X
___ 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 _____
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 _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) TKlecowski Date 7-25 Time on survey 7:00 - 7:45

Lake Black River Harbor Township____ N Range____ W Section____

Weather P cloudy, calm, cool.

Boat launch description/condition Concrete, Park, launch for large charter boats.

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) Harbor @ Superior, Charter boats docked, Park.

Water color Dk Brown Turbidity Low

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, Charter boats

Shoreline development Park, Harbor

Connection to other waterbodies Lake Superior

Potential for AIS establishment (low, (medium), high, why, likely invaders) Heavy Traffic but water is deep + cool - No plants found.

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

Explain Establishment in Harbor low but could get into Lake Superior.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleczewski Date [illegible] Time on survey 7-7:45

Lake Black River Harbor Township____N Range____W Section____ or County____

General description of lake (*setting, nutrient level, obvious concerns*):
DK, clear water, no plants found. Low nutrient.
Heavy use from charter boats - little use up river.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (0 %) Emergents (/ %) Submergents (0 %)

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
___ ____
___ ____
___ ____
___ ____

0 3-way sedge (
0 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 Very Dark
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____
Threats/concerns:____

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-21-14 Time on survey 1:30 - 2:30

Lake Chamberlain Township 46 N Range 36 W Section 28

Weather Sunny, hot, calm

Boat launch description/condition gravel, rough

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) off FR-3500 ~25 miles north of Iron River

Water color dk brown Turbidity low - clear SD = 8'

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 - fishing, camping

Shoreline development 1 cabin

Connection to other waterbodies None

Potential for AIS establishment (low, medium, high, why, likely invaders) stained water, deep off shoreline, scattered veg, low use, Rusty in area.

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

Explain Dark water, low use, narrow littoral zone, few plants.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kilczewski Date 7-21-14 Time on survey 1:30 - 2:30

Lake Chamberlain Township 46 N Range 36 W Section 28 or County Iron

General description of lake (*setting, nutrient level, obvious concerns*):
Dark water, low nutrient, remote lake, surrounded by bog. Deep shoreline. Rough landing

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (1 %) Emergents (1 %) Submergents (1 %)

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.

T yellow water lily (spatterdock) 1
T white water lily 1
O water shield 1
O bur-reed 1 PL
___ pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

C 3-way sedge 1
___ sedge (other than 3-way)
O rush 1
___ 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
C bladderwort 1
___ elodea (waterweed)
___ pondweed: CLP, robbins, small, claspingleaf, flatstem, other
T naiad 1
___ wild celery
___ pipewort
___ quillwort (Isoetes)
___ shoregrass (Littorella)
___ water lobelia
___ water bulrush
___ water marigold
___ golden hedgehyssop
___ _____
___ _____
___ _____

Specimens collected? Yes No (give to Botany staff)
L. uniflorus } 1408
U. gem. } - shallow sandy pt

Water clarity (*circle one*) Clear Stained Turbid with sediment Turbid with algae SD = 8'
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 _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) TKlecewski Date 7-23-14 Time on survey

Lake Deer Township 45 N Range 32 W Section 4

Weather Sunny, warm, light breeze.

Boat launch description/condition Gravel

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) NE of Iron River, outside of Ottawa NF.

Water color brown Turbidity low

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) Cabins, campground, good landing

Shoreline development Cabins, resort, campground

Connection to other waterbodies No creek, Fishing. Iron River

Potential for AIS establishment (low, medium, high, why, likely invaders) Good access, high use, scattered native veg.

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

Explain High use, high populations eg. coontail & N. watermilfoil

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kiernowski Date 7-23-14 Time on survey 2:20 -

Lake Deer Township 45 N Range 32 W Section 4 or County Iron

General description of lake (*setting, nutrient level, obvious concerns*):
Developed w/ homes/cabins campgrounds at edge of state forest.
Low nutrient, scattered weeds

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (5 %) Emergents (10 %) Submergents (20 %)

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.

C 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
D sedge (other than 3-way) |
___ rush
___ wild rice
___ grass (other than wild rice)
___ arrowhead
___ spikerush
___ water horsetail
T iris |
___ cattail
___ wild calla
___ pickerel weed
___ _____
___ _____
___ _____
___ _____

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

Fil algae.

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-few locations Nearshore only
INVASIVE SPECIES SEEN EWM CLP (Complete weed form) Other _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) T Kieczewski Date 7-24-14 Time on survey 1:45-2:20

Lake Elbow Township 46 N Range 44 W Section 26

Weather Sunny, warm, calm

Boat launch description/condition Gravel, paved, rough

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) Between Wakefield + Watersmeet, S of Hwy 2 off FR-8300

Water color Dk brown Turbidity low SD = 3.5 ft.

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 - cabins, fishing, paddling

Shoreline development Some cabins/homes

Connection to other waterbodies None

Potential for AIS establishment (low) medium, high, why, likely invaders) Low use, very dark water, few submersed plants. Elodea rusty in area

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

Explain Low use, dark water, few submersed plants.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleczewski Date 7-24-14 Time on survey 1:45 - 2:20

Lake Elbow Township 46 N Range 44 W Section 26 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
Dark water, some homes/cabins, moderate nutrients, very few submersed, lots of watershield.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (20 %) Emergents (1 %) Submergents (1 %)

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
D water shield 1
___ bur-reed
O pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

C 3-way sedge 1
C sedge (other than 3-way) 1
___ 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)
Myriophyllum farwell.

Water clarity (*circle one*) Clear Stained Turbid with sediment Turbid with algae SD = 3.5'
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 _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) T Klecewski Date 7-23-14 Time on survey 11:20 - 1:00

Lake Lake Ellen Township 44 N Range 31 W Section 35

Weather sunny, warm, light breeze

Boat launch description/condition gravel drive, conc. ramp, pier, vault toilet

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) NE of Crystal Falls outside of Ottawa NF.

