

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

2003

Waterbody	County	2003
Barb Lake	Gogebic	9/26/03 Amy Rockwell. No official boat launch. Shore survey of lake, no milfoil found.
Bluebell Lake	Gogebic	9/26/03 Amy Rockwell. No official boat launch. No milfoil found during shore survey.
Bob Lake	Houghton	7/25/03 Amy Rockwell, Arlene Rockwell. Water too brackish? Some northern watermilfoil, very little. No EWM. Checked boat launch, campground shoreline, and swim area.
Bobcat Lake	Gogebic	9/16/03 Amy Rockwell. Very shallow lake – water seems to be down (?) – no milfoil found – only coontail.
Brule Lake	Iron	8/7/03 Amy Rockwell, Kyle Grambley. Connected to/part of river system in WI and MI – higher chance of EWM. Northern milfoil present downstream of launch. Also found white watercrowfoot and spiny hornwort. Very turbid water – hard to see. Recommend monitoring closely.
Chamberlain Lake	Iron	8/7/03 Amy Rockwell, Kyle Grambley. No milfoil – low use access?
Courtney Lake	Ontonagon	7/25/03 Amy Rockwell, Arlene Rockwell. Lots of northern watermilfoil, but no EWM. Check boat launch and entire edge area of lake.
Crooked Lake	Gogebic	July 23, 2003: FS snorkeled & hand-pulled EW milfoil. October 9, 2003: Aquatic Biologists, Inc. surveyed the north bay. EWM was only found near the boat landing, as in the 2002 survey. Herbicide treatment proposed.
Eel Lake	Gogebic	9/18/03 Amy Rockwell. Lots of northern milfoil – no EWM.
Elbow Lake	Gogebic	9/18/03 Amy Rockwell. No EWM, only northern milfoil.
Gaylord Lake	Gogebic	Amy Rockwell checked 9/26/2003. Surrounded by private ownership. No “official” boat launch. No milfoil found when shore survey was done.
Golden Lake	Iron	8/7/03 Amy Rockwell, Kyle Grambley. No milfoil. Paved boat launch, higher use – very clear water. May want to re-check more thoroughly or monitor frequently due to optimum growing conditions and high use boat launch.
Hagerman Lake	Iron	8/7/03 Amy Rockwell, Kyle Grambley. Same as Golden Lake, this could be the most populated/highest use boat launch on the forest – watch closely.
Hannah Webb Lake	Iron	8/24/03 Amy Rockwell. No milfoil found.
Henry Lake	Gogebic	9/18/03 Amy Rockwell. Seems to be a higher use lake – too windy to do a canoe survey by myself, did shore survey instead – checked both floating docks and boat launch, and shoreline in between them all – only found northern milfoil.
Honeysuckle Lake	Gogebic	9/26/03 Amy Rockwell. No official boat launch. No milfoil found during shore survey.
James Lake	Iron	8/7/03 Amy Rockwell, Kyle Grambley. No milfoil found.
Lake Ottawa	Iron	8/7/03 Amy Rockwell, Kyle Grambley. Same as Golden Lake.
Lake Sainte Kathryn	Iron	8/24/03 Amy Rockwell. No milfoil found.
Langford Lake	Gogebic	Lake Association worked on EW milfoil. July 2003: first EW milfoil herbicide treatment (DEQ permit # 03-98-0162-0); 2.5 acres treated at boat launch with Navigate aquatic herbicide. October 2003: more EW milfoil is found, and LLROA has another 2 acres treated in one of the south bays of the lake.
Little Oxbow Lake	Gogebic	9/18/03 Amy Rockwell. Very brackish water and high winds – hard to survey – no milfoil found.
Moosehead Lake	Gogebic	9/16/03 Amy Rockwell. Lots of northern milfoil, but didn't find any EWM.
Moraine Lake	Gogebic	9/18/03 Amy Rockwell. Higher use lake? No milfoil found, only coontail.
Norway Lake	Iron	8/24/03 Amy Rockwell. No milfoil found.
Ormes Lake	Gogebic	9/18/03 Amy Rockwell. No milfoil found, only coontail.
Plymouth Lake	Gogebic	9/18/03 Amy Rockwell. No boat launch. Shore survey – only found coontail.
Pomeroy Lake	Gogebic	9/16/03 Amy Rockwell. No milfoil found. Lots of green algae(?) floating in the lake.
Presque Isle Flowage	Gogebic	9/18/03 Amy Rockwell. No milfoil found – only looked just above dam, did not go way out into reservoir.
Redboat Lake	Gogebic	9/18/03 Amy Rockwell. No milfoil found.

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

Waterbody	County	2003
Sudden Lake	Ontonagon	7/30/03 Amy Rockwell, Jackie Kosey, Dave Dillman. Report of Eurasian watermilfoil on lake (by resident) – went to check the situation and found only northern watermilfoil, though there was quite a bit of it floating at the boat launch area.
Tepee Lake	Iron	7/25/03 Amy Rockwell, Arlene Rockwell. Water brackish, no milfoil sighted at all.
Thrush Lake	Gogebic	9/18/03 Amy Rockwell. Only found northern milfoil.
Winslow Lake	Iron	8/24/03 Amy Rockwell. Northern milfoil, but no EWM. Paved boat ramp, more traffic, higher EWM possibility.

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

2004

Waterbody	County	2004
Bobcat Lake	Gogebic	6/23/04 Bushman, Wollenhaupt, Koivisto
Brule Lake	Iron	7/28/04 Bushman, Koivisto
Clearwater Lake	Gogebic	7/15/04 Bushman, Koivisto, Shackelford
Courtney Lake	Ontonagon	7/16/03 Amy Rockwell. Surveyed around entire edge of lake. Abundance of northern milfoil; several areas like a carpet. No EWM. Lots of dead stickleback fish in the lake. Why? Water is very clear.
Crooked Lake	Gogebic	Monthly EWM surveys. Snorkeled 5-26, 6-4, 8-12, 9-2. July 23, 2004: 0.8 acre at boat launch treated with 8.2 gallons Renovate herbicide (triclopyr). September 10, 2004: 0.8 acre at boat launch treated with 120 pounds of Navigate herbicide (2,4-D).
Golden Lake	Iron	7/28/04 Bushman, Koivisto
Hagerman Lake	Iron	7/28/04 Bushman, Koivisto
Lake Ottawa	Iron	7/28/04 Bushman, Koivisto
Langford Lake	Gogebic	Lake Association worked on EW milfoil. Scattered sites (1.5 acres total) of EW milfoil treated in June (04-98-0070-0). September 2004: Lake Association has another 4.3 acres of scattered EW milfoil treated.
Moosehead Lake	Gogebic	6/23/04 Bushman, Wollenhaupt, Koivisto
Perch Lake	Iron	7/19/04 Amy Rockwell. Surveyed from boat launch out to point of campground, then across point opposite log home, then back to launch near the shore. Saw no EWM, only northern milfoil.
Pomeroy Lake	Gogebic	6/23/04 Bushman, Wollenhaupt, Koivisto
Robinson Lake	Iron	8/4/04 Amy Rockwell. Carry down access off of Robinson Lake Road (?). No EWM, but quite a bit of bladderwort. Lake is quite clear and seems somewhat shallow. Chance of EWM in lake seems less likely.
Sudden Lake	Ontonagon	7/16/03 Amy Rockwell. Found quite a bit of northern watermilfoil in the lake, though no EW milfoil was found.
Winslow Lake	Iron	7/19/04 Amy Rockwell. Water very brackish. Saw northern milfoil and bladderwort; no EWM.

