NATIONAL WETLANDS INVENTORY REPORT

NORTHEAST REGION

Wetlands and Deepwater Habitats of Saratoga County, New York: The Results of the National Wetlands Inventory

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Wetlands and Deepwater Habitats of Saratoga County, New York: The Results of the National Wetlands Inventory

by

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METHODS

The project involved conducting an inventory of wetlands and deepwater habitats of Saratoga County following standard NWI conventions. These features were identified by stereoscopic photointerpretation of 1985-1986 1:58,000 color infrared photographs. The target mapping unit for this project was 1-3 acres. Most wetlands this size or larger should be mapped, while some conspicuous smaller wetlands (e.g., ponds) will be mapped.

Wetlands and deepwater habitats were classified according to the Service's official wetlands classification system (Cowardin et al. 1979). Wetlands were generally described to system, class, and subclass, with water regime and special modifiers applied. Beaver-influenced wetlands were marked by a "b." Table 1 lists some common wetland types and their corresponding map codes. Note that all permanently flooded riverine habitats are considered deepwater habitats for purposes of this inventory, although many may be shallow enough to classify as nonvegetated wetlands.

Collateral data sources used to aid in wetland photointerpretation included U.S.G.S. topographic maps and the Saratoga County interim soil survey.

Field trips to the study area were conducted in October 1994, May 1995, and September 1995. The purpose of these trips was to gain an understanding of the relationship between various wetland types and their photo-signatures, with an emphasis on field checking questionable sites (e.g., possible wet signatures or areas that may be wetlands based on their landscape position). During these trips, field notes were taken at a number of sites. Recorded data included wetland type, dominant vegetation and associated species, possible soil type or characteristics, and signs of wetland hydrology. This information was used to prepare a summary of the wetland types found in the County.

After photointerpretation was completed, the work was reviewed for regional quality control and for national quality assurance. Large-scale (1:24,000) draft maps were then prepared. Draft map review was performed by the Service. Copies of draft maps were distributed to other agencies (e.g., Corps of Engineers, EPA, and National Park Service) plus the Service's New York Field Office for review and comment. Based on this review, any needed edits were made and final maps were prepared.

After completion of the final maps, map data were digitized for future geographic information system (GIS) application. The digital wetland map database for the county was used to compile wetland acreage summaries. The original statistics reported in a 1998 report (same title) were compiled through GIS analysis using a county boundary layer derived from a small-scale map product (possibly 1:250,000). Subsequently, we located a more accurate county boundary digital layer in the Cornell University Geospatial Information Repository. This layer more closely matched county boundaries shown on the U.S. Geological Survey topographic maps. The acreage summaries were, therefore, recompiled producing more accurate data. The revised results are presented in this report.

TABLE 1. Common wetland and deepwater habitat types and their corresponding NWI map codes. Deepwater habitats are marked by an asterisk (*).

Map Code	Wetland Type
PEM1A	Palustrine Emergent Wetland, Persistent, Temporarily Flooded
PEM1C	Palustrine Emergent Wetland, Persistent, Seasonally Flooded
PEM1E	Palustrine Emergent Wetland, Persistent, Seasonally Flooded/Saturated
PEM1F	Palustrine Emergent Wetland, Persistent, Semipermanently Flooded
PSS1A	Palustrine Scrub-Shrub Wetland, Broad-leaved Deciduous, Temporarily Flooded
PSS1C	Palustrine Scrub-Shrub Wetland, Broad-leaved Deciduous, Seasonally Flooded
PSS1E	Palustrine Scrub-Shrub Wetland, Broad-leaved Deciduous, Seasonally Flooded/Saturated
PSS1/EM1Eb	Palustrine Scrub-Shrub Wetland, Broad-leaved Deciduous/Emergent, Persistent, Seasonally Flooded/Saturated, Beaver-influenced
PSS3Ba	Palustrine Scrub-Shrub Wetland, Broad-leaved Evergreen, Saturated, Acidic
PFO1E	Palustrine Forested Wetland, Broad-leaved Deciduous, Seasonally Flooded/Saturated
PFO1C	Palustrine Forested Wetland, Broad-leaved Deciduous, Seasonally Flooded
PFO2/1E	Palustrine Forested Wetland, Needle-leaved/Broad-leaved Deciduous, Seasonally Flooded/Saturated
PFO4E	Palustrine Forested Wetland, Needle-leaved Evergreen, Seasonally Flooded/Saturated
PFO5Fb	Palustrine Forested Wetland, Dead, Semipermanently Flooded, Beaver-influenced