Water color brown - green Turbidity 11+ ft mod. - some algae

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 - many local boats, paddling, fishing

Shoreline development High, many homes/cabins, Church camp.

Connection to other waterbodies none

Potential for AIS establishment (low, medium, (high), why, likely invaders) Good landing with use - 2 boats fishing, town in area lake.

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

Explain High use, clear water, few weeds, town in area.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Klecawski Date 7-23-14 Time on survey 11:20 - 1:00

Lake Lake Ellen Township 44 N Range 31 W Section 35 or County Iron

General description of lake (*setting, nutrient level, obvious concerns*):
Few plants, many homes/cabins
Lots of sunken wood.
Green with algae - clear water

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

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)
O white water lily 1
___ water shield
___ bur-reed
O pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

C 3-way sedge 1
C sedge (other than 3-way) 1
C rush 1
___ wild rice
___ grass (other than wild rice)
___ arrowhead
C spikerush 1
T water horsetail 1
___ iris
T cattail 1
___ wild calla
___ pickerel weed
___ _____
___ _____
___ _____
___ _____

O chara or nitella 1
___ watermilfoil : Eurasian, northern variable-leaf, other
___ coontail
___ water buttercup
___ bladderwort
___ elodea (waterweed)
O pondweed: CLP, robbins, small, claspingleaf, flatstem, other 1 Illinois
___ 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 SD 11+ ft
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 _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-23-14 Time on survey 4:30 – 6:20

Lake Five Township 44 N Range 33 W Section 19

Weather sunny, warm, light breeze

Boat launch description/condition Gravel road, cone ramp, vault toilet

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

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

Survey area description (also sketch on topo map) Off Hwy 643, gravel access NE of Iron River outside of Ottawa NF.

Water color light green Turbidity low – algae but good clarity SD = 13+ ft.

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 – fishing, recreation

Shoreline development High – homes & cabins

Connection to other waterbodies Five Lake Creek

Potential for AIS establishment (low, medium, high, why, likely invaders) Medium use, fine sediment, medium nutrient, Eurasian Zebra mussel in area.

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

Explain Medium use, and water quality good for Eurasian Zebra.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kiczewski Date 7-23-14 Time on survey 4:30 - 6:20

Lake Five Township 44 N Range 33 W Section 19 or County Itasca

General description of lake (*setting, nutrient level, obvious concerns*):
Low nutrient, soft water lake; few scattered plants

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (1 %) Emergents (5 %) Submergents (2 %)

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)
O white water lily
___ water shield
___ bur-reed
C pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
T water knotweed
___ water starwort
___ ___
___ ___
___ ___
___ ___

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

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

Specimens collected? Yes No (give to Botany staff)
Fil Algae @ landing.

Water clarity (*circle one*) Clear Stained Turbid with sediment Turbid with algae So 13+ft.
Dominant substrate (*circle one*) Mud Sand Rock Gravel Muck Debris Unknown Other Marl
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 ___
Threats/concerns: ___

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-23-14 Time on survey 10:00 – 10:45

Lake Holmes Township 43 N Range 31 W Section 24

Weather sunny, cool, light breeze

Boat launch description/condition gravel road, conc. ramp

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) Outside of Ottawa Forest NE of Crystal Falls.

Water color brown Turbidity low SD = 7+ ft.

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 - fishing, paddling

Shoreline development Few cabins - 1 pontoon

Connection to other waterbodies none.

Potential for AIS establishment (low, medium, high, why, likely invaders) low use, few plants, Eurm in area lakes.

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

Explain Low use, very few plants.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Klucewski Date 7-23-14 Time on survey 10:00 - 10:45

Lake Holmes Township 43 N Range 31 W Section 24 or County Iron

General description of lake (*setting, nutrient level, obvious concerns*):
Low nutrient, clear stained water, very few plants, emergent @ shoreline, few cabins, natural shoreline.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (1 %) Emergents (10 %) Submergents (30 %) needle spikerush

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
O bur-reed
___ pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

D 3-way sedge
C sedge (other than 3-way)
___ rush
___ wild rice
___ grass (other than wild rice)
___ arrowhead
D spikerush - needle
___ water horsetail
___ iris
T 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 SD = 7+ ft.
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 _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) T Klecewski Date 8-4 Time on survey 5 - 5:30

Lake King Township 45 N Range 43 W Section 27

Weather Partly Sunny Calm

Boat launch description/condition Carry down near road, steep

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) between Lakefield & Watersmeet. S of Hwy 2 off FR - 8220.

Water color very dark brown Turbidity low?

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) Fishing, paddling

Shoreline development None

Connection to other waterbodies Outlet stream on map.

Potential for AIS establishment (low, medium, high, why, likely invaders) Low use, very stained, deep, little plant growth & small littoral zone. Elvira Rusty lk area lake.

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

Explain Low use, very dark & deep, little plants & littoral zone.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleowski Date 8-4-14 Time on survey 5-5:30

Lake King Township 45 N Range 43 W Section 27 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
Very dark, deep, bog lake, low nutrient, few plants.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (2 %) Emergents (5 %) 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.

C yellow water lily (spatterdock) x
T white water lily x
___ water shield
___ bur-reed
___ pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

C 3-way sedge x
C sedge (other than 3-way) x
O rush x
___ 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 _____
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 _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-7/23/14 Time on survey 6:45 - 7:30

Lake Long Township 43 N Range 33 W Section 5

Weather Sunny, warm, light breeze

Boat launch description/condition Gravel drive, conc. ramp, pier, toilets.

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) NE of Iron River outside of Ottawa NF.

Water color lt. brown - clear Turbidity Low SD > 13 ft.

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) Cabins-homes, fishing

Shoreline development High, large homes on east side.

Connection to other waterbodies None

Potential for AIS establishment (low, medium, high, why, likely invaders) High use, high clarity, EWM, CLP & Zebra mussels in area.

