

Lakes Association of Norway

Aquatic Invasive Plant Screening Surveys



2023

L a k e & W a t e r s h e d

Resource Management Associates

PO Box 65, Turner, Maine, 04282 ~ 207-333-1849 ~ 2robertahill@gmail.com

This report summarizes the findings of the invasive aquatic plant screening surveys conducted over a period extending from 7/19/23 to 9/26/23, by Lake & Watershed Associates for the Lakes Association of Norway.

LWA has been conducting comprehensive (level-3) Aquatic Invasive Plant screening surveys on the lakes of Norway, Maine since 2002. In 2023 LWA associates performed level-3 surveys on the four Norway lakes: Lake Pennessewassee; North Pond (including the North Pond boat landing dam pond); Hobbs Pond and Sand Pond. The surveys were timed to coincide with optimum survey conditions: good light, good water clarity, low wind, and full plant maturity.

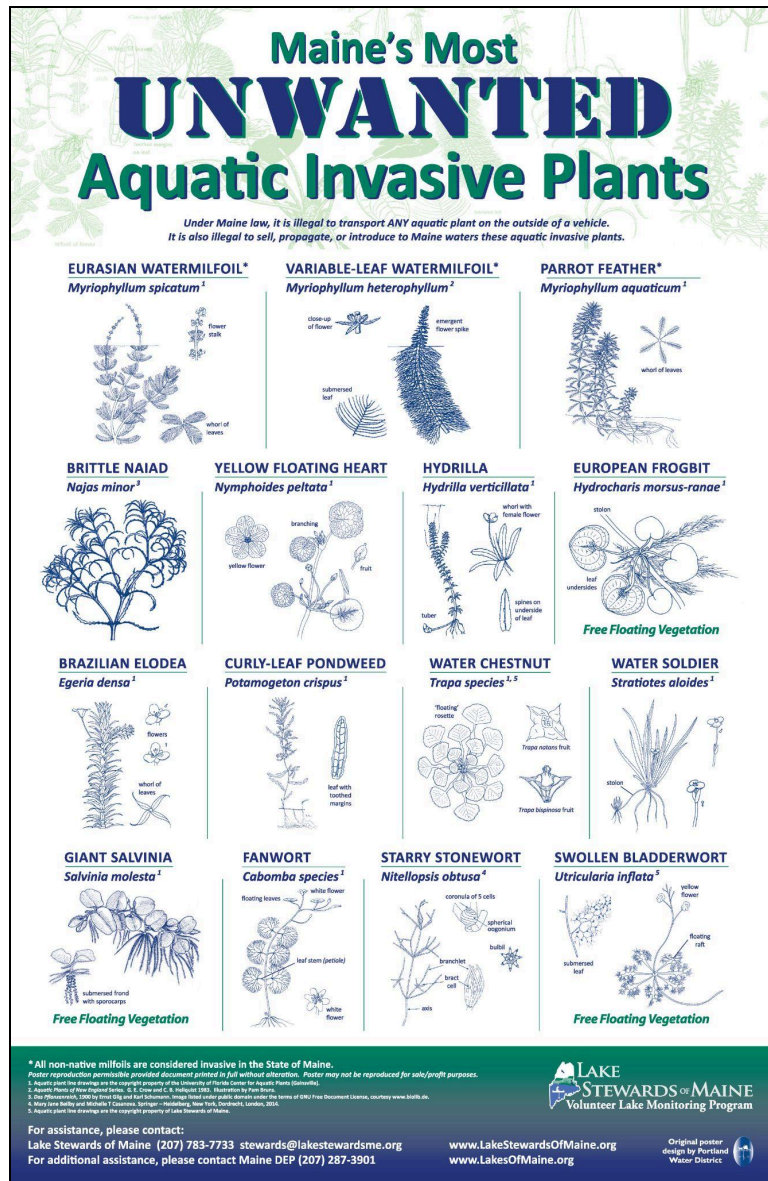


*Excellent conditions and good water clarity on September 6, 2023 allowed a wonderful view of this healthy colony of large-leaf pondweed (*Potamogeton amplifolius*) on North Pond*

SUMMARY OF FINDINGS:

None of the Aquatic Invasive Plants (AIP) listed by Maine law as imminent threat to the waters of Maine were observed in any of the Norway waters surveyed in 2023.

The list of prohibited plants in Maine is listed on this poster available from Lake Stewards of Maine



Observed species of concern:

***Iris pseudocorus* (yellow iris) - first noted in 2012, continues to be present in previously identified locations along the shore of Lake Pennesseewassee.** This tall, showy, yellow iris is listed by the Maine Department of Agriculture, Conservation, and Forestry, as one of thirty-three “likely-invasive” terrestrial plants that are illegal to sell, import, export, buy or intentionally propagate in Maine.

***Lyrthrum salicaria* (purple loosestrife) - was noticed for the first time in 2021, growing in a patch of floating bog associated with the small pond adjacent to the Lake Store south of Route 118.**

Scattered individual loosestrife plants, though not extensive, continue to be present in this area (N44.21015/W70.57780). Removing seed heads from the plants annually and properly disposing of them is one way to slow the spread of this invasive wetland plant in the area.

***Myosotis scorpiodes* (water forget-me-not) - was noted along the shore of a small cove in sector 12 and scattered throughout the tributary stream in sector 14.** According to [Go-Botany](#), water forget-me-not is “native to . . . Eurasia. It has naturalized in many wet places in North America and is considered invasive in some New England states.” This plant is on Maine’s “Advisory List,” meaning it’s a plant of concern that doesn’t quite meet the statutory guidelines to qualify as “invasive.”

As in past years, **Chinese mystery snails were observed in abundance throughout three of the Norway lakes: Pennesseewassee, North and Hobbs.**

All native plants observed during the surveys were recorded by LWA. The field sheets are attached to this report.

Other observations of note:

This never-before-seen delta composed of massive amounts of rubble, gravel, sand and silt along the eastern shore of Lake Pennesseewassee stopped us in our tracks on July 20, 2023. A flash storm on July 16 in which 5-inches of rain fell in a relatively short period of time, caused major flooding, road washouts, etc. in the Norway, South Paris area. The erosion event was reported to LOAN immediately.





This photo, taken during a site visit the following spring (May 23, 2024), reveals the eroded channel that contributed material to the delta. Remedial actions have since been taken.

Sadly, we also found a dead loon along the north eastern shore of Lake Pennesseewassee. A lakefront property owner offered to call Maine Audubon to report what looked to be a boat strike.



Below is a summary of the 2021 survey activity. For more detail, please see the attached AIP Screening Survey Documentation Forms.

WATERBODY	DATE/S OF 2023 SURVEY	SURVEY TEAM MEMBERS	AIP OBSERVED? Y/N	# NATIVE PLANT SPECIES OBSERVED
Lake Pennessewassee	July 19, 20, 21, 26, Aug 3 & Sept 26	Roberta Hill; Keith Williams	N* <i>* Please see above for noted plant species of concern</i>	58
North Pond	Sept. 1 & 6	Roberta Hill; Keith Williams	N	49
North Pond/ Public Boat Landing Dam Pond	Sept 26	Roberta Hill; Keith Williams	N	20
Hobbs Pond	Aug 10	Roberta Hill; Keith Williams	N	35
Sand Pond	Aug 1	Roberta Hill; Keith Williams	N	31

Thank you once again for entrusting Lake & Watershed with this work. We continue to be honored and delighted to have the opportunity to work on behalf of Norway's beautiful lakes.

Respectfully,

A handwritten signature in blue ink, appearing to read "Roberta Hill". The signature is fluid and cursive, with the first letter "R" being particularly large and stylized.

Roberta Hill
Principal, Aquatic Ecologist
Lake & Watershed Resource Management Associates



INVASIVE AQUATIC PLANT SCREENING SURVEY DOCUMENTATION FORM (6/1/2021)



Please complete a separate documentation form for each distinct survey; each waterbody surveyed, or each different survey level conducted on a single waterbody. Submit a copy of each completed form by Nov. 15, 2021 to LSM 24 Maple Hill Rd. Auburn ME 04210.

DON'T FORGET: On-Water Survey Hrs 7 **X# surveyors** 2 = **Total Hrs** 14

Section 1: General Information Survey Map Attached? (circle one) Y N

Waterbody HOBBS POND Town NORWAY County OXFORD State ME
 MIDAS # 0367 Date's 8/10/23 Sector's Location ENTIRE
 Lead Surveyor ROBERTA HIL IPP Training Y/N Cert # 41-1000
 Plant ID Proficiency Cert Y/N Phone # 207-333-1849 Email 2 ROBERTAHIL@GMAIL.COM
 Name of Lake Team LWAMA Regional Affiliation LAON Infestation Surveillance
 Surveyor Type (check one) IPP Volunteer Agency Research/Ed Inst. Professional Other (explain) _____
 Additional Surveyor # 1 KEITH WILLIAMS Cert # WI-0217 IPP Training: N
 Additional Surveyor # 2 _____ Cert # _____ IPP Training: Y / N
 Additional Surveyor # 3 _____ Cert # _____ IPP Training: Y / N

Check all that apply unless otherwise indicated

Survey Level		Screening Methods		Relative Water Level (check one)	
check one	check one	VISUAL METHODS	GRAB SAMPLE METHODS	<input type="checkbox"/> Above	<input checked="" type="checkbox"/> Normal High
<input type="checkbox"/> Limited	<input checked="" type="checkbox"/> By Sector	<input type="checkbox"/> Random Points	<input type="checkbox"/> Random Points	<input type="checkbox"/> Below	
<input type="checkbox"/> Level 1	<input type="checkbox"/> Multiyear	<input type="checkbox"/> Plot Points	<input checked="" type="checkbox"/> Target Points	Maximum Observed Plant Depth (Circle Units)	
<input type="checkbox"/> Level 2	<input checked="" type="checkbox"/> By Sector	<input checked="" type="checkbox"/> Transects	<input type="checkbox"/> Plot Points		
<input checked="" type="checkbox"/> Level 3	<input type="checkbox"/> Entire	<input checked="" type="checkbox"/> Complete Coverage		<u>7.5</u> Meters <u>(Foot)</u>	
Invasive Plant/s Targeted					
<input checked="" type="checkbox"/> Complete List - all 11 invaders on section 2 table below					
<input type="checkbox"/> Partial List - Use codes from Sec. 2 to list specific targets					
Additional Survey Goals			Grab Sample Tool	Water Clarity	
<input checked="" type="checkbox"/> Inventory of dominant native plants by sector			<input checked="" type="checkbox"/> Long Handled Implement	<input type="checkbox"/> 1-Clear <input type="checkbox"/> 3	
<input type="checkbox"/> Inventory of dominant native plants by waterbody			<input type="checkbox"/> Weed Wessel (double rake on tow)	<input type="checkbox"/> 2 <input type="checkbox"/> 4-Turbid	
<input type="checkbox"/> Complete inventory of native plants including rare/endangered species			<input checked="" type="checkbox"/> Hand		
Light Conditions	Surface Conditions	Plant Conditions	Viewing Methods		
<input checked="" type="checkbox"/> Bright (distinct shadows)	<input type="checkbox"/> Flat (glass-like)	<input type="checkbox"/> Pre-Mature	<input type="checkbox"/> 4" Diameter Tube Scope	<input type="checkbox"/> Facemask or equivalent	
<input type="checkbox"/> Cloudy Bright	<input checked="" type="checkbox"/> Ripples	<input checked="" type="checkbox"/> Mature	<input type="checkbox"/> 6" Diameter Tube Scope	<input checked="" type="checkbox"/> Polarized Lenses	
<input type="checkbox"/> Overcast	<input checked="" type="checkbox"/> Wavelets (no whitecaps)	<input type="checkbox"/> Early Decay	<input type="checkbox"/> Bucket Scope or equivalent	<input checked="" type="checkbox"/> Naked Eye	
	<input type="checkbox"/> Scattered Whitecaps	<input type="checkbox"/> Advanced Decay	<input type="checkbox"/> Trunk Scope or equivalent	<input checked="" type="checkbox"/> Other <u>KAYAK</u>	

Section 2: Invasive Aquatic Plant Screening Survey Suspected IAP observed: Y N (Continue this section only if YES)

Suspicious Plant Submitted for ID: Y ___ N ___ To: LSM ___ DEP ___ Other (explain) _____ Date: _____