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

2005

Waterbody	County	2005
Allen Lake	Gogebic	6/28/05. Wollenhaup & Genrich. No EWM found. We surveyed around boat landing and the bay to the northwest of landing.
Bass Lake	Iron	7/12/05. Wollenhaup. No EWM found. Water was stained which made visibility poor. Even with Aqua-scope visibility was less than 3 feet.
Sunset Lake	Iron	Bob Gussert surveyed in 2005.
Beatons Lake	Gogebic	7/5/05. Wollenhaup & Genrich. No EWM found. Deep, clear lake with little vegetation.
Brule Lake	Iron	7/6/05. Wollenhaup & Genrich. No EWM found. NWM is present and abundant to the south of boat launch. This lake seemed to be especially vulnerable to EWM and should be monitored.
Camp Lake	Iron	Bob Gussert surveyed in 2005.
Chamberlain Lake	Iron	7/18/05. Wollenhaup & Genrich. No EWM found.
County Line Lake	Ontonagon	Rockwell & S. Dunlap. 8/16/05. No EW milfoil. Very little aquatic plant growth, other than water shield. All vegetation was very low-growing & rake seldom pulled any weeds up at all. Also checked by Barb Gakewski.
Crooked Lake	Gogebic	Monitoring by Watersmeet Township and USFS. Two EW milfoil found and hand-pulled in 2005.
Deadman Lake	Ontonagon	Rockwell & S. Dunlap. 8/16/05. No EW milfoil. Very little aquatic plant growth, other than water shield. All vegetation was very low-growing & rake seldom pulled any weeds up at all. Barb Gajewski also monitored, Watersmeet TWP contract.
Golden Lake	Iron	7/6/05. Wollenhaup & Genrich. No EWM found. Lake was clear and deep.
Hagerman Lake	Iron	7/6/05. Wollenhaup & Genrich. No EWM found. Lake was clear and deep with a lot of development. The boat launch and picnic area appeared very popular and seemed to be used extensively.
Hannah Webb Lake	Iron	7/18/05. Wollenhaup & Genrich. No EWM found. Clear water with little submersed vegetation.
Imp Lake	Gogebic	7/5/05. Wollenhaup & Genrich. No EWM found. Loon observed on the south side of island, on nest. We surveyed area around boat landing and in front of campground.
Indian Lake	Iron	Bob Gussert surveyed in 2005.
James Lake	Iron	7/6/05. Wollenhaup & Genrich. No EWM found. We surveyed entire bay where boat landing was located. Water was clear with good visibility.
Killdeer Lake	Iron	7/12/05. Wollenhaup. No EWM found. Lake was clear with a large amount of bladderwort. Landing was very shallow and would be difficult to launch a boat of any size.
Lake Ottawa	Iron	7/6/05. Wollenhaup & Genrich. No EWM found. Lake was clear and deep. Very little vegetation around boat launch area.
Lake St. Kathryn	Iron	7/18/05. Wollenhaup & Genrich. No EWM found.
Langford Lake	Gogebic	June 2005: Lake Association finds EW milfoil found in several spots throughout lake; 4.85 acres treated (DEQ permit 05-98-0046-0). August 2005: Lake Associations finds more EW milfoil found in several locations; 4.33 acres treated. September 8, 2005: Michigan DEQ employees Laura Esman & Julie Sims conduct an AVAS plant survey on Langford Lake.
Little Duck	Gogebic	6/28/05. Wollenhaup & Genrich. No EWM found. We surveyed around the boat landing along both shorelines. Barb Gajewski also monitored for Watersmeet Township.
Long Lake	Gogebic	7/5/05. Wollenhaup & Genrich. No EWM found. Bottom of lake was very rocky, with little vegetation. Barb Gajewski also surveyed.
Marion Lake	Gogebic	6/27/05 Wollenhaup & Brashear. No EWM. Water was clear & relatively deep. Bottom was rocky with little submersed vegetation. Barb Gajewski also surveyed in 2005.
Marion Lake	Gogebic	6/27/05 Wollenhaup & Brashear. No EWM found. The lake had clear water with good visibility. We checked the entire bay where the boat landing was located. Barb Gajewski also surveyed in 2005.

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

Waterbody	County	2005
Moon Lake	Gogebic	7/11/05. Wollenhaup. No EWM found. Lake appeared to have a high amount of traffic. Several boats landing while survey was being conducted. Barb Gajewski also monitored, Watersmeet TWP.
Norway Lake	Iron	7/19/05. Wollenhaup & Genrich. No EWM found. Lake had clear water with little vegetation. Loon observed with no young.
Perch Lake	Iron	7/19/05. Wollenhaup & Genrich. No EWM found. NWM present with a lot of floating pieces around boat launch. Lake appeared to have high traffic and would be a good lake to monitor regularly.
Pomeroy Lake	Gogebic	Several visits.
Stuesser Lake	Ontonagon	Rockwell & S. Dunlap. 8/16/05. No EW milfoil. Very little aquatic plant growth, other than water shield. All vegetation was very low-growing & rake seldom pulled any weeds up at all.
Tamarack Lake	Iron	7/6/05. Wollenhaup & Genrich. No EWM found. NWM found in several locations around boat launch. We surveyed the shoreline on both sides of landing and the bay to the south of landing. Barb Gajewski also surveyed in 2005.
Taylor Lake	Gogebic	6/27/05. Wollenhaup & Brashear. No EWM found. NWM found. There was a large amount of vegetation to the east of landing. Good lake to continue monitoring. Barb Gajewski also surveyed in 2005.
Tepee Lake	Iron	7/19/05. Wollenhaup & Genrich. No EWM found. Clear water with a large amount of water shield present.
Winslow Lake	Iron	7/18/05. Wollenhaup & Genrich. No EWM found. We surveyed the south end of lake and found NWM present.