TABLE 1. --continued--

Map Code	Wetland Type
PUBHh	Palustrine Unconsolidated Bottom, Permanently Flooded, Impounded
Pf	Palustrine, Farmed
PABF	Palustrine Aquatic Bed, Semipermanently Flooded
L1UBHh	*Lacustrine Limnetic Unconsolidated Bottom, Permanently Flooded, Impounded
L2EM2F	Lacustrine Littoral Emergent Wetland, Nonpersistent, Semipermanently Flooded
R2UBH	*Riverine Lower Perennial Unconsolidated Bottom, Permanently Flooded
R2USC	Riverine Lower Perennial Unconsolidated Shore, Seasonally Flooded
R3UBH	*Riverine Upper Perennial Unconsolidated Bottom, Permanently Flooded

RESULTS

Wetland Plant Communities

The study area contained freshwater wetlands of varying types. Most of the wetlands were vegetated types represented by forested wetlands, scrub-shrub wetlands, emergent wetlands, and various mixtures of these types. Nonvegetated wetlands also were common. These wetlands were mostly comprised of farm ponds. Wetland plants can be identified by the specialized field guides, such as "Field Guide to Nontidal Wetland Identification" (Tiner 1988) and "In Search of Swampland: A Wetland Sourcebook and Field Guide" (Tiner 1998), or by more technical taxonomic manuals (e.g., Fernald 1950).

Common emergent wetland species included the following: tussock sedge (Carex stricta), purple loosestrife (Lythrum salicaria), broad-leaved cattail (Typha latifolia), big arrowhead (Sagittaria latifolia), eastern bur-reed (Sparganium americanum), reed canary grass (Phalaris arundinacea), soft rush (Juncus effusus), sweet flag (Acorus calamus), and sensitive fern (Onoclea sensibilis). Other emergents observed were arrow arum (Peltandra virginica) and soft-stemmed bulrush (Scirpus validus).

Some aquatic bed species seen during the inventory were white water lily (Nymphaea odorata), water milfoil (Myriophyllum sp.), duckweed (Lemnacea), and water chestnut (Trapa natans). The latter species was observed on a state wildlife management area along the Mohawk River (Erie Canal) near Vischer Ferry.

Shrub wetlands were represented by the following species: speckled alder (Alnus rugosa), red osier dogwood (Cornus stolonifera), common elderberry (Sambucus canadensis), northern arrowwood (Viburnum recognitum), broad-leaved meadowsweet (Spiraea latifolia), northern wild raisin (Viburnum cassinoides), tartarian honeysuckle (Lonicera tartarica), silky dogwood (Cornus amomum), and swamp rose (Rosa palustris). Saplings of several tree species were also found in shrub wetlands such as black willow (Salix nigra) and red maple (Acer rubrum).

Several species were dominant or common trees in forested wetlands in Saratoga County. Common deciduous species were red maple, green ash (Fraxinus pennsylvanica), black gum (Nyssa sylvatica), trembling aspen (Populus tremuloides), eastern cottonwood (Populus deltoides), box elder (Acer negundo), black willow, American elm (Ulmus americana), and swamp white oak (Quercus bicolor). Larch or tamarack (Larix laricina) also occurred and co-dominated some sites. Two evergreens were frequently observed eastern white pine (Pinus strobus) and eastern hemlock (Tsuga canadensis). The former was often co-dominant with red maple in mixed forested wetlands. Balsam fir (Abies balsamea) was uncommon. Typical shrubs found in forested wetlands included speckled alder, broad-leaved meadowsweet, common winterberry (Ilex verticillata), gray birch (Betula populifolia), northern arrowwood, northern wild raisin, gray dogwood (Cornus racemosa), tartarian honeysuckle, highbush blueberry (Vaccinium corymbosum), and silky dogwood. Emergent species included some ferns (cinnamon - Osmunda

