

**Standard Aquatic Vegetation Summary Sheet**

Lake Name: Pentwater  
 County: Oceana  
 Surveyor: Rick Buteyn, Jared Laughlin  
 Survey Date: 08 28 2023  
 Total Number of AVAS Sites: 106

Code No	Plant Name	Occurrence per Density Category				Relative Density Calculations				Relative Density for Entire Littoral Zone		Code No	Plant Name
		A	B	C	D	A x 1	B x 10	C x 40	D x 80	Sum	%		
1	Eurasian milfoil	20	14			20	140	0	0	160	1.5	1	<i>Myriophyllum spicatum</i>
2	Curly leaf pondweed		1			0	10	0	0	10	0.1	2	<i>Potamogeton crispus</i>
3	Chara		21	11		0	210	440	0	650	6.1	3	<i>Chara sp.</i>
4	Thinleaf pondweed	4	2			4	20	0	0	24	0.2	4	<i>Potamogeton sp.</i>
5	Flatstem pondweed	2	23	3		2	230	120	0	352	3.3	5	<i>Potamogeton zosteriformis</i>
6	Robbins pondweed		2			0	20	0	0	20	0.2	6	<i>Potamogeton robbinsii</i>
7	Variable pondweed					0	0	0	0	0	0.0	7	<i>Potamogeton gramineus</i>
8	Whitestem pondweed		2			0	20	0	0	20	0.2	8	<i>Potamogeton praelongus</i>
9	Richardsons pondweed	3	42	3		3	420	120	0	543	5.1	9	<i>Potamogeton richardsonii</i>
10	Illinois pondweed					0	0	0	0	0	0.0	10	<i>Potamogeton illinoensis</i>
11	Large leaf pondweed					0	0	0	0	0	0.0	11	<i>Potamogeton amplifolius</i>
12	American pondweed					0	0	0	0	0	0.0	12	<i>Potamogeton americanus</i>
13	Floating leaf pondweed					0	0	0	0	0	0.0	13	<i>Potamogeton natans</i>
14	Water stargrass	3	24	4		3	240	160	0	403	3.8	14	<i>Heteranthera dubia</i>
15	Wild celery		42	35	5	0	420	1,400	400	2,220	20.9	15	<i>Vallisneria americana</i>
16	Sagittaria					0	0	0	0	0	0.0	16	<i>Sagittaria sp.</i>
17	Northern milfoil					0	0	0	0	0	0.0	17	<i>Myriophyllum sibiricum</i>
18	<i>M. verticillatum</i>					0	0	0	0	0	0.0	18	<i>Myriophyllum verticillatum</i>
19	<i>M. heterophyllum</i>					0	0	0	0	0	0.0	19	<i>Myriophyllum heterophyllum</i>
20	Coontail	10	30	22	1	10	300	880	80	1,270	12.0	20	<i>Ceratophyllum demersum</i>
21	Elodea	1	5	6	3	1	50	240	240	531	5.0	21	<i>Elodea canadensis</i>
22	<i>Utricularia spp.</i>	6	5			6	50	0	0	56	0.5	22	<i>Utricularia vulgaris</i>
23	Bladderwort-mini					0	0	0	0	0	0.0	23	<i>Utricularia minor</i>
24	Buttercup					0	0	0	0	0	0.0	24	<i>Ranunculus sp.</i>
25	<i>Najas flexilis</i>	1	8	2	1	1	80	80	80	241	2.3	25	<i>Najas flexilis</i>
26	Brittle naiad					0	0	0	0	0	0.0	26	<i>Najas minor</i>
27	Sago pondweed	1	5	1		1	50	40	0	91	0.9	27	<i>Stuckenia pectinata</i>
28						0	0	0	0	0	0.0	28	
29						0	0	0	0	0	0.0	29	
30	<i>Nymphaea</i>		2			0	20	0	0	20	0.2	30	<i>Nymphaea odorata</i>
31	Nuphar		2	1		0	20	40	0	60	0.6	31	<i>Nuphar sp.</i>
32	<i>Brasenia</i>					0	0	0	0	0	0.0	32	<i>Brasenia schreberi</i>
33	<i>Lemna minor</i>		5			0	50	0	0	50	0.5	33	<i>Lemna minor</i>
34	<i>Spirodella</i>					0	0	0	0	0	0.0	34	<i>Spirodela polyrhiza</i>
35	Watermeal		1			0	10	0	0	10	0.1	35	<i>Wolffia punctata</i>
36	Arrowhead					0	0	0	0	0	0.0	36	<i>Sagittaria latifolia</i>
37	Pickerelweed					0	0	0	0	0	0.0	37	<i>Pontederia cordata</i>
38	Arrow arum					0	0	0	0	0	0.0	38	<i>Peltandra virginica</i>
39	Cattails	2	3	1	1	2	30	40	80	152	1.4	39	<i>Typha sp.</i>
40	Bulrushes		2			0	20	0	0	20	0.2	40	<i>Schoenoplectus sp.</i>
41	Iris					0	0	0	0	0	0.0	41	<i>Iris sp.</i>
42	Swamp loosestrife					0	0	0	0	0	0.0	42	<i>Decodon verticillatus</i>
43	Purple loosestrife					0	0	0	0	0	0.0	43	<i>Lythrum salicaria</i>
44	Starry stonewort	1	25	17	1	1	250	680	80	1,011	9.5	44	<i>Nitellopsis obtusa</i>
45	Phragmites		1			0	10	0	0	10	0.1	45	<i>Phragmites australis</i>
61	Lake sedge	1				1	0	0	0	1	0.0	61	<i>Carex lacustris</i>

