

Predicting Wetland Plant Community Responses to Proposed Water-Level-Regulation Plans for Lake Ontario: GIS-Based Modeling

Douglas A. Wilcox^{1,3} and Yichun Xie²

¹*U.S. Geological Survey*

Great Lakes Science Center

1451 Green Road

Ann Arbor, Michigan 48105

email: dwilcox@usgs.gov; phone: 734/214-7256; fax: 734/994-8780

²*Department of Geography and Geology*

Eastern Michigan University

205 Strong Hall

Ypsilanti, Michigan 48197

email: yxie@emich.edu; phone: 734/487-0218; fax: 734/487-6979

Appendix A. Lake Ontario – Upper St. Lawrence River coastal wetland database

WETLAND_NAME	COUNTRY	SHL_UNIT	SITECLASS	AREA_HA
Barnesdale Marsh	Canada	CND1	DRM	5.33
Eight Mile Creek Estuary	Canada	CND1	DRM	7.08
Eighteen Mile Creek	Canada	CND1	DRM	4.90
Fifteen Mile Creek	Canada	CND1	DRM	40.86
Four Mile Creek Estuary	Canada	CND1	DRM	6.55
Four Mile Pond	Canada	CND1	DRM	6.46
Jordan Station Marsh	Canada	CND1	DRM	73.42
Martindale Pond	Canada	CND1	DRM	34.86
Port Weller	Canada	CND1	OB	4.82
Sixteen & Seventeen Mile Creeks Terrace Valley	Canada	CND1	DRM	8.52
Two Mile Pond	Canada	CND1	DRM	2.05
Battlefield Creek Wetland	Canada	CND3	DRM	5.29
Cootes Paradise 1	Canada	CND3	DRM	166.55
Cootes Paradise 2	Canada	CND3	DRM	5.71
Cootes Paradise 3	Canada	CND3	DRM	5.35
RBG- Hendrie Valley (Lambs Hollow Wetland)	Canada	CND3	DRM	27.28
Van Wagners Marsh	Canada	CND3	DRM	15.95
Bronte Creek Marsh	Canada	CND4	DRM	4.79
Credit River Marshes	Canada	CND4	DRM	7.85
Humber River Marshes	Canada	CND4	DRM	25.10
Joshua's Creek	Canada	CND4	DRM	0.28
Oakville Marsh (Sixteen Mile Creek)	Canada	CND4	DRM	3.52
Ratray Marsh	Canada	CND4	BB	11.41
Turtle Creek- Reed Swamp	Canada	CND4	DRM	4.26
Toronto Island Wetlands 1	Canada	CND5	BB	0.99
Toronto Island Wetlands 2	Canada	CND5	PB	12.33
Toronto Island Wetlands 3	Canada	CND5	BB	3.34
Toronto Island Wetlands 4	Canada	CND5	PB	1.62
Carruthers Creek Marsh	Canada	CND7	DRM	124.43
Corbett Creek Mouth Marsh	Canada	CND7	DRM	21.27
Cranberry Marsh	Canada	CND7	BB	47.29
Crysler Point Wetland (Wesleyville Marsh) 1	Canada	CND7	BB	7.21

Crysler Point Wetland (Wesleyville Marsh) 2	Canada	CND7	BB	3.45
Duffins Creek Lakeshore Marsh	Canada	CND7	DRM	71.99
Frenchman's Bay Marsh	Canada	CND7	BB	32.35
Harmony Creek Wetland	Canada	CND7	DRM	19.88
Highland Creek Wetland	Canada	CND7	DRM	6.97
Hydro Marsh	Canada	CND7	DRM	24.33
Lynde Creek Marsh	Canada	CND7	BB	130.03
McLaughlin Bay Wetland 1	Canada	CND7	BB	40.18
McLaughlin Bay Wetland 2	Canada	CND7	BB	1.55
Oshawa Second Marsh	Canada	CND7	BB	112.80
Port Britain Wetland	Canada	CND7	BB	20.45
Port Darlington Marsh	Canada	CND7	DRM	28.70
Port Newcastle Wetland Complex	Canada	CND7	DRM	8.19
Pumphouse Marsh	Canada	CND7	BB	7.25
Raby Head Wetland # 1	Canada	CND7	BB	5.26
Rouge River Marsh	Canada	CND7	DRM	67.60
Westside Beach Marsh	Canada	CND7	BB	45.12
Wilmot Creek Marsh	Canada	CND7	DRM	25.87
Brookside Wetland	Canada	CND8	BB	7.99
Carrs Marsh (Peters Rock Marsh)	Canada	CND8	BB	70.63
Colborne Creek 1	Canada	CND8	DRM	4.75
Colborne Creek 2	Canada	CND8	BB	12.88
Grafton Swamp	Canada	CND8	DRM	53.04
Hortop Creek	Canada	CND8	DRM	0.67
Peter Rock #2 Wetland	Canada	CND8	BB	2.52
Popham Bay	Canada	CND8	DRM	54.26
Salem Creek Wetland	Canada	CND8	DRM	4.37
Spencer Point 1	Canada	CND8	DRM	16.21
Spencer Point 2	Canada	CND8	DRM	2.80
Spencer Point 3	Canada	CND8	BB	45.14
Wicklow Bay Wetland	Canada	CND8	BB	47.72
Wicklow Gravel Pit	Canada	CND8	DRM	2.65
Big Sand Bay 1	Canada	CND9	BB	9.37
Big Sand Bay 2	Canada	CND9	BB	122.46
Bluff Island Wetland	Canada	CND9	BB	1.11
East Lake Marsh 1	Canada	CND9	BB	8.18
East Lake Marsh 2	Canada	CND9	OB	42.93
East Lake Marsh 3	Canada	CND9	OB	10.31
East Lake Marsh 4	Canada	CND9	PB	100.16
East Lake Marsh 5	Canada	CND9	PB	8.88
East Lake Marsh 6	Canada	CND9	PB	8.52
East Lake Marsh 7	Canada	CND9	DRM	7.45
Gravelly Bay Wetland	Canada	CND9	BB	10.32
Gravelly Point	Canada	CND9	BB	3.23
Gull Island Wetland	Canada	CND9	BB	0.54
Gull Pond Wetland	Canada	CND9	BB	7.25
Hucyks Bay 1	Canada	CND9	BB	155.57
Hucyks Bay 2	Canada	CND9	DRM	240.84