cinnamomea, royal - O. regalis, sensitive, and marsh - Thelypteris thelypteroides), manna-grasses (Glyceria striata; G. canadensis), jewelweed (Impatiens capensis), skunk cabbage (Symplocarpus foetidus), marsh horsetail (Equisetum fluviatile), mayflower (Maianthemum canadense), goldthread (Coptis groenlandica), and several sedges (including tussock, fringed - Carex crinita, and bladder - C. intumescens). Examples of some forested wetland communities are given in Table 2.

TABLE 2. Examples of palustrine forested wetland (PFO) plant communities in Saratoga County, New York. [Codes: 1 - broad-leaved deciduous, 2 - needle-leaved deciduous, 4 - needle-leaved evergreen, B - saturated (seasonally), C - seasonally flooded, E - seasonally flooded/saturated, and h - impounded.]

Wetland Type (Map Code)	Dominant Species	Associated Species
PFO1E	Acer rubrum/Fraxinus pennsylvanica	Alnus rugosa, Spiraea latifolia, Osmunda regalis, Onoclea sensibilis, Equisetum fluviatile, Thelypteris thelypteroides, Glyceria canadensis, Betula populifolia, Osmunda cinnamomea, Fragaria virginiana, Impatiens capensis, Galium sp., Carex crinita, Juncus effusus, Carex stricta, Eupatoriadelphus sp., Leersia sp.
PFO1B	Acer rubrum	Onoclea sensibilis, Osmunda cinnamomea, Sphagnum sp., Viburnum recognitum, Carex sp., Alnus rugosa, Tsuga canadensis, Viburnum cassinoides, Carex crinita, Geum sp., Galium sp., Osmunda regalis, Carpinus caroliniana, Ulmus americana
PFO1C	Acer rubrum	Nyssa sylvatica, Fraxinus pennsylvanica, Viburnum recognitum, Osmunda cinnamomea, Impatiens capensis, Vaccinium corymbosum, Pinus strobus, Corylus americana, Maianthemum canadensis, Symplocarpus foetidus, Viburnum cassinoides, Ilex verticillata, Aralia nudicaulis, Arisaema atrorubens, Thelypteris noveboracensis, Quercus alba
PFO1A	Acer rubrum/Fraxinus sp.	Viburnum recognitum, Osmunda cinnamomea, Onoclea sensibilis, Populus tremuloides, Betula populifolia, Pinus strobus, Viburnum cassinoides, Alnus rugosa, Symplocarpus foetidus
PFO1Ch	Populus deltoides/Acer negundo	Salix nigra, Ulmus americana, Onoclea sensibilis, Impatiens capensis, Solidago sp., Vitis sp., Cinna arundinacea, Urtica dioica
PFO1A	Acer rubrum	Onoclea sensibilis, Cornus foemina, Osmunda cinnamomea, Ulmus americana, Betula populifolia, Populus tremuloides, Prunus serotina, Spiraea latifolia, Vitis sp.

