

Standard Aquatic Vegetation Assessment Site Species Density Sheet

		Aquatic Vegetation Assessment Site Number								Aquatic Vegetation Assessment Site Number										
Code No.	Plant Name	NO. 17	NO. 18	NO. 19	NO. 20	NO. 21	NO. 22	NO. 23	NO. 24	Code No.	Plant Name	NO. 25	NO. 26	NO. 27	NO. 28	NO. 29	NO. 30	NO. 31	NO. 32	
1	Eurasian watermilfoil		a			b	b		a	1	Eurasian watermilfoil		b	a	a	a	a			
2	Curly leaf pondweed					a				2	Curly leaf pondweed									a
3	Chara									3	Chara									
4	Thin leaf pondweed									4	Thin leaf pondweed									
5	Flat stem pondweed	b			a		b	a		5	Flat stem pondweed		b	a	b	b				
6	Robbins pondweed	b	c	c	b	b	b	b	b	6	Robbins pondweed	b	c	c	c	c	c	b	c	
7	Variable pondweed		b			a			b	7	Variable pondweed	b	b	b		b	b	b	c	
8	White stem pondweed	a							a	8	White stem pondweed			b	a					
9	Richardsons pondweed									9	Richardsons pondweed									
10	Illinois pondweed				a		b	a	b	10	Illinois pondweed	b		b	b	b			a	b
11	Large leaf pondweed									11	Large leaf pondweed									
12	American pondweed									12	American pondweed									
13	Floating leaf pondweed									13	Floating leaf pondweed									
14	Water stargrass									14	Water stargrass									
15	Wild Celery									15	Wild Celery									
16	Arrowhead (submergent)									16	Arrowhead (submergent)									
17	Native milfoil									17	Native milfoil									
18	Whorled watermilfoil									18	Whorled watermilfoil									
19	Various leaf watermilfoil									19	Various leaf watermilfoil									
20	Coontail	a	b	b	a	b	b	b		20	Coontail				b	b	b	b	b	
21	Elodea									21	Elodea									a
22	Bladderwort					a				22	Bladderwort								a	b
23	Bladderwort (mini)									23	Bladderwort (mini)									
24	Buttercup									24	Buttercup									
25	Najas spp.	c	b	b	c	c	b	b	c	25	Najas spp.	c	c	b	b	b	b	b	b	b
26	Brittle naiad									26	Brittle naiad									
27	Sago pondweed									27	Sago pondweed									
28				b		a		a		28				a						a
29										29			a							a
30	White waterlily	b	a	a	b	b	b	b	b	30	White waterlily	b	b	b	c	b	b	c	b	
31	Yellow waterlily	a	a		a	a	a	a	a	31	Yellow waterlily	a	b	a	b	b		c	b	
32	Watershield	b	c	b		c	b	b	b	32	Watershield	b	b	b	c	c	b	d	d	
33	Small duckweed									33	Small duckweed									
34	Great duckweed									34	Great duckweed									
35	Watermeal									35	Watermeal									
36	Arrowhead									36	Arrowhead									
37	Pickereelweed	a	a	a	b	c			a	37	Pickereelweed	b	b	b	b	b	b	c	c	
38	Arrow arum									38	Arrow arum									
39	Cattail					a				39	Cattail	a	a	a					b	a
40	Bulrush	a								40	Bulrush									
41	Iris									41	Iris									
42	Swamp Loosestrife					b	b	b	b	42	Swamp Loosestrife	a			b					b
43	Purple Loosestrife									43	Purple Loosestrife									
44									a	44										a
45										45										
46			a							46										
47										47										