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

Explain High use, AIS in area, good access to lake.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Klecewski Date 7 Time on survey 6:45 - 7:30

Lake Long Township 43 N Range 33 W Section 5 or County Iron

General description of lake (*setting, nutrient level, obvious concerns*):
Low nutrient, clear, large homes on east side & south
Few scattered plants, lots of wood.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (1 %) Emergents (2 %) Submergents (1 %)

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.

T yellow water lily (spatterdock) 1
___ white water lily
___ water shield
C bur-reed 1
T pondweed: ribbonleaf, (largeleaf), (floatingleaf), variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ ___
___ ___
___ ___
___ ___

C 3-way sedge 1
___ sedge (other than 3-way)
___ rush
___ wild rice
C grass (other than wild rice) 1
___ arrowhead
T spikerush 1 - needle
___ water horsetail
___ iris
T cattail 1
___ wild calla
___ pickerel weed
___ ___
___ ___
___ ___
___ ___

C chara or nitella 1
___ 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
C Illinois pw
___ ___
___ ___

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-few locations Nearshore only
INVASIVE SPECIES SEEN EWM CLP (Complete weed form) Other ___
Threats/concerns: ___

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 8-5-14 Time on survey 2:30 - 5:15

Lake Mallard Township 45 N Range 37 W Section 16

Weather Partly cloudy, warm, calm

Boat launch description/condition None, accessed through private land

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) ~15 miles from Iron River, wooded, some development, lots of marsh around lake.

Water color Clear / brown Turbidity Low

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) Fishing, paddling - no boats or cabins.

Shoreline development Few cabins

Connection to other waterbodies trib to North Branch Paint River

Potential for AIS establishment (low, medium, high, why, likely invaders) Low use, few cabins, no public access.

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

Explain Low use, dark water at lower end w/ few plants.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Klecewski Date 8-5-14 Time on survey 2:30-5:15

Lake Mallard Township 45 N Range 37 W Section 16 or County Iron

General description of lake (*setting, nutrient level, obvious concerns*):
No public access, few cabins, forested and lots of marsh surrounding lake. low nutrient, clear water & vegetation at west end, dark water w/ few plants at South end, shallow with many stumps.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (50 %) Emergents (2 %) Submergents (30 %)

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.

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

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

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

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

west east

Water clarity (*circle one*) (Clear) (Stained) Turbid with sediment (Turbid with algae) east
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 ___
Threats/concerns: ___

AIS Lake Survey Record

Surveyor(s) T Klimowski Date 8-4-14 Time on survey 6:20 - 7:15

Lake Marrell Township 45 N Range 45 W Section 9

Weather Partly Sunny, calm, warm

Boat launch description/condition Carry in off unmarked road.

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) ~ 10 mi South of Wakefield just north of WI border. Unmarked road off of highway.

Water color Dark brown Turbidity Low

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) Fishing, paddling

Shoreline development None yet, private land subdivided

Connection to other waterbodies None

Potential for AIS establishment (low, medium, high, why, likely invaders) Little use, dark water, only submersed species in bay.

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

Explain Low use, dark water, unmarked access, carry in only.

LAKE FLORA QUICK CHECK CARD

Observer(s) J Kiraewski Date 8-4-14 Time on survey 6:20 7:15

Lake Marrell Township 45 N Range 45 W Section 9 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
Surrounded by private land. Shallow area not developed. [illegible] nutrient. Few plants. [illegible]

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (5 %) Emergents (2 %) Submergents (1 %)

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.

D yellow water lily (spatterdock)
T white water lily X
O water shield X
___ bur-reed
O pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other longleaf X
___ duckweed
___ water knotweed
___ water starwort
___ ___
___ ___
___ ___
___ ___

D 3-way sedge X
___ 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
C bladderwort X
___ 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 ___
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 ___
Threats/concerns: ___

AIS Lake Survey Record

Surveyor(s) T Klecewski Date 7-24-14 Time on survey 3:50 - 6:50

Lake McDonald Township 46 N Range 46 W Section 14

Weather Sunny, warm, calm

Boat launch description/condition Very steep + rough.

Dominant substrate (*circle one*) Mud Sand Rock Gravel Muck Debris (Unknown) Other To dark fibrous

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

Survey area description (also sketch on topo map) Surrounded by State forest. South of Wakefield.

Water color Very dark brown Turbidity low SD = 3 ft

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) Fishing

Shoreline development none

Connection to other waterbodies McDonald Cr., Bice Cr.

Potential for AIS establishment (low, (medium), high, why, likely invaders) Used by fishermen, CLP in nearby lake in WI

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

Explain Used by fishermen, shallow, abundant weeds 4 ft or less. Entire South half should be surveyed. Checked.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleczewski Date 7-24-14 Time on survey 3:50 - 6:50

Lake McDonald Township 46 N Range 46 W Section 14 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
Surrounded by state land - no development. Moderate nutrient levels. Scattered patches of plants throughout shallow south half. Whole lake is shallow. Many areas non-navigable due to stumps, shallow water areas in bays.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (20 %) Emergents (5 %) Submergents (15 %)

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
D water shield
___ bur-reed
D pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
O Ag. moss
___
___
___

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

___ chara or nitella
C watermilfoil: Eurasian, northern, variable-leaf, other
C coontail
___ water buttercup
___ bladderwort
___ elodea (waterweed)
C pondweed: CLP, robbins, small, claspingleaf, flatstem, other
T 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 Very Dark. SD = 3 ft
Dominant substrate (*circle one*) Mud Sand Rock Gravel Muck Debris Unknown Other too dark to see
Present lake level relative to average (*circle one*) Lower Higher Average Don't know Dam
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___
Threats/concerns:___

AIS Lake Survey Record

Surveyor(s) T. Kleczewski Date 7-25-14 Time on survey 12-12:30

Lake Misty Township 45 N Range 41 W Section 31

Weather partly cloudy, warm, light breeze

Boat launch description/condition canoe access

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) between Watersmeet + Wakefield, S of HWY 2 off CR 531

Water color DK brown Turbidity low

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, paddling

Shoreline development None

Connection to other waterbodies Foggy Lake

Potential for AIS establishment (low, medium, high, why, likely invaders) Low use, canoe access, very dark water, few plants. Elodea, CLP + Rusty in area.