Little Popular Point	Canada	CND9	BB	7.94
North Bay Wetland	Canada	CND9	BB	30.82
Owen Point Wetland	Canada	CND9	BB	4.34
Petticoat Wetland	Canada	CND9	BB	14.42
Pleasant Bay 1	Canada	CND9	BB	290.48
Pleasant Bay 2	Canada	CND9	DRM	33.97
Point Petre	Canada	CND9	BB	9.78
Presqu'ile Bay Marsh 1	Canada	CND9	DRM	25.71
Presqu'ile Bay Marsh 10	Canada	CND9	DRM	56.45
Presqu'ile Bay Marsh 11	Canada	CND9	PB	73.95
Presqu'ile Bay Marsh 12	Canada	CND9	PB	36.92
Presqu'ile Bay Marsh 13	Canada	CND9	PB	18.24
Presqu'ile Bay Marsh 2	Canada	CND9	BB	68.50
Presqu'ile Bay Marsh 3	Canada	CND9	BB	26.22
Presqu'ile Bay Marsh 4	Canada	CND9	PB	112.95
Presqu'ile Bay Marsh 5	Canada	CND9	BB	1.98
Presqu'ile Bay Marsh 6	Canada	CND9	PB	0.62
Presqu'ile Bay Marsh 7	Canada	CND9	PB	155.19
Presqu'ile Bay Marsh 8	Canada	CND9	DRM	34.72
Presqu'ile Bay Marsh 9	Canada	CND9	DRM	19.89
Rocky Point Wetland	Canada	CND9	BB	15.21
Salmon Point	Canada	CND9	BB	79.11
Soup Harbour	Canada	CND9	BB	67.52
South Bay Coastal Wetland 1	Canada	CND9	BB	171.45
South Bay Coastal Wetland 2	Canada	CND9	DRM	68.27
Wellers Bay Wetland 1	Canada	CND9	DRM	4.49
Wellers Bay Wetland 11	Canada	CND9	BB	15.37
Wellers Bay Wetland 12	Canada	CND9	BB	45.73
Wellers Bay Wetland 14	Canada	CND9	PB	14.44
Wellers Bay Wetland 2	Canada	CND9	PB	16.30
Wellers Bay Wetland 3	Canada	CND9	BB	2.06
Wellers Bay Wetland 4	Canada	CND9	BB	25.71
Wellers Bay Wetland 5	Canada	CND9	OB	23.55
Wellers Bay Wetland 6	Canada	CND9	DRM	26.55
Wellers Bay Wetland 7	Canada	CND9	DRM	57.10
Wellers Bay Wetland 8	Canada	CND9	PB	72.46
Wellers Bay Wetland 9	Canada	CND9	BB	2.24
West Lake Wetland 1	Canada	CND9	PB	0.95
West Lake Wetland 2	Canada	CND9	PB	2.97
West Lake Wetland 3	Canada	CND9	PB	11.80
West Lake Wetland 4	Canada	CND9	DRM	409.99
West Lake Wetland 5	Canada	CND9	OB	396.18
West Lake Wetland 6	Canada	CND9	DRM	11.59
Black Creek Wetland	Canada	CND10	DRM	67.10
Cape Vasey 1	Canada	CND10	PB	2.57
Cape Vasey 2	Canada	CND10	BB	5.99
False Ducks Island	Canada	CND10	BB	5.64
Halfmoon Bay Wetland	Canada	CND10	BB	3.26

Little Bluff Wetland	Canada	CND10	BB	6.90
Long Point Harbour Wetland	Canada	CND10	DRM	1.90
South Bay Marsh 1	Canada	CND10	OB	21.12
South Bay Marsh 2	Canada	CND10	OB	39.12
Waupoos Creek Swamp 1	Canada	CND10	PB	8.49
Waupoos Creek Swamp 2	Canada	CND10	OB	2.62
Waupoos Creek Swamp 3	Canada	CND10	DRM	1.91
Waupoos Island Wetland	Canada	CND10	BB	1.45
12 O'Clock Point	Canada	CND11	DRM	24.94
Adolphus Reach Wetland	Canada	CND11	OB	20.73
Adolphustown Marsh 1	Canada	CND11	BB	2.35
Adolphustown Marsh 2	Canada	CND11	PB	15.67
Adolphustown Marsh 3	Canada	CND11	DRM	9.68
Airport Creek Marsh	Canada	CND11	DRM	29.15
Bayside Wetland 1	Canada	CND11	BB	0.46
Bayside Wetland 2	Canada	CND11	OB	5.99
Bayside Wetland 3	Canada	CND11	DRM	5.75
Bayside Wetland 4	Canada	CND11	PB	3.13
Bayside Wetland 5	Canada	CND11	BB	1.74
Bayside Wetland 6	Canada	CND11	PB	4.07
Bayside Wetland 7	Canada	CND11	PB	3.22
Bell Creek Swamp Complex	Canada	CND11	DRM	1.34
Belleville Marsh 1	Canada	CND11	BB	1.64
Belleville Marsh 2	Canada	CND11	PB	16.04
Belleville Treatment Plant Marsh	Canada	CND11	PB	1.37
Big Bay Wetland	Canada	CND11	BB	4.00
Big Island Marsh	Canada	CND11	PB	685.46
Blessington Creek Marsh 1	Canada	CND11	DRM	5.68
Blessington Creek Marsh 2	Canada	CND11	PB	95.96
Blessington Creek Marsh 3	Canada	CND11	PB	12.27
Bluff Point 1	Canada	CND11	OB	0.21
Bluff Point 2	Canada	CND11	BB	31.28
Bluff Point 3	Canada	CND11	PB	3.61
Bygotts Bay Wetland 1	Canada	CND11	PB	1.30
Bygotts Bay Wetland 2	Canada	CND11	BB	1.90
Carnachan Bay Wetland 1	Canada	CND11	PB	2.43
Carnachan Bay Wetland 2	Canada	CND11	DRM	3.91
Carnachan Bay Wetland 3	Canada	CND11	DRM	9.09
Carnachan Bay Wetland 4	Canada	CND11	DRM	0.88
Carnachan Bay Wetland 5	Canada	CND11	BB	2.69
Carrying Place	Canada	CND11	DRM	4.34
Cole Point Wetland	Canada	CND11	DRM	3.80
Cressy Marsh	Canada	CND11	BB	10.60
Cressy Swamp 1	Canada	CND11	DRM	122.97
Cressy Swamp 2	Canada	CND11	PB	1.24
Dead Creek Marsh	Canada	CND11	DRM	330.36
Duck Creek Wetland	Canada	CND11	DRM	3.95
Forester's Island	Canada	CND11	PB	10.15

Grassy Point Wetland	Canada	CND11	OB	3.60
Hay Bay Marsh 1	Canada	CND11	PB	18.44
Hay Bay Marsh 2	Canada	CND11	OB	216.42
Hay Bay Marsh 3	Canada	CND11	DRM	494.29
Hay Bay Marsh 4	Canada	CND11	DRM	79.01
Hay Bay Marsh 5	Canada	CND11	PB	383.14
Hay Bay Marsh 6	Canada	CND11	PB	65.95
Hay Bay Marsh 7	Canada	CND11	OB	121.96
Hay Bay Marsh 8	Canada	CND11	PB	112.63
Lower Napanee River 1	Canada	CND11	DRM	16.14
Lower Napanee River 2	Canada	CND11	BB	3.11
Lower Napanee River 3	Canada	CND11	DRM	64.06
Lower Napanee River 4	Canada	CND11	DRM	79.65
Lower Napanee River 5	Canada	CND11	DRM	36.41
Lower Napanee River 6	Canada	CND11	DRM	9.44
Lower Napanee River 7	Canada	CND11	DRM	59.77
Lower Salmon River Wetland 1	Canada	CND11	DRM	12.90
Lower Salmon River Wetland 2	Canada	CND11	PB	4.00
Lower Salmon River Wetland 3	Canada	CND11	DRM	82.57
Lower Sucker Creek 1	Canada	CND11	PB	9.17
Lower Sucker Creek 2	Canada	CND11	DRM	30.62
Lower Sucker Creek 3	Canada	CND11	PB	2.35
Lower Sucker Creek 4	Canada	CND11	PB	11.31
Makatewis Island	Canada	CND11	PB	1.19
Mallory Bay 1	Canada	CND11	BB	4.46
Mallory Bay 2	Canada	CND11	BB	1.01
Mallory Bay 3	Canada	CND11	BB	1.41
Marysville Creek Wetland	Canada	CND11	DRM	351.99
Pine Point Wetland 1	Canada	CND11	PB	17.41
Pine Point Wetland 2	Canada	CND11	PB	11.73
Point Anne Wetland	Canada	CND11	PB	1.03
Robinson Cove Marsh	Canada	CND11	OB	8.83
Sawquin Creek Marsh 1	Canada	CND11	DRM	1157.21
Sawquin Creek Marsh 10	Canada	CND11	PB	34.70
Sawquin Creek Marsh 2	Canada	CND11	PB	72.83
Sawquin Creek Marsh 3	Canada	CND11	OB	148.17
Sawquin Creek Marsh 4	Canada	CND11	PB	7.34
Sawquin Creek Marsh 5	Canada	CND11	OB	89.76
Sawquin Creek Marsh 6	Canada	CND11	DRM	26.19
Sawquin Creek Marsh 7	Canada	CND11	PB	546.06
Sawquin Creek Marsh 8	Canada	CND11	OB	78.58
Sawquin Creek Marsh 9	Canada	CND11	PB	19.22
Shermans Point	Canada	CND11	PB	3.26
Solmesville	Canada	CND11	PB	2.47
The Pines	Canada	CND11	DRM	2.80
Willow Point 1	Canada	CND11	OB	0.74
Willow Point 2	Canada	CND11	PB	3.40
Willow Point 3	Canada	CND11	OB	0.25