TABLE 2. --continued--

Wetland Type	Dominant Species	Associated Species
PFO1E	Acer rubrum	Ulmus americana, Quercus bicolor, Viburnum recognitum, Onoclea sensibilis, Osmunda cinnamomea, Pinus strobus
PFO1E	Acer rubrum/Fraxinus pennsylvanica	Ilex verticillata, Alnus rugosa, Osmunda regalis, Carex stricta, Thelypteris thelypteroides, Decodon verticillatus, Onoclea sensibilis, Osmunda cinnamomea, Lythrum salicaria, Peltandra virginica, Sagittaria latifolia, Utricularia sp.
PFO1C	Fraxinus pennsylvanica/ Populus deltoides	Salix nigra, Equisetum fluviatile, Osmunda cinnamomea, Solidago sp., Onoclea sensibilis, Ulmus americana, Urtica diocia, Impatiens capensis, Apios sp., Galium sp., Parthenocissis quinquefolia, Echinocystis lobata, Cornus amomum, Acer negundo
PFO2/1C	Larix laricina/Salix nigra/ Populus deltoides	Cornus foemina, Solidago sp., Onoclea sensibilis, Vitis sp., Acer rubrum, Aster sp., Crataegus sp., Fragaria virginiana, Phragmites australis, Asclepias sp., Glyceria striata
PFO1E	Fraxinus pennsylvanica	Salix nigra, Carex sp., Lonicera tartarica, Solidago sp., Lythrum salicaria
PFO1/4B	Acer rubrum/Pinus strobus	Osmunda cinnamomea, Onoclea sensibilis, Solidago sp., Vaccinium corymbosum, Fraxinus sp., Carex crinita, Salix sp.
PFO1/4B	Acer rubrum/Pinus strobus	Fraxinus sp., Viburnum recognitum, Osmunda cinnamomea, Onoclea sensibilis, Coptis groenlandica, Rubus hispidus, Viburnum cassinoides, Prunus serotina, Maianthemum canadense, Tsuga canadensis, Osmunda regalis, Ilex verticillata, Populus tremuloides, Cornus amomum, Carex intumescens, Alnus rugosa, Ulmus americana
PFO4E	Pinus strobus/Tsuga canadensis	Viburnum cassinoides, Osmunda cinnamomea, Onoclea sensibilis, Acer rubrum, Sphagnum sp., Abies balsamea, Fraxinus pennsylvanica, Alnus rugosa

Wetland Maps and Digital Geospatial Data

Twenty-seven 1:24,000 National Wetlands Inventory (NWI) maps were prepared using U.S. Geological Survey topographic maps as the base maps. These maps may be ordered by calling the NWI state map distribution center: Institute for Resource Information Systems (IRIS) at Cornell University, Ithaca, 607-255-4864.

All NWI maps have been digitized for GIS applications. Digital data are accessible through the Internet: http://www.nwi.fws.gov/homepage.

Wetland and Deepwater Habitat Acreage Summaries

County Totals

According to the NWI, Saratoga County possessed 42,801 acres of wetlands and 20,954 acres of deepwater habitats. Wetlands alone accounted for about 8 percent of the county, while deepwater habitats occupied about 4 percent of the County's land area. Most of Saratoga County was represented by uplands (88%).

Palustrine wetlands were the most abundant types, accounting for 42,680 acres (99.7 percent of the County's wetlands). Only 118 acres of lacustrine wetlands and 3 acres of riverine wetlands were inventoried. Table 3 summarizes wetland acreage for the County, while raw data are included as Appendix A.

Palustrine forested wetlands predominated, occupying over 30,800 acres and representing 72 percent of Saratoga County's wetlands. Broad-leaved deciduous forested wetlands were the most abundant type (13,632 acres), with mixed forested and shrub wetlands (mostly deciduous) second-ranked in abundance (6091 acres). Emergent wetlands and scrub-shrub wetlands were present in nearly equal amounts (3,328 acres and 3,125 acres, respectively) and representing 8 and 7 percent of the County's wetlands, respectively. Mixtures of emergent-shrub wetlands comprised about 6 percent of the County total (or 2,579 acres). Eighty-nine acres of farmed wetlands were inventoried. Shallow water, mostly nonvegetated wetlands (riverine and lacustrine wetlands plus palustrine nonvegetated wetlands) accounted for 7 percent of the County's wetlands (or 2,852 acres).

Statistics for linear wetlands (too small to map as polygons) were recorded in miles. Over 280 miles of these linear features were mapped: 1) 161 miles of linear palustrine forested wetlands; 2) 57 miles of linear emergent wetlands; 3) 48 miles of linear palustrine scrub-shrub wetlands; and 4) 22 miles of linear ponds (including large ditches). Most of the vegetated linears followed narrow drainageways (e.g., hillside seeps and swales) (see Appendix B for raw data).