Brazilian Elodea (BE) Curly-Leaf Pondweed (CP) Eurasian Watermilfoil (EM) European Frogbit (EF) European Naitad (EN) Fanwort (F)
 Parrot Feather (PF) Yellow Floating Heart (YH) Variable Leaf Watermilfoil (VM) [VMh for hybrid] Water Chestnut (WC) Hydrilla (H)

IAP CODE	Sector / Location	GPS Lat/Long	Buoy Code	NOTES

Section 3: Native Plant Inventory

For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector				Common Native Plant Checklist (con't)	Sector			
	1	2	3	4		1	2	3	4
aquatic moss spp.					<i>Potamogeton natans</i> floating-leaf pondweed				
freshwater sponge spp.	✓	✓	✓	✓	<i>Potamogeton oakesianus</i> Onkes pondweed				
Metaphyton (colonial algae "clouds")		✓			<i>Potamogeton perfoliatus</i> clasping-leaf pondweed				
<i>Bidens beckii</i> water marigold					<i>Potamogeton puerillius</i> slender pondweed				
<i>Branenia schrebleri</i> watershield					<i>Potamogeton pueriloid</i> spp. small pondweed				
<i>Callitriche</i> spp. water starworts			✓	✓	<i>Potamogeton richardsonii</i> clasping (red-head) pondweed				
<i>Ceratophyllum demersum</i> coontail					<i>Potamogeton robbinsii</i> fern pondweed				
<i>Chara</i> spp. muskgrass	✓			✓	<i>Potamogeton spirillus</i> spiral-fruited pondweed				
<i>Dalichion arundinaceum</i> three-way sedge					<i>Potamogeton zosteriformis</i> flat-stem pondweed				
<i>Elatine minima</i> small waterwort	✓	✓	✓	✓	<i>Potamogeton</i> spp. pondweed spp.				
<i>Eleocharis acicularis</i> needle spikerush	✓	✓	✓	✓	<i>Ranunculus</i> spp. water buttercup <i>Flammula</i>				
<i>Eleocharis subternata</i> Ruppel's spikerush spp.	✓	✓	✓	✓	<i>Sagittaria graminea</i> grass-leaved arrowhead	✓	✓	✓	✓
<i>Elodea canadensis</i> common waterweed					<i>Sagittaria latifolia</i> common arrowhead				
<i>Elodea nuttallii</i> slender (Nuttall's) waterweed					<i>Sagittaria</i> spp. arrowhead spp.				
<i>Eriocaulon aquaticum</i> pipewort	✓	✓	✓	✓	<i>Schoenoplectus subterminalis</i> water bulrush				
<i>Glyceria borealis</i> northern manna-grass					<i>Schoenoplectus tabernaemontani</i> soft-stem bulrush				
<i>Gratiola aurea</i> golden pelt	✓	✓			<i>Sium suave</i> water parsnip				
<i>Isotetes</i> spp. quillwort spp.	✓	✓			<i>Sparganium angustifolium</i> narrow floating-leaf bur-reed				
<i>Juncus militaris</i> bayonet rush					<i>Sparganium fluchense</i> floating leaf bur-reed	✓	✓	✓	✓
<i>Juncus pelocarpus</i> brown fruited rush					<i>Sparganium</i> spp. bur-reed spp. <i>Americanum</i>				
<i>Lemna minor</i> common duckweed					<i>Spiridula polyrrhiza</i> giant duckweed				
<i>Lobelia dortmanna</i> water lobelia					<i>Typha latifolia</i> common cattail				
<i>Myriophyllum alterniflorum</i> alternate-flowered water-milfoil					<i>Typha</i> spp. cattail spp.				
<i>Myriophyllum farwellii</i> Farwell's water-milfoil					<i>Utricularia gibba</i> humped bladderwort				
<i>Myriophyllum humile</i> low water-milfoil					<i>Utricularia intermedia</i> northern bladderwort				
<i>Myriophyllum sibiricum</i> northern water-milfoil					<i>Utricularia minor</i> lesser bladderwort				
<i>Myriophyllum tenellum</i> dwarf water-milfoil	✓				<i>Utricularia purpurea</i> large purple bladderwort				
<i>Myriophyllum verticillatum</i> whorled water-milfoil					<i>Utricularia radiata</i> floating bladderwort				
<i>Myriophyllum</i> spp. water-milfoil spp.					<i>Utricularia vulgaris</i> common bladderwort	✓			
<i>Najas flexilis/canadensis</i> slender naiad					<i>Utricularia</i> spp. bladderwort spp.				
<i>Najas gracillima</i> thread-like naiad					<i>Paltimera americana</i> wild celery (eel grass)				
<i>Najas</i> spp. stonewort spp.					<i>Leersia orizoides</i>	✓			
<i>Najas variegata</i> spatterdock					<i>Eleocharis palustris</i>	✓			
<i>Nymphaea odorata</i> fragrant water lily					<i>Triadenum virginicum</i>	✓			
<i>Nymphoides cordata</i> little floating heart					<i>Ludwigia palustris</i>				
<i>Pontederia cordata</i> pickerel weed	✓				<i>Lythrum scum-cuculus</i>				
<i>Potamogeton amplifolius</i> large-leaf pondweed					<i>Scirpus cyperinus</i>				
<i>Potamogeton berchtoldii</i> Berchtold's slender pondweed		✓			<i>Hypericum ellipticum</i>				
<i>Potamogeton epiphyllus</i> ribbon-leaf pondweed	✓	✓	✓	✓					
<i>Potamogeton gemmiparus</i> budding slender pondweed									
<i>Potamogeton gramineus</i> variable pondweed									

NOTES: BYD COANS & collected sample
MUSSELS
CMS

**Najas flexilis* explanation and **form listing plants by scientific name is available at <http://www.lakestewards.org/volunteer-info/invasive-plant-monitoring/data-form/>

Section 4: Observed Species of Concern				
SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES
<u>CMS</u>	<u>SCATTERED ALL SECTORS</u>			

EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, geleotrichia, didymo

Section 3: Native Plant Inventory

For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector	Common Native Plant Checklist (cont)	Sector
aquatic moss spp.	5	<i>Potamogeton natans</i> floating-leaf pondweed	5
freshwater sponge spp.		<i>Potamogeton oakesianus</i> Oakes pondweed	
Metaphyton (colonial algae "clouds")		<i>Potamogeton perfoliatus</i> clasping-leaf pondweed	
<i>Ribes beckii</i> water marigold		<i>Potamogeton pusillus</i> slender pondweed	
<i>Brasenia schreiberi</i> watershield		<i>Potamogeton pusilloid</i> spp. small pondweed	
<i>Callitriche</i> spp. water starworts		<i>Potamogeton richardsonii</i> clasping (red-head) pondweed	
<i>Ceratophyllum demersum</i> coontail		<i>Potamogeton robbinsii</i> fern pondweed	
<i>Chara</i> spp. muskgrass		<i>Potamogeton spirillus</i> spiral-framed pondweed	
<i>Dulichium arundinaceum</i> three-way sedge		<i>Potamogeton zosteriformis</i> flat-stem pondweed	
<i>Elatine minima</i> small waterwort		<i>Potamogeton</i> spp. pondweed spp.	
<i>Elaecharis acicularis</i> needle spikerush		<i>Ranunculus</i> spp. water buttercups	
<i>Elaecharis robbinsii</i> Robbin's spikerush		<i>Sagittaria graminea</i> grass-leaved arrowhead	✓
<i>Elodea canadensis</i> common waterweed		<i>Sagittaria latifolia</i> common arrowhead	✓
<i>Elodea nuttallii</i> slender (Nuttall's) waterweed		<i>Sagittaria</i> spp. arrowhead spp.	
<i>Eriocaulon aquaticum</i> pipewort	✓	<i>Scheuchzeria palustris</i> water burdock	
<i>Glyceria borealis</i> northern mangrass		<i>Scheuchzeria palustris</i> soft-stem burdock	
<i>Gratiola aurea</i> golden pert	✓	<i>Stenactis</i> water parsnip	
<i>Isotria medeolae</i> quillwort spp.		<i>Sparganium angustifolium</i> narrow floating-leaf bur-reed	
<i>Juncus militaris</i> bayonet rush		<i>Sparganium flaccidum</i> floating leaf bur-reed	
<i>Juncus polycarpus</i> brown fruited rush		<i>Sparganium</i> spp. bur-reed spp.	
<i>Lemna minor</i> common duckweed		<i>Spirodela polyrrhiza</i> giant duckweed	
<i>Libella dormana</i> water lobelia		<i>Typha latifolia</i> common cattail	
<i>Myriophyllum alterniflorum</i> alternate-flowered water-milfoil		<i>Typha</i> spp. cattail spp.	
<i>Myriophyllum farwellii</i> Farwell's water-milfoil		<i>Utricularia gibba</i> humped bladderwort	
<i>Myriophyllum humile</i> low water-milfoil		<i>Utricularia intermedia</i> northern bladderwort	
<i>Myriophyllum sibiricum</i> northern water-milfoil		<i>Utricularia minor</i> lesser bladderwort	
<i>Myriophyllum terrestre</i> dwarf water-milfoil		<i>Utricularia purpurea</i> large purple bladderwort	
<i>Myriophyllum verticillatum</i> whorled water-milfoil		<i>Utricularia radicata</i> floating bladderwort	
<i>Myriophyllum</i> spp. water-milfoil spp.		<i>Utricularia vulgaris</i> common bladderwort	
<i>Najas flexilis/canadensis</i> slender naiad		<i>Utricularia</i> spp. bladderwort spp.	
<i>Najas gracillima</i> thread-like naiad		<i>Vallisneria spiralis</i> wild celery (eel grass)	
<i>Najas</i> spp. stonewort spp.			
<i>Najas variegata</i> spatterdock			
<i>Nymphaea odorata</i> fragrant water lily			
<i>Nymphoides cordata</i> little floating heart			
<i>Potamogeton amplifolius</i> large-leaf pondweed	✓		
<i>Potamogeton berchtoldii</i> Berchtold's slender pondweed			
<i>Potamogeton epiphyllus</i> ribbon-leaf pondweed			
<i>Potamogeton gemmiparus</i> budding slender pondweed			
<i>Potamogeton gramineus</i> variable pondweed			

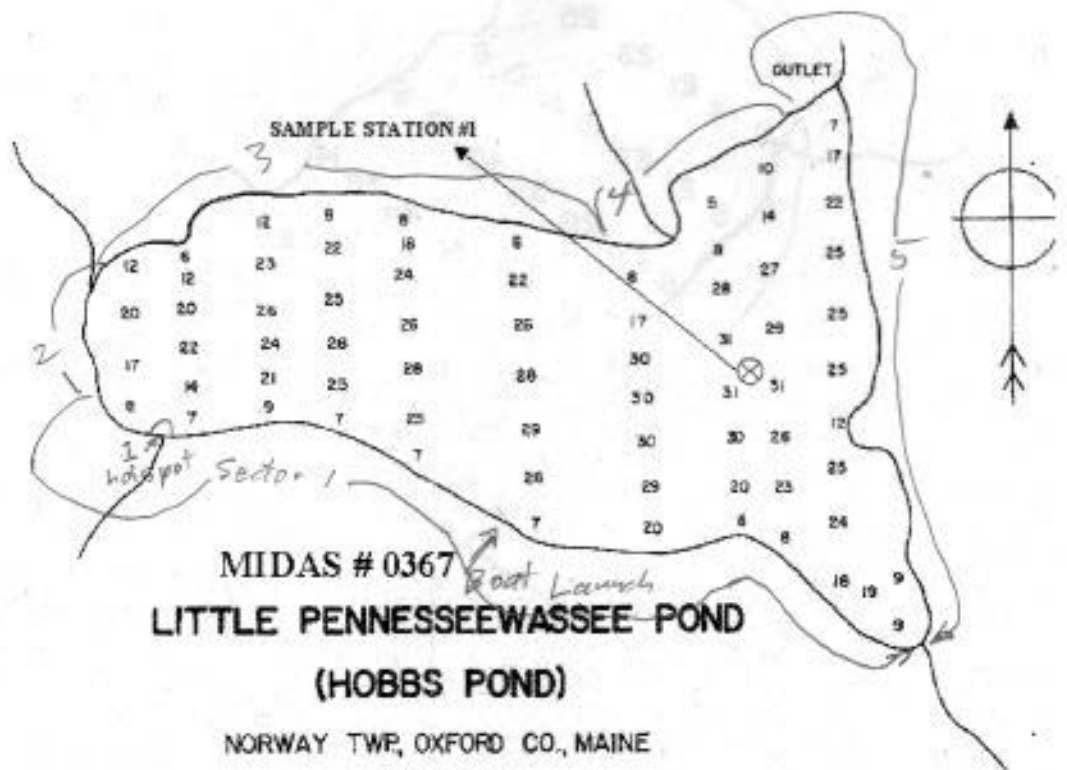
NOTES:

**Najas flexilis* explanation and **fern listing plants by scientific name is available at <http://www.lakesterwards.org/volunteer-info/invasive-plant-monitoring-data-forms/>

Section 4: Observed Species of Concern

SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES

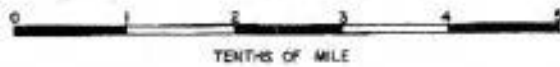
EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, gleotrichia, didymo



MIDAS # 0367
LITTLE PENNESSEEWASSEE POND
(HOBBS POND)

NORWAY TWP, OXFORD CO., MAINE

AREA 96 ACRES



**INVASIVE AQUATIC PLANT SCREENING SURVEY
DOCUMENTATION FORM (6/12/2020)**

Please complete a separate documentation form for each distinct survey: each waterbody surveyed, or each different survey level conducted on a single waterbody. Submit a copy of each completed form by Nov. 15, 2020 to LSM 24 Maple Hill Rd. Auburn ME 04210.

