

Appendix D

**Manatee 1 Mitigation Wetlands
Enhanced Native Habitats - Vegetation Monitoring
Sample Data (2004)**

Manatee County Site #1 Vegetation Monitoring-Baseline			
Transect: 2		Date: 6/1/2001	
Orientation: 120°		Personnel: WRC	
Water Depth	0		
Species	% Ground	% Midstory	% Canopy
Bare Ground	14	17	55
Cephalanthus occidentalis	5	10	
Ilex cassine		1	11
Itea virginica		8	
Ludwigia peruviana*	47	35	
Magnolia virginiana	1	1	6
Myrica cerifera	3	10	1
Osmunda cinnamomea	10	3	
Salicornia virginica	1	11	26
Schinus terebinthifolius*	2	3	
Thelypteris hispidula var. versicolor	12	1	1
Woodwardia virginica	6		
Total Veg.	86	83	45

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Exotic Time Zero			
Transect: 2		Date: 12/5/2004	
Orientation: 120°		Personnel: MJF	
Water Depth	avg 4 inches		
Species	% Ground	% Midstory	% Canopy
Bare Ground	35		
Hydrocotyle umbellata	4		
Ilex cassine		8	14
Itea virginica	2	5	
Ludwigia peruviana*	8	12	
Lyonia lucida		3	
Magnolia virginiana		4	8
Myrica cerifera	2	18	1
Nyssa sylvatica			4
Osmunda cinnamomea	28		
Persea palustris	1	4	2
Quercus laurifolia		2	2
Quercus nigra			
Salix caroliniana		8	4
Smilax sp.		1	
Woodwardia virginica	2		
Cephalanthus occidentalis	2	5	
Thelypteris interrupta	12		
Total Veg.	96	70	35

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Baseline			
Transect: 4		Date: 6/1/2001	
Orientation: 220°		Personnel: WRC	
Water Depth	0		
Species	% Ground	% Midstory	% Canopy
Bare Ground	32		
Ludwigia peruviana*	37	49	
Typha sp*	31	37	
Total Veg.	68	86	0

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Exotic Time Zero			
Transect: 4		Date: 12/6/2004	
Orientation: 220°		Personnel: MJF	
Water Depth	8-10 inches		
Species	% Ground	% Midstory	% Canopy
Bare Ground	47		
Algae sp.	2		
Ludwigia peruviana*			
Typha sp*	1		
Lemna minuta	18		
Polygonum punctatum	4		
Ludwigia repens	2		
Unknown herb	2		
Echinochloa crusgalli	2		
Hydrocotyle umbellata	8		
Eleocharis vivipara	3		
Salicornia sp.	11		
Total Veg.	53	0	0

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Baseline			
Transect: 5		Date: 6/2/2001	
Orientation: 240°		Personnel: WRC	
Water Depth	0		
Species	% Ground	% Midstory	% Canopy
Bare Ground	60		
Ampelopsis arborea	1		
Andropogon sp.			
Axonopus sp.			
Bidens pilosa	1		
Centella asiatica	1		
Desmodium incanum	1		
Paspalum notatum	10		
Parthenocissus quinquefolia	2		
Quercus laurifolia		2	22
Quercus virginiana	3		40
Sabal palmetto	3	11	4
Schinus terebinthifolius*	4	42	1
Serenoa repens	9		
Sesbania sp.*	1		
Setaria geniculata			
Smilax sp.		2	
Toxicodendron radicans	1		
Urena lobata*	2		
Vitis rotundifolia	1		
Total Veg.	40	57	67

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Exotic Time Zero			
Transect: 5		Date: 12/6/2004	
Orientation: 240°		Personnel: MJF	
Water Depth	0		
Species	% Ground	% Midstory	% Canopy
Bare Ground	15		
Ampelopsis arborea			
Andropogon sp.	4		
Axonopus sp..	5		
Bidens sp.	3		
Commelina diffusa	16		
Desmodium sp.	4		
Paspalum notatum	14		
Parthenocissus quinquefolia			
Quercus laurifolia		3	21
Quercus virginiana	1	2	38
Sabal palmetto	5	13	3
Schinus terebinthifolius*			
Serenoa repens	11		
Sesbania sp.*			
Setaria geniculata	3		
Smilax sp.			
Toxicodendron radicans	2		
Urena lobata*	14		
Vitis rotundifolia	3		
Total Veg.	85	18	62