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

Explain Low use, dk water.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kilczewski Date 7-25-14 Time on survey 12-12:30

Lake Misty Township 45 N Range 41 W Section 31 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
Remote, canoe landing, very dark water, scattered plants, low nutrient

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (1 %) Emergents (2 %) Submergents (1 %)

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.

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

C 3-way sedge
C sedge (other than 3-way)
___ rush
___ wild rice
___ grass (other than wild rice)
___ arrowhead
___ spikerush
O 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
C 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 _____
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 _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-24-14 Time on survey 10:30 - 11:15

Lake Moosehead Lake Township 44 N Range 42 W Section 6

Weather Sunny, warm

Boat launch description/condition Gravel road, conc ramp, good condition

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) between Watersmeet + Wakefield, S of Hwy 2 off FR 6862

Water color brown Turbidity low SD = 11 ft.

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) Campground, fishing, paddling

Shoreline development Campground only

Connection to other waterbodies Little Prairie Isle Lake

Potential for AIS establishment (low, medium, high, why, likely invaders) Medium use, good access, Eurm. Rusty + CLP in area. Rusty in lake but not observed.

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

Explain Moderate use w/ good access + AIS in area.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Klecewski Date 7-24-14 Time on survey 10:30 - 11:15

Lake Moosehead Township 44 N Range 42 W Section 6 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
Remot, Fed campground, stained water, abundant native veg. Lots of N milfoil. to ~ 9 ft.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (5 %) Emergents (5 %) Submergents (15 %)

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.

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

___ 3-way sedge
D sedge (other than 3-way) \
D rush /
___ wild rice
___ grass (other than wild rice)
___ arrowhead
___ spikerush
___ water horsetail
___ iris
T cattail /
___ wild calla
O 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 SD = 11 ft.
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 ___
Threats/concerns: near shore + bays

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-24-14 Time on survey 11:50 - 1:10

Lake Ormes Township 45 N Range 43 W Section 26

Weather Sunny, warm, calm

Boat launch description/condition Gravel - good

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) Between Lakefield & Watersmeet, S of Hwy 2 off CR-525

Water color Brown Turbidity low SD = 7.5 ft

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) few cabins - fishing, paddling

Shoreline development low - few cabins - natural shoreline

Connection to other waterbodies none.

Potential for AIS establishment (low, medium, high, why, likely invaders) Low use, dark water, low plant growth. Rusty, EWM + CLP in area.

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

Explain low use, low development.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleczewski Date 7-24-14 Time on survey 11:50 - 1:10

Lake Ormes Township 45 N Range 43 W Section 26 or County _____

General description of lake (*setting, nutrient level, obvious concerns*):
few cabins moderate nutrient & plant growth, good access.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (5 %) Emergents (2 %) 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.

- C yellow water lily (spatterdock)
- \ white water lily
- C water shield \
- C bur-reed \
- D 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
- T bladderwort |
- ___ elodea (waterweed)
- ___ pondweed: CLP, robbins, small, claspingleaf, flatstem, other
- ___ naiad
- T 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 SD = 7.5 ft.
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 _____
Threats/concerns: shoreline & bays

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-21-14 Time on survey 4:30 - 7:00

Lake Paint Township 46 N Range 37 W Section 36

Weather Sunny, hot, light breeze

Boat launch description/condition sand, unmarked, rough

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) ~20 mi north of Iron River off FR-3602.

Water color green-brown (algae) Turbidity high SD = 2.5'

AIS observed *circle* **NONE** *or use lines below*

Species Elodm Location (in lake) Island at north shore

Abundance scattered plants GPS See attached map

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) Fishing, pleasure boating

Shoreline development North end high development

Connection to other waterbodies Paint River

Potential for AIS establishment (low, (medium), high, why, likely invaders) CLP due to turbidity & high nutrients.

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

Explain monitor Elodm

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleczewski Date 7-21-14 Time on survey 4:30 - 7:00

Lake Paint Township 46 N Range 37 W Section 36 or County Iron

General description of lake (*setting, nutrient level, obvious concerns*):
Very green w/ algae. Very low Secchi 2.5'. Landing OK.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (5 %) Emergents (____ %) 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.

C yellow water lily (spatterdock) 1
C white water lily 1
___ water shield
___ bur-reed
C 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
T watermilfoil : Eurasian, northern variable-leaf, other
___ coontail
___ water buttercup
T bladderwort
C elodea (waterweed) 1
C 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)
1613 - ? Vasey pondweed ?

Water clarity (*circle one*) Clear Stained Turbid with sediment Turbid with algae SD = 2.5'
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 ____
Threats/concerns: Fil algae - south end.
2.5 - 4.5' - EWM - not topped out

Ottawa National Forest
Weed Reporting Form

Weed Species: Eurasian watermilfoil

Occurrence number: _____

Project name: Ottawa AIS Survey 2014

Site name: Paint Lake

Location (Fill in either the legal description, latitude and longitude, UTM, or attach a map)

Legal Description: Twp 46 Rng 37 Sec _____ ¼ sec _____ ¼¼ sec _____

Latitude _____ Longitude _____

UTM _____

25 - W 1/2 See Attached map
26 - E 1/2

District: _____ Compartment: _____ Stand: _____

Directions to site (or include a detailed map) : North end Paint Lake

Owner: — County: Iron

Infested gross area (acres): <1

living room = .004 acres (12' x 16')
baseball diamond = 0.2 acres (90' x 90')
football field = 1.1 acres (300' x 160')