Section 1: General Information Survey Map Attached? (circle one) Y N Page 1 of 4

Waterbody NORTH POND Town NORWAY County OXFORD State ME

MIDAS # _____ Date/s 9/1/23, 9/6/23 On-Water Survey Hrs 16 X # surveyors 2 = Total Hrs 32

Sector/s Location _____ Infestation Surveillance

Lead Surveyor ROBERTA HULL IPP Training: Y/N Cert # H1-1000 Plant ID Proficiency Cert: Y/N

Phone # 207-333-1849 Email 2ROBERTAHULL@GMAIL Regional Affiliation LOAN

Name of Lake Team LWARMA For Multi-Year Surveys: YEAR _____ OF _____

Surveyor Type (check one) IPP Volunteer _____ Agency _____ Research/Ed Inst. _____ Professional _____ Other (explain) _____

Additional Surveyor # 1 SCOTT WILLIAMS (9/1) Cert # 001-0490 IPP Training: Y/N

Additional Surveyor # 2 KEITH WILLIAMS (9/6) Cert # _____ IPP Training: Y/N

Additional Surveyor # 3 _____ Cert # _____ IPP Training: Y / N

Check all that apply unless otherwise indicated

Survey Level		Screening Methods		Relative Water Level (check one)	
check one	check one	VISUAL METHODS	GRAB SAMPLE METHODS		
<input type="checkbox"/> Limited	<input checked="" type="checkbox"/> By Sector	<input type="checkbox"/> Random Points	<input type="checkbox"/> Random Points	<input type="checkbox"/> Above	
<input type="checkbox"/> Level 1	<input type="checkbox"/> Entire	<input type="checkbox"/> Plot Points	<input checked="" type="checkbox"/> Target Points	<input checked="" type="checkbox"/> Normal High	
<input type="checkbox"/> Level 2		<input checked="" type="checkbox"/> Transects	<input type="checkbox"/> Plot Points	<input type="checkbox"/> Below	
<input checked="" type="checkbox"/> Level 3		<input checked="" type="checkbox"/> Complete Coverage		Maximum Observed Plant Depth (Circle Units)	
Invasive Plant/s Targeted					
<input checked="" type="checkbox"/> Complete List - all 11 invaders on section 2 table below					
<input type="checkbox"/> Partial List - Use codes from Sec. 2 to list specific targets				<u>8</u> Meters (Feet)	
Additional Survey Goals			Grab Sample Tool	Water Clarity	
<input checked="" type="checkbox"/> Inventory of dominant native plants by sector			<input type="checkbox"/> Long Handled Implement	<input type="checkbox"/> Excellent <input type="checkbox"/> Fair	
<input type="checkbox"/> Inventory of dominant native plants by waterbody			<input type="checkbox"/> Weed Weasel (double rake on line)	<input type="checkbox"/> Good <input type="checkbox"/> Poor	
<input type="checkbox"/> Complete inventory of native plants including rare/endorsangered species			<input type="checkbox"/> Hand		
Light Conditions	Surface Conditions	Plant Conditions	Viewing Methods		
<input checked="" type="checkbox"/> Bright (distinct shadows)	<input checked="" type="checkbox"/> Flat (glass-like)	<input type="checkbox"/> Pre-Mature	<input checked="" type="checkbox"/> 4" <input type="checkbox"/> 6" Dia. Tube Scope	<input type="checkbox"/> Facemask or equivalent	
<input type="checkbox"/> Cloudy Bright	<input checked="" type="checkbox"/> Ripples	<input type="checkbox"/> Early Decay	<input type="checkbox"/> Pistol Case Scope or equiv	<input checked="" type="checkbox"/> Polarized Lenses	
<input type="checkbox"/> Overcast	<input type="checkbox"/> Wavelets (no whitecaps)	<input checked="" type="checkbox"/> Mature	<input type="checkbox"/> Bucket Scope or equivalent	<input checked="" type="checkbox"/> Naked Eye	
	<input type="checkbox"/> Scattered Whitecaps	<input type="checkbox"/> Advanced Decay	<input checked="" type="checkbox"/> Trunk Scope or equivalent	<input type="checkbox"/> Other _____	

Section 2: Invasive Aquatic Plant Screening Survey Suspected IAP observed: Y N (Continue this section only if YES)

Suspicious Plant Submitted for ID: Y _____ N _____ To: LSM _____ DEP _____ Other (explain) _____ Date: _____

Brazilian Elodea (BE) Curly-Leaf Pondweed (CP) Eurasian Watermilfoil (EM) European Frogbit (EF) European Nalad (EN) Fanwort (F)
Parrot Feather (PF) Yellow Floating Heart (YH) Variable Leaf Watermilfoil (VM) [VMh for hybrid] Water Chestnut (WC) Hydrilla (H)

IAP CODE	Sector / Location	GPS Lat/Long	Buoy Code	NOTES

Section 3: Native Plant Inventory

For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector				Common Native Plant Checklist (con't)	Sector			
	A	B	C	I		A	B	C	I
aquatic moss spp.					<i>Potamogeton natans</i> floating-leaf pondweed				
freshwater sponge spp.					<i>Potamogeton oakesianus</i> Oakes pondweed				
Metaphyton (colonial algae "clouds")					<i>Potamogeton perfoliatus</i> clasping-leaf pondweed				
<i>Bidens beckii</i> water marigold					<i>Potamogeton pusillus</i> slender pondweed				
<i>Brauneria schreberi</i> watershield		✓			<i>Potamogeton pusillifolius</i> spp. small pondweed				
<i>Callitriche</i> spp. water starworts					<i>Potamogeton richardsonii</i> clasping (red-head) pondweed				
<i>Ceratophyllum demersum-americanum</i> <u>chinatum</u>				✓	<i>Potamogeton robbinsii</i> fern pondweed				
<i>Chara</i> spp. muskgrass					<i>Potamogeton spirillus</i> spiral-fruited pondweed				
<i>Dufourea arundinacea</i> three-way sedge					<i>Potamogeton zosteriformis</i> flat-stem pondweed				
<i>Elatine minima</i> small waterwort					<i>Potamogeton</i> spp. pondweed spp.				
<i>Eleocharis acicularis</i> needle spikerush				✓	<i>Ranunculus</i> spp. water buttercups				
<i>Eleocharis robbinsii</i> Robbin's spikerush				✓	<i>Sagittaria graminea</i> grass-leaved arrowhead				
<i>Elodea canadensis</i> common waterweed					<i>Sagittaria latifolia</i> common arrowhead			✓	✓
<i>Elodea nuttallii</i> slender (Nuttall's) waterweed					<i>Sagittaria</i> spp. arrow-head spp.				
<i>Eriocaulon aquaticum</i> pipewort				✓	<i>Scheuchzeria palustris</i> water bulrush				
<i>Glyceria borealis</i> northern manna-grass					<i>Scheuchzeria palustris</i> self-stem bulrush				
<i>Gnathia aurea</i> golden pert					<i>Sium</i> spp. water parsnip				
<i>Isoetes</i> spp. quillwort spp.		✓	✓	✓	<i>Sparganium angustifolium</i> narrow floating-leaf bur-reed				
<i>Juncus nuttallii</i> bayonet rush					<i>Sparganium flaccidum</i> floating leaf bur-reed			✓	✓
<i>Juncus pelocarpus</i> brown fruited rush					<i>Sparganium</i> spp. bur-reed <u>americanum</u>			✓	✓
<i>Lemna minor</i> common duckweed					<i>Spirodela polyrrhiza</i> giant duckweed				
<i>Lobelia dortmanna</i> water lobelia					<i>Typha latifolia</i> common cattail			✓	✓
<i>Myriophyllum alterniflorum</i> alternate-flowered water-milfoil					<i>Typha</i> spp. cattail spp.				
<i>Myriophyllum farwellii</i> Farwell's water-milfoil					<i>Utricularia gibba</i> humped bladderwort				
<i>Myriophyllum humile</i> low water-milfoil					<i>Utricularia intermedia</i> northern bladderwort				✓
<i>Myriophyllum sibiricum</i> northern water-milfoil					<i>Utricularia minor</i> lesser bladderwort				
<i>Myriophyllum trisetum</i> dwarf water-milfoil		✓	✓		<i>Utricularia purpurea</i> large purple bladderwort				
<i>Myriophyllum verticillatum</i> wheeled water-milfoil					<i>Utricularia radiata</i> floating bladderwort			✓	✓
<i>Myriophyllum</i> spp. water-milfoil spp.					<i>Utricularia vulgaris</i> common bladderwort			✓	✓
<i>Najas flexilis</i> slender naiad		✓	✓	✓	<i>Utricularia</i> spp. bladderwort spp.			✓	✓
<i>Najas gracillima</i> thread-like naiad					<i>Vallisneria spiralis</i> wild celery (eel grass)			✓	✓
<i>Najas</i> spp. stone-wort spp.					<u>Triadenum virginicum</u>			✓	✓
<i>Najas variabilis</i> spatterdock					<u>Eleocharis palustris</u>			✓	✓
<i>Nymphaea odorata</i> fragrant water lily		✓	✓		<u>P. obtusifolia</u>			✓	✓
<i>Nymphaeoides cordata</i> little floating heart					<u>Peersia orizoides</u>				✓
<i>Pontederia cordata</i> pickerel weed		✓	✓	✓					
<i>Potamogeton amplifolius</i> large-leaf pondweed									
<i>Potamogeton berchtoldii</i> Berchtold's slender pondweed									
<i>Potamogeton epiphyllus</i> ribbon-leaf pondweed									
<i>Potamogeton gemmiparus</i> budding slender pondweed									
<i>Potamogeton gramineus</i> variable pondweed									

NOTES:
cms!