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Baseline			
Transect: 8		Date: 6/2/2001	
Orientation: 275°		Personnel: CS	
Water Depth	0		
Species	% Ground	% Midstory	% Canopy
Bare Ground	36		
Aster carolinianus			
Blechnum serrulatum	1		
Cephalanthus occidentalis	2	16	
Commelina diffusa	3		
Ludwigia peruviana*	44		
Myrica cerifera		1	
Polygala sp.	4		
Polygonum punctatum			
Pontederia cordata	2		
Sabal palmetto		2	2
Salix caroliniana		20	19
Schinus terebinthifolius*	2	18	4
Thelypteris interrupta	6		
Thalia geniculata			
Unknown herb			
Total Veg.	64	57	25

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Exotic Time Zero			
Transect: 8		Date: 12/6/2004	
Orientation: 275°		Personnel: MJF	
Water Depth	4 inches		
Species	% Ground	% Midstory	% Canopy
Bare Ground	74		
Aster carolinianus	3		
Blechnum serrulatum	2		
Cephalanthus occidentalis		8	
Commelina diffusa	5		
Ludwigia peruviana*	5		
Myrica cerifera		2	
Polygala sp.	3		
Polygonum punctatum	22		
Pontederia cordata	6		
Sabal palmetto			3
Salix caroliniana	3	22	26
Schinus terebinthifolius*			
Thelypteris interrupta	7		
Thalia geniculata	2		
Unknown herb	2		
Total Veg.	60	32	29

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Baseline			
Transect: 9		Date: 6/2/2001	
Orientation: 320°		Personnel: CS	
Water Depth	0		
Species	% Ground	% Midstory	% Canopy
Bare Ground	53		
Andropogon virginicus			
Bumeila sp.		1	
Callicarpa americana			
Cyperus sp.			
Parthenocissus quinquefolia	2		
Paspalum notatum	8		
Psychotria sp.			
Quercus virginiana	1		63
Sabal palmetto	7	11	14
Schinus terebinthifolius*	1	7	
Serenoa repens	20	7	
Smilax sp.	4		
Toxicodendron radicans	1		
Urena lobata*	1		
Vitis rotundifolia	2		
Total Veg.	47	26	77

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Exotic Time Zero			
Transect: 9		Date: 12/17/2004	
Orientation: 320°		Personnel: MJF	
Water Depth	0		
Species	% Ground	% Midstory	% Canopy
Bare Ground	32		
Andropogon virginicus	1		
Bumeila sp.			
Callicarpa americana	1		
Cyperus sp.	2		
Parthenocissus quinquefolia			
Paspalum notatum	3		
Psychotria sp.	2		
Quercus virginiana	2	1	68
Sabal palmetto	6	22	11
Schinus terebinthifolius*			
Serenoa repens	36		
Smilax sp.	4		
Toxicodendron radicans	1		
Urena lobata*	8		
Vitis rotundifolia	2		
Total Veg.	68	23	79

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Baseline			
Transect: 10		Date: 5/6/2001	
Orientation: 270°		Personnel: KB	
Water Depth			
Species	% Ground	% Midstory	% Canopy
Bare Ground	21		
Ampelopsis arborea	3	5	
Cephalanthus occidentalis		1	
Commelina diffusa			
Cuphea carthagenensis	2		
Cyperus spp.	3		
Eleocharis baldwinii			
Juncus effusus	1		
Juncus megacephalus	1		
Ludwigia peruviana*	52		
Ludwigia repens			
Osmunda cinnamomea	1		
Paspalidium geminatum			
Polygonum punctatum	7		
Pontederia cordata	1		
Salix caroliniana		34	27
Sacciolepis striata			
Spartina bakeri	8		
Cynodon dactylon			
Thelypteris sp.			
Total Veg.	79	40	27