% Gross Area Infested (typically 100%): <1%

% Cover (canopy cover of the weed, 1 to 100): 1

Count: 1 (Circle one: plants or stems)

Dominant life form (circle one): Forbs, Graminoids, Nonvascular plants, Shrubs, Trees Aquatic

Phenology (circle one): Pre-flowering , Flowering , Fruiting , Senescent

Distribution (circle one): Clumpy , Scattered patchy , Scattered even , Linear

Observer: T Kleczewski

Date observed: 7-21-14

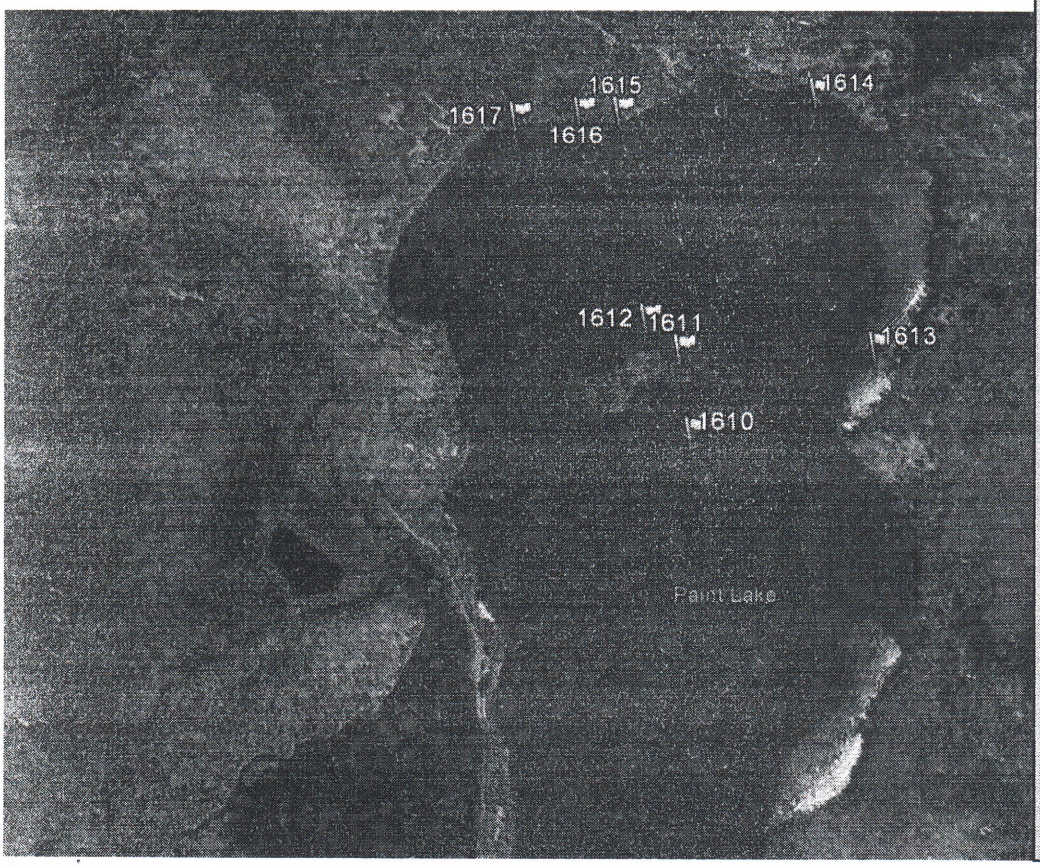
Address: PO Box 273 Park Falls WI 54552

Phone: 715 963 3489

Comments: Few scattered plants along north shore + island.

The six items in bold must be filled out!

26 March 2009



Paint Lake EWM Locations

7/21/2014

ident	Latitude	Longitude
1610	46.352917	-88.886841
1611	46.354029	-88.887067
1612	46.354469	-88.887735
1614	46.357796	-88.884383
1615	46.357502	-88.888349
1616	46.357503	-88.889133
1617	46.357395	-88.890399