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		NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8			NO. 9	NO. 10	NO. 11	NO. 12	NO. 13	NO. 14	NO. 15	NO. 16
1	Eurasian watermilfoil	c	a	b	b	b	b	a	a	1	Eurasian watermilfoil	b		b	b	b			
2	Curly leaf pondweed	b			a					2	Curly leaf pondweed					a	a		
3	Chara									3	Chara								
4	Thin leaf pondweed									4	Thin leaf pondweed						c		
5	Flat stem pondweed	a	a	a		a	b	a		5	Flat stem pondweed	b	b	b	b	a	a	a	
6	Robbins pondweed	b	a	b	a	a	b		a	6	Robbins pondweed	b		b	a	b	a	a	
7	Variable pondweed			a	b		b			7	Variable pondweed			b	b				
8	White stem pondweed									8	White stem pondweed								
9	Richardsons pondweed									9	Richardsons pondweed								
10	Illinois pondweed						a			10	Illinois pondweed	a	b	b	b	b			
11	Large leaf pondweed			a	a	a				11	Large leaf pondweed								
12	American pondweed									12	American pondweed								
13	Floating leaf pondweed									13	Floating leaf pondweed								
14	Water stargrass									14	Water stargrass								
15	Wild Celery	b								15	Wild Celery					a			
16	Arrowhead (submergent)									16	Arrowhead (submergent)								
17	Native milfoil									17	Native milfoil								
18	Whorled watermilfoil									18	Whorled watermilfoil								
19	Various leaf watermilfoil									19	Various leaf watermilfoil								
20	Coontail			a	a	b				20	Coontail	b	b	b	b	b	c	b	b
21	Elodea	a								21	Elodea		b	a	a	a		a	
22	Bladderwort									22	Bladderwort			b			a		
23	Bladderwort (mini)									23	Bladderwort (mini)								
24	Buttercup									24	Buttercup								
25	Najas spp.	c	c	c	c	c	c	c	c	25	Najas spp.	c	b	b	b	b	b	b	c
26	Brittle naiad									26	Brittle naiad								
27	Sago pondweed									27	Sago pondweed								
28	<i>Nitella</i>			b	b		b	b	a	28									
29	<i>Smartweed</i>							a	a	29		a							
30	White waterlily	a	a			a	a	a	a	30	White waterlily	a	b	c	c	c	d	c	c
31	Yellow waterlily									31	Yellow waterlily		b	c	c	b	b	b	a
32	Watershield			a		a	a			32	Watershield		a	b	b	b	a	a	
33	Small duckweed									33	Small duckweed						a	a	
34	Great duckweed									34	Great duckweed								
35	Watermeal									35	Watermeal								
36	Arrowhead									36	Arrowhead							a	
37	Pickerelweed									37	Pickerelweed		a	b	b	b	c	b	b
38	Arrow arum									38	Arrow arum								
39	Cattail									39	Cattail						b	a	b
40	Bulrush									40	Bulrush		a				a	a	a
41	Iris									41	Iris							a	a
42	Swamp Loosestrife									42	Swamp Loosestrife								
43	Purple Loosestrife									43	Purple Loosestrife								
44	<i>Water Marigold</i>									44				b					
45										45									
46	<i>Eleocharis</i>		a		a				a	46									a
47	<i>Rush</i>									47									

Standard Aquatic Vegetation Summary Sheet

SURVEY BY: M. Preisser, E. Bacon (DEQ)