Amererst Bar Wetland	Canada	CND12	BB	10.19
Bath Point Wetland	Canada	CND12	DRM	11.16
Collins Creek Wetlands 1	Canada	CND12	DRM	1.30
Collins Creek Wetlands 2	Canada	CND12	PB	43.99
Duck Club Marsh	Canada	CND12	BB	111.63
Emeric Point Wetland	Canada	CND12	BB	5.05
Greater Cataraqui Marsh	Canada	CND12	DRM	488.53
Gull Point 1	Canada	CND12	BB	0.76
Gull Point 2	Canada	CND12	BB	1.13
Little Cataraqui Creek	Canada	CND12	DRM	279.21
Long Point Bay Marsh 1	Canada	CND12	BB	349.80
Long Point Bay Marsh 2	Canada	CND12	BB	11.78
Nut Island Wetland	Canada	CND12	BB	5.57
Parrott Bay Wetland 1	Canada	CND12	DRM	1.10
Parrott Bay Wetland 2	Canada	CND12	PB	28.59
Pig Point Wetland	Canada	CND12	BB	1.56
Wemps Bay Marsh	Canada	CND12	BB	45.73
Eighteenmile Creek	USA	US1	DRM	24.48
Fish Creek	USA	US1	DRM	2.65
Fourmile Creek	USA	US1	DRM	4.61
Golden Hill Creek	USA	US1	DRM	6.10
Hopkins Creek	USA	US1	DRM	3.88
Johnson Creek	USA	US1	DRM	8.22
Keg Creek	USA	US1	DRM	5.16
Lomond Shore	USA	US1	OB	0.08
Marsh Creek	USA	US1	DRM	0.68
Oak Orchard Creek	USA	US1	DRM	84.93
Rock Ledge Beach	USA	US1	OB	0.40
Sixmile Creek	USA	US1	DRM	10.54
Stream at county line	USA	US1	DRM	0.51
Stream at Harrison Grove	USA	US1	DRM	1.18
Stream at Lomond Shore	USA	US1	DRM	0.30
Stream at Marshall Road	USA	US1	DRM	0.76
Stream at North Beebe Road	USA	US1	DRM	1.77
Stream at Towers Corners	USA	US1	DRM	0.79
The Marsh	USA	US1	DRM	3.49
Tuscarora Bay	USA	US1	BB	32.11
Twelvemile Creek	USA	US1	DRM	24.34
West of Eighteenmile Creek	USA	US1	BB	0.89
Bald Eagle Creek	USA	US2	DRM	8.35
Benedict Beach east	USA	US2	DRM	17.90
Benedict Beach west	USA	US2	DRM	1.99
Bluff Beach 1	USA	US2	OB	0.10
Bluff Beach 2	USA	US2	OB	0.13
Braddock Bay	USA	US2	OB	160.82
Brush Creek	USA	US2	DRM	84.88
Buck Pond	USA	US2	BB	222.05
Cowsucker Creek	USA	US2	DRM	15.14

Cranberry Pond	USA	US2	BB	90.60
Davidson Beach east	USA	US2	BB	11.06
Davidson Beach west	USA	US2	BB	2.39
Devils Nose 1	USA	US2	OB	0.04
Devils Nose 2	USA	US2	OB	0.13
Durand Eastman Park stream	USA	US2	PB	1.77
Durand Eastmand Park	USA	US2	PB	0.64
East Creek	USA	US2	DRM	12.47
East of Bogus Point 1	USA	US2	BB	21.99
East of Bogus Point 2	USA	US2	BB	3.05
Genessee River	USA	US2	DRM	110.87
Hamlin Beach	USA	US2	DRM	0.10
Irondequoit Bay	USA	US2	PB	91.53
Irondequoit Creek	USA	US2	DRM	126.97
Long Pond	USA	US2	BB	45.55
Northrup Creek	USA	US2	DRM	3.40
Onteo Beach	USA	US2	OB	0.06
Payne Beach	USA	US2	BB	58.51
Round Pond	USA	US2	BB	114.11
Sandy Creek	USA	US2	DRM	31.96
Shore Acres	USA	US2	BB	17.25
Shore at Troutberg	USA	US2	OB	0.12
Shore east of Bald Eagle Creek	USA	US2	OB	0.44
Slater Creek	USA	US2	DRM	7.07
Stream at Bluff Beach	USA	US2	DRM	3.08
Stream at Float Bridge	USA	US2	DRM	5.51
Stream at Troutberg	USA	US2	DRM	0.79
West Creek	USA	US2	DRM	77.51
Yanty Marsh	USA	US2	DRM	42.72
Dennison Creek	USA	US3	DRM	0.16
East of Boller Point	USA	US3	OB	0.11
East of Bootleggers Point	USA	US3	DRM	3.22
East of Dufloo Road	USA	US3	DRM	1.20
East of Fischer Road	USA	US3	OB	0.06
East of Mink Creek	USA	US3	OB	0.03
East of Ninemile Point 1	USA	US3	OB	0.06
East of Ninemile Point 2	USA	US3	OB	0.06
East of Salmon Creek	USA	US3	OB	0.46
Ginna Nuclear Plant	USA	US3	OB	0.10
Holland Cove	USA	US3	OB	0.12
Mill Creek	USA	US3	DRM	0.34
Mink Creek	USA	US3	DRM	1.93
Ontario on the Lake 1	USA	US3	OB	0.07
Ontario on the Lake 2	USA	US3	OB	0.07
Ontario on the Lake 3	USA	US3	OB	0.10
Pultneyville 1	USA	US3	OB	0.05
Pultneyville 2	USA	US3	OB	0.09
West of Bootleggers Point	USA	US3	DRM	0.88