Google earth

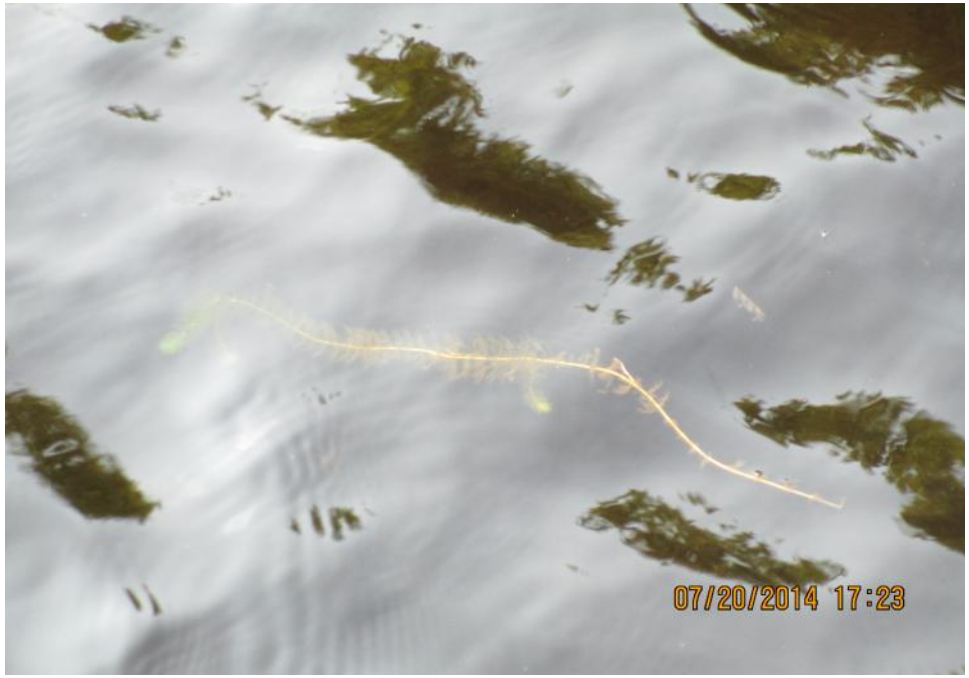
feet 3000

meters 900

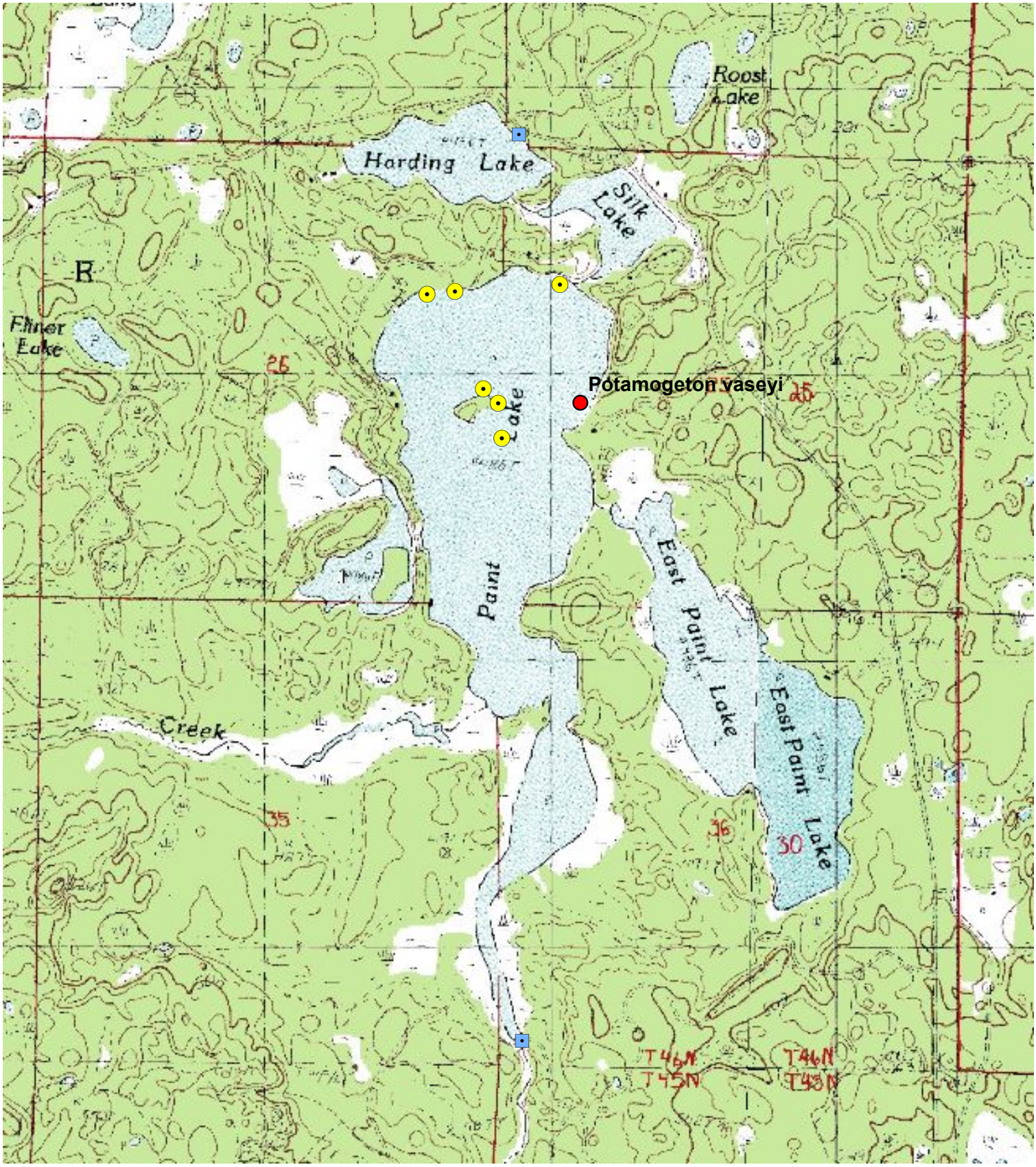
07/22/2014 19:49

07/21/2014 17:29

07/21/2014 17:29


07/20/2014 17:23

AIS Survey Contract 2014



Kleczewski_Points_2014

Myriophyllum spicatum 2014

boat_access_all_NAD83

0 0.5 1 Miles

25 November 2015

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-25-14 Time on survey 1:45 – 2:10

Lake Paulding Township 46 N Range 39 W Section 15

Weather mostly cloudy, warm, light breeze.

Boat launch description/condition Canoe access

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) North of Watersmeet on Hwy 45

Water color Dk brown Turbidity low

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, fishing

Shoreline development none.

Connection to other waterbodies Bluff Creek

Potential for AIS establishment (low, (medium), high, why, likely invaders) Low use, high nutrients in area, high native plant growth, fine sed. bottom, Ewm

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

Explain Low use, very thick native plant growth

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleczewski Date 7-25-14 Time on survey 1:45 - 2:10

Lake Paulding Township 46 N Range 39 W Section 15 or County Ontonagon

General description of lake (*setting, nutrient level, obvious concerns*):
off Hwy 45 high nutrients, many plants, canoe access.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (60 %) 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.

O yellow water lily (spatterdock) |
___ white water lily
___ water shield
C bur-reed |
D pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed |
___ water starwort
___ ___
___ ___
___ ___
___ ___

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

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

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-few locations Nearshore only
INVASIVE SPECIES SEEN EWM CLP (Complete weed form) Other ___
Threats/concerns: ___

AIS Lake Survey Record

Surveyor(s) TKleczewski Date 7-21-14 Time on survey 9:53 - 12:45

Lake Perch Township 46N Range 35 W Section 22

Weather Sunny, hot

Boat launch description/condition gravel road & campground, conc. ramp.