A total of 20,954 acres of deepwater habitats were mapped in the County. Lakes and reservoirs predominated with 15,458 acres inventoried. These waterbodies represented 74 percent of the

County's deepwater habitats. The remaining 26 percent were riverine wetlands (5,496 acres mapped: 4,878 acres of lower perennial rivers and streams; 618 acres of upper perennial streams). In addition, over 450 miles of linear riverine wetlands were mapped. Nearly three-quarters of these features were upper perennial streams (340 miles), while 103 miles of intermittent streambeds and 13 miles of linear lower perennial streams were also inventoried.

Town Totals

Wetland and deepwater habitat acreage data were also tabulated for each town in Saratoga County. The results are shown in Table 4. More detailed information for each town is available upon request (contact the senior author at the address on the title page).

Greenfield had the highest wetland acreage (3,838 acres), while Clifton Park was a close second with 3,811 acres. Other towns with more than 3,000 acres included Galway and Saratoga Springs. Several towns had 2,000-3,000 acres: Ballston, Charlton, Corinth, Malta, Milton, Saratoga, Stillwater, and Waterford.

Edinburg and Day, with their extensive lacustrine waters, had the most deepwater habitat acreage of the towns in Saratoga County, with 4,360 acres and 3,396 acres, respectively. Other towns with over 1,000 acres of deepwater habitat were Clifton Park, Malta, Moreau, Saratoga, and Stillwater. Moreau ranked number one in riverine acreage with 824 acres, followed by Halfmoon (747 acres) and Saratoga (714 acres).

Wetlands and deepwater habitats represented 20 percent or more of Malta (24%) and Saratoga Springs (20%). Other towns with more than 10 percent coverage by these habitats were Ballston, Charlton, Clifton Park, Edinburg, Galway, Mechanicville, Moreau, Saratoga, Stillwater, and Waterford.

TABLE 3. Acreage summary of wetlands in Saratoga County, New York based on NWI mapping.

Palustrine Wetlands	**Acreage**
Emergent	*3,328.2*
Mixed Emergent/Shrub	*2,579.1*
Scrub-shrub	
Broad-leaved Deciduous	3,006.2
Broad-leaved Evergreen	43.1
Needle-leaved Evergreen	17.6
Mixed	58.1
Subtotal	*3,125.0*
Forested	
Broad-leaved Deciduous	13,631.8
Mixed Deciduous (Broad- and Needle-leaved)	77.3
Needle-leaved Evergreen	1,949.2
Mixed Deciduous/Evergreen	8,237.2
Mixed Forested/Shrub	6,090.9
Mixed Forested/Emergent	317.1
Dead	523.8
Subtotal	*30,827.3*
Unconsolidated Bottom	
Nonvegetated	1,948.8
Mixed w/Emergent	338.4
Mixed w/Shrub	234.0
Mixed w/Dead Trees	175.6
Aquatic Bed	13.3
Subtotal	*2,710.1*
Unconsolidated Shore	*21.2*
Farmed	*89.0*
Subtotal Palustrine Wetlands	**42,679.9**
Riverine Wetlands	**3.4**
Lacustrine Wetlands	
Nonvegetated (Unconsolidated Bottom)	42.5
Emergent	26.9
Aquatic Bed	48.1
Subtotal Lacustrine Wetlands	**117.5**
All Wetlands	**42,800.8**

TABLE 4. Acreage summary of wetlands and deepwater habitats by towns for Saratoga County, New York based on NWI mapping. (DWHs = Deepwater Habitats)