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

2006

Waterbody	County	2006
Black River Lake	Gogebic	FS surveyed 8-2-06 (Dunlap, Soltesz, Shackelford). Remote, perhaps relatively little use. Stained water. Smartweed common. Seems less susceptible to EWM.
Bob Lake	Houghton	Surveyed 9/13/2006 by Amy Rockwell and Gayle Sironen, using a canoe and a weed rake. Areas from the boat launch to the swimming beach, then across the lake from the boat launch (near the bogs) were all checked. Again, water here is quite dark, and there appears to be limited weed growth in the deeper areas due to lack of light. Larger area of Northern milfoil is located off the point near the swimming beach. Several masses of Bryozoans were found near the bog. No Eurasian milfoil found.
Bobcat Lake	Gogebic	8/16/2006 by FS. Average visibility and medium water. Moderate to heavy amount of vegetation. No boats/fisherman observed during survey. No sign of EWM. This lake seemed moderately susceptible to EWM. Vegetation observed: <i>Brasenia schreberi</i> , <i>Nymphaea odorata</i> , <i>Nuphar advena</i> , <i>Utricularia</i> spp., <i>Dulichium arundinaceum</i> , <i>Myriophyllum sibiricum</i> , <i>Elodea canadensis</i> , <i>Scirpus acutus</i> , and <i>Potamogeton</i> spp.
Brule Lake	Iron	FS: Sue & YCC crew did whole-lake survey in 2006. Lots of native milfoil. Lots of algae too. Suspicious lake: Sue wonders if the septic systems around lake are failing.
Cable Lake	Iron	Bob Gussert surveyed in 2006.
Chaney Lake	Gogebic	FS: Dunlap, Soltesz, Shackelford surveyed 8-2-06. Bays near boat launch seem the most susceptible to EWM. Lake is in close proximity to infested Wisconsin lakes.
Courtney Lake	Ontonagon	Surveyed 9/13/2006 by Amy Rockwell and Gayle Sironen, using a canoe and a weed rake. The entire near-shore area and portions across the middle of this lake were checked. The water here is very clear and supports a very large population of northern milfoil. However, no Eurasian milfoil was found.
Crooked Lake	Gogebic	Continued monitoring by Watersmeet Township and USFS. One EW milfoil found and pulled.
Elbow Lake	Gogebic	8/15/2006 by FS: Good visibility and clear water. No boats/fisherman observed during the survey. No sign of EWM. This lake appeared to have moderate susceptible for EWM. Vegetation observed: <i>Brasenia schreberi</i> , <i>Nuphar advena</i> , <i>Myriophyllum sibiricum</i> , <i>Typha</i> spp., <i>Utricularia</i> spp., <i>Potamogeton</i> spp., <i>Eriocaulon aquaticum</i> , and <i>Dulichium arundinaceum</i> .
Lake Emily	Iron	Bob Gussert surveyed in 2006.
Golden Lake	Iron	Sue & YCC Crew surveyed lake in 2006.
Henry Lake	Gogebic	8/15/2006 by FS. Good visibility and clear water. 3 boats on lake during survey along with people fishing from pier. No sign of EWM. This lake has moderate to high susceptible for EWM due to the boat launch and campground. Vegetation observed: <i>Brasenia schreberi</i> , <i>Myriophyllum sibiricum</i> , <i>Potamogeton</i> spp., <i>Utricularia</i> spp., <i>Nuphar advena</i> , <i>Eriocaulon aquaticum</i> , and <i>Dulichium arundinaceum</i> .
James Lake	Iron	FS: Sue & YCC checked boat launch in 2006.
Langford Lake	Gogebic	US Forest Service agrees to start helping with control of EW milfoil. May 20-30, 2006: Barb Gajewski, under FS contract, maps EW milfoil in Langford Lake. June 8, 2006: US Forest Service contracts with Northern Environmental to treat 16.5 acres treated throughout lake (based on 2005 survey, 06-98-0167-0). Much more than 16.5 acres is observed, however. July 6, 2006: Barb Gajewski maps many sites of EW milfoil in a post-treatment survey. July 26 & 27, 2006: John Skogerboe (ACOE) returns to Langford Lake with Bill Ratajczyk of Applied Biochemists, master distributor of Navigate herbicide. John recommends a grid survey of Langford Lake be repeated, to map milfoil and see if any changes to aquatic plant community have occurred. September 13 & 14, 2006: FS pays for Northern Environmental to conduct a 75-meter grid survey of Langford Lake. November 2006: John Skogerboe proposes a research project to use early-season treatment of EW milfoil in Langford Lake. The high aquatic diversity and the demonstrated commitment of the Lake Association made Langford a good candidate for a research project.
McDonald Lake	Gogebic	FS: Dunlap, Soltesz, Shackelford surveyed 8-2-06. Diverse aquatic community. Lots of

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

Waterbody	County	2006
		different fragments washed up at boat launch.
Moosehead Lake	Gogebic	Randall Wollenhaup 8/16/2006. Good visibility and clear water. Large amount of Northern Water Milfoil present in littoral zone. No sign of EWM. This lake seemed to be extremely susceptible to EWM due to the popularity of the boat landing and the high amount of milfoil present. Observed 3 fishing boats on lake during survey. Vegetation observed: <i>Nuphar schreberi</i> , <i>Nymphaea odorata</i> , <i>Pontederia cordata</i> , <i>Sagittaria latifolia</i> , <i>Scirpus acutus</i> , <i>Polygonum amphibium</i> , <i>Elodea canadensis</i> , <i>Potamogeton</i> spp., and <i>Sparganium eurycarpum</i> .
Ormes Lake	Gogebic	Randall Wollenhaup. ORMES LAKE 8/15/2006. Excellent visibility and clear water. Average to low amount of vegetation on lake. No sign of EWM. This lake has a low to moderate susceptible. Vegetation observed: <i>Brasenia schreberi</i> , <i>Nymphaea odorata</i> , <i>Potamogeton</i> spp., <i>Eriocaulon aquaticum</i> , and <i>Dulichium arundinaceum</i> .
Pomeroy Lake	Gogebic	Barb Gajewski surveyed 5/31/2006. FS contract.
Runkle Lake	Iron	2,4-D EW milfoil treatment by WI Lake & Pond Resource
Stanley Lake	Iron	Bob Gussert surveyed in 2006.
Sudden Lake	Ontonagon	9/13/2006 by Amy Rockwell and Gayle Sironen. Checked area from boat launch to cabin... basically checked all around the boat launch end of the lake. Used a canoe and a weed rake and brought up very small amounts of weeds. Water is very dark, with a mucky bottom. Some northern milfoil and pond-lily – not much variety in terms of weed species seen. No Eurasian milfoil found.