(31)

**Najas flexilis* explanation and **form listing plants by scientific name is available at <http://www.lakesciencetrust.org/whetstone/info/invasive-plant-monitors-data-forms/>

Section 4: Observed Species of Concern				
SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES

EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, gloetrichia, didymo

Section 3: Native Plant Inventory

For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector					Common Native Plant Checklist (con't)	Sector				
	H	G	F	E			H	G	F	E	
aquatic moss spp.	✓	✓	✓	✓	✓	<i>Potamogeton natans</i> floating-leaf pondweed		✓		✓	
freshwater sponge spp.	✓	✓	✓	✓	✓	<i>Potamogeton oakesianus</i> Oakes pondweed					
Metaphyton (colonial algae "clouds")			✓			<i>Potamogeton perfoliatus</i> clasping-leaf pondweed					
<i>Bilens becki</i> water marigold						<i>Potamogeton pusillus</i> slender pondweed					
<i>Brasenia schreberi</i> watershield						<i>Potamogeton pusilloid</i> spp. small pondweed					
<i>Callitriche</i> spp. water starworts			✓	✓	✓	<i>Potamogeton richardsonii</i> clasping (red-head) pondweed					
<i>Ceratophyllum demersum</i> coontail			✓		✓	<i>Potamogeton rubrinus</i> fern pondweed					
<i>Chara</i> spp. maskgrass			✓			<i>Potamogeton spirillus</i> spiral-fruited pondweed				✓	✓
<i>Dalmanites arundinaceus</i> three-way sedge			✓			<i>Potamogeton zosteriformis</i> flat-stem pondweed					✓
<i>Elatine minima</i> small waterwort						<i>Potamogeton</i> spp. pondweed spp. <i>obtusifolius</i>	✓	✓	✓		
<i>Eleocharis acicularis</i> needle spikerush			✓	✓	✓	<i>flaccuolus</i> spp. water buttercups					
<i>Eleocharis rubrinus</i> Robin's spikerush			✓	✓	✓	<i>Sagittaria graminea</i> grass-leaved arrowhead				✓	
<i>Elodea canadensis</i> common waterweed						<i>Sagittaria latifolia</i> common arrowhead				✓	
<i>Elodea nuttallii</i> slender (Nuttall's) waterweed						<i>Sagittaria</i> spp. arrowhead spp.					
<i>Eriocaulon aquaticum</i> pipewort			✓	✓	✓	<i>Schoenoplectus subterminalis</i> water bulrush					
<i>Glyceria borealis</i> northern manna-grass						<i>Schoenoplectus tuberosomontani</i> soft-stem bulrush					
<i>Gratiola aurea</i> golden perit						<i>Sium nativum</i> water parsnip				✓	
<i>Isostes</i> spp. quillwort spp.						<i>Sparganium angustifolium</i> narrow floating-leaf bur-reed					
<i>Juncus millinaria</i> bayonet rush						<i>Sparganium fluxuans</i> floating leaf bur-reed	✓	✓	✓	✓	✓
<i>Juncus pelocarpus</i> brown fruited rush						<i>Sparganium</i> spp. bur-reed spp. <i>americanum</i>	✓	✓	✓	✓	✓
<i>Lemna minor</i> common duckweed						<i>Spirodela polyrrhiza</i> giant duckweed					
<i>Lobelia dortmanna</i> water lobelia	✓	✓				<i>Typha latifolia</i> common cattail	✓			✓	
<i>Myriophyllum alterniflorum</i> alternate-flowered water-milfoil						<i>Typha</i> spp. cattail spp.					
<i>Myriophyllum farwellii</i> Farwell's water-milfoil						<i>Utricularia gibba</i> humped bladderwort					
<i>Myriophyllum humile</i> low water-milfoil						<i>Utricularia intermedia</i> northern bladderwort				✓	✓
<i>Myriophyllum sibiricum</i> northern water-milfoil						<i>Utricularia minor</i> lesser bladderwort					
<i>Myriophyllum tenellum</i> dwarf water-milfoil			✓			<i>Utricularia purpurea</i> large purple bladderwort					
<i>Myriophyllum verticillatum</i> whorled water-milfoil						<i>Utricularia radiata</i> floating bladderwort				✓	✓
<i>Myriophyllum</i> spp. water-milfoil spp.						<i>Utricularia vulgaris</i> common bladderwort	✓	✓	✓	✓	✓
<i>Najas flexilis/canadensis</i> slender naiad	✓	✓	✓	✓	✓	<i>Utricularia</i> spp. bladderwort spp.					
<i>Najas gracillima</i> thread-like naiad			✓	✓	✓	<i>Vallisneria spiralis</i> wild celery (eel grass)				✓	✓
<i>Najas</i> spp. stonewort spp.						<i>Eleocharis palustris</i>				✓	
<i>Najas variiegata</i> spatterdock	✓	✓	✓	✓	✓	<i>CAREX LASIOLEPADA</i>				✓	✓
<i>Nymphaea odorata</i> fragrant water lily	✓	✓	✓	✓	✓	SPARGANIUM NATANS					
<i>Nymphoides cordata</i> little floating heart	✓	✓	✓	✓	✓	<i>SPARGANIUM NATANS</i>				✓	✓
<i>Pontederia cordata</i> pickerel weed	✓	✓	✓	✓	✓	<i>SPIRODELLA POLYRRHYZA</i>				✓	✓
<i>Potamogeton amplifolius</i> large-leaf pondweed	✓	✓	✓	✓	✓	<i>Lysmachia terrestris</i>				✓	✓
<i>Potamogeton berchtoldii</i> Berchtold's slender pondweed	✓	✓	✓	✓	✓	<i>Triadenum virginicum</i>				✓	✓
<i>Potamogeton epiphyllus</i> ribbon-leaf pondweed	✓	✓	✓	✓	✓	<i>Ludwigia palustris</i>				✓	
<i>Potamogeton gonimporus</i> budding slender pondweed	✓	✓	✓	✓	✓	<i>Hypericum ellipticum</i>				✓	
<i>Potamogeton gramineus</i> variable pondweed	✓	✓	✓	✓	✓						

NOTES:

**Najas flexilis* explanation and **form listing plants by scientific name is available at <http://www.lakesteward.org/volunteer-info/invasive-plant-monitors/data-forms>.

Section 4: Observed Species of Concern

SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES

EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, gloetrichia, didymo

Section 3: Native Plant Inventory

For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector		Common Native Plant Checklist (con't)	Sector	
	D	J		D	J
aquatic moss spp.			<i>Potamogeton natans</i> floating-leaf pondweed		
freshwater sponge spp.	✓	✓	<i>Potamogeton oakesianus</i> Oakes pondweed		
Metaphyton (colonial algae "clouds")			<i>Potamogeton perfoliatus</i> clasping-leaf pondweed		
<i>Bidens beckii</i> water marigold			<i>Potamogeton pusillus</i> slender pondweed		
<i>Brasenia schreberi</i> watershield			<i>Potamogeton pusilloid</i> spp. small pondweed		
<i>Callitriche</i> spp. water starworts			<i>Potamogeton richardsonii</i> clasping (red-head) pondweed		
<i>Ceratophyllum demersum</i> coontail			<i>Potamogeton robbinsii</i> fern pondweed		
<i>Chara</i> spp. muskgrass	✓		<i>Potamogeton spirillus</i> spiral-fruited pondweed		
<i>Dulichium arundinaceum</i> three-way sedge			<i>Potamogeton zosteriformis</i> flat-stem pondweed		
<i>Elatine minima</i> small waterwort			<i>Potamogeton</i> spp. pondweed spp. <i>obtusifolius</i> ✓		
<i>Eleocharis acicularis</i> needle spikerush			<i>Ranunculus</i> spp. water buttercups		
<i>Eleocharis robbinsii</i> Robbin's spikerush			<i>Sagittaria graminea</i> grass-leaved arrowhead		
<i>Elodea canadensis</i> common waterweed			<i>Sagittaria latifolia</i> common arrowhead		
<i>Elodea nuttallii</i> slender (Nuttall's) waterweed			<i>Sagittaria</i> spp. arrowhead spp.		
<i>Eriocaulon aquaticum</i> pipewort	✓		<i>Schoenoplectus subterminalis</i> water bulrush		
<i>Glyceria borealis</i> northern mannagrass			<i>Schoenoplectus tabernaemontani</i> soft-stem bulrush		
<i>Gratiola aurea</i> golden pert			<i>Slam saua</i> water parsnip		
<i>Isocetes</i> spp. quillwort spp.			<i>Sparganium angustifolium</i> narrow floating-leaf bur-reed		
<i>Juncus militaris</i> bayonet rush			<i>Sparganium flaccidum</i> floating leaf bur-reed	✓	
<i>Juncus pelocarpus</i> brown fruited rush			<i>Sparganium</i> spp. bur-reed spp. <i>americanum</i> ✓		
<i>Lemna minor</i> common duckweed			<i>Spirodela polyrriza</i> giant duckweed		
<i>Lobelia dortmanna</i> water lobelia			<i>Typha latifolia</i> common cattail		
<i>Myriophyllum alterniflorum</i> alternate-flowered water-milfoil			<i>Typha</i> spp. cattail spp.		
<i>Myriophyllum farwellii</i> Farwell's water-milfoil			<i>Utricularia gibba</i> humped bladderwort		
<i>Myriophyllum humile</i> low water-milfoil			<i>Utricularia intermedia</i> northern bladderwort		
<i>Myriophyllum libericum</i> northern water-milfoil			<i>Utricularia minor</i> lesser bladderwort		
<i>Myriophyllum tonillanum</i> dwarf water-milfoil			<i>Utricularia purpurea</i> large purple bladderwort	✓	
<i>Myriophyllum verticillatum</i> whorled water-milfoil			<i>Utricularia radiata</i> floating bladderwort		
<i>Myriophyllum</i> spp. water-milfoil spp.			<i>Utricularia vulgaris</i> common bladderwort	✓	
<i>Najas flexilis/canadensis</i> slender naiad	✓	✓	<i>Utricularia</i> spp. bladderwort spp.		
<i>Najas gracillima</i> thread-like naiad	✓	✓	<i>Vallisneria spiralis</i> wild celery (cel grass)		
<i>Nitella</i> spp. stonewort spp.	✓	✓			
<i>Najas variegata</i> spatterdock	✓	✓			
<i>Nymphaea odorata</i> fragrant water lily	✓				
<i>Nymphaoides cordata</i> little floating heart					
<i>Pontederia cordata</i> pickerel weed	✓				
<i>Potamogeton amplifolius</i> large-leaf pondweed	✓	✓			
<i>Potamogeton berchtoldii</i> Berchtold's slender pondweed	✓				
<i>Potamogeton zosterifolius</i> ribbon-leaf pondweed	✓	✓			
<i>Potamogeton pectinatus</i> budding slender pondweed					
<i>Potamogeton gramineus</i> variable pondweed					

NOTES:

**Najas flexilis* explanation and **form listing plants by scientific name is available at <http://www.lakesidewards.org/volunteer-info/invasive-plant-monitors/data-forms/>

Section 4: Observed Species of Concern

SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES

EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, gleotrichia, didymo



INVASIVE AQUATIC PLANT SCREENING SURVEY DOCUMENTATION FORM (6/12/2020)



Please complete a separate documentation form for each distinct survey: each waterbody surveyed, or each different survey level conducted on a single waterbody. Submit a copy of each completed form by Nov. 15, 2020 to LSM 24 Maple Hill Rd. Auburn ME 04210.

Section 1: General Information Survey Map Attached? (circle one) Y **(N)** Page 1 of 2

Waterbody NORTH POND DAM Town NORWAY County OXFORD State ME
 MIDAS # _____ Date/s 9/26/23 On-Water Survey Hrs 3 X # surveyors 2 = Total Hrs 6
 Sector/s Location LANDING + IMPOUNDMENT Infestation Surveillance
 Lead Surveyor ROBERTA HILL IPP Training N Cert # H1-1000 Plant ID Proficiency Cert: N
 Phone # 207-333-1849 Email 2ROBERTAHILL@GMAIL.COM Regional Affiliation LOAN
 Name of Lake Team LWRMA For Multi-Year Surveys: YEAR _____ OF _____
 Surveyor Type (check one) IPP Volunteer _____ Agency _____ Research/Ed Inst. _____ Professional Other (explain) _____
 Additional Surveyor # 1 WILLIAMS, KEITH Cert # W1- IPP Training: Y / N
 Additional Surveyor # 2 _____ Cert # _____ IPP Training: Y / N
 Additional Surveyor # 3 _____ Cert # _____ IPP Training: Y / N