Town	**Wetland Acreage**	**Deepwater Habitat Acreage** (Riverine/Lacustrine)	**Percent of Town Occupied by Wetlands/DWHs**
Ballston	2,258.3	0/264.2	13
Charlton	2,574.2	0.6/0	12
Clifton Park	3,811.4	685.1/318.3	15
Corinth	2,525.9	340.0/568.7	9
Day	925.7	0/3,395.8	10
Edinburg	1,647.1	0/4,360.2	14
Galway	3,358.5	0/553.2	14
Greenfield	3,838.1	0/74.7	9
Hadley	681.8	425.5/570.5	6
Halfmoon	1,238.4	746.5/0	9
Malta	2,484.6	18.7/2,231.3	24
Mechanicville	4.9	79.8/0	15
Milton	2,187.4	9.0/0	10
Moreau	1,958.9	824.0/258.8	11
Northumberland	1,572.1	463.9/0	10
Providence	1,606.4	0/639.5	8
Saratoga	2,450.9	714.7/885.9	15
Saratoga Springs	3,124.1	171.7/341.0	20
Stillwater	2,656.2	557.1/949.9	15
Waterford	234.0	459.8/0	15
Wilton	1,661.8	0/46.0	7

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Glenn Smith of the U.S. Fish and Wildlife Service performed quality control of the interpreted photos and assisted in field review of draft maps. Ralph Tiner, Regional Wetland Coordinator for the Service, managed the project for the Service, assisted in field data collection, and prepared the final report. The Service's NWI Office in St. Petersburg, Florida was responsible for wetland map production and digital database construction. Special thanks go to Becky Stanley (data prep), Greg Pipkin (national quality control and map production), Kurt Snider (digital database construction), and Matthew Starr (data analysis).

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APPENDIX A. Raw digital data summaries of wetland and deepwater habitat polygons appearing on NWI maps for Saratoga County, New York.

NEW Calculations For Saratoga Co. Wetlands

Attribute	Count	Acreage
L1UBH	18	1578.224
L1UBHh	43	13879.55
Sub-Total	61	15457.77
L2AB/UBHh	2	46.745
L2AB4Hh	2	1.341
Sub-Total	4	48.086
L2EM2/UBFh	1	3.164
L2EM2F	3	1.588
L2EM2Fh	10	14.161
L2EM2Hh	4	7.998
Sub-Total	18	26.911
L2UBHh	2	32.448
L2USAh	9	7.963
L2USC	2	0.709
L2USCh	2	1.35
Sub-Total	15	42.47
PAB/SS1F	1	0.349
Sub-Total	1	0.349
PAB5/UBHx	1	5.523
Sub-Total	1	5.523
PABF	2	0.838
PABHh	3	1.835
Sub-Total	5	2.673
PEM2/AB4Hh	1	0.181
PEM1/ABFh	1	0.148
Sub-Total	2	0.329
PEM1/SS1A	2	4.609
PEM1/SS1B	20	66.306
PEM1/SS1Bd	1	4.947
PEM1/SS1Bh	1	0.739
PEM1/SS1C	22	123.407
PEM1/SS1Cd	1	12.045
PEM1/SS1Ch	3	11.431
PEM1/SS1E	99	434.188
PEM1/SS1Eb	51	337.713
PEM1/SS1Ed	3	12.05
PEM1/SS1Eh	11	37.443