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

2007

Waterbody	County	2007
Allen Lake	Gogebic	2.6 miles / 17 acres monitored by Barb Gajewski June 3. No AIS.
Beatons Lake	Gogebic	14.3 miles / 91 acres monitored by Barb Gajewski in Aug & Sept. No AIS. Dara Olson (GLIFWC): Surveyed 7/16 & 8/27. Purple loosestrife & reed canary grass.
Cisco Lake	Gogebic	3.3 miles / 24 acres monitored by Barb Gajewski July 17. P. crispus fragments were observed within the proximity of the boatlanding
Clearwater Lake	Gogebic	14 miles / 89 acres monitored by Barb Gajewski June 25 & 27. 160 sites of milfoil mapped.
County Line Lake	Ontonagon	3.25 miles / 21 acres monitored by Barb Gajewski Aug 6. No AIS.
Crooked Lake	Gogebic	36.6 miles / 234 acres monitored by Barb Gajewski Aug 24-30. Two spots of EW milfoil near boat launch.
Cyrus Lake	Gogebic	Bogaczyk August 2007: "Cyrus Lake: I noticed the berm had been breached here too, and decided to do a paddle survey since this lake has a launch capable of hadling trailered boats. I figured no-one had done a good EWM/CLPW survey here ever. We paddled ~80% of shoreline, including the area nearest the launch. Found no EWM, but native milfoils with up to 10 leaflet pairs. Lots of aquatics in the wide littoral zone. This lake would be greatly affected by EWM if it got in here. We need to get this access re-blocked as well. Noticed a scotch pine growing near berm, and cut it down (2-inch diameter at stump height)."
Dawn Lake	Gogebic	Bogaczyk august 2007. "Checked around boat launch and waded around a bit. Very little aquatic vegetation at all. Odd in how much bare lake bottom I could see. Ice action? Appears to be at very low risk from EWM due to no aquatics present now, a user-created boat launch and low visitor use."
Dinner Lake	Gogebic	8.3 miles / 53 acres monitored by Barb Gajewski Sept 12. No AIS.
Eel Lake	Gogebic	Bogaczyk August 2007. "Paddled all but the furthest end of the lake, due to loon pair tending a chick down there. Lots of milfoil, and bladderwort, and other aquatics. Everything I counted had < 10 leaflet pairs, so no EWM. Clear water equates to a wide and deep littoral zone. EWM could be bad if it got in here. Launch is useable by big boats, and this lake has musky. Saw a big fishing boat from WI in there while we were doing surveys. I'd rate it as a med-high risk lake."
Lake Emily	Iron	GLIFWC (Dara Olson) surveyed 7/19/07 & 8/30/07. Found CL pondweed and banded mysterysnail, as well as several invasive terrestrial plants.
Hagerman Lake	Iron	GLIFWC (Dara Olson) surveyed 7/18/07 & 8/29/07. Mapped several terrestrial invasive plants. Babler said, "I can vouch for the boat landing being free of all aquatic vegetation, therefore no AIS plants for sure."
Imp Lake	Gogebic	Wollenhaup checked while putting out loon platforms, and Bob Evans checked 7/24/07. Imp and Little Duck are deeper, with a lack of submergent vegetation in general. Small amounts of bur-reed were present near the boat landings of both of these lakes, but that is about it for aquatic vegetation (very sparse). These two lakes probably do not need to be checked for EWM every year, as they are not the type of lakes where EWM is going to be easily established, in my opinion. I think every couple years or so would be adequate. Also: 2 miles / 13 acres monitored by Barb Gajewski Sept 7. No AIS.
Lac Vieux Desert	Gogebic	23 miles / 146 acres monitored by Barb Gajewski in June, July, and Aug.. No AIS.
Lake Sainte Kathryn	Iron	GLIFWC did waterflea and zebra mussel veliger tows only, 8/29/2007. Results unknown. Evans and Wollenhaup checked while evaluating for wild rice.
Langford Lake	Gogebic	May 7 & 8, 2007: Marine Biochemists applies 17,000 pounds (8.5 tons) of Navigate to 111 acres of Langford Lake. DEQ Permit # 07-98-1080-0. Army Corp of engineers continues monitoring. Results disappointing.

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

Waterbody	County	2007
Little Oxbow Lake	Gogebic	Bogaczyk August 2007. "Paddled about 75% of lakeshore, including most of the widest littoral zone. This lake has a relatively narrow littoral zone, with lots of that being rock/cobble/boulder substrate, so not a lot of aquatics-growing substrate. In that regard this lake would not suffer greatly if EWM got in. The lake is at a fairly high risk of introduction of invasives though, due to the number of cottages around it, and the FS launch is useable by big trailered boats. This lake has walleyes, which attracts a lot of users from other big walleye waters (which tend to have a lot of the invasives in them)."
Long Lake	Gogebic	6.8 miles / 43 acres monitored by Barb Gajewski Aug 10. No AIS.
Marion Lake	Gogebic	10 miles / 64 acres monitored by Barb Gajewski Aug 8. No AIS.
Middle Branch Ontonagon River	Gogebic	5 miles / 32 acres monitored by Barb Gajewski Sept 1. No AIS.
Moon Lake	Gogebic	4 miles / 26 acres monitored by Barb Gajewski Aug 16. No AIS.
Moosehead Lake	Gogebic	Bogaczyk August 2007. "Paddled most of shorelines of both lakes. Lots of native milfoil and other aquatics in both. Extensive littoral zone in both (~25% of lake acreage). Weed growth dense out to 10' of depth. High risk lake for EWM due to extensive littoral zone, a boat launch in WI and one at our FS Campground, and the high amount of visitor use. Found 3 clumps of purple loosestrife along the south shoreline of L Presque Isle Lake, in amongst the houses and docks. Dug/pulled one at 46 14.060' 89 36.579'. Other 2 clumps are located to the east, along shoreline. This infestation is new, as I've never noticed purple loosestrife here before. Easily controlled at this point. Just need permission from private WI landowners."
Moraine Lake	Gogebic	Bogaczyk August 2007. "Paddled almost the entire lake, including the shallow bay in WI. Saw no EWM. Lotsa aquatics in littoral zone, but relatively little milfoil. I found none with >10 leaflet pairs, so no EWM. This lake is relatively deep, with a fairly narrow littoral zone, so EWM would not be as bad in Moraine as in some other lakes. However, the launch is useable by small trailered boats, and the lake contains musky and has quite a few cottages on the shoreline, so the risk of invasives is definately real. I'd rate this lake as medium risk."
Ormes Lake	Gogebic	Bogaczyk 9/7/2007. " I needed to look at Ormes for loons, so I paddled the shoreline (~70% of it) looking for EWM too. Found none. Overall, the risk to this lake from EWM is "moderate" due to several large shallow bays which would get totally choked, and a boat launch useable by big boats coming in from infested lakes. There are a couple deep holes in Ormes which are not at risk from EWM, so it would not be a total loss if EWM got in there.
Perch Lake	Iron	GLIFWC (Dara Olson) surveyed 7/17/07 & 8/28/07. Mapped p loosestrife and other terrestrial invasive plants. Evans and Wollenhaup checked while evaluating wild rice potential
Pomeroy Lake	Gogebic	Shackleford, Pagel, and fish crew mapped a lot of milfoil Aug. 2 & 15, 2007.
Presque Isle Flowage	Gogebic	Bogaczyk August 2007. 'Presque Isle Flowage: Tons of aquatics, of course since this flowage is essentially a deep marsh; relatively little milfoil. Emergents and submerged both abundant. Paddled up to the confluence with the South Branch. Found no EWM. Boat launch is useable by big trailered boats, and Flowage contains musky, so there is a strong possibility of introducing invasives. However, we have the ability to dewater all but the river channel itself, which could be used to control invasives if needed. Not that we could totally get rid of them with a drawdown, but we could greatly reduce the acreage that needs herbicides. I'd rate it as a high risk waterbody, overall."
Range Lake	Gogebic	Bogaczyk August 2007. "Can't see much from the carry-down launch. Tons of aquatics present ("choked") but no milfoils seen while wading near launch. Pretty low risk from EWM due to poor access and low visitor use. No way to launch a trailered boat."
Smoky Lake	Vilas	GLIFWC surveyed Aug 13 & 14, 2007. Reported nightshade, crack willow, exotic honeysuckle, European swamp thistle, Eurasian mints, reed canary grass, and water forget-me-not.