West of Mill Creek	USA	US3	OB	0.06
West of Stony Lonesome Road	USA	US3	OB	0.04
Beaver Creek	USA	US4	DRM	101.76
Between Blind and Little Sodus Bays	USA	US4	BB	0.36
Black Creek	USA	US4	BB	160.27
Blind Sodus Bay	USA	US4	PB	9.80
Blind Sodus Creek	USA	US4	DRM	6.69
Brush Marsh 1	USA	US4	DRM	10.50
Brush Marsh 2	USA	US4	BB	25.55
Clark Creek	USA	US4	DRM	8.71
Dutch Street Road	USA	US4	BB	1.09
East Bay	USA	US4	BB	195.77
East Bay tributary 2	USA	US4	DRM	14.11
East Bay tributary 1	USA	US4	DRM	58.36
East of Brown Road 1	USA	US4	BB	0.57
East of Brown Road 2	USA	US4	BB	0.47
East of Fair Haven Beach	USA	US4	BB	2.60
East of McIntyres Bluff	USA	US4	BB	9.26
East of Port Bay 1	USA	US4	DRM	2.87
East of Port Bay 2	USA	US4	BB	8.09
East of Port Bay 3	USA	US4	DRM	36.50
East of Port Bay 4	USA	US4	BB	4.30
East of Scotts Bluff 1	USA	US4	BB	1.99
East of Scotts Bluff 2	USA	US4	BB	9.38
East of Sodus Bay 1	USA	US4	DRM	0.56
East of Sodus Bay 2	USA	US4	DRM	2.08
East of Sodus Bay 3	USA	US4	DRM	2.20
East of West Ninemile Point	USA	US4	OB	0.08
Eightmile Creek	USA	US4	DRM	4.75
Fair Haven Beach	USA	US4	BB	288.89
Fair Haven Beach tributary	USA	US4	DRM	14.85
First Creek	USA	US4	DRM	7.77
Juniper Pond	USA	US4	BB	14.22
Little Sodus Bay	USA	US4	PB	49.16
Maxwell Bay	USA	US4	BB	12.43
Mudge Creek	USA	US4	DRM	17.89
Ninemile Creek	USA	US4	DRM	6.40
Port Bay	USA	US4	PB	158.99
Red Creek	USA	US4	DRM	138.35
Root Swamp	USA	US4	BB	43.48
Second Creek	USA	US4	PB	27.15
Snake Swamp	USA	US4	BB	50.46
Sodus Bay	USA	US4	PB	189.49
Sodus Creek	USA	US4	DRM	104.26
Sprong Bluff	USA	US4	BB	1.15
Sterling Creek	USA	US4	DRM	12.29
Third Creek	USA	US4	DRM	18.47
West Lake Road	USA	US4	BB	18.32

West of Blind Sodus Bay	USA	US4	BB	28.35
West of Chimney Bluff 1	USA	US4	OB	0.04
West of Chimney Bluff 2	USA	US4	BB	0.41
West of Moon Beach	USA	US4	BB	3.04
West of Port Bay 1	USA	US4	DRM	1.80
West of Port Bay 2	USA	US4	DRM	2.33
West of Sodus Bay 1	USA	US4	PB	5.55
West of Sodus Bay 2	USA	US4	PB	1.91
West of Sodus Bay 3	USA	US4	PB	0.11
West of Sodus Bay 4	USA	US4	DRM	0.35
West of Sodus Bay 5	USA	US4	DRM	2.59
West of Sodus Bay 6	USA	US4	PB	0.04
West of Sodus Bay 7	USA	US4	DRM	0.76
West of Sodus Bay 8	USA	US4	PB	1.04
Wheeler Road wetland outlet	USA	US4	DRM	0.29
Wolcott Creek	USA	US4	DRM	48.99
East of Burt Point	USA	US5	OB	0.04
East of stream at Lake View Road	USA	US5	BB	0.58
East of Walker creek 1	USA	US5	BB	5.47
East of Walker creek 2	USA	US5	BB	6.36
Fort Ontario	USA	US5	OB	0.17
Lake View 1	USA	US5	OB	0.57
Lake View 2	USA	US5	BB	1.87
Lake View 3	USA	US5	OB	0.69
Lake View 4	USA	US5	OB	0.13
Oswego Beach 1	USA	US5	OB	1.23
Oswego Beach 2	USA	US5	OB	0.61
Rice Creek	USA	US5	DRM	12.15
Stream at Lake View	USA	US5	DRM	1.57
Stream at Lake View Road	USA	US5	DRM	0.33
Stream at Walker	USA	US5	BB	49.55
West of stream at Walker	USA	US5	BB	16.71
West of Wine Creek	USA	US5	OB	0.03
Wine Creek	USA	US5	BB	1.17
Butterfly Swamp	USA	US6	BB	136.43
Catfish Creek	USA	US6	DRM	4.47
East of Pleasant Point	USA	US6	OB	0.02
Otter Branch	USA	US6	BB	11.71
Shore at Butterfly Swamp	USA	US6	OB	0.04
Shore at Otter Branch	USA	US6	OB	0.11
Sunset Bay	USA	US6	OB	0.06
West of Catfish Road	USA	US6	BB	1.12
Black Pond	USA	US7	BB	165.41
Blind Creek	USA	US7	DRM	21.04
Cranberry Pond	USA	US7	BB	51.35
Deer Creek Marsh	USA	US7	BB	534.02
Grindstone Creek	USA	US7	BB	62.95
Jefferson Park	USA	US7	BB	7.34

Lindsey Creek	USA	US7	DRM	5.05
Little Sandy Creek	USA	US7	DRM	29.38
Mud Brook	USA	US7	DRM	10.03
North Pond	USA	US7	PB	279.76
S Colwell to Lakeview Pond	USA	US7	BB	1006.53
Sage Creek	USA	US7	BB	13.53
Sage Creek Road 1	USA	US7	BB	1.96
Sage Creek Road 2	USA	US7	BB	14.99
Salmon Creek	USA	US7	DRM	20.90
Salmon River	USA	US7	DRM	133.78
Sawyer Point	USA	US7	OB	0.41
Skinner Creek	USA	US7	DRM	58.07
Snake Creek	USA	US7	BB	45.33
South Pond	USA	US7	PB	25.49
Southwick Beach	USA	US7	BB	30.45
Stony Creek	USA	US7	DRM	45.87
West of Mexico Point 1	USA	US7	BB	6.12
West of Mexico Point 2	USA	US7	BB	14.21
Adams Cove Road	USA	US8	BB	0.32
Association Island north	USA	US8	PB	1.32
Association Island southwest	USA	US8	OB	0.89
Backus Road	USA	US8	DRM	0.39
Baird Point	USA	US8	BB	0.61
Barnes Bay	USA	US8	OB	10.29
Base of Gleason Peak	USA	US8	BB	2.04
Basin Harbor	USA	US8	BB	2.92
Bedford Creek	USA	US8	DRM	18.44
Black River Bay 1	USA	US8	PB	63.19
Black River Bay 2	USA	US8	OB	106.73
Boultons Beach	USA	US8	OB	7.29
Calf Island	USA	US8	BB	8.34
Carrying Place Road	USA	US8	DRM	2.14
Chaumont River	USA	US8	DRM	23.22
Cherry Island	USA	US8	OB	0.70
Clines Point	USA	US8	PB	1.70
East of Shaver Creek	USA	US8	DRM	0.55
East of the Isthmus	USA	US8	OB	0.37
Everleigh Point	USA	US8	OB	0.10
Fir Island	USA	US8	OB	0.67
Fox Creek	USA	US8	DRM	8.21
Fox Island central 1	USA	US8	OB	15.51
Fox Island central 2	USA	US8	BB	19.06
Fox Island north point	USA	US8	BB	0.23
Fox Island northwest	USA	US8	BB	0.11
Fox Island south	USA	US8	BB	0.39
Fuller Bay	USA	US8	BB	1.79
Galloo Island north	USA	US8	BB	9.16
Galloo Island North Pond	USA	US8	BB	19.93