PEM1/SS1F	3	2.011
PEM1/SS1Fb	5	19.324
PEM1/SS1Fd	1	15.921
PEM1/SS1Fh	5	54.071
PEM1/SS3Bg	1	5.604
PEM1/SS3E	4	26.092
PSS1/EM1Ah	1	3.248
PSS1/EM1B	29	93.827
PSS1/EM1Bd	1	2.623
PSS1/EM1C	14	45.921
PSS1/EM1E	127	806.461
PSS1/EM1Eb	26	160.215
PSS1/EM1Ed	2	26.659
PSS1/EM1Eh	14	128.197
PSS1/EM1F	5	13.201
PSS1/EM1Fb	7	38.689
PSS1/EM1Fh	6	60.849
PSS3/EM1B	1	12.866
PSS3/EM1E	2	7.339
PSS4/EM1E	3	11.136
Sub-Total	471	2579.132
PEM1A	49	92.773
PEM1Ad	7	13.153
PEM1Ah	3	0.92
PEM1Ax	2	4.838
PEM1B	226	363.54
PEM1Bd	42	120.003
PEM1C	188	317.247
PEM1Cb	4	5.392
PEM1Cd	28	83.121
PEM1Ch	13	12.841
PEM1Cx	1	1.455
PEM1E	638	1074.853
PEM1Eb	130	474.475
PEM1Ed	37	168.708
PEM1Eh	112	217.48
PEM1Ex	3	1.819
PEM1F	76	73.181
PEM1Fb	55	180.927
PEM1Fh	60	110.204
PEM1Fx	12	8.557
PEM2Fh	1	2.445
Sub-Total	1687	3327.932
PFO1/2B	2	26.517
PFO1/2E	5	44.248
PFO1A	118	305.494
PFO1Ad	2	6.595

PFO1Ah	15	54.116
PFO1B	209	923.169
PFO1Bb	2	2.912
PFO1Bd	1	15.453
PFO1C	431	1859.336
PFO1Cb	9	19.484
PFO1Cd	4	36.507
PFO1Ch	116	517.446
PFO1E	1494	8905.412
PFO1Eb	65	291.223
PFO1Ed	15	114.156
PFO1Eh	80	580.436
PFO2/1E	2	6.564
Sub-Total	2570	13709.07

PFO1/4A	5	30.021
PFO1/4B	121	1572.887
PFO1/4Bb	1	8.844
PFO1/4C	21	171.353
PFO1/4Cb	1	0.86
PFO1/4Ch	3	5.75
PFO1/4E	408	4814.422
PFO1/4Eb	12	91.764
PFO1/4Eh	1	2.287
PFO1/5Eb	3	45.75
PFO1/5Fb	2	3.222
PFO4/1B	23	256.358
PFO4/1C	2	16.864
PFO4/1E	119	1114.095
PFO4/1Eb	9	97.788
PFO4/1Eh	1	1.144
PFO4/5Eb	2	3.816
Sub-Total	734	8237.225

PFO4A	2	13.334
PFO4B	50	267.232
PFO4Ba	2	14.836
PFO4C	4	5.577
PFO4Cb	3	8.32
PFO4E	376	1378.656
PFO4Eb	34	238.531
PFO4Ed	1	11.243
PFO4Eh	4	9.852
PFO4Fb	1	1.579
Sub-Total	477	1949.16

PFO5/1Eb	1	19.198
PFO5/1Fb	1	2.923

PFO5Eb	1	1.745
PFO5Eh	1	1.857
PFO5F	7	55.021
PFO5Fb	66	374.885
PFO5Fh	8	58.535
PFO5Hb	2	9.642
Sub-Total	87	523.806
PFO1/EM1A	1	4.954
PFO1/EM1B	1	13.817
PFO1/EM1C	4	21.174
PFO1/EM1Ch	2	4.556
PFO1/EM1E	8	37.592
PFO1/EM1Eb	4	42.404
PFO1/EM1Eh	3	18.409
PEM1/FO1C	3	9.745
PEM1/FO1Ch	2	7.423
PEM1/FO1E	3	7.101
PEM1/FO1Eb	2	10.164
PEM1/FO1Eh	1	8.787
PEM1/FO5Eb	8	49.513
PEM1/FO5Fb	7	25.007
PFO5/EM1E	1	3.315
PFO5/EM1Eb	2	14.926
PFO5/EM1Fb	4	26.162
PFO4/EM1E	2	12.001
Sub-Total	58	317.05
PFO1/SS1A	2	6.049
PFO1/SS1B	30	200.765
PFO1/SS1C	43	333.862
PFO1/SS1Cd	1	11.288
PFO1/SS1Ch	5	23.64
PFO1/SS1E	253	2635.624
PFO1/SS1Eb	22	210.644
PFO1/SS1Ed	8	32.99
PFO1/SS1Eh	14	73.404
PFO1/SS1