Total: 74.8

EGLE Number	EGLE Name	Common Name	Scientific Name
1	Eurasian milfoil	Eurasian milfoil	Myriophyllum spicatum
2	Curly leaf pondweed	Curly-leaf pondweed	Potamogeton crispus
3	Chara	Chara	Chara sp.
4	Thinleaf pondweed	Thin-leaf pondweed	Potamogeton sp.
5	Flatstem pondweed	Flat-stem pondweed	Potamogeton zosteriformis
6	Robbins pondweed	Robbins pondweed	Potamogeton robbinsii
7	Variable pondweed	Variable pondweed	Potamogeton gramineus
8	Whitestem pondweed	Whitestem pondweed	Potamogeton praelongus
9	Richardsons pondweed	Richardson's pondweed	Potamogeton richardsonii
10	Illinois pondweed	Illinois pondweed	Potamogeton illinoensis
11	Large leaf pondweed	Large-leaf pondweed	Potamogeton amplifolius
12	American pondweed	American pondweed	Potamogeton americanus
13	Floating leaf pondweed	Floating-leaf pondweed	Potamogeton natans
14	Water stargrass	Water stargrass	Heteranthera dubia
15	Wild celery	Wild celery	Vallisneria americana
16	Sagittaria	Underwater arrowhead	Sagittaria sp.
17	Northern milfoil	Northern milfoil	Myriophyllum sibiricum
18	M. verticillatum	Green milfoil	Myriophyllum verticillatum
19	M. heterophyllum	Variable-leaf milfoil	Myriophyllum heterophyllum
20	Coontail	Coontail	Ceratophyllum demersum
21	Elodea	Elodea	Elodea canadensis
22	Utricularia spp.	Bladderwort	Utricularia vulgaris
23	Bladderwort-mini	Mini bladderwort	Utricularia minor
24	Buttercup	Buttercup	Ranunculus sp.
25	Najas flexilis	Slender naiad	Najas flexilis
26	Brittle naiad	Brittle-leaf naiad	Najas minor
27	Sago pondweed	Sago pondweed	Stuckenia pectinata
28			
29			
30	Nymphaea	White waterlily	Nymphaea odorata
31	Nuphar	Yellow waterlily	Nuphar sp.
32	Brasenia	Water shield	Brasenia schreberi
33	Lemna minor	Duckweed	Lemna minor
34	Spirodella	Big duckweed	Spirodela polyrhiza
35	Watermeal	Watermeal	Wolffia punctata
36	Arrowhead	Arrowhead	Sagittaria latifolia
37	Pickeralweed	Pickeralweed	Pontederia cordata
38	Arrow arum	Arrow arum	Peltandra virginica
39	Cattails	Cattail	Typha sp.
40	Bulrushes	Bulrush	Schoenoplectus sp.
41	Iris	Iris	Iris sp.
42	Swamp loosestrife	Swamp loosestrife	Decodon verticillatus
43	Purple loosestrife	Purple loosestrife	Lythrum salicaria
44	Starry stonewort	Starry stonewort	Nitellopsis obtusa
45	Phragmites	Phragmites	Phragmites australis
46	Carolina fanwort	Carolina fanwort	Cabomba caroliniana
47	Southern naiad	Southern naiad	Najas guadalupensis
48	Spiny naiad	Spiny naiad	Najas marina
49	Nitella	Nitella	Nitella
50	Water smartweed (submersed)	Water smartweed	Persicaria amphibia var. stipulacea
51	Slender milfoil	Slender milfoil	Myriophyllum tenellum
52	Water marigold	Water marigold	Bidens beckii
53	Variable-leaf pondweed	Variable-leaf pondweed	Potamogeton diversifolius
54	Ribbon-leaf pondweed	Ribbon-leaf pondweed	Potamogeton epihydrus
55	Leafy pondweed	Leafy pondweed	Potamogeton foliosus
56	Clasping-leaf pondweed	Clasping-leaf pondweed	Potamogeton perfoliatus
57	Small pondweed	Small pondweed	Potamogeton pusillus
58	Horned pondweed	Horned pondweed	Zannichellia palustris
59	Submersed bulrush	Submersed bulrush	Schoenoplectus subterminalis
60	American lotus	American lotus	Nelumbo lutea
61	Lake sedge	Lake sedge	Carex lacustris
62	Small bur-reed	Small bur-reed	Sparganium natans
63	Buttonbush	Buttonbush	Cephalanthus occidentalis
64	Southern wild rice	Southern wild rice	Zizania aquatica
65	Northern wild rice	Northern wild rice	Zizania palustris
66	Water smartweed (emergent)	Water smartweed	Persicaria amphibia var. emersa
67	Flowering rush	Flowering rush	Butomus umbellatus
68	European frog-bit	European frog-bit	Hydrocharis morsus-ranae
69	Star Duckweed	Star Duckweed	Lemna trisulca