Galloo Island south	USA	US8	BB	13.30
Gravelly Bay 1	USA	US8	BB	4.78
Gravelly Bay 2	USA	US8	BB	0.34
Grenadier Island north 1	USA	US8	BB	1.21
Grenadier Island north 2	USA	US8	BB	0.29
Grenadier Island north 3	USA	US8	BB	0.99
Grenadier Island south	USA	US8	BB	0.66
Grenadier Island southwest	USA	US8	BB	2.45
Guffin Creek	USA	US8	DRM	21.72
Henderson Bay east	USA	US8	OB	51.00
Henderson Harbor	USA	US8	PB	2.51
Horse Island east	USA	US8	PB	0.24
Horse Island west	USA	US8	OB	1.59
Kents Creek	USA	US8	DRM	91.32
Lighthouse Road 1	USA	US8	BB	0.20
Lighthouse Road 2	USA	US8	BB	0.19
Little Fox Creek	USA	US8	DRM	23.07
Little Galloo Island 1	USA	US8	BB	0.33
Little Galloo Island 2	USA	US8	BB	0.23
Little Galloo Island 3	USA	US8	BB	0.17
Little Galloo Island 4	USA	US8	BB	0.08
Long Bay	USA	US8	PB	0.35
Long Carrying Place 1	USA	US8	PB	7.77
Long Carrying Place 2	USA	US8	OB	0.99
Marina at Three Mile Bay	USA	US8	OB	0.58
Marsh Point	USA	US8	PB	0.95
Moffett Road 1	USA	US8	OB	0.15
Moffett Road 2	USA	US8	OB	0.25
Mud Bay	USA	US8	BB	5.04
North of Little Fox Creek	USA	US8	BB	0.94
North of the Isthmus 1	USA	US8	BB	0.24
North of the Isthmus 2	USA	US8	PB	1.88
North of Wilson Point	USA	US8	BB	2.47
North Shore 1	USA	US8	BB	0.30
North Shore 2	USA	US8	BB	5.72
North Shore 3	USA	US8	BB	0.29
North Shore 4	USA	US8	BB	0.20
North shore of Black Bay	USA	US8	OB	0.05
North Shore Road wetland 1	USA	US8	BB	1.57
North Shore Road wetland 2	USA	US8	BB	0.65
North Shore Road wetland 3	USA	US8	BB	1.05
Perch River	USA	US8	DRM	24.73
Point Peninsula east	USA	US8	PB	8.15
Point Peninsula north 1	USA	US8	OB	0.29
Point Peninsula north 2	USA	US8	OB	3.13
Point Peninsula southeast	USA	US8	BB	0.74
Point Peninsula west 1	USA	US8	BB	128.79
Point Peninsula west 2	USA	US8	BB	0.47

Point Peninsula west 3	USA	US8	BB	9.91
Ray Bay north	USA	US8	BB	0.40
Ray Bay south	USA	US8	BB	5.73
Reeds Bay 1	USA	US8	DRM	1.31
Reeds Bay 2	USA	US8	OB	0.17
Sawmill Bay	USA	US8	OB	0.97
Shaver Creek	USA	US8	DRM	2.42
Sherwin Creek	USA	US8	DRM	16.65
Six Town Point	USA	US8	OB	1.74
Snowshoe Bay	USA	US8	PB	6.44
South of Basin Harbor	USA	US8	BB	4.81
South of Boultons Beach 1	USA	US8	BB	1.23
South of Boultons Beach 2	USA	US8	OB	0.03
South of Campbell Point	USA	US8	BB	0.23
South of Fox Creek	USA	US8	BB	0.37
South of Little Fox Creek 1	USA	US8	DRM	0.10
South of Little Fox Creek 2	USA	US8	DRM	0.63
South of Little Fox Creek 3	USA	US8	BB	0.33
South of Long Carrying Place	USA	US8	BB	0.08
Stony Island north point	USA	US8	BB	3.45
Stony Island northeast	USA	US8	BB	1.22
Stony Island south 1	USA	US8	PB	0.16
Stony Island south 2	USA	US8	PB	0.32
Stony Island southeast	USA	US8	BB	5.23
Stoors Harbor Road	USA	US8	BB	0.83
Stream at Barnes Bay	USA	US8	DRM	2.19
Stream at Ray Bay	USA	US8	DRM	9.37
The Isthmus	USA	US8	OB	9.89
Three Mile Bay	USA	US8	OB	2.27
Three Mile Bay north 1	USA	US8	OB	1.13
Three Mile Bay north 2	USA	US8	DRM	2.07
Three Mile Point Road	USA	US8	DRM	0.53
Tibbetts Point	USA	US8	BB	0.13
Toad Hole Cove	USA	US8	BB	2.99
West of Guffin Creek 1	USA	US8	BB	1.37
West of Guffin Creek 2	USA	US8	OB	0.58
West of Guffin Creek 3	USA	US8	OB	0.81
West of Long Point	USA	US8	PB	0.56
West of Pillar Point	USA	US8	BB	1.31
Westcott Beach State Park	USA	US8	BB	2.38
Wilson Bay	USA	US8	BB	80.49
Abraham Point Wetland	Canada	R1	PB	1.60
Across from Endymion Island	USA	R1	PB	0.16
Across from Grants Island 1	USA	R1	PB	0.82
Across from Grants Island 2	USA	R1	PB	1.85
Across from Grants Island 3	USA	R1	PB	0.08
Across from Little Ironsides Islands	USA	R1	PB	1.22
Across from Netley Island	USA	R1	PB	0.15

Across from Niagara Island	USA	R1	PB	0.05
Across from Round Island 1	USA	R1	OB	0.25
Across from Round Island 2	USA	R1	DRM	0.10
Aunt Janes Bay	USA	R1	PB	3.34
Barnett Marsh	USA	R1	PB	61.52
Barrett Bay	Canada	R1	PB	40.17
Bartlett Point	USA	R1	PB	0.38
Bateau Channel Wetland	Canada	R1	PB	0.65
Bayfield Bay Wetland 1	Canada	R1	PB	444.23
Bayfield Bay Wetland 2	Canada	R1	DRM	12.25
Bayfield Bay Wetland 3	Canada	R1	PB	18.48
Beatie Point	USA	R1	PB	1.71
Big Sandy Bay	Canada	R1	BB	405.77
Big Thurso Bay	USA	R1	PB	35.05
Blind Bay north	USA	R1	PB	2.90
Blind Bay south	USA	R1	PB	10.12
Bostwick Island Complex 1	Canada	R1	OB	13.01
Bostwick Island Complex 2	Canada	R1	OB	21.05
Bostwick Island Complex 3	Canada	R1	OB	8.53
Bostwick Island Complex 4	Canada	R1	OB	0.66
Brooks Point	USA	R1	PB	0.17
Browns Bay Complex	Canada	R1	OB	1.38
Browns Bay Wetland 1	Canada	R1	PB	4.82
Browns Bay Wetland 2	Canada	R1	OB	2.91
Buck Bay	USA	R1	OB	0.73
Button Bay 1	Canada	R1	PB	2.77
Button Bay 2	Canada	R1	OB	100.56
Canoe Point and Picnic Point State Park 1	USA	R1	PB	0.13
Canoe Point and Picnic Point State Park 2	USA	R1	PB	0.08
Carleton Island north	USA	R1	BB	0.17
Carriage Bay east	USA	R1	PB	3.28
Carriage Bay west	USA	R1	PB	2.55
Carrier Bay 1	USA	R1	PB	0.55
Carrier Bay 2	USA	R1	PB	0.76
Cassidy's Bay 1	Canada	R1	PB	3.67
Cassidy's Bay 2	Canada	R1	PB	2.58
Chippewa Bay south	USA	R1	PB	0.21
Chippewa Creek	USA	R1	DRM	137.08
Chippewa Point	USA	R1	PB	2.06
Collier Island Wetland	Canada	R1	PB	18.08
Collins Landing Wildlife Management Area 1	USA	R1	OB	2.10
Collins Landing Wildlife Management Area 2	USA	R1	OB	6.15
Constance Road	USA	R1	OB	0.75
Crooked Creek	USA	R1	DRM	225.70
Crows Nest	USA	R1	PB	1.38
Customs House 1	USA	R1	PB	0.45
Customs House 2	USA	R1	PB	5.21
Delack Point	USA	R1	PB	0.11