Code No	Plant Name	Total number of AVAS's for each Density Category				Calculations				Sum of Previous Four Columns	Total Number of AVAS's	Quotient of Column 9 divided by Column 10	Code No	Plant Name
		A	B	C	D	Category A x 1	Category B x 10	Category C x 40	Category D x 80					
		1	2	3	4	5	6	7	8					
1	Eurasian milfoil	10	13	1	0	10	130	40	0	180	35	5.1	1	Eurasian milfoil
2	Curly leaf pondweed	5	1	0	0	5	10	0	0	15	35	0.4	2	Curly leaf pondweed
3	Chara					0	0	0	0	0	35	0.0	3	Chara
4	Thinleaf pondweed	0	0	1	0	0	0	40	0	40	35	1.1	4	Thinleaf pondweed
5	Flatstem pondweed	12	11	0	0	12	110	0	0	122	35	3.5	5	Flatstem pondweed
6	Robbins pondweed	7	15	10	0	7	150	400	0	557	35	15.9	6	Robbins pondweed
7	Variable pondweed	2	14	1	0	2	140	40	0	182	35	5.2	7	Variable pondweed
8	Whitestem pondweed	3	1	0	0	3	10	0	0	13	35	0.4	8	Whitestem pondweed
9	Richardsons pondweed					0	0	0	0	0	35	0.0	9	Richardsons pondweed
10	Illinois pondweed	5	13	0	0	5	130	0	0	135	35	3.9	10	Illinois pondweed
11	Large leaf pondweed	3	0	0	0	3	0	0	0	3	35	0.1	11	Large leaf pondweed
12	American pondweed					0	0	0	0	0	35	0.0	12	American pondweed
13	Floating leaf pondweed					0	0	0	0	0	35	0.0	13	Floating leaf pondweed
14	Water stargrass					0	0	0	0	0	35	0.0	14	Water stargrass
15	Wild Celery	1	2	0	0	1	20	0	0	21	35	0.6	15	Wild Celery
16	Sagittaria					0	0	0	0	0	35	0.0	16	Sagittaria
17	Northern milfoil					0	0	0	0	0	35	0.0	17	Northern milfoil
18	M. verticillatum					0	0	0	0	0	35	0.0	18	M. verticillatum
19	M. heterophyllum					0	0	0	0	0	35	0.0	19	M. heterophyllum
20	Coontail	5	19	1	0	5	190	40	0	235	35	6.7	20	Coontail
21	Elodea	6	1	0	0	6	10	0	0	16	35	0.5	21	Elodea
22	Utricularia spp.	3	2	0	0	3	20	0	0	23	35	0.7	22	Utricularia spp.
23	Bladderwort-mini					0	0	0	0	0	35	0.0	23	Bladderwort-mini
24	Buttercup					0	0	0	0	0	35	0.0	24	Buttercup
25	Najas spp.	0	16	19	0	0	160	760	0	920	35	26.3	25	Najas spp.
26	Brittle naiad					0	0	0	0	0	35	0.0	26	Brittle naiad
27	Sago pondweed					0	0	0	0	0	35	0.0	27	Sago pondweed
28	Nitella	5	5	0	0	5	50	0	0	55	35	1.6	28	
29	Smartweed	5	0	0	0	5	0	0	0	5	35	0.1	29	
30	Nymphaea	11	14	7	1	11	140	280	80	511	35	14.6	30	Nymphaea
31	Nuphar	10	9	3	0	10	90	120	0	220	35	6.3	31	Nuphar
32	Brasenia	7	14	4	2	7	140	160	160	467	35	13.3	32	Brasenia
33	Lemna minor	2	0	0	0	2	0	0	0	2	35	0.1	33	Lemna minor
34	Spirodella					0	0	0	0	0	35	0.0	34	Spirodella
35	Watermeal					0	0	0	0	0	35	0.0	35	Watermeal
36	Arrowhead	1	0	0	0	1	0	0	0	1	35	0.0	36	Arrowhead
37	Pickerelweed	5	13	4	0	5	130	160	0	295	35	8.4	37	Pickerelweed
38	Arrow Arum					0	0	0	0	0	35	0.0	38	Arrow Arum
39	Cattails	8	3	0	0	8	30	0	0	38	35	1.1	39	Cattails
40	Bulrushes	6	1	0	0	6	10	0	0	16	35	0.5	40	Bulrushes
41	Iris	2	0	0	0	2	0	0	0	2	35	0.1	41	Iris
42	Swamp Loosestrife	2	6	0	0	2	60	0	0	62	35	1.8	42	Swamp Loosestrife
43	Purple Loosestrife					0	0	0	0	0	35	0.0	43	Purple Loosestrife
44	Water marigold	2	1	0	0	2	10	0	0	12	35	0.3	44	
45						0	0	0	0	0	35	0.0	45	
46	Eleocharis sp.	5	0	0	0	5	0	0	0	5	35	0.1	46	Eleocharis sp.
47	Rush	4	1	0	0	4	10	0	0	14	35	0.4	47	Rush
48	Sedge	2	0	0	0	2	0	0	0	2	35	0.1	48	Sedge