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Exotic Time Zero			
Transect: 10		Date: 12/17/2004	
Orientation: 270°		Personnel: MJF	
Water Depth			
Species	% Ground	% Midstory	% Canopy
Bare Ground	59	82	89
Ampelopsis arborea			
Cephalanthus occidentalis			
Commelina diffusa	2		
Cuphea carthagenensis			
Cyperus spp.	4		
Eleocharis baldwinii	3		
Juncus effusus	1		
Juncus megacephalus			
Ludwigia peruviana*	2		
Ludwigia repens	1		
Osmunda cinnamomea			
Paspalidium geminatum			
Polygonum punctatum	31		
Pontederia cordata	2		
Salix caroliniana	2	21	8
Sacciolepis striata	6		
Spartina bakeri	4		
Cynodon dactylon	1		
Thelypteris sp.	11		
Total Veg.	70	21	8

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Baseline			
Transect: 11		Date: 5/6/2001	
Orientation: 240°		Personnel: KB	
Water Depth	0		
Species	% Ground	% Midstory	% Canopy
Bare Ground	60		
Ampelopsis arborea	11	2	
Baccharis halimifolia	1	5	
Cephalanthus occidentalis	1	7	
Commelina diffusa	1		
Cynodon dactylon			
Cyperus sp.			
Echinochloa crusgalli			
Eleocharis vivipara			
Hydrocotyle umbellata			
Juncus effusus	2		
Lemna minuta			
Ludwigia peruviana*	11	5	
Polygonum punctatum	9		
Polygala sp.	1		
Pontederia cordata			
Sabal palmetto			3
Salix caroliniana	1	29	50
Salicornia sp			
Schinus terebinthifolius*		13	3
Spartina bakeri	2		
Thelypteris sp.			
Unknown herb			
Total Veg.	40	61	56

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Exotic Time Zero			
Transect: 11		Date: 12/17/2004	
Orientation: 240°		Personnel: MJF	
Water Depth	6 inches		
Species	% Ground	% Midstory	% Canopy
Bare Ground			
Ampelopsis arborea	1		
Baccharis halimifolia			
Cephalanthus occidentalis		3	
Commelina diffusa	2		
Cynodon dactylon	3		
Cyperus sp.	2		
Echinochloa crusgalli	2		
Eleocharis vivipara	8		
Hydrocotyle umbellata	2		
Juncus effusus	6		
Lemna minuta	12		
Ludwigia peruviana*	1		
Polygonum punctatum	35		
Polygala sp.			
Pontederia cordata	2		
Sabal palmetto			
Salix caroliniana	2	15	28
Salicornia sp	6		
Schinus terebinthifolius*			
Spartina bakeri			
Thelypteris sp.	2		
Unknown herb	4		
Total Veg.	90	18	28

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Baseline			
Transect: 12		Date: 5/6/2001	
Orientation: 70°		Personnel: KB	
Water Depth			
Species	% Ground	% Midstory	% Canopy
Bare Ground	20		
Acer rubrum		2	18
Blechnum serrulatum	9		
Cephalanthus occidentalis	2	11	
Ilex cassine		17	30
Itea virginica		5	
Ludwigia peruviana*	4	5	
Magnolia virginiana	1	1	
Myrica cerifera		19	
Nyssa sylvatica			29
Osmunda cinnamomea	55		
Osmunda regalis	3		
Persea palustris		4	2
Quercus laurifolia		1	5
Quercus nigra		1	
Salix caroliniana	4		5
Sabal palmetto		6	
Schinus terebinthifolius*		4	
Thelypteris interrupta	6	1	
Total Veg.	80	81	89

*Targeted exotic/nuisance vegetation

Manatee County Site #1 Vegetation Monitoring-Exotic Time Zero			
Transect: 12		Date: 12/17/2004	
Orientation: 70°		Personnel: MJF	
Water Depth	avg 2-3 inches		
Species	% Ground	% Midstory	% Canopy
Bare Ground			
Acer rubrum	2	6	12
Blechnum serrulatum	8		
Cephalanthus occidentalis	2	4	
Ilex cassine		16	7
Itea virginica	1	4	
Ludwigia peruviana*			
Magnolia virginiana	1	1	3
Myrica cerifera		8	
Nyssa sylvatica		3	31
Osmunda cinnamomea	32		
Osmunda regalis	1		
Persea palustris	2	6	7
Quercus laurifolia	1		2
Quercus nigra		1	2
Salix caroliniana		2	1
Sabal palmetto		3	
Schinus terebinthifolius*			
Smilax sp	4		
Thelypteris interrupta	38		
Vitis rotundifolia	1		
Total Veg.	93	54	65

*Targeted exotic/nuisance vegetation