Check all that apply unless otherwise indicated

Survey Level		Screening Methods		Relative Water Level (check one)	
check one	check one	VISUAL METHODS	GRAB SAMPLE METHODS		
<input type="checkbox"/> Limited	<input type="checkbox"/> By Sector	<input type="checkbox"/> Random Points	<input type="checkbox"/> Random Points	<input type="checkbox"/> Above	Maximum Observed Plant Depth (Circle Units)
<input checked="" type="checkbox"/> Level 1	<input checked="" type="checkbox"/> Entire	<input type="checkbox"/> Plot Points	<input checked="" type="checkbox"/> Target Points	<input checked="" type="checkbox"/> Normal High	
<input type="checkbox"/> Level 2		<input checked="" type="checkbox"/> Transects	<input type="checkbox"/> Plot Points	<input type="checkbox"/> Below	
<input type="checkbox"/> Level 3		<input checked="" type="checkbox"/> Complete Coverage			
Invasive Plant/s Targeted					
<input checked="" type="checkbox"/> Complete List - all 11 invaders on section 2 table below					
<input type="checkbox"/> Partial List - Use codes from Sec. 2 to list specific targets					
Additional Survey Goals			Grab Sample Tool	Water Clarity	
<input checked="" type="checkbox"/> Inventory of dominant native plants by sector			<input checked="" type="checkbox"/> Long Handled Implement	<input type="checkbox"/> Excellent <input type="checkbox"/> Fair	
<input type="checkbox"/> Inventory of dominant native plants by waterbody			<input type="checkbox"/> Weed Weasel (double rake on line)	<input checked="" type="checkbox"/> Good <input type="checkbox"/> Poor	
<input type="checkbox"/> Complete inventory of native plants including rare/endangered species			<input checked="" type="checkbox"/> Hand		
Light Conditions	Surface Conditions	Plant Conditions	Viewing Methods		
<input checked="" type="checkbox"/> Bright (distinct shadows)	<input checked="" type="checkbox"/> Flat (glass-like)	<input type="checkbox"/> Pre-Mature	<input type="checkbox"/> 4" <input type="checkbox"/> 6" Dia. Tube Scope	<input type="checkbox"/> Face mask or equivalent	
<input type="checkbox"/> Cloudy Bright	<input checked="" type="checkbox"/> Ripples	<input checked="" type="checkbox"/> Early Decay	<input type="checkbox"/> Pistol Case Scope or equiv	<input type="checkbox"/> Polarized Lenses	
<input type="checkbox"/> Overcast	<input type="checkbox"/> Wavelets (no whitecaps)	<input checked="" type="checkbox"/> Mature	<input type="checkbox"/> Bucket Scope or equivalent	<input checked="" type="checkbox"/> Naked Eye	
	<input type="checkbox"/> Scattered Whitecaps	<input type="checkbox"/> Advanced Decay	<input checked="" type="checkbox"/> Trunk Scope or equivalent	<input type="checkbox"/> Other _____	

Section 2: Invasive Aquatic Plant Screening Survey Suspected IAP observed: Y **(N)** (Continue this section only if YES)

Suspicious Plant Submitted for ID: Y _____ N _____ To: LSM _____ DEP _____ Other (explain) _____ Date: _____

Brazilian Flodan (BF) Curly-Leaf Pondweed (CP) Eurasian Watermilfoil (EM) European Frogbit (EF) European Nalad (EN) Fanwort (F)
 Parrot Feather (PF) Yellow Floating Heart (YH) Variable Leaf Watermilfoil (VM) [VMh for hybrid] Water Chestnut (WC) Hydrills (H)

IAP CODE	Sector / Location	GPS Lat/Long	Buoy Code	NOTES



INVASIVE AQUATIC PLANT SCREENING SURVEY DOCUMENTATION FORM (6/1/2021)



Please complete a separate documentation form for each distinct survey: each waterbody surveyed, or each different survey level conducted on a single waterbody. Submit a copy of each completed form by Nov. 15, 2021 to LSM 24 Maple Hill Rd. Auburn ME 04210.

DON'T FORGET: On-Water Survey Hrs 5.5 **X # surveyors** 2 = **Total Hrs** 11

Section 1: General Information Survey Map Attached? (circle one) Y N

Waterbody SAND POND Town NORWAY County OXFORD State ME

MIDAS # _____ Date's 8/1/23 Sector's Location ENTIRE

Lead Surveyor ROBERTA HILL IPP Training Y N Cert # H1-1000

Plant ID Proficiency Cert Y N Phone # 207-333-1849 Email 2ROBERTA HILL@GMAIL.COM

Name of Lake Team LWAMA Regional Affiliation LOAN Infestation Surveillance

Surveyor Type (check one) IPP Volunteer Agency Research/Ed Inst. Professional Other (explain) _____

Additional Surveyor # 1 KATH WILLIAMS Cert # W1-0297 IPP Training: Y / N

Additional Surveyor # 2 _____ Cert # _____ IPP Training: Y / N

Additional Surveyor # 3 _____ Cert # _____ IPP Training: Y / N

Check all that apply unless otherwise indicated

Survey Level		Screening Methods		Relative Water Level (check one)
check one	check one	VISUAL METHODS	GRAB SAMPLE METHODS	<input checked="" type="checkbox"/> Above
<input type="checkbox"/> Limited	<input type="checkbox"/> By Sector	<input checked="" type="checkbox"/> Random Points	<input type="checkbox"/> Random Points	<input type="checkbox"/> Normal High
<input type="checkbox"/> Level 1	<input type="checkbox"/> Multiyear	<input type="checkbox"/> Plot Points	<input checked="" type="checkbox"/> Target Points	<input type="checkbox"/> Below
<input type="checkbox"/> Level 2	<input type="checkbox"/> By Sector	<input checked="" type="checkbox"/> Transects	<input type="checkbox"/> Plot Points	
<input checked="" type="checkbox"/> Level 3	<input checked="" type="checkbox"/> Entire	<input checked="" type="checkbox"/> Complete Coverage		Maximum Observed Plant Depth (Circle Units)
Invasive Plant/s Targeted				
<input checked="" type="checkbox"/> Complete List - all 11 invaders on section 2 table below				<u>9</u> Meters (Feet)
<input type="checkbox"/> Partial List - Use codes from Sec. 2 to list specific targets				
Additional Survey Goals		Grab Sample Tool		Water Clarity
<input type="checkbox"/> Inventory of dominant native plants by sector		<input checked="" type="checkbox"/> Long Handled Implement		<input checked="" type="checkbox"/> 1-Clear <input type="checkbox"/> 3
<input checked="" type="checkbox"/> Inventory of dominant native plants by waterbody		<input type="checkbox"/> Weed Weasel (double rake on line)		<input type="checkbox"/> 2 <input type="checkbox"/> 4-Turbid
<input type="checkbox"/> Complete inventory of native plants including rare/endangered species		<input checked="" type="checkbox"/> Hand		
Light Conditions	Surface Conditions	Plant Conditions	Viewing Methods	
<input checked="" type="checkbox"/> Bright (distinct shadows)	<input checked="" type="checkbox"/> Flat (glass-like)	<input type="checkbox"/> Pre-Mature	<input type="checkbox"/> 4" Diameter Tube Scope	<input type="checkbox"/> Facemask or equivalent
<input type="checkbox"/> Cloudy Bright	<input checked="" type="checkbox"/> Ripples	<input checked="" type="checkbox"/> Mature	<input type="checkbox"/> 6" Diameter Tube Scope	<input type="checkbox"/> Polarized Lenses
<input type="checkbox"/> Overcast	<input checked="" type="checkbox"/> Wavelets (no whitecaps)	<input type="checkbox"/> Early Decay	<input type="checkbox"/> Bucket Scope or equivalent	<input type="checkbox"/> Naked Eye
	<input type="checkbox"/> Scattered Whitecaps	<input type="checkbox"/> Advanced Decay	<input type="checkbox"/> Trunk Scope or equivalent	<input checked="" type="checkbox"/> Other <u>MAYAK</u>

Section 2: Invasive Aquatic Plant Screening Survey Suspected IAP observed: Y N (Continue this section only if YES)

Suspicious Plant Submitted for ID: Y N To: LSM DEP Other (explain) _____ Date: _____

Brazilian Elodea (BE) Curly-Leaf Pondweed (CP) Eurasian Watermilfoil (EM) European Frogbit (EF) European Naiad (EN) Fanwort (F)
Parrot Feather (PF) Yellow Floating Heart (YH) Variable Leaf Watermilfoil (VM) [VMh for hybrid] Water Chestnut (WC) Hydrilla (H)

IAP CODE	Sector / Location	GPS Lat/Long	Buoy Code	NOTES

Waterbody SAND PONDDate/s 8/1/23Page 1 of 1

Section 3: Native Plant Inventory

For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector	Common Native Plant Checklist (con't)	Sector
aquatic moss spp.	✓	<i>Potamogeton nodosus</i> floating-leaf pondweed	
freshwater sponge spp.	✓	<i>Potamogeton oakesianus</i> Oakes pondweed	
Metaphyton (colonial algae "clouds")	✓	<i>Potamogeton perfoliatus</i> clasping-leaf pondweed	
<i>Bidens beckii</i> water marigold		<i>Potamogeton paxillus</i> slender pondweed	
<i>Brasenia schreberi</i> watershield		<i>Potamogeton paxilloid</i> spp. small pondweed	
<i>Callitriche</i> spp. water starworts		<i>Potamogeton richardsonii</i> clasping (red-head) pondweed	
<i>Ceratophyllum demersum</i> coontail		<i>Potamogeton robbinsii</i> fern pondweed	
<i>Chara</i> spp. muskgrass		<i>Potamogeton spirillus</i> spiral-fruited pondweed	
<i>Dulichium arundinaceum</i> three-way sedge	✓	<i>Potamogeton zosteriformis</i> flat-stem pondweed	
<i>Elatine minima</i> small waterwort	✓	<i>Potamogeton</i> spp. pondweed spp.	
<i>Eleocharis acicularis</i> needle spikerush		<i>Ranunculus</i> spp. water buttercups	
<i>Eleocharis robbinsii</i> Robbin's spikerush	✓	<i>Sagittaria graminea</i> grass-leaved arrowhead	✓
<i>Elodea canadensis</i> common waterweed		<i>Sagittaria latifolia</i> common arrowhead	✓
<i>Elodea nuttallii</i> slender (Nuttall's) waterweed		<i>Sagittaria</i> spp. arrowhead spp.	
<i>Eriocaulon aquaticum</i> pipewort	✓	<i>Schoenoplectus subterminalis</i> water bulrush	
<i>Glyceria borealis</i> northern mannagrass	✓	<i>Schoenoplectus tabernaemontani</i> soft-stem bulrush	
<i>Gratiola aurea</i> golden pert	✓	<i>Stum suave</i> water parsnip	
<i>Isotes</i> spp. quillwort spp.		<i>Sparganium angustifolium</i> narrow floating-leaf bur-reed	
<i>Juncus militaris</i> bayonet rush		<i>Sparganium fuchianum</i> floating leaf bur-reed	✓
<i>Juncus pelocarpus</i> brown fruited rush	✓	<i>Sparganium</i> spp. bur-reed spp. <u>AMERICANUM</u>	✓
<i>Lemna minor</i> common duckweed		<i>Spirodela polyrrhiza</i> giant duckweed	
<i>Lobelia dortmanna</i> water lobelia	✓	<i>Typha latifolia</i> common cattail	
<i>Myriophyllum alterniflorum</i> alternate-flowered water-milfoil		<i>Typha</i> spp. cattail spp.	
<i>Myriophyllum farwellii</i> Farwell's water-milfoil		<i>Utricularia gibba</i> humped bladderwort	✓
<i>Myriophyllum humile</i> low water-milfoil		<i>Utricularia intermedia</i> northern bladderwort	
<i>Myriophyllum sibiricum</i> northern water-milfoil		<i>Utricularia minor</i> lesser bladderwort	
<i>Myriophyllum tenellum</i> dwarf water-milfoil		<i>Utricularia purpurea</i> large purple bladderwort	✓
<i>Myriophyllum verticillatum</i> whorled water-milfoil		<i>Utricularia radiata</i> floating bladderwort	✓
<i>Myriophyllum</i> spp. water-milfoil spp.		<i>Utricularia vulgaris</i> common bladderwort	✓
<i>Najas flexilis/canadensis</i> slender naiad		<i>Utricularia</i> spp. bladderwort spp.	
<i>Najas gracillima</i> thread-like naiad		<i>Vallisneria spiralis</i> wild celery (eel grass)	
<i>Najas</i> spp. stonewort spp.	✓	<u>LYSMACHIA TERRESTRIS</u>	✓
<i>Najas variagata</i> spatterdock	✓	<u>LEERSIA ORICOIDES</u>	✓
<i>Nymphaea odorata</i> fragrant water lily	✓	<u>CAREX COMOSA</u>	✓
<i>Nymphoides cordata</i> little floating heart	✓	<u>IRIS VERZICOLOR</u>	✓
<i>Pontederia cordata</i> pickerel weed	✓	<u>ELEOCHARIS PALUSTRIS</u>	✓
<i>Potamogeton amplifolius</i> large-leaf pondweed			
<i>Potamogeton berchtoldii</i> Berchtold's slender pondweed	✓		
<i>Potamogeton epiphyllus</i> ribbon-leaf pondweed	✓		
<i>Potamogeton gonwiparus</i> budding slender pondweed			
<i>Potamogeton gramineus</i> variable pondweed	✓		