US Forest Service, Ottawa National Forest
 Aquatic Invasive Species Lake Monitoring

Waterbody	County	2007
Summit Lake	Gogebic	Bogaczyk August 2007. "We have been trying to prevent drive-to access but unsuccessfully. Tire tracks visible during my visit were fresh, indicating someone has again gotten past our berms/boulders. The carry-down trail is steep, and would prevent introduction of invasives, but we can't stop the trucks and boats. The lake itself has an extensive littoral zone, and would be at risk from EWM if it got in there. If we can't get the trespassing stopped, we should check this lake every year or two. I did not paddle this lake. Only looked around the access point. Tons of aquatics in the shallows there, but could not see any EWM. Low survey effort leaves me uncertain of EWM presence, however."
Tamarack Lake	Iron	7 miles / 45 acres monitored by Barb Gajewski June 12. No AIS.
Taylor Lake	Gogebic	5 miles / 32 acres monitored by Barb Gajewski July 1. No AIS.
Tepee Lake	Iron	Jo Thurber checked Tepee L. while doing loon surveys on 8/13/08. "There was no Eurasian watermilfoil that I could find."

US Forest Service, Ottawa National Forest
 Aquatic Invasive Species Lake Monitoring

2008

Waterbody	County	2008
Brule Lake	Iron	Scott Pearson checked 9/17/08 and found no invasives to report. "Brule Lake has a very heavy algae bloom going right now, so it was difficult to see more than a foot into the water column."
Brush Lake	Gogebic	Ian Shackleford & Randall Wollenhaup checked wild rice on 9/19/08. No AIS. No boat launch.
Crooked Lake	Gogebic	Continued monitoring by Lake Guards and USFS. Two EW milfoil found and hand-pulled.
Hagerman Lake	Iron	Shackleford & Babler canoed the north end on 9/11/08, doing a plant survey for proposed wild rice seeding. No AIS found.
Hannah Webb Lake	Iron	Scott Pearson checked 9/22/08 and found no AIS.
Harding Lake	Iron	Scott Pearson checked 9/22/08 and found no AIS.
Langford Lake	Gogebic	Army Corp early spring 2,4-D experiment year 2 of 3. May 19, 2008: Marine Biochemists applies 17,050 pounds (8.5 tons) of Navigate to 112.8 acres (DEQ permit 08-98-0775-0). October 21, 2008: Marine Biochemists adds a fall treatment and applies 750 pounds of Navigate to 4 acres. Army Corp continues monitoring.
Little Smoky Lake	Iron	Scott Pearson checked 9/17/08 and found no invasives to report.
Perch Lake	Iron	Bob Evans checked boat launch with Ted Brzezinski on 8/13/08. See email.
Prickett Lake	Houghton	Nuthals, Fedora, and Shackleford mapped all the EW milfoil on August 26 & 27, 2008.
Robinson Lake	Iron	Scott Pearson checked 9/22/08 and found no AIS.
Winslow Lake	Iron	Scott Pearson checked 9/22/08 and found large milfoil beds. Shackleford & Pearson returned 10/8/08. We canoed the whole shore and found no AIS. The big beds were native northern watermilfoil. Diverse aquatic plant community. No walleye harvest rule may attract people to this lake.

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

2009

Waterbody	County	2009
Lake Gogebic	Ontonagon	Soltész & Fullman surveyed lake in 2009.
Bob Lake	Houghton	Jo Thurber paddled full perimeter 9/1/09 and found small amounts of the native Northern milfoil, no sign of the Eurasian.
Bobcat Lake	Gogebic	Soltész checked during 2009 loon survey
Cisco Lake	Gogebic	Surveyed by GLIFWC on 7/23/09 & 9/3/09.
Courtney Lake	Ontonagon	Jo Thurber paddled full perimeter 9/1/09 and found small amounts of the native Northern milfoil, no sign of the Eurasian.
Crooked Lake	Gogebic	FS snorkel and canoe surveys on July 16 and August 24. Three sites found (two old sites, one new), 16 plants total, all snorkel-pulled. Concern about jump in abundance. Whole lake paddled by Ian, Sue, Bob Evans, Eric Wachdorf on 8/26/09 & 9/1/09. One new EW milfoil site in N bay. EWM snorkel-pulled.
Dinner Lake	Gogebic	Surveyed by GLIFWC on 7/20/09 & 9/1/09. Monitored by ISCCW volunteer Will Buergey.
Lake Gogebic	Gogebic	Soltész & Fullman surveyed lake in 2009.
Elbow Lake	Gogebic	Soltész checked during 2009 loon survey
Golden Lake	Iron	Scott checked during 2009 loon surveys and didn't observe anything new or different .
Henry Lake	Gogebic	Soltész checked during 2009 loon survey
Indian Lake	Iron	Surveyed by GLIFWC on 7/21/09 and 9/1/09.
Lake Gogebic	Gogebic	Soltész & Fullman surveyed lake in 2009.
Lake Gogebic	Gogebic	Soltész & Fullman surveyed lake in 2009.
Lake Gogebic	Ontonagon	Soltész & Fullman surveyed lake in 2009.
Lake Ottawa	Iron	Scott checked during 2010 loon surveys and didn't observe anything new or different .
Langford Lake	Gogebic	Army Corp early spring 2,4-D experiment year 3 of 3. May 12, 2009: Marine Biochemists applies 5,650 pounds (2.8 tons) of Navigate to 35.1 acres (DEQ permit # 09-98-1346-0). October 7, 2009: Marine Biochemists applies 3,195 pounds (1.6 tons) of Navigate to 18.8 acres. Army Corp continues monitoring.
Little Oxbow Lake	Gogebic	Soltész checked. A lot of private homes.
Moosehead Lake	Gogebic	Soltész checked during 2009 loon survey. New developments and boat launch on connected Little Presque Isle Lake in Wisconsin.
Redboat Lake	Gogebic	Soltész checked during 2009 loon survey
Thousand Island Lake	Gogebic	Surveyed by GLIFWC on 7/23/09 & 9/3/09.
Thrush Lake	Gogebic	Soltész checked the boat landing, but not in water.
Winslow Lake	Iron	Surveyed by GLIFWC on 7/21/09 & 9/2/09.