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) North of Iron River ~25 miles off Winslow Lake Rd.

Water color brown Turbidity low

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) campground, recreation, fishing

Shoreline development campground, homes/cabins

Connection to other waterbodies Perch R, wolf Cr, Kidney Cr.

Potential for AIS establishment (low, medium, high, why, likely invaders) Medium use, low plant growth, Rusty in lake - not observed.

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

Explain Medium use, low plant growth, coarse sediments.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleczewski Date 7-21-14 Time on survey 9:53-12:46

Lake Perch Township 46 N Range 35 W Section 22 or County Iron

General description of lake (*setting, nutrient level, obvious concerns*):
Landing near campground, med. nutrient, some algae in water.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (2 %) Emergents (2 %) Submergents (5 %)

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 |
T water shield |
O bur-reed |
___ pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

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

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

Specimens collected? Yes No (give to Botany staff)

C-whitestem pw
C-illinois pw

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 <5' deep
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 _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 8-5-14 Time on survey 9-

Lake Plymouth Township 45 N Range 44 W Section 12

Weather Sunny, warm, calm

Boat launch description/condition Portage from Taps

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 Beaver Dam

Survey area description (also sketch on topo map) between Watersmeet & Wakefield - Sig Hwy 2 off FR- 8120

Water color Dark Brown Turbidity Low

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) Fishing, paddling

Shoreline development None

Connection to other waterbodies Outlet to Taps

Potential for AIS establishment (low, medium, high, why, likely invaders) Low use, portage from Lake Ten miles or portage from Taps, Elm & Rusty in area lake.

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

Explain Low use dark water

LAKE FLORA QUICK CHECK CARD

Observer(s) T Klecznowski Date 8-5-14 Time on survey 9-10-20

Lake Plymouth Township 45 N Range 44 W Section 12 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
Forested, low nutrient, dark water

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (5 %) Emergents (2 %) Submergents (5 %)

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
D water shield X
___ bur-reed
D pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

C 3-way sedge X
C sedge (other than 3-way) X
C rush X
___ 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
O bladderwort X
___ elodea (waterweed)
C pondweed: CLP, robbins, small, claspingleaf, flatstem, other Illinois
___ 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 _____
Present lake level relative to average (*circle one*) Lower (Higher) Average Don't know Beaver Dam
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_____
Threats/concerns:_____

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-20-14 Time on survey

Lake Sandy Township 51 N Range 36 W Section 3

Weather P. cloudy

Boat launch description/condition Gravel drive, concrete ramp, vault toilet

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) Near Winona North of Ottawa Forest.

Water color Stained Turbidity Clear SD = 3.5'

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) 3 traverse landing, fishing, recreation

Shoreline development med. high

Connection to other waterbodies ~~None~~ Headwater Bruno Creek

Potential for AIS establishment (low, medium, high, why, likely invaders) moderate use; stained water

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

Explain Higher use from residents & transient boats but few plants w/ stained water.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Klecewski Date 7-20-14 Time on survey 2:35 - 4:15

Lake Sandy Township 51 N Range 36 W Section 3 or County ____

General description of lake (*setting, nutrient level, obvious concerns*):
Rural, off gravel road, moderate nutrients.
Clear, stained water

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (20 %) Emergents (5 %) Submergents (2 %)

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
D water shield 1 6'
___ bur-reed
___ pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ ____
___ ____
___ ____
___ ____

C 3-way sedge 1
___ sedge (other than 3-way)
___ rush
___ wild rice
___ grass (other than wild rice)
___ arrowhead
O spikerush 1
T water horsetail
___ iris
___ cattail
___ wild calla
___ pickerel weed
___ ____
___ ____
___ ____
___ ____

___ chara or nitella
___ watermilfoil : Eurasian, northern variable-leaf, other
___ coontail
___ water buttercup
C bladderwort 1
___ 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)

Potamogeton confervoides

Water clarity (*circle one*) Clear Stained Turbid with sediment Turbid with algae SD=3.5'
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 @ OHWM
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 ____
Threats/concerns: ____ 4 bays
Algal bloom

AIS Lake Survey Record

Surveyor(s) T Klecewski Date 7-23-14 Time on survey 7:20 - 8:40

Lake Stager Township 41 N Range 32 W Section 5

Weather Sunny Cool lt. breeze

Boat launch description/condition paved road conc. ramp

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) Easy access, paved road, good landing, well developed but good shoreline cover.

Water color brown Turbidity low SD = 11+ft

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, recreation, fishing

Shoreline development Cabins/homes surround lake.

Connection to other waterbodies none.

Potential for AIS establishment (low, medium, high, why, likely invaders) All due to high use. EWM due to high native milfoil growth & EWM in area lakes.

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

Explain High use, heavy milfoil growth

LAKE FLORA QUICK CHECK CARD

Observer(s) T Klecewski Date 7-23-14 Time on survey 7:20 - 8:40

Lake Stager Township 41 N Range 32 W Section 5 or County Iron

General description of lake (*setting, nutrient level, obvious concerns*):
Low nutrient, clear, stained water; high development but good shoreline. Heavy native milfoil growth in bays + island near landing.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (5 %) Emergents (5 %) Submergents (30 %)

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.