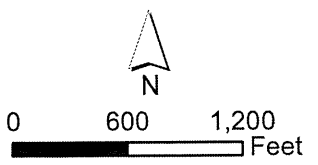
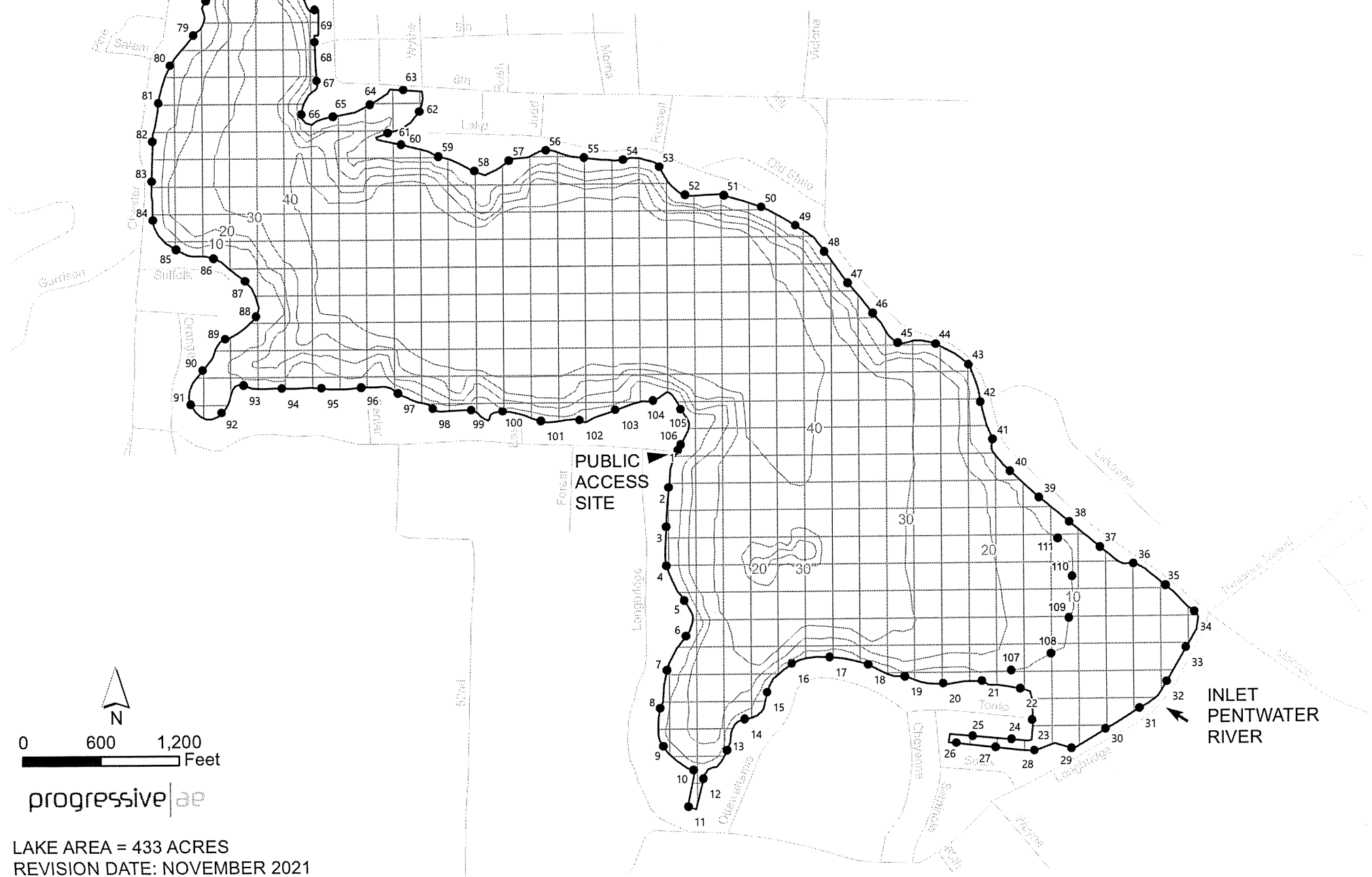
□ = 1 ACRE

OUTLET TO LAKE MICHIGAN

# PENTWATER LAKE OCEANA COUNTY, MICHIGAN AQUATIC PLANT SURVEY MAP

Date: 8-28-23  
Crew: ReB Dink Doel  
Weather: Sunny 24°F

Notes:



progressive|ae

LAKE AREA = 433 ACRES  
REVISION DATE: NOVEMBER 2021

# Pentwater Lake

# August 28, 2023

AVAS	1	2	3	4	5	6	7	8	9	10	11	12
1	25c	14b	15b	3b	9b	44b						
2	44c	20b	15b	25b	9b	3b	5b					
3	1a	44b	3b	20c	5b							
4	39a	20b	31c	3b	44b	9b						
5	20c	1b	3b	15b	9b	14b						
6	1b	20b	9b	3c	15b							
7	44b	31b	1b	9b	20c							
8	20c	15c	3b	9b								
9	20c	15c	1a	14b	3c							
10	20b	15c	1a	14b								
11	5b	1b	20a	9b								
12	4a	5b	14b	20b	15c	9b						
13	44b	15b	20c									
14	15c	20b	1b	14b								
15	15b	1b	9b	5b	14b	3b	25b					
16	25d	44b	20b	9b	14a	15b						
17	25b	44c	15b	20b								
18	3c	20a										
19	3c	15b	20b	1a	9a							
20	20d	3b	15b									
21	15c	3b										
22	1a	21a	20b	15c	5b	9b						
23	22a	5c	1b	21b	8b	44c						
24	20b	5b	8b	9b	21b	4a						
25	5b	9c	22a	4a	20b	21b						