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

2010

Waterbody	County	2010
Brule Lake	Iron	Pearson & Hildebrandt surveyed 7/30/10. High nutrient level. Known for algae blooms in late summer. Recommends survey every other year.
Crooked Lake	Gogebic	FS snorkel survey of north bay only on Aug 3 & 25, 2010. ~21 EWM hand-pulled.
Hagerman Lake	Iron	Pearson & Hildebrandt surveyed 8/5/10. Medium-high potential for AIS establishment.
Lake Sainte Kathryn	Iron	Jo Thurber surveyed 8/12/10.
Langford Lake	Gogebic	Army Corp arranges an experimental treatment to compare the effects of Navigate (2,4-D) and Navitrol (triclopyr) aquatic herbicides. Nufarm again donates herbicide and Marine Biochemists donates application. June 10, 2010: Marine Biochemists applies 4,519 pounds (2.3 tons) of Navigate and 4,417 pounds of Navitrol (2.2 tons) to 40.6 acres total. Permit # 10-98-1815-0. Results show similar EW milfoil dieback from Navigate and Navitrol. No difference between one, the other, or both. Army Corp monitoring shows EW milfoil remains frequent fall 2010.
Perch Lake	Iron	Jo Thurber surveyed 8/12/10. Found more purple loosestrife.
Pomeroy Lake	Gogebic	Army Corp is monitoring.
Presque Isle Flowage	Gogebic	Soltesz & Rothlisberger surveyed 8/3/10.
Sucker Lake	Gogebic	Scott Pearson surveyed 8/3/10. Carry-down unimproved boat access. Limited concerns for invasives.

In 2010 the US Forest Service (Ottawa National Forest) used Great Lakes Restoration Initiative for two lake survey contracts. Results are available separately.

Lake & Pond Solution surveyed Bass (Iron County), Black River Harbor, Bobcat, Chamberlain, County Line, Deadman, Eel, Grass, Hager, Hannah Webb, Harding, Henry, Holly, James, Little Oxbow, Moosehead, Moraine, Norway, Ormes, Steusser, Sudden, and Tepee.

Wintergreen Farm surveyed Crystal, Estes, Glare, Glitter, Irish, Kunze, Lower Dam, Misty, Paulding, Penegor, Range, Redboat, Robbins Pond, Tanlund, Thrush.

AIS Lake Survey Record

Surveyor(s) S. PEARSON, L. HELDEBRANDT Date 7-30-10 Time on survey 10:30-1400

Lake BRULE Township _____ N Range _____ W Section _____

Weather partly cloudy, light to no breeze, ~75-80°F

Boat launch description/condition developed concrete blocks w/ gravel - good condition

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

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

Survey area description (also sketch on topo map) most plants close to shore so followed shoreline of lake, forested w/ 13 home developed

Water color brown Turbidity minor

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 -> low

Shoreline development 13 home developed some mow / some more

Connection to other waterbodies Headwater of Brule R. ^{shrub} & Pendleton Ck.

Potential for AIS establishment (low, medium, high, why, likely invaders) low moderate, few current boaters, most homes have boats, seems low outside-use

Do you think an annual AIS check is needed or could the interval be less frequent? boat land every other

Explain Not high use from outside boaters,

LAKE FLORA QUICK CHECK CARD

Observer(s) S. PARSON, L. HEIDEBRADT Date 7-30-10 Time on survey 10:30 am - 14:00

Lake BRULE Township _____ N Range _____ W Section _____ or County IRON

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

1/3 moderate home development, 2/3 forested to shoreline
High nutrient level, lower algae now but known for bloom in late summer.

Vegetation data- canopy cover (extent of entire lake occupied by layer) and species:

Floating leaved plants (<5 %) ✓ Emergents (15-20 %) ~ 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.

- | | | |
|--|---|---|
| <input checked="" type="radio"/> yellow water lily (spatterdock)-C | <input type="radio"/> 3-way sedge | <input type="radio"/> chara or nitella |
| <input checked="" type="radio"/> white water lily | <input checked="" type="radio"/> sedge (other than 3-way) | <input checked="" type="radio"/> watermilfoil: Eurasian, northern |
| <input type="radio"/> water shield | <input type="radio"/> rush | <input type="radio"/> variable-leaf, other |
| <input type="radio"/> bur-reed | <input checked="" type="radio"/> wild rice | <input type="radio"/> coontail |
| <input checked="" type="radio"/> pondweed: ribbonleaf, largeleaf, | <input type="radio"/> grass (other than wild rice) | <input type="radio"/> water buttercup |
| floating leaf, variable leaf, other: | <input type="radio"/> arrowhead | <input type="radio"/> bladderwort |
| <input type="radio"/> duckweed <u>Illinois P.</u> | <input type="radio"/> spikerush | <input checked="" type="radio"/> elodea (waterweed) |
| <input type="radio"/> water knotweed <u>- flat stem</u> | <input type="radio"/> water horsetail | <input type="radio"/> pondweed: CLP, robbins, small, |
| <input type="radio"/> water starwort <u>small</u> | <input type="radio"/> iris | <input type="radio"/> clasping leaf, flat stem, other |
| _____ | <input checked="" type="radio"/> cattail | <input type="radio"/> naiad |
| _____ | <input type="radio"/> wild calla | <input checked="" type="radio"/> wild celery |
| _____ | <input type="radio"/> pickerel weed | <input type="radio"/> pipewort |
| _____ | _____ | <input type="radio"/> quillwort (Isoetes) |
| _____ | _____ | <input type="radio"/> shoregrass (Littorella) |
| _____ | _____ | <input type="radio"/> water lobelia |
| _____ | _____ | <input type="radio"/> water bulrush |
| _____ | _____ | <input type="radio"/> water marigold |
| _____ | _____ | <input type="radio"/> 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 None

Threats/concerns: _____

AIS Lake Survey Record

Surveyor(s) Scott Pearson Date 8-3-10 Time on survey 3 Hours

Lake SUCKER Township _____ N Range _____ W Section _____

Weather SUNNY

Boat launch description/condition CARRY-DOWN UNIMPROVED 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) UNDEVELOPED, FORESTED, SHALLOW BASIN LAKE. MUD AND ROCK SUBSTRATE

Water color LT. BROWN (MUD) Turbidity HIGH

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) _____

Shoreline development UNDEVELOPED

Connection to other waterbodies CREEK

Potential for AIS establishment (low, medium, high, why, likely invaders) Low

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

Explain LOW USAGE OF LAKE.