Delaney Bay	USA	R1	PB	59.24
Densmore Bay 1	USA	R1	PB	0.16
Densmore Bay 2	USA	R1	OB	0.23
Duck Cove	USA	R1	PB	0.69
Eagers Bay	USA	R1	OB	0.82
East of Webster Point	USA	R1	PB	0.86
Eel Bay east	USA	R1	OB	5.85
Eel Bay north	USA	R1	OB	19.21
Firman's Creek Wetland	Canada	R1	DRM	11.41
Flynn Bay 1	USA	R1	OB	0.90
Flynn Bay 2	USA	R1	OB	17.45
Flynn Bay 3	USA	R1	OB	9.82
French Creek	USA	R1	DRM	236.79
French Creek Bay west	USA	R1	PB	0.10
Garden Island Wetland	Canada	R1	PB	0.62
Gillespies Point Wetlands 1	Canada	R1	PB	3.83
Gillespies Point Wetlands 2	Canada	R1	PB	2.70
Gillespies Point Wetlands 3	Canada	R1	OB	1.76
Gillespies Point Wetlands 4	Canada	R1	PB	2.26
Goose Bay	USA	R1	PB	194.98
Goose Bay 1	USA	R1	OB	0.69
Goose Bay 2	USA	R1	PB	0.38
Granite Peak	USA	R1	PB	0.21
Grass Bay 1	USA	R1	OB	0.41
Grass Bay 2	USA	R1	DRM	0.92
Grass Creek 1	Canada	R1	DRM	34.24
Grass Creek 2	Canada	R1	PB	8.76
Grass Creek Point Wetland	Canada	R1	PB	1.32
Grass Point State Park	USA	R1	PB	1.15
Gray's Creek Wetland	Canada	R1	DRM	20.80
Greens Creek	USA	R1	PB	0.18
Grenadier Island Complex 1	Canada	R1	OB	52.49
Grenadier Island Complex 10	Canada	R1	DRM	49.23
Grenadier Island Complex 2	Canada	R1	OB	544.43
Grenadier Island Complex 3	Canada	R1	PB	68.15
Grenadier Island Complex 4	Canada	R1	PB	2.75
Grenadier Island Complex 5	Canada	R1	DRM	1.45
Grenadier Island Complex 6	Canada	R1	PB	7.02
Grenadier Island Complex 7	Canada	R1	OB	7.88
Grenadier Island Complex 8	Canada	R1	PB	10.08
Grenadier Island Complex 9	Canada	R1	PB	30.84
Halstead Bay Marsh 1	Canada	R1	OB	9.58
Halstead Bay Marsh 2	Canada	R1	OB	69.93
Halstead Creek Marsh	Canada	R1	DRM	7.36
Harder Road	USA	R1	PB	0.20
Hay Island Marsh	Canada	R1	OB	53.59
Hill Island East	Canada	R1	PB	67.92
Hill Island West	Canada	R1	PB	20.70

Holliday Bay Wetland 1	Canada	R1	PB	17.55
Holliday Bay Wetland 2	Canada	R1	PB	5.11
Holliday Bay Wetland 3	Canada	R1	PB	1.55
Holliday Bay Wetland 4	Canada	R1	OB	39.09
Indian Point	USA	R1	PB	18.08
International Rift	USA	R1	PB	9.79
Irvine Bay Wetland 1	Canada	R1	PB	5.46
Irvine Bay Wetland 2	Canada	R1	PB	8.27
Irvine Bay Wetland 3	Canada	R1	OB	47.16
Irvine Bay Wetland 4	Canada	R1	PB	5.54
Irving Wetland	Canada	R1	BB	1.85
Ivy Lea Wetland Complex 1	Canada	R1	OB	11.38
Ivy Lea Wetland Complex 2	Canada	R1	DRM	19.96
Ivy Lea Wetland Complex 3	Canada	R1	OB	1.23
Ivy Lea Wetland Complex 4	Canada	R1	PB	20.29
Ivy Lea Wetland Complex 5	Canada	R1	OB	0.91
Johnson Bay 1	Canada	R1	DRM	70.60
Johnson Bay 2	Canada	R1	PB	1.30
Johnson Bay 3	Canada	R1	PB	34.38
Johnson Bay 4	Canada	R1	PB	41.90
Johnson Bay 5	Canada	R1	OB	148.35
Jones Creek Marsh	Canada	R1	DRM	175.28
Keewaydin Point	USA	R1	PB	1.09
Lake of the Isles north 1	USA	R1	OB	0.15
Lake of the Isles north 2	USA	R1	OB	29.89
Lake of the Isles south 1	USA	R1	OB	1.79
Lake of the Isles south 2	USA	R1	OB	1.65
Lake of the Isles south 3	USA	R1	PB	1.00
Landon Bay Marsh	Canada	R1	DRM	43.91
Legges Creek Marsh	Canada	R1	DRM	35.06
Lewis Bay Wetland	Canada	R1	PB	12.11
Little Hammond Point	USA	R1	PB	0.93
Little Thurso Bay east	USA	R1	PB	0.46
Little Thurso Bay west	USA	R1	PB	0.38
Lower Town Landing	USA	R1	PB	0.31
Lucas Point Wetland	Canada	R1	PB	4.32
MacGregor Bay Wetland 1	Canada	R1	PB	4.76
MacGregor Bay Wetland 2	Canada	R1	OB	40.17
MacGregor Bay Wetland 3	Canada	R1	BB	0.49
Madoma Marsh 1	Canada	R1	DRM	3.57
Madoma Marsh 2	Canada	R1	PB	60.18
Madoma Marsh 3	Canada	R1	DRM	0.49
Mason Point	USA	R1	OB	1.88
McDonnell Bay Wetland 1	Canada	R1	PB	4.99
McDonnell Bay Wetland 2	Canada	R1	PB	3.53
McDonnell Bay Wetland 3	Canada	R1	PB	1.55
McDonnell Bay Wetland 4	Canada	R1	PB	6.54
Mill Point Wetland	Canada	R1	PB	8.19