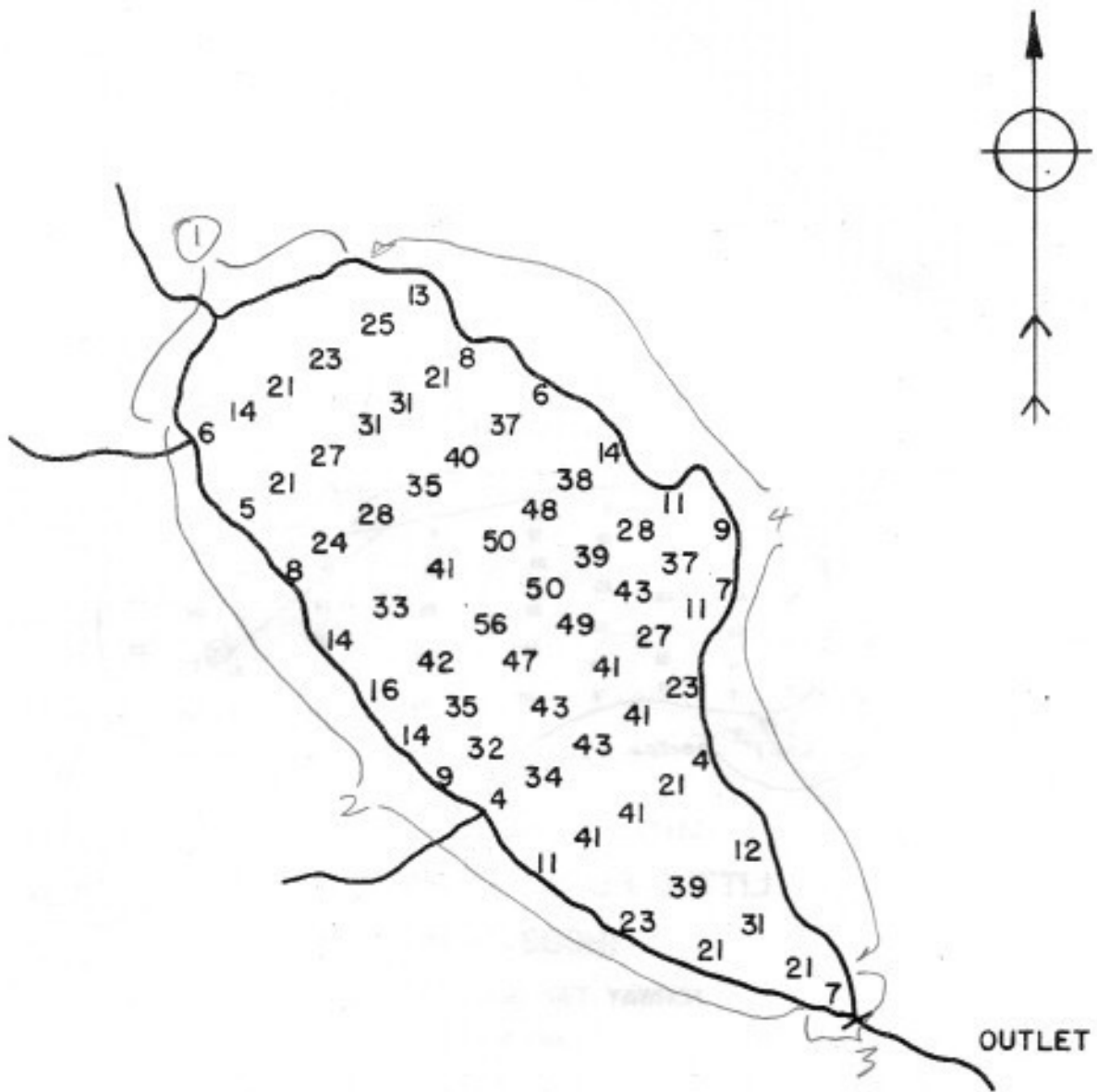
NOTES:

**Najas flexilis* explanation and **form listing plants by scientific name is available at <http://www.lakesteward.org/volunteer-info/invasive-plant-monitors/data-forms>

Section 4: Observed Species of Concern

SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES

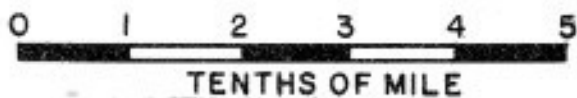
EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, gleotrichia, didymo



SAND POND

NORWAY TWP., OXFORD CO., MAINE

AREA 141 ACRES



1/6

7/19 + 6/3 - 40 hrs v 2



INVASIVE AQUATIC PLANT SCREENING SURVEY DOCUMENTATION FORM (6/1/2021)



Please complete a separate documentation form for each distinct survey: each waterbody surveyed, or each different survey level conducted on a single waterbody. Submit a copy of each completed form by Nov. 15, 2021 to LSM 24 Maple Hill Rd. Auburn ME 04210.

DON'T FORGET: On-Water Survey Hrs _____ **X # surveyors** _____ = **Total Hrs** _____

Section 1: General Information Survey Map Attached? (circle one) **(Y)** N

Waterbody PENNESSEEWASSEG Town NORWAY County OXFORD State ME

MIDAS # 3434 Date/s 7/19/23, 7/20/23 Sector's Location ENTIRE

Lead Surveyor ROBERTA HILL IPP Training: **(Y)** N Cert # H1-1000

Plant ID Proficiency Cert. **(Y)** N Phone # 207-333-1849 Email 2ROBERTAHILL@GMAIL.COM

Name of Lake Team LWRMA Regional Affiliation LOAN Infestation Surveillance

Surveyor Type (check one) IPP Volunteer Agency Research/Ed Inst. Professional Other (explain) _____

Additional Surveyor # 1 KEITH WILLIAMS Cert # MI-029 IPP Training: **(Y)** N

Additional Surveyor # 2 _____ Cert # _____ IPP Training: Y / N

Additional Surveyor # 3 _____ Cert # _____ IPP Training: Y / N

Check all that apply unless otherwise indicated

Survey Level		Screening Methods		Relative Water Level (check one)	
check one	check one	VISUAL METHODS	GRAB SAMPLE METHODS	<input checked="" type="checkbox"/> Above	Maximum Observed Plant Depth (Circle Units)
<input type="checkbox"/> Limited	<input type="checkbox"/> By Sector	<input checked="" type="checkbox"/> Random Points	<input type="checkbox"/> Random Points	<input type="checkbox"/> Normal High	
<input type="checkbox"/> Level 1	<input type="checkbox"/> Multiyear	<input checked="" type="checkbox"/> Plot Points	<input checked="" type="checkbox"/> Target Points	<input type="checkbox"/> Below	____ Meters / Feet
<input type="checkbox"/> Level 2	<input type="checkbox"/> By Sector	<input checked="" type="checkbox"/> Transects	<input type="checkbox"/> Plot Points		
<input checked="" type="checkbox"/> Level 3	<input checked="" type="checkbox"/> Entire	<input checked="" type="checkbox"/> Complete Coverage			
Invasive Plant/s Targeted					
<input checked="" type="checkbox"/> Complete List - all 11 invaders on section 2 table below					
<input type="checkbox"/> Partial List - Use codes from Sec. 2 to list specific targets					
Additional Survey Goals			Grab Sample Tool	Water Clarity	
<input checked="" type="checkbox"/> Inventory of dominant native plants by sector			<input checked="" type="checkbox"/> Long Handled Implement	<input type="checkbox"/> 1-Clear <input type="checkbox"/> 3	
<input type="checkbox"/> Inventory of dominant native plants by waterbody			<input checked="" type="checkbox"/> Weed Weasel (double rake on line)	<input type="checkbox"/> 2 <input type="checkbox"/> 4-Turbid	
<input type="checkbox"/> Complete inventory of native plants including rare/endangered species			<input checked="" type="checkbox"/> Hand		
Light Conditions	Surface Conditions	Plant Conditions	Viewing Methods		
<input checked="" type="checkbox"/> Bright (distinct shadows)	<input checked="" type="checkbox"/> Flat (glass-like)	<input checked="" type="checkbox"/> Pre-Mature	<input type="checkbox"/> 4" Diameter Tube Scope	<input type="checkbox"/> Facemask or equivalent	
<input type="checkbox"/> Cloudy Bright	<input type="checkbox"/> Ripples	<input type="checkbox"/> Mature	<input type="checkbox"/> 6" Diameter Tube Scope	<input checked="" type="checkbox"/> Polarized Lenses	
<input type="checkbox"/> Overcast	<input type="checkbox"/> Wavelets (no whitecaps)	<input type="checkbox"/> Early Decay	<input type="checkbox"/> Bucket Scope or equivalent	<input checked="" type="checkbox"/> Naked Eye	
	<input type="checkbox"/> Scattered Whitecaps	<input type="checkbox"/> Advanced Decay	<input checked="" type="checkbox"/> Trunk Scope or equivalent	<input checked="" type="checkbox"/> Other <u>KAPIC</u>	

Section 2: Invasive Aquatic Plant Screening Survey Suspected IAP observed: Y **(N)** (Continue this section only if YES)

Suspicious Plant Submitted for ID: Y ___ N ___ To: LSM ___ DEP ___ Other (explain) _____ Date: _____

Brazilian Elodea (BE) Curly-Leaf Pondweed (CP) Eurasian Watermilfoil (EM) European Frogbit (EF) European Naiad (EN) Fanwort (F)
Parrot Feather (PF) Yellow Floating Heart (YH) Variable Leaf Watermilfoil (VM) [VMh for hybrid] Water Chestnut (WC) Hydrilla (H)