LAKE FLORA QUICK CHECK CARD

Observer(s) SCOTT PEARSON Date 8-3-10 Time on survey 3 HOURS

Lake SUCKER Township _____ N Range _____ W Section _____ or County GOBEVIC

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

UNDEVELOPED, FORESTED SHORELINE, MOSTLY SHALLOW BASIN, CARRY-DOWN ACCESS ONLY. LIMITED CONCERN FOR INVASIVES.

Vegetation data- canopy cover (extent of entire lake occupied by layer) and species:

Floating leaved plants (5 %) Emergents (25 %) 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.

- | | | |
|---|---|---|
| <input checked="" type="radio"/> yellow water lily (spatterdock) | <input type="radio"/> 3-way sedge | <input type="radio"/> chara or nitella |
| <input type="radio"/> white water lily | <input checked="" type="radio"/> sedge (other than 3-way) | <input checked="" type="radio"/> watermilfoil : Eurasian, <u>northern</u> |
| <input type="radio"/> water shield | <input checked="" type="radio"/> rush | <input type="radio"/> variable-leaf, other |
| <input type="radio"/> bur-reed | <input checked="" type="radio"/> wild rice | <input checked="" type="radio"/> coontail |
| <input checked="" type="radio"/> pondweed: ribbonleaf, largeleaf, | <input type="radio"/> grass (other than wild rice) | <input type="radio"/> water buttercup |
| floatingleaf, variableleaf, other | <input checked="" type="radio"/> arrowhead | <input type="radio"/> bladderwort |
| <input type="radio"/> duckweed | <input type="radio"/> spikerush | <input checked="" type="radio"/> elodea (waterweed) |
| <input type="radio"/> water knotweed | <input type="radio"/> water horsetail | <input checked="" type="radio"/> pondweed: CLP, robbins, small, |
| <input type="radio"/> water starwort | <input type="radio"/> iris | claspingleaf, flatstem, other |
| _____ | <input checked="" type="radio"/> cattail | <input type="radio"/> naiad |
| _____ | <input type="radio"/> wild calla | <input type="radio"/> wild celery |
| _____ | <input type="radio"/> pickerel weed | <input type="radio"/> pipewort |
| _____ | _____ | <input type="radio"/> quillwort (Isoetes) |
| _____ | _____ | <input type="radio"/> shoregrass (Littorella) |
| _____ | _____ | <input type="radio"/> water lobelia |
| _____ | _____ | <input type="radio"/> water bulrush |
| _____ | _____ | <input type="radio"/> water marigold |
| _____ | _____ | <input type="radio"/> golden hedgehyssop |
| _____ | _____ | <input checked="" type="radio"/> <u>WATER STARGRASS</u> |
| _____ | _____ | <u>(ZOSTERELLA)</u> |
| _____ | _____ | _____ |

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: UNDEVELOPED SHORELINE AND ACCESS SHOULD LIMIT THREATS.

AIS Lake Survey Record

Surveyor(s) Scott Pearson / Lauren Hildebrandt Date 8/5/10 Time on survey 10-14:00

Lake Hagerman Township _____ N Range _____ W Section _____

Weather Clear 60-70% cloudy 70°F

Boat launch description/condition shallow/rocky difficult for large 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) 3/4 developed, very clear, some recreational boaters,

Water color Clear Turbidity None

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) _____

Shoreline development 3/4 developed small-large homes,

* Connection to other waterbodies _____

Potential for AIS establishment (low, medium, high, why, likely invaders) med-high, already had Z. mussel, many owners w/boats, although landing poor condition and discourages outside use

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

Explain Zebra mussel had been found.

LAKE FLORA QUICK CHECK CARD

Observer(s) Scott Pearson, Lauren Hildebrandt Date 8/5/10 Time on survey 10am-14:00

Lake Hagerman Township _____ N Range _____ W Section _____ or County Iowa

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

3/4 Developed lake ~ very clear, rocky/sand bottom,
boat landing very shallow, rocky
Zebra mussel - was found here in past - no sign today

Vegetation data- canopy cover (extent of entire lake occupied by layer) and species:

Floating leaved plants (<5 %) Emergents (~5 %) 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.

- | | | |
|--|---|--|
| <input type="checkbox"/> yellow water lily (spatterdock) | <input type="checkbox"/> 3-way sedge | <input type="checkbox"/> chara or nitella |
| <input checked="" type="checkbox"/> white water lily | <input type="checkbox"/> sedge (other than 3-way) | <input type="checkbox"/> watermilfoil : Eurasian, northern |
| <input type="checkbox"/> water shield | <input checked="" type="checkbox"/> rush | <input type="checkbox"/> variable-leaf, other |
| <input type="checkbox"/> bur-reed | <input type="checkbox"/> wild rice | <input type="checkbox"/> coontail |
| <input checked="" type="checkbox"/> pondweed: ribbonleaf, <u>largeleaf,</u> | <input type="checkbox"/> grass (other than wild rice) | <input type="checkbox"/> water buttercup |
| <input checked="" type="checkbox"/> <u>floatingleaf,</u> variableleaf, other | <input type="checkbox"/> arrowhead | <input checked="" type="checkbox"/> bladderwort |
| <input type="checkbox"/> duckweed <u>flat stem</u> | <input type="checkbox"/> spikerush? | <input checked="" type="checkbox"/> elodea (waterweed) |
| <input type="checkbox"/> water knotweed <u>fern</u> | <input type="checkbox"/> water horsetail | <input checked="" type="checkbox"/> pondweed: CLP, robbins, small, |
| <input type="checkbox"/> water starwort | <input type="checkbox"/> iris | <input type="checkbox"/> claspingleaf, <u>flatstem</u> other |
| _____ | <input checked="" type="checkbox"/> cattail | <input type="checkbox"/> naiad ?? |
| _____ | <input type="checkbox"/> wild calla | <input type="checkbox"/> wild celery |
| _____ | <input type="checkbox"/> pickerel weed | <input type="checkbox"/> pipewort |
| _____ | _____ | <input type="checkbox"/> quillwort (Isoetes) |
| _____ | _____ | <input type="checkbox"/> shoregrass (Littorella) |
| _____ | _____ | <input type="checkbox"/> water lobelia |
| _____ | _____ | <input type="checkbox"/> water bulrush |
| _____ | _____ | <input type="checkbox"/> water marigold? or bladderwort |
| _____ | _____ | <input type="checkbox"/> 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 Dther _____
 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) Dther NO
 Threats/concerns: Many owners w/boats - but current landing access is poor
and discourages outside use