Millen Bay	USA	R1	DRM	1.25
Morgan Island	USA	R1	PB	0.18
Morristown Bay	USA	R1	PB	3.14
Murray Isle east 1	USA	R1	PB	0.56
Murray Isle east 2	USA	R1	PB	0.47
Murray Isle south	USA	R1	PB	0.15
North of Allens Point	USA	R1	OB	4.42
North of Buck Bay	USA	R1	BB	6.04
North of Schermerhorn Landing 1	USA	R1	PB	1.79
North of Schermerhorn Landing 2	USA	R1	PB	1.10
North of Sheephead Point	USA	R1	OB	1.81
Northeast of Murdoch Point	USA	R1	PB	0.83
Oak Island north 1	USA	R1	PB	5.55
Oak Island north 2	USA	R1	PB	2.34
Oak Island south 1	USA	R1	PB	2.42
Oak Island south 2	USA	R1	PB	1.15
Oak Island south 3	USA	R1	PB	0.74
Oak Island south 4	USA	R1	PB	1.13
Oak Island south 5	USA	R1	PB	1.45
Oak Point Wetland 1	Canada	R1	BB	5.97
Oak Point Wetland 2	Canada	R1	BB	1.49
Oak Point Wetland 3	Canada	R1	OB	12.89
Otter Creek	USA	R1	PB	5.73
Owatonna Island	USA	R1	PB	0.11
Picton Island	USA	R1	PB	0.48
Pitts Ferry Wetland	Canada	R1	OB	4.45
Plumtree Marsh	USA	R1	PB	8.16
Point Angiers	USA	R1	PB	0.15
Point Marguerite	USA	R1	PB	0.09
Point Vivian Bay	USA	R1	PB	18.02
Point Vivian east	USA	R1	PB	0.31
Rabbit Island	USA	R1	PB	1.33
Reeds Bay 1	Canada	R1	OB	6.71
Reeds Bay 2	Canada	R1	DRM	10.19
Rush Bay Wetland	Canada	R1	BB	4.56
Rusho Bay	USA	R1	PB	0.47
Sand Bay	USA	R1	BB	0.38
Sand Bay 1	Canada	R1	OB	13.29
Sand Bay 2	Canada	R1	DRM	19.95
Sand Bay 3	Canada	R1	OB	4.94
Sand Bay 4	Canada	R1	BB	4.35
Schermerhorn Landing	USA	R1	PB	0.35
Seburns Creek Wetland 1	Canada	R1	PB	2.54
Seburns Creek Wetland 2	Canada	R1	DRM	14.28
Seburns Creek Wetland 3	Canada	R1	DRM	1.70
Seburns Creek Wetland 4	Canada	R1	DRM	1.30
Seburns Creek Wetland 5	Canada	R1	OB	13.18
Simcoe Island Wetland	Canada	R1	PB	3.44

South Bay	USA	R1	OB	6.66
South of Crows Nest	USA	R1	PB	0.56
South of Point Angiers	USA	R1	PB	1.17
South of Poplar Tree Bay	USA	R1	DRM	0.13
South of Sheephead Point	USA	R1	OB	5.24
Spicer Bay	USA	R1	PB	15.31
St. Margarett's Island	USA	R1	PB	0.16
Stave Island Marsh 1	Canada	R1	PB	4.18
Stave Island Marsh 2	Canada	R1	PB	10.76
Sturgeon Point	USA	R1	PB	0.20
Swan Bay east	USA	R1	PB	2.06
Swan Bay west	USA	R1	PB	8.09
The Narrows	USA	R1	PB	0.06
Thompsons Bay Wetland	Canada	R1	PB	1.11
Thousand Island Country Club	USA	R1	PB	1.53
Thousand Islands Resort	USA	R1	PB	0.03
Turkey Peak	USA	R1	PB	0.14
Waterloo	USA	R1	PB	1.49
Webster Point	USA	R1	PB	0.64
Wellesley Island landing strip	USA	R1	PB	22.85
West of Grossman Point	USA	R1	OB	0.07
West of McRay Point	USA	R1	BB	0.16
West of Moore Landing	USA	R1	PB	0.45
West of Swiftwater Point	USA	R1	PB	0.37
Westminster Park 1	USA	R1	OB	0.43
Westminster Park 2	USA	R1	OB	6.98
Whitehouse Marsh	USA	R1	OB	3.95
Willowbank Marsh 1	Canada	R1	DRM	11.34
Willowbank Marsh 2	Canada	R1	OB	29.76
Willowbank Marsh 3	Canada	R1	DRM	16.36
Wolfe Island Cut Wetland	Canada	R1	PB	2.01
Wolfe Island Wetland	Canada	R1	PB	5.17
Bradleys Creek Marsh	Canada	R2	DRM	3.93
Doran Creek Marsh 1	Canada	R2	PB	10.34
Doran Creek Marsh 2	Canada	R2	DRM	22.91
Doran Creek Marsh 3	Canada	R2	OB	4.01
Doran Creek Marsh 4	Canada	R2	PB	12.22
East of Chimney Point	USA	R2	DRM	3.38
East of Iroquois Dam	USA	R2	PB	0.24
East of Keystone Road 1	USA	R2	OB	0.10
East of Keystone Road 2	USA	R2	DRM	0.50
East of Sparrowhawk Point 1	USA	R2	DRM	1.03
East of Sparrowhawk Point 2	USA	R2	PB	0.04
East of Sparrowhawk Point 3	USA	R2	DRM	1.09
Grant's Creek 1	Canada	R2	PB	6.08
Grant's Creek 2	Canada	R2	OB	2.89
Grant's Creek 3	Canada	R2	DRM	8.58
Iroquois Dam 1	USA	R2	PB	0.23

Iroquois Dam 2	USA	R2	PB	2.93
Johnstown Marsh Complex 1	Canada	R2	DRM	3.99
Johnstown Marsh Complex 2	Canada	R2	OB	58.22
Johnstown Marsh Complex 3	Canada	R2	PB	80.78
Johnstown Marsh Complex 4	Canada	R2	OB	10.30
Keystone Road	USA	R2	DRM	0.38
Lisbon Beach	USA	R2	PB	0.43
Little Sucker Brook 1	USA	R2	PB	16.57
Little Sucker Brook 2	USA	R2	OB	0.46
McLachlan Creek Complex 1	Canada	R2	OB	24.25
McLachlan Creek Complex 2	Canada	R2	DRM	5.07
McLachlan Creek Complex 3	Canada	R2	DRM	2.43
Molly's Gut Complex 1	Canada	R2	PB	2.11
Molly's Gut Complex 2	Canada	R2	PB	6.52
North of Lisbon Beach	USA	R2	PB	4.59
Ogden Island central	USA	R2	PB	1.12
Ogden Island east 1	USA	R2	PB	0.05
Ogden Island east 2	USA	R2	PB	0.08
Ogden Island east 3	USA	R2	PB	0.06
Ogden Island east 4	USA	R2	PB	0.06
Ogden Island east 5	USA	R2	PB	0.17
Ogden Island west	USA	R2	PB	0.38
Ogdensburg	USA	R2	OB	1.93
South of Lisbon Beach	USA	R2	DRM	1.62
Sparrowhawk Point	USA	R2	OB	0.97
Stream at Keystone Road	USA	R2	DRM	0.82
Sucker Brook	USA	R2	PB	3.27
Taggart Road	USA	R2	PB	3.78
West of Leishman Point	USA	R2	DRM	0.48
Whitehouse Bay	USA	R2	PB	3.53
Brandy Brook 1	USA	R3	BB	0.55
Brandy Brook 2	USA	R3	PB	6.77
Brandy Brook 3	USA	R3	BB	7.88
Coles Creek 1	USA	R3	BB	0.22
Coles Creek 2	USA	R3	PB	86.76
Coles Creek 3	USA	R3	BB	0.56
Coles Creek Camping Area	USA	R3	PB	8.35
Croil Islands 1	USA	R3	BB	4.89
Croil Islands 2	USA	R3	PB	10.23
Croil Islands 3	USA	R3	BB	2.14
Croil Islands 4	USA	R3	OB	0.94
Croil Islands 5	USA	R3	OB	0.23
Croil Islands 6	USA	R3	BB	4.09
East of Brandy Brook	USA	R3	BB	1.05
East of Massena Power Canal	USA	R3	BB	0.60
East of Wilson Hill Island	USA	R3	PB	0.28
Eisenhower Lock	USA	R3	OB	3.64
Hoople Bay Marsh 1	Canada	R3	PB	32.68