IAP CODE	Sector / Location	GPS Lat/Long	Buoy Code	NOTES

Waterbody BIG PENNDate/s 7/19/23Page 2 of 6

Section 3: Native Plant Inventory

For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector				Common Native Plant Checklist (con't)	Sector			
	10	16	3	2		10	16	3	2
aquatic moss spp.			✓		<i>Potamogeton natans</i> floating-leaf pondweed			✓	✓
freshwater sponge spp.					<i>Potamogeton oakesianus</i> Oakes pondweed			✓	✓
Metaphyton (colonial algae "clouds")					<i>Potamogeton perfoliatus</i> clasping-leaf pondweed			✓	✓
<i>Bidens beckii</i> water marigold			✓	✓	<i>Potamogeton purillus</i> slender pondweed				
<i>Brasenia schreberi</i> watershield					<i>Potamogeton purilloid</i> spp. small pondweed				
<i>Callitriche</i> spp. water starworts					<i>Potamogeton richardsonii</i> clasping (red-head) pondweed	✓			
<i>Ceratophyllum demersum</i> coontail			✓		<i>Potamogeton robbinsii</i> fern pondweed			✓	
<i>Clara</i> spp. maskgrass					<i>Potamogeton spirillus</i> spiral-fruited pondweed				
<i>Dulichium arundinaceum</i> three-way sedge			✓		<i>Potamogeton zosteriformis</i> flat-stem pondweed				
<i>Elatine minima</i> small waterwort					<i>Potamogeton</i> spp. pondweed spp.				
<i>Eleocharis acicularis</i> needle spikerush	✓			✓	<i>Ranunculus</i> spp. water buttercups				
<i>Eleocharis robbinsii</i> Robbin's spikerush			✓	✓	<i>Sagittaria graminea</i> grass-leaved arrowhead		✓		✓
<i>Elodea canadensis</i> common waterweed					<i>Sagittaria latifolia</i> common arrowhead			✓	✓
<i>Elodea nuttallii</i> slender (Nuttall's) waterweed					<i>Sagittaria</i> spp. arrowhead spp.				
<i>Eriocaulon aquaticum</i> pipewort		✓		✓	<i>Schoenoplectus subterminalis</i> water bulrush				
<i>Glyceria borealis</i> northern manna grass			✓		<i>Schoenoplectus tabernaemontani</i> soft-stem bulrush				
<i>Gratiola aurea</i> golden pert					<i>Sium suave</i> water parsnip				
<i>Juncus</i> spp. quillwort spp.			✓		<i>Spartanium angustifolium</i> narrow floating-leaf bur-reed	✓			✓
<i>Juncus militaris</i> bayonet rush		✓		✓	<i>Spartanium fluctuans</i> floating leaf bur-reed		✓	✓	✓
<i>Juncus pelocarpus</i> brown fruited rush					<i>Spartanium</i> spp. bur-reed spp. <u>americanum</u>	✓	✓	✓	✓
<i>Lemna minor</i> common duckweed			✓	✓	<i>Spirodela polyrrhiza</i> giant duckweed				
<i>Lobelia dortmanna</i> water lobelia		✓		✓	<i>Typha latifolia</i> common cattail			✓	✓
<i>Myriophyllum alterniflorum</i> alternate-flowered water-milfoil					<i>Typha</i> spp. cattail spp.				
<i>Myriophyllum farwellii</i> Farwell's water-milfoil					<i>Utricularia gibba</i> humped bladderwort				
<i>Myriophyllum humile</i> low water-milfoil					<i>Utricularia intermedia</i> northern bladderwort				
<i>Myriophyllum sibiricum</i> northern water-milfoil					<i>Utricularia minor</i> lesser bladderwort				
<i>Myriophyllum tenellum</i> dwarf water-milfoil			✓		<i>Utricularia purpurea</i> large purple bladderwort				
<i>Myriophyllum verticillatum</i> whorled water-milfoil			✓		<i>Utricularia radiata</i> floating bladderwort				
<i>Myriophyllum</i> spp. water-milfoil spp.					<i>Utricularia vulgaris</i> common bladderwort			✓	✓
<i>Najas flexilis/canadensis</i> slender naiad				✓	<i>Utricularia</i> spp. bladderwort spp.				
<i>Najas gracillima</i> thread-like naiad					<i>Valisneria americana</i> wild celery (cel grass)		✓	✓	✓
<i>Nitella</i> spp. stonewort spp.					<i>Iris versicolor</i>			✓	✓
<i>Najas flexilis/canadensis</i> slender naiad					<i>Eleocharis palustris</i>			✓	✓
<i>Najas gracillima</i> thread-like naiad					<i>Liadenum virginicum</i>			✓	✓
<i>Nitella</i> spp. stonewort spp.					<i>Hypericum ellipticum</i>			✓	✓
<i>Najas flexilis/canadensis</i> slender naiad					<i>Scheuchzeria palustris</i>				
<i>Najas gracillima</i> thread-like naiad					<i>Scheuchzeria palustris</i> <u>montana</u>			✓	
<i>Nitella</i> spp. stonewort spp.					<i>Carex comosa</i>			✓	
<i>Najas flexilis/canadensis</i> slender naiad					<i>Leersia orizoides</i>			✓	
<i>Najas gracillima</i> thread-like naiad					<i>Gymnastia terrestris</i>		✓	✓	✓
<i>Nitella</i> spp. stonewort spp.					<i>Ludwigia palustris</i>			✓	
<i>Najas flexilis/canadensis</i> slender naiad					<i>Calla palustris</i>			✓	
<i>Najas gracillima</i> thread-like naiad					<i>Spirodella polyrrhiza</i>			✓	

NOTES:

PLANT NET
16 - CMS DENSE*Calla palustris*
*Spirodella polyrrhiza***Najas flexilis* explanation and **form listing plants by scientific name is available at <http://www.lakestewards.org/volunteer-info/invasive-plant-monitors/data-form/>

Section 4: Observed Species of Concern

SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES

EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, gleotrichia, didymo

Section 3: Native Plant Inventory

For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector				Common Native Plant Checklist (con't)	Sector			
	8	11	12	9		8	11	12	9
aquatic moss spp.					<i>Potamogeton natans</i> floating-leaf pondweed		✓		
freshwater sponge spp.					<i>Potamogeton oakesianus</i> Oakes pondweed				
Metaphyton (colonial algae "clouds")					<i>Potamogeton perfoliatus</i> clasping-leaf pondweed		✓		
<i>Bidens beckii</i> water marigold		✓	✓		<i>Potamogeton pusillus</i> slender pondweed				
<i>Brasenia schreberi</i> watershield		✓	✓		<i>Potamogeton pusilloid</i> spp. small pondweed				
<i>Callitriche</i> spp. water starworts					<i>Potamogeton richardsonii</i> clasping (red-head) pondweed				
<i>Ceratophyllum demersum</i> coontail					<i>Potamogeton robbinsii</i> fern pondweed				✓
<i>Chara</i> spp. muskgrass					<i>Potamogeton spirillus</i> spiral-fruited pondweed				✓
<i>Dalichium arundinaceum</i> three-way sedge					<i>Potamogeton zosteriformis</i> flat-stem pondweed				
<i>Elatine minima</i> small waterwort					<i>Potamogeton</i> spp. pondweed spp.				
<i>Eleocharis acicularis</i> needle spikerush		✓			<i>Ranunculus</i> spp. water buttercups <i>flammula</i>		✓		
<i>Eleocharis robbinsii</i> Robbin's spikerush		✓			<i>Sagittaria graminea</i> grass-leaved arrowhead				
<i>Elodea canadensis</i> common waterweed					<i>Sagittaria latifolia</i> common arrowhead		✓	✓	
<i>Elodea nuttallii</i> slender (Nuttall's) waterweed					<i>Sagittaria</i> spp. arrowhead spp.				
<i>Eriocaulon aquaticum</i> pipewort					<i>Scheuchzeria subterminalis</i> water bulrush				
<i>Glyceria borealis</i> northern manna-grass					<i>Scheuchzeria subterminalis</i> soft-stem bulrush				
<i>Gratiola aurea</i> golden pelt					<i>Slum naeve</i> water parsnip				
<i>Isotria medeolae</i> quillwort spp.		✓			<i>Sparganium angustifolium</i> narrow floating-leaf bur-reed				
<i>Juncus militaris</i> bayonet rush			✓		<i>Sparganium fluctuans</i> floating leaf bur-reed		✓	✓	
<i>Juncus pelocarpus</i> brown fruited rush					<i>Sparganium</i> spp. bur-reed spp. <i>Americanum</i>		✓	✓	
<i>Lemma minor</i> common duckweed					<i>Spirodela polyrrhiza</i> giant duckweed				
<i>Lobelia dortmanna</i> water lobelia		✓	✓		<i>Typha latifolia</i> common cattail				
<i>Myriophyllum alterniflorum</i> alternate-flowered water-milfoil					<i>Typha</i> spp. cattail spp.				
<i>Myriophyllum farwellii</i> Farwell's water-milfoil					<i>Utricularia gibba</i> humped bladderwort				
<i>Myriophyllum humile</i> low water-milfoil					<i>Utricularia intermedia</i> northern bladderwort				
<i>Myriophyllum sibiricum</i> northern water-milfoil					<i>Utricularia minor</i> lesser bladderwort				
<i>Myriophyllum tomentosum</i> dwarf water-milfoil		✓			<i>Utricularia purpurea</i> large purple bladderwort				
<i>Myriophyllum verticillatum</i> whorled water-milfoil					<i>Utricularia radiata</i> floating bladderwort				✓
<i>Myriophyllum</i> spp. water-milfoil spp.					<i>Utricularia vulgaris</i> common bladderwort				✓
<i>Najas flexilis/canadensis</i> slender naiad		✓			<i>Utricularia</i> spp. bladderwort spp.		✓		
<i>Najas gracillima</i> thread-like naiad					<i>Vallisneria spiralis</i> wild celery (eel grass)		✓	✓	✓
<i>Nitella</i> spp. stonewort spp.					<i>Eleocharis palustris</i>		✓		
<i>Najas variegata</i> spatterdock		✓			<i>Iridium virgatum</i>		✓	✓	
<i>Nymphaea odorata</i> fragrant water lily		✓	✓		<i>Equisetum fluviatili</i>		✓		
<i>Nymphaeoides cordata</i> little floating heart					<i>Potamogeton</i> spp.				
<i>Pontederia cordata</i> pickerel weed		✓	✓		<i>Meerstrica orizoides</i>		✓	✓	
<i>Potamogeton amplifolius</i> large-leaf pondweed		✓	✓		<i>Spirodela polyrrhiza</i>		✓		
<i>Potamogeton bertholdii</i> Berchtold's slender pondweed		✓	✓		<i>Mysoites</i>				✓
<i>Potamogeton epiphyllus</i> ribbon-leaf pondweed		✓			<i>PIS VERICOLOR</i>				✓
<i>Potamogeton gemmiparus</i> budding slender pondweed		✓							
<i>Potamogeton gramineus</i> variable pondweed		✓	✓						

NOTES:
 COLOR KIT
 PENCIL LEAS
 BIG RIBBAND
 C.F. P. PERF SAMPLE
 BRYOZOANS
 DEAD LOON IN CWS W/IRIS - ASSUMED BOAT HIT

**Najas flexilis* explanation and **form listing plants by scientific name is available at <http://www.lakeswards.org/volunteer-info/invasive-plant-monitors/data-forms/>

Section 4: Observed Species of Concern

SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES

EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, gloetrichia, didymo

JIM OBRIEN
WG & MON ETC
LOAN

Waterbody BIG PENN Date/s 7/21/23 / 7/25/23 Page 4 of 6
 Section 3: Native Plant Inventory For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector				Common Native Plant Checklist (con't)	Sector			
	13	14	15	17		13	14	15	17
aquatic moss spp.	✓				Potamogeton natans floating-leaf pondweed	✓	✓	✓	
freshwater sponge spp.					Potamogeton oakesianus Oakes pondweed	✓	✓	✓	
Metaphyton (colonial algae "clouds")					Potamogeton perfoliatus clasping-leaf pondweed				
Bileta beckii water marigold	✓	✓	✓		Potamogeton pusillus slender pondweed	✓	✓		
Brasenia schreberi watershield	✓	✓	✓		Potamogeton pusilloid spp. small pondweed				
Callitriche spp. water starworts					Potamogeton richardsonii clasping (red-head) pondweed				
Ceratophyllum demersum coontail	✓	✓	✓		Potamogeton robbinsii fern pondweed	✓	✓	✓	
Chara spp. muskgrass				✓	Potamogeton spirillus spiral-fruited pondweed				✓ SAMPLE
Dulichium arundinaceum three-way sedge					Potamogeton zosteriformis flat-stem pondweed				
Elatine minima small waterwort					Potamogeton spp. pondweed spp.				
Eleocharis acicularis needle spikerush			✓		Ranunculus spp. water buttercups				✓
Eleocharis robbinsii Robbin's spikerush	✓	✓	✓		Sagittaria graminea grass-leaved arrowhead	✓	✓	✓	
Elodea canadensis common waterweed					Sagittaria latifolia common arrowhead	✓	✓	✓	
Elodea nuttallii slender (Nuttall's) waterweed					Sagittaria spp. arrowhead spp.				
Eriocaulon aquaticum pipewort					Schoenoplectus subterminalis water bulrush				
Glyceria borealis northern mannagrass		✓	✓		Schoenoplectus tabernaemontani soft-stem bulrush				
Gratiola aurea golden pent					Sium suave water parsnip	✓	✓		
Isoetes spp. quillwort spp.					Sparganium angustifolium narrow floating-leaf bur-reed				
Juncus militaris bayonet rush					Sparganium fluctans floating leaf bur-reed	✓	✓	✓	
Juncus pelocarpus brown fruited rush					Sparganium spp. bur-reed spp. <u>omprsum</u>				✓
Lemna minor common duckweed	✓	✓	✓		Spirodela polyrrhiza giant duckweed				
Limnium douglasii water lobelia			✓		Typha latifolia common cattail	✓	✓	✓	
Myriophyllum alterniflorum alternate-flowered water-milfoil					Typha spp. cattail spp.				
Myriophyllum farwellii Farwell's water-milfoil					Utricularia gibba lumpy bladderwort				
Myriophyllum humile low water-milfoil					Utricularia intermedia northern bladderwort				
Myriophyllum sibiricum northern water-milfoil					Utricularia minor lesser bladderwort				
Myriophyllum tenellum dwarf water-milfoil			✓		Utricularia purpurea large purple bladderwort	✓	✓	✓	
Myriophyllum verticillatum whorled water-milfoil					Utricularia radiata floating bladderwort				
Myriophyllum spp. water-milfoil spp.					Utricularia vulgaris common bladderwort				
Najas flexilis/canadensis slender naiad					Utricularia spp. bladderwort spp.	✓	✓	✓	
Najas gracillima thread-like naiad			✓		Fallisneria americana wild celery (eel grass)	✓	✓	✓	
Nitella spp. stonewort spp.		✓	✓		<u>Spirodela polyrrhiza</u>	✓	✓	✓	
Najas variiegata spatterdock		✓	✓		<u>Triadenum virginicum</u>	✓	✓	✓	
Nymphaea odorata fragrant water lily	✓	✓	✓		<u>Calla lily</u>	✓	✓	✓	
Nymphoides cordata little floating heart					<u>Boerhaavia strizoides</u>	✓	✓	✓	
Pontederia cordata pickerel weed	✓	✓	✓		<u>Eleocharis palustris</u>	✓	✓	✓	
Potamogeton amplifolius large-leaf pondweed	✓	✓	✓		<u>P. obtusifolius</u>				✓
Potamogeton berchtoldii Berchtold's slender pondweed	✓	✓	✓		<u>E. palustris</u>				✓
Potamogeton epiphyllus ribbon-leaf pondweed	✓	✓	✓		<u>Basioocarpus</u> → <u>Carex</u>				✓
Potamogeton gemmiparus budding slender pondweed	✓	✓	✓		<u>Mysaites</u>				
Potamogeton gramineus variable pondweed			✓		<u>Eleocharis palustris</u>				✓