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

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

___ chara or nitella
D watermilfoil: Eurasian, northern variable-leaf, other
___ coontail
___ water buttercup
___ bladderwort
___ elodea (waterweed)
C pondweed: CLP, robbins, small, claspingleaf, flatstem, other ICC Illinois Fries
___ 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 SD = 11+ ft.
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 ___
Threats/concerns: Lots of native milfoil, plants @ 11'+

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-20-14 Time on survey _____

Lake Sudden Township 50 N Range 37 W Section 10

Weather Sunny, warm, calm

Boat launch description/condition Gravel road, gravel launch

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) _____

Water color dk brown-stained Turbidity low

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) fishing, canoeing

Shoreline development Low 1- cabin

Connection to other waterbodies Headwater W branch Firesteel River

Potential for AIS establishment (low, medium, high, why, likely invaders) Low use, shallow landing, small lake

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

Explain Low use, dark water w/ few submersed plants.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleczewski Date 7-20-14 Time on survey 5:10 - 5:50

Lake Sudden Township 50 N Range 37 W Section 10 or County Ontonagon

General description of lake (*setting, nutrient level, obvious concerns*):
off Forest Road 16, gravel road to landing
Low nutrients, clear, stained water

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (10 %) Emergents (10 %) Submergents (2 %)

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.

C yellow water lily (spatterdock) 1
C white water lily 1
___ water shield
C bur-reed 1
T pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

D 3-way sedge 1
___ sedge (other than 3-way)
___ rush
___ wild rice
___ grass (other than wild rice)
___ arrowhead
D spikerush 1
___ water horsetail
___ iris
O cattail 1
___ 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 _____
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 _____
Threats/concerns: Bays +

AIS Lake Survey Record

Surveyor(s) T Klecewski Date 7-25-14 Time on survey 9:00-15

Lake Sunday Township 47 N Range 45 W Section 9

Weather mostly cloudy, cool, light breeze

Boat launch description/condition Paved, pump

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 Dam

Survey area description (also sketch on topo map) In wakefield, surrounded by homes, parks, campgrounds.

Water color Dk Brown Turbidity low

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, recreation

Shoreline development High - campgrounds, homes, parks

Connection to other waterbodies Little Black River

Potential for AIS establishment (low, (medium), high, why, likely invaders) High use but few submerged plants.

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

Explain High use from transient boaters.

LAKE FLORA QUICK CHECK CARD

Observer(s) TKlecewski Date 7-25-14 Time on survey 9-10:15

Lake Sunday Township 47 N Range 45 W Section 9 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
In Wakefield, very developed, Campground, park, beach, homes. Seaweed plants.

Vegetation data- canopy cover (*extent of entire lake occupied by layer*) and species:
Floating leaved plants (5 %) Emergents (1 %) Submergents (1 %)

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.

D yellow water lily (spatterdock) 1
O white water lily 1
C water shield 1
___ bur-reed
C pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

___ 3-way sedge
___ sedge (other than 3-way)
C rush 1
___ wild rice
___ grass (other than wild rice)
___ arrowhead
___ spikerush
___ water horsetail
___ iris
O cattail 1
___ wild calla
___ pickerel weed
___ _____
___ _____
___ _____
___ _____

___ chara or nitella
___ watermilfoil : Eurasian, northern variable-leaf, other
___ coontail
___ water buttercup
___ bladderwort
T elodea (waterweed) 1
___ pondweed: CLP, robbins, small, claspingleaf, flatstem, other
___ naiad
C wild celery 1
___ 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 _____
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 _____
Threats/concerns: + bays

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 8-5-14 Time on survey 8-8:40

Lake Paps Township 45 N Range 44 W Section 12

Weather Sunny, calm, warm

Boat launch description/condition Off Forest Road, carry in

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) between Wakefield & Watersmeet S of Hwy 2 off FR-8120.

Water color Dark brown Turbidity Low

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) Fishing, paddling

Shoreline development None.

Connection to other waterbodies Stream from Plymouth.

Potential for AIS establishment (low, medium, high, why, likely invaders) Dark water, heavy native growth, low use. Eurasian Rusty in area.

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

Explain Low use, carry in access, good native growth.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Klelzewski Date 8-5-14 Time on survey 8 – 8:40

Lake Taps Township 45 N Range 44 W Section 12 or County Gogebic

General description of lake (*setting, nutrient level, obvious concerns*):
Off Forest Rd. Carry in access. Moderate nutrients, dark water, Lots of large trees & pond lilies.

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

C yellow water lily (spatterdock) X
D white water lily Y
C water shield X
___ bur-reed
D pondweed: ribbonleaf, largeleaf, floatingleaf, variableleaf, other
___ duckweed
___ water knotweed
___ water starwort
___ _____
___ _____
___ _____
___ _____

C 3-way sedge X
C sedge (other than 3-way) X
C rush X
___ 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
C coontail X
___ water buttercup
O bladderwort X
___ 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 _____
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 _____
Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) T Kleczewski Date 7-21-14 Time on survey 3:00 - 4:10

Lake Teepee Township 46 N Range 37 W Section 13

Weather Sunny, hot, lt. breeze

Boat launch description/condition Gravel

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) ~25 miles north of Iron River off Hwy 16

Water color dk brown Turbidity low

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 - fishing, canoeing, recreation

Shoreline development moderate

Connection to other waterbodies Intermittent stream, wetlands.

Potential for AIS establishment (low, medium, high, why, likely invaders) medium use, dark water, few submersed plants, Rusty & Elwin in area.

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

Explain Good access, medium use but dark water w/ few plants.

LAKE FLORA QUICK CHECK CARD

Observer(s) T Kleczewski Date 7-21-14 Time on survey 3:00 - 4:10

Lake Teepee Township 46 N Range 37 W Section 13 or County Iron

General description of lake (*setting, nutrient level, obvious concerns*):
Off Hwy 116 ~ 25 miles north of Iron River.
Moderate nutrients

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

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
D water shield 1
___ bur-reed
C 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
O bladderwort 1
___ elodea (waterweed)
___ pondweed: CLP, robbins, small, claspingleaf, flatstem, other
___ naiad
O wild celery 1
___ 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 _____
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 _____
Threats/concerns: _____