US Forest Service, Ottawa National Forest
 Aquatic Invasive Species Lake Monitoring

2011

Waterbody	County	2011
Crooked Lake	Gogebic	Marine Biochemists applied 560 pounds of Navigate to two areas of EWM (1.3 & 1.5 acres) in the north bay on 6/14/2011. DEQ permit # 11-98-0005-0. A third area was hand-pulled by Ian Shackelford. No EW milfoil found during post-treatment surveys on 7/20/11 and 8/3/11. Gogebic RAC project GOG-11-033 funded a grid survey of the whole lake by Barb Gajewski and William Artwich (September 12 th -16 th 2012).
Duck Lake	Gogebic	Gogebic RAC project GOG-11-033 also funded a grid survey of Duck Lake by Barb Gajewski and William Artwich. The Duck Lake survey was completed between the 21st-26th of August.
Langford Lake	Gogebic	Marine Biochemists applied 7150 pounds of Navigate to ten treatment sites, 39 acres total. These are the remaining bags from the Toumey Nursery, leftover from the Army Corp herbicide studies begun in 2007. DEQ Permit # 11-98-1569-0. Follow-up surveys by John Skogerboe in 2011 find very little long-term effect from 2,4-D treatments.
Moosehead Lake	Gogebic	John Pagel reported EWM from either Moosehead or Little Presque Isle Lake. Ian & crew boated perimeter of both 7/20/11, didn't find any. Barb Gajewski did a point intercept survey for Whitewater Associates.
Pomeroy Lake	Gogebic	Army Corp monitoring.

In 2011 the US Forest Service (Ottawa National Forest) used Great Lakes Restoration Initiative for one lake survey contract. Wintergeen Farm surveyed Black River, Bob, Brule/State Line, Cable, Camp, Chaney, Clear, Elbow, Emily, Fire, Indian, Long, McDonald, Pike, Robinson, Sandy, Smoky (found one EWM on 9/12/11), Stanley, Sunday, Sunset Lake, Swan, Winslow. Results are available separately.

US Forest Service, Ottawa National Forest
Aquatic Invasive Species Lake Monitoring

2012

Waterbody	County	2012
Crooked Lake	Gogebic	FS and volunteers snorkeled in north bay three times. On 7/26/12 we removed ~17 EWM plants, mostly south of the boat launch, plus one plant in a new spot in the NE corner of the bay (waypoint 225). On 8/14/12 we removed ~16 EWM plants, all south of the boat launch. On 10/2/12, after Bill Artwich found more EWM south of the boat launch, Ian pulled ~13 EWM. A gate and rocks were installed to make Crooked Lake carry-down access only (except permitted private landowner).
Echo Lake	Houghton	Jo Thurber 8/21/12: No AIS. Low use, limited access.
Lake Thirteen	Houghton	8/21/12 Jo Thurber: No AIS. Low risk from low use and limited access.
Langford Lake	Gogebic	No herbicide treatment in 2012. Army Corp AVAS Survey September 6 & 8, 2012. Eurasian watermilfoil abundant.
Marten Lake	Iron	Thurber 8/29/12: Low risk. Few cabins, their boats probably stay on the lake. Low access for motorboats at dispersed site.
Pomeroy Lake	Gogebic	Army Corp is monitoring.
Tepee Lake	Iron	Thurber & Toole 8/22/12: Low risk, relatively low use.

In 2010 the US Forest Service (Ottawa National Forest) used Great Lakes Restoration Initiative for two lake survey contracts. Results are available separately.

William Artwich surveyed Finger , Fortune Lakes (First, Second, & Third), Glidden, Hannah Webb, Lake Mary, Lake Sainte Kathryn, Little Smoky, and Norway.

Wintergreen Farm surveyed Bluebell, Bobcat, County Line, Courtney, Crooked, Cyrus, Eel, Estes, Forest, Fuller, Honeysuckle, Killdeer, Lake Cornelia, Lake on Three, Little Langford, Little Oxbow, Moraine, Presque Isle Flowage, Range, Six Mile Lake, Spider, Stuesser Lake, Summit, and Thrush.

AIS Lake Survey Record

Surveyor(s) Jo Thurber Date 8/21/12 Time on survey 1.5 hrs.

Lake Echo Township 49 N Range 36 W Section 29, 30

Weather 78°, wind 5-8mph, increasing clouds

Boat launch description/condition dispersed - carry in 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) canoeed shoreline of Echo Lake. Lots of large woody debris

Water color clear 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) _____

Shoreline development 3 leases (FS), minimally developed

Connection to other waterbodies none

Potential for AIS establishment (low), medium, high, why, likely invaders) _____

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

Explain low use, limited access

AIS Lake Survey Record

Surveyor(s) Jo Thurber Date 8/21/2012 Time on survey 1.5 hrs

Lake Lake Thirteen Township 47 N Range 36 W Section 13

Weather 74° mostly clear, calm.

Boat launch description/condition Dispersed landing for canoes only; landowners have their own accesses

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) canoeed shoreline, lots of common yellow & white waterlilies, some wild rice

Water color clear 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) _____

Shoreline development ~ 7-8 cabins, getting increased use & upgrades to existing properties,

Connection to other waterbodies Sidnow Creek

Potential for AIS establishment (low) medium, high, why, likely invaders) _____

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

Explain Low use, limited access

AIS Lake Survey Record

Surveyor(s) Jo Thurber Date 8/29/2012 Time on survey 1.5 hrs.

Lake Marten Township 46 N Range 35 W Section 9, 16

Weather clear, ~68°, calm

Boat launch description/condition dispersed site; gravel sand; can drive w/in about 15' of lake

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) surveyed entire edge of lake with some zig-zagging

Water color brownish (tannic) Turbidity somewhat turbid

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) _____

Shoreline development ~ 5 cabins

Connection to other waterbodies no

Potential for AIS establishment (low, medium, high, why, likely invaders) low, few cabins, their boats probably stay on the lake. Low access for motor boats at dispersed sites

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

Explain see above.

AIS Lake Survey Record

Surveyor(s) Jo Thurber, Ben Toole Date 8/22/12 Time on survey 1.0 hrs

Lake Tepee Township 46 N Range 37 W Section 13

Weather clear, 75°

Boat launch description/condition gravel, in fairly 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) canoed around complete edge of lake

Water color tannic Turbidity none

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) smaller motor boats, canoes

Shoreline development 3 cabins

Connection to other waterbodies no

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

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

Explain Low use (relatively)