NOTES:
 TILIA EXTENSION?
 POSSIBLE THIS IS POTAMOGETON MONTANUS
 LYTHRUM SP. - MAY 23 1 - 70.5446 21 PAVEN WAY

*Najas flexilis explanation and **form listing plants by scientific name is available at <http://www.lakesjwards.org/volunteer-info/invasive-plant-monitors/data-forms/>

Section 4: Observed Species of Concern GRASSON CREEK W. SIDE ST. ANNE'S STREAM, S. BANK

SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES

EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, gloetrichia, didymo
 → W. SIDE ST. ANNE'S STREAM W. BANK

Section 3: Native Plant Inventory

For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector	Common Native Plant Checklist (con't)	Sector
aquatic moss spp.	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Potamogeton natans</i> floating-leaf pondweed	✓ W ✓ S ✓ E ✓ NE ✓ E
freshwater sponge spp.		<i>Potamogeton oakesianus</i> Oakes pondweed	
Metaphyton (colonial algae "clouds")	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Potamogeton perfoliatus</i> clasping-leaf pondweed	
<i>Bidens beckii</i> water marigold	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Potamogeton pusillus</i> slender pondweed	
<i>Brasenia schreberi</i> watershield		<i>Potamogeton pusilloid</i> spp. small pondweed	
<i>Callitriche</i> spp. water starworts		<i>Potamogeton richardsonii</i> clasping (red-head) pondweed	
<i>Ceratophyllum demersum</i> coontail	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Potamogeton robbinsii</i> fern pondweed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Chara</i> spp. muskgrass	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Potamogeton spirillus</i> spiral-fruited pondweed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Dufourea arundinacea</i> three-way sedge	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Potamogeton zosteriformis</i> flat-stem pondweed	
<i>Elatine minima</i> small waterwort		<i>Potamogeton</i> spp. pondweed spp.	
<i>Eleocharis acicularis</i> needle spikerush	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Ranunculus</i> spp. water buttercups <i>flammula</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Eleocharis robbinsii</i> Robbin's spikerush	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Sagittaria graminea</i> grass-leaved arrowhead	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Elodea canadensis</i> common waterweed		<i>Sagittaria latifolia</i> common arrowhead	
<i>Elodea nuttallii</i> slender (Nuttall's) waterweed		<i>Sagittaria</i> spp. arrowhead spp.	
<i>Eriocaulon aquaticum</i> pipewort	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Schoenoplectus subterminalis</i> water bulrush	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Glyceria borealis</i> northern manna-grass		<i>Schoenoplectus tabernaemontani</i> soft-stem bulrush	
<i>Gratiola aurea</i> golden pert		<i>Sium suave</i> water parsnip	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Isoetes</i> spp. quillwort spp.		<i>Sparganium angustifolium</i> narrow floating-leaf bur-reed	
<i>Juncus militaris</i> bayonet rush		<i>Sparganium flaccidum</i> floating leaf bur-reed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Juncus pelocarpus</i> brown fruited rush	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Sparganium</i> spp. bur-reed spp. <i>americanum</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Lemna minor</i> common duckweed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Spirodela polyrrhiza</i> giant duckweed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Lobelia dortmanna</i> water lobelia		<i>Typha latifolia</i> common cattail	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Myriophyllum alterniflorum</i> alternate-flowered water-milfoil		<i>Typha</i> spp. cattail spp.	
<i>Myriophyllum farwellii</i> Farwell's water-milfoil		<i>Utricularia gibba</i> humped bladderwort	
<i>Myriophyllum humile</i> low water-milfoil		<i>Utricularia intermedia</i> northern bladderwort	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Myriophyllum sibiricum</i> northern water-milfoil		<i>Utricularia minor</i> lesser bladderwort	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Myriophyllum tenellum</i> dwarf water-milfoil	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Utricularia purpurea</i> large purple bladderwort	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Myriophyllum verticillatum</i> whorled water-milfoil		<i>Utricularia radiata</i> floating bladderwort	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Myriophyllum</i> spp. water-milfoil spp.		<i>Utricularia vulgaris</i> common bladderwort	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Najas flexilis/canadensis</i> slender naiad	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Utricularia</i> spp. bladderwort spp.	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Najas gracillima</i> thread-like naiad		<i>Puffinera americana</i> wild celery (cel grass)	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Nitella</i> spp. stonewort spp.		<i>P. obtusifolius</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Nuphar variegata</i> spatterdock	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Spirodela polyrrhiza</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Nymphaea odorata</i> fragrant water lily	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Triadenum virginica</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Nymphoides cordata</i> little floating hoar	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Carex comosa</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Pontederia cordata</i> pickerel weed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Eleocharis palustris</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Potamogeton amplifolius</i> large-leaf pondweed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Carex lasiocarpa</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Potamogeton berchtoldii</i> Berchtold's slender pondweed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Hypericum boreal.</i>	
<i>Potamogeton ephedrus</i> ribbon-leaf pondweed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Sparganium emersum</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Potamogeton gonispurus</i> budding slender pondweed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Rhynchospora alba</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E
<i>Potamogeton gramineus</i> variable pondweed	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E	<i>Schoenoplectus</i>	✓ W ✓ S ✓ E ✓ SE ✓ NE ✓ E

NOTES:
 F.W. MUSSELS ✓
 NOSTOC (sm. PEASIZE)
 BRYOZOAN (IE)
 tabernaemontani
 white beak sedge

**Najas flexilis* explanation and **form listing plants by scientific name is available at <http://www.lakesteward.org/volunteer-info/invasive-plant-monitors/data-forms/>

Section 4: Observed Species of Concern

SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES

EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, gloetrichia, didymo

Section 3: Native Plant Inventory

For inventory: ✓ = presence; D = dominant; U = uncommon

Common Native Plant Checklist *	Sector		Common Native Plant Checklist (con't)	Sector	
	4w	6		4w	6
aquatic moss spp.			<i>Potamogeton natans</i> floating-leaf pondweed		
freshwater sponge spp.	✓		<i>Potamogeton oakesianus</i> Oakes pondweed		
Metaphyton (colonial algae "clouds")	✓		<i>Potamogeton perfoliatus</i> clasping-leaf pondweed		
<i>Bidens beckii</i> water marigold	✓	✓	<i>Potamogeton pusillus</i> slender pondweed		
<i>Brasenia schreberii</i> watershield			<i>Potamogeton pusilloid</i> spp. small pondweed		
<i>Callitriche</i> spp. water starworts			<i>Potamogeton richardsonii</i> clasping (red-head) pondweed		
<i>Ceratophyllum demersum</i> coontail			<i>Potamogeton robbinsii</i> fern pondweed		✓
<i>Chara</i> spp. muskgrass			<i>Potamogeton spirillus</i> spiral-fruited pondweed	✓	✓
<i>Dulichium arundinaceum</i> three-way sedge			<i>Potamogeton zosteriformis</i> flat-stem pondweed		
<i>Elatine minima</i> small waterwort			<i>Potamogeton</i> spp. pondweed spp.		
<i>Eleocharis acicularis</i> needle spikerush			<i>Ranunculus</i> spp. water buttercups		
<i>Eleocharis robbinsii</i> Robbin's spikerush	✓	✓	<i>Sagittaria graminea</i> grass-leaved arrowhead		✓
<i>Elodea canadensis</i> common waterweed			<i>Sagittaria latifolia</i> common arrowhead		✓
<i>Elodea nuttallii</i> slender (Nuttall's) waterweed			<i>Sagittaria</i> spp. arrowhead spp.		
<i>Eriocaulon aquaticum</i> pipewort	✓		<i>Scheuchzeria subterminalis</i> water bulrush	✓	✓
<i>Glyceria borealis</i> northern mannagrass			<i>Scheuchzeria tabernaemontani</i> soft-stem bulrush		
<i>Gratiola aurea</i> golden pelt			<i>Stem suave</i> water parsnip		
<i>Isotetes</i> spp. quillwort spp.			<i>Sparganium angustifolium</i> narrow floating-leaf bur-reed		
<i>Juncus militaris</i> bayonet rush	✓		<i>Sparganium fluctuans</i> floating leaf bur-reed		
<i>Juncus pelocarpus</i> brown fruited rush	✓		<i>Sparganium</i> spp. bur-reed spp. <u>americanum</u>	✓	
<i>Lemna minor</i> common duckweed			<i>Spirodela polyrhiza</i> giant duckweed		
<i>Lobelia dortmanna</i> water lobelia			<i>Typha latifolia</i> common cattail		✓
<i>Myriophyllum alterniflorum</i> alternate-flowered water-milfoil			<i>Typha</i> spp. cattail spp.		
<i>Myriophyllum farwellii</i> Farwell's water-milfoil			<i>Utricularia gibba</i> humped bladderwort		
<i>Myriophyllum humile</i> low water-milfoil			<i>Utricularia intermedia</i> northern bladderwort		
<i>Myriophyllum sibiricum</i> northern water-milfoil			<i>Utricularia minor</i> lesser bladderwort		
<i>Myriophyllum tomentosum</i> dwarf water-milfoil	✓		<i>Utricularia purpurea</i> large purple bladderwort	✓	
<i>Myriophyllum verticillatum</i> whorled water-milfoil			<i>Utricularia radicata</i> floating bladderwort		
<i>Myriophyllum</i> spp. water-milfoil spp.			<i>Utricularia vulgaris</i> common bladderwort		
<i>Najas flexilis/canadensis</i> slender naiad			<i>Utricularia</i> spp. bladderwort spp.		
<i>Najas gracillima</i> thread-like naiad	✓	✓	<i>Valisneria spiralis</i> wild celery (eel grass)	✓	✓
<i>Najas</i> spp. stonewort spp.	✓	✓			
<i>Najas variegata</i> spatterdock	✓	✓			
<i>Nymphaea odorata</i> fragrant water lily	✓				
<i>Nymphoides cordata</i> little floating heart					
<i>Pontederia cordata</i> pickerel weed					
<i>Potamogeton amplifolius</i> large-leaf pondweed	✓				
<i>Potamogeton berchtoldii</i> Berchtold's slender pondweed	✓				
<i>Potamogeton epiphyllus</i> ribbon-leaf pondweed	✓				
<i>Potamogeton geminiparus</i> budding slender pondweed	✓				
<i>Potamogeton gramineus</i> variable pondweed	✓				

NOTES:

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Section 4: Observed Species of Concern

SPECIES	Sector / Location	GPS Waypoint	Buoy Code	NOTES

EXAMPLE SPECIES OF CONCERN: purple loosestrife, Chinese mystery snail, gloetrichia, didymo

LAKE PENNESEEWASSEE
MIDAS 3434