# Pentwater Lake

## August 28, 2023

AVAS	1	2	3	4	5	6	7	8	9	10	11	12
26	35b	5b	9b	20c	1a	2b						
27	5b	20c	9b	44b	22a	1b	21c					
28	44b	21c	1b	5c	22b	9b	20b					
29	21c	22b	20c	5b	9b	14b						
30	21c	14b	22b	15c	1b							
31	14c	15c	1a	9a	5a	21b						
32	15d	14b	20a	9b								
33	15d	21b	14b	9b	5b	22b						
34	14c	15b	21c	20b	39b	1a	30b	9b	22a			
35	14b	39b	21d	22b	1a	33b						
36	33b	14b	9b	20c	21d	1a						
37	5b	15d	9c	20a								
38	20c	9c	15c									
39	20c	15c	9b	5b	33b							
40	44a	15c	5c	20c								
41	15b	33b	44b	9b								
42	39d	15c	20a									
43	44b	14b	15c	39c	45b	20b	1a					
44	15c	39a	5b	20c								
45	44b	9b	15b									
46	27b	44b	15b	9b	1a							
47	44b	20b										
48	44b	40b	20b	15b	5b							
49	40b	15b	20b									
50	44b	15c	39b	4b	20b							

# Pentwater Lake

## August 28, 2023

AVAS	1	2	3	4	5	6	7	8	9	10	11	12
51	20c	15b										
52	20c	15b	9b									
53	20c	15c	9b	33b								
54	15c	20c	14b	44b								
55	44b	15b	5b									
56	27b	44b	20b	15b	5b							
57	44b	15b	9b	20b								
58	15c	44c	20c	1a								
59	1a	14a	15b	20b								
60	14b	20c	15c	22a	1b	9b						
61	15b	1b	5b	14c	21c							
62	15b	20b	9b	1b	5b							
63	22a	9b	1b	21d	4b	61a	5b					
64	14b	15b	9b									
65	No vegetation present											
66	No vegetation present											
67	9b	14c	15b									
68	15b	5b	14b	1a	25a							
69	15b	14b	20b									
70	15c	9b										
71	15c	9b										
72	No vegetation present											
73	15c	14b	20b									
74	15c	14b	20b	27b								
75	No vegetation present											

# Pentwater Lake

## August 28, 2023

AVAS	1	2	3	4	5	6	7	8	9	10	11	12
76	15c	4a										
77	15c											
78	15d	9b										
79	44b	1a	9b									
80	44c	15c	9b									
81	44c	1a	5a	27a	14a	20a						
82	15c	14b	3b	44c								
83	44c	15c										
84	15c	1a	3b									
85	15c	25b	20c									
86	44c	27b	15b	3b								
87	3c	25c	27b	20a	15b							
88	3c	25b	15b	9b	20b							
89	27c	15c	20a									
90	44d	15b	14b	9b								
91	44c	9b	15c	3c	20b	30b						
92	15d	20b	5b	14b	3c	1a	3b					
93	15b	20a	25b									
94	31b	15b	3c	44b	9a	20a						
95	15c	44c	9b	3b								
96	3b	44b	15b									
97	15c	3c										
98	3c	25b	44b									
99	15b	3b	44b									
100	15b	3b	44b									

# Pentwater Lake

## August 28, 2023

AVAS	1	2	3	4	5	6	7	8	9	10	11	12
101	6b	44c	3b	25b								
102	44c	3b	15b	6b								
103	44c	15b										
104	44c	3b	15b									
105	44c	3b	15b	20b								
106	44c	3b	15b	1a	20c							