Hoople Bay Marsh 2	Canada	R3	PB	42.89
Island west of Coles Creek 1	USA	R3	PB	1.06
Island west of Coles Creek 2	USA	R3	BB	0.41
Long Sault Islands 1	USA	R3	PB	1.63
Long Sault Islands 2	USA	R3	PB	2.51
Long Sault Islands 3	USA	R3	PB	1.10
Long Sault Islands 4	USA	R3	PB	0.60
Long Sault Islands 5	USA	R3	PB	0.47
Long Sault Islands 6	USA	R3	OB	1.14
Long Sault Islands 7	USA	R3	PB	0.14
Long Sault Islands 8	USA	R3	PB	0.06
Riverside Marsh 1	Canada	R3	OB	4.14
Riverside Marsh 2	Canada	R3	PB	54.82
Riverside Marsh 3	Canada	R3	OB	83.63
Riverside Marsh 4	Canada	R3	PB	0.18
Riverside Marsh 5	Canada	R3	PB	1.46
Tucker Terrace	USA	R3	PB	0.11
Upper Canada Migratory Bird Sanctuary (UCMBS) 1	Canada	R3	PB	153.46
Upper Canada Migratory Bird Sanctuary (UCMBS) 2	Canada	R3	DRM	56.66
Upper Canada Migratory Bird Sanctuary (UCMBS) 3	Canada	R3	DRM	12.60
Upper Canada Migratory Bird Sanctuary (UCMBS) 4	Canada	R3	OB	125.07
Upper Canada Migratory Bird Sanctuary (UCMBS) 5	Canada	R3	PB	156.78
West of Brandy Brook 1	USA	R3	BB	1.08
West of Brandy Brook 2	USA	R3	BB	0.33
West of Brandy Brook 3	USA	R3	BB	3.02
West of Coles Creek 1	USA	R3	BB	10.32
West of Coles Creek 2	USA	R3	BB	1.61
West of Long Sault Dam	USA	R3	OB	0.20
Whalen Road	USA	R3	OB	0.74
Whalen Road islands	USA	R3	PB	13.15
Wilson Hill	USA	R3	PB	186.61

Appendix B. Pseudo code for querying surface areas between various elevation models.

```
Function Query-Area-By-Elevation-Intervals( )
{
  Number-of-wetlands = 8;
  Bottom-elevation = 71.00m;
  Top-elevation = 74.75m;
  Elevation-interval = 0.25m;
  Number-of-intervals = (Top-elevation – Bottom-elevation) / Elevation-interval
  start-elevation = Bottom-elevation;
  for (i = 1; i < Number-of-interval; i++)
  {
    end-elevation = Bottom-elevation + i*Elevation-interval;
    temporary-area = 0;
    for(j = 1; j <= Number-of-wetlands; j++)
    {
      temporary-area= temporary-area +
      Wetland[j].GetSurfaceArea(start-elevation, end-elevation);
    }
    area-by-interval[i] = temporary-area/Number-of-wetlands;
    start-elevation = end-elevation;
  }
}
```

Appendix C. Pseudo code analyzing a lake-level regulation plan.

Sub Analyzing-Corresponding-Flood-Events-in-a-Regulation-Plan()

```
' Define or initialize several variables, which were processed in other functions
PlanDataList ' a list of highest quarter-month water level value within a year
AdjustDataList ' a list of lowest quarter-month water level values among the four
    consecutive highest quarter-month water level values within a year (called adjust
    highest values)
RemainList ' a sub-list of lowest quarter-month water level values from a flooded
    year to a current year in study
FloodClassList ' a list of flood events that are marked with the number of years
    happened, which are extracted from the real lake level data
OldList ' a temporary list for switch data
TempList ' a temporary list for switch data
WetlandSurface ' the TIN surface generated in GIS based on one of the four wetland
    geometric models
PlanBeginYear ' the start year of the plan
SearchBeginYear ' a year to start a search that keep changing in analysis
HighWaterYear ' the year when a high water level planned
LastFloodedValue ' the highest quarter-month water level value of the current year
SurfaceArea ' the wetland area that will be affected by the planned high water level
FloodClass ' which flood class a planned high water level belongs to
TotalCount = PlanDataList.Count

' The main procedures for the analysis
while (TotalCount>0) ' reiterate for TotalCount years
    ' find the highest water level

    maxvalue=PlanDataList.get(0)
    LastFloodedValue=PlanDataList.Get(TotalCount-1)
    for each data in PlanDataList
        if (maxvalue<data) then
            maxvalue=data
        end
    end
    ' find the year of the highest water level
    HighWaterYear=PlanDataList.findbyvalue(maxvalue)
    ' calculate the wetland area
    SurfaceArea = wetlandSurface.Area(maxvalue)
    ' find the flood class that this planned high water level coincides
    FloodClass = FloodClassList.findbyvalue(maxvalue)
    ' save the analysis results to new data lists or files for further analysis
    Write HighWaterYear, SurfaceArea, FloodClass

    ' search for the remaining adjusted high water levels and related info; the
        search range should be between the most recent plan year to the year
        when a higher water level already found
    SearchBeginYear=HighWaterYear+1+PlanBeginYear
```

```

TempList = AdjustDataList.clone

while ((TempList.count-HighWaterYear) > 0)
    ' place the adjust high water level data from the year with the highest
      value up to the current year into a new subset
    for each i in TempList.Count..(HighWaterYear+1)
        RemainList.Insert(TempList.get(i))
    end
    ' find the highest water level
    maxvalue=RemainList.get(0)
    for each data in RemainList
        if (maxvalue<data) then
            maxvalue=data
        end
    end
    ' if the year is the current year, replace the adjusted high value with the
      true value
    if((HighWaterYear-RemainList.Count)=0) then
        Maxvalue=LastFloodedValue
    end
    ' find the year of the highest water level
    HighWaterYear=PlanDataList.findbyvalue(maxvalue)
    ' calculate the wetland area
    SurfaceArea = wetlandSurface.Area(maxvalue)
    ' find the flood class that this planned high water level coincides
    FloodClass = FloodClassList.findbyvalue(maxvalue)
    ' save the analysis results to new data lists or files for further analysis
    Write HighWaterYear, SurfaceArea, FloodClass

    ' update the temporary subset of the data
    OldList=RemainList.deepclone
    ' reset the search beginning year for next high water level
    SearchBeginYear=HighWaterYear+1+SearchBeginYear
    ' empty the list of subset data
    RemainList.empty
end ' finishing the 2nd WHILE loop

' set the counters for the next run to get the hydrological averages
TotalCount = TotalCount-1
PlanBeginYear = PlanbeginYear-1
OldList.empty
' take the first record of the dataset and insert it as the last record
lastrecord = PlanDataList.get(PlanDataList.count-1)
PlanDataList.remove(PlanDataList.count-1)
PlanDataList.insert(lastrecord)
end ' finishing the first WHILE loop
end sub ' finishing the sub-routine

```