Standard Aquatic Vegetation Summary Sheet

waterbody: HICKS LAKE
 e.w.m. distribution: 68.57%

county: OSCEOLA
 surveyors: Matthew Preisser, Eric Bacon, DEQ

survey date: 7/28/2005 # of a.v.a.s.'s: 35

plant species	# of a.v.a.s. per density category				density calculations				sum of previous four columns	cumulative cover (column 9 / # of a.v.a.s.'s)
	a	b	c	d	a x 1	b x 10	c x 40	d x 80		
	1	2	3	4	5	6	7	8	9	10
<i>Najas spp.</i>	0	16	19	0	0	160	760	0	920	26.29
<i>Potamogeton robbinsii</i>	7	15	10	0	7	150	400	0	557	15.91
<i>Ceratophyllum demersum</i>	5	19	1	0	5	190	40	0	235	6.71
<i>Potamogeton gramineus</i>	2	14	1	0	2	140	40	0	182	5.20
<i>Myriophyllum spicatum</i>	10	13	1	0	10	130	40	0	180	5.14
<i>Potamogeton illinoensis</i>	5	13	0	0	5	130	0	0	135	3.86
<i>Potamogeton zosteriformis</i>	12	11	0	0	12	110	0	0	122	3.49
<i>Nitella spp.</i>	5	5	0	0	5	50	0	0	55	1.57
<i>Potamogeton spp. (thin-leaf)</i>	0	0	1	0	0	0	40	0	40	1.14
<i>Utricularia spp.</i>	3	2	0	0	3	20	0	0	23	0.66
<i>Vallisneria americana</i>	1	2	0	0	1	20	0	0	21	0.60
<i>Elodea canadensis</i>	6	1	0	0	6	10	0	0	16	0.46
<i>Potamogeton crispus</i>	5	1	0	0	5	10	0	0	15	0.43
<i>Potamogeton praelongus</i>	3	1	0	0	3	10	0	0	13	0.37
<i>Bidens beckii</i>	2	1	0	0	2	10	0	0	12	0.34
<i>Potamogeton amplifolius</i>	3	0	0	0	3	0	0	0	3	0.09
<i>Nymphaea spp.</i>	11	14	7	1	11	140	280	80	511	14.60
<i>Brasenia schreberi</i>	7	14	4	2	7	140	160	160	467	13.34
<i>Pontederia cordata</i>	5	13	4	0	5	130	160	0	295	8.43
<i>Nuphar spp.</i>	10	9	3	0	10	90	120	0	220	6.29
<i>Decodon verticillatus</i>	2	6	0	0	2	60	0	0	62	1.77
<i>Typha spp.</i>	8	3	0	0	8	30	0	0	38	1.09
<i>Scirpus spp.</i>	6	1	0	0	6	10	0	0	16	0.46
<i>Juncus spp.</i>	4	1	0	0	4	10	0	0	14	0.40
<i>Polygonum spp.</i>	5	0	0	0	5	0	0	0	5	0.14
<i>Eleocharis spp.</i>	5	0	0	0	5	0	0	0	5	0.14
<i>Iris spp.</i>	2	0	0	0	2	0	0	0	2	0.06
<i>Lemna spp.</i>	2	0	0	0	2	0	0	0	2	0.06
<i>Carex spp.</i>	2	0	0	0	2	0	0	0	2	0.06
<i>Sagittaria spp. (emergent)</i>	1	0	0	0	1	0	0	0	1	0.03

a.v.a.s. - aquatic vegetation assessment site
 e.w.m. - eurasian watermilfoil (*Myriophyllum spicatum*)

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		NO. 33	NO. 34	NO. 35	NO. 36	NO. 37	NO. 38	NO. 39	NO. 40			NO. 41	NO. 42	NO. 43	NO. 44	NO. 45	NO. 46	NO. 47	NO. 48
1	Eurasian watermilfoil	a	b	b						1	Eurasian watermilfoil								
2	Curly leaf pondweed									2	Curly leaf pondweed								
3	Chara									3	Chara								
4	Thin leaf pondweed									4	Thin leaf pondweed								
5	Flat stem pondweed		a	b						5	Flat stem pondweed								
6	Robbins pondweed	c	c	b						6	Robbins pondweed								
7	Variable pondweed		b	b						7	Variable pondweed								
8	White stem pondweed									8	White stem pondweed								
9	Richardsons pondweed									9	Richardsons pondweed								
10	Illinois pondweed	b	b							10	Illinois pondweed								
11	Large leaf pondweed									11	Large leaf pondweed								
12	American pondweed									12	American pondweed								
13	Floating leaf pondweed									13	Floating leaf pondweed								
14	Water stargrass									14	Water stargrass								
15	Wild Celery			b						15	Wild Celery								
16	Arrowhead (submergent)									16	Arrowhead (submergent)								
17	Native milfoil									17	Native milfoil								
18	Whorled watermilfoil									18	Whorled watermilfoil								
19	Various leaf watermilfoil									19	Various leaf watermilfoil								
20	Coontail		a	b						20	Coontail								
21	Elodea									21	Elodea								
22	Bladderwort									22	Bladderwort								
23	Bladderwort (mini)									23	Bladderwort (mini)								
24	Buttercup									24	Buttercup								
25	Najas spp.	c	c	c						25	Najas spp.								
26	Brittle naiad									26	Brittle naiad								
27	Sago pondweed									27	Sago pondweed								
28										28									
29										29									
30	White waterlily	b	a	a						30	White waterlily								
31	Yellow waterlily	b								31	Yellow waterlily								
32	Watershield	b	b	a						32	Watershield								
33	Small duckweed									33	Small duckweed								
34	Great duckweed									34	Great duckweed								
35	Watermeal									35	Watermeal								
36	Arrowhead									36	Arrowhead								
37	Pickerelweed	b								37	Pickerelweed								
38	Arrow arum									38	Arrow arum								
39	Cattail	a	a							39	Cattail								
40	Bulrush		b	a						40	Bulrush								
41	Iris									41	Iris								
42	Swamp Loosestrife			a						42	Swamp Loosestrife								
43	Purple Loosestrife									43	Purple Loosestrife								
44										44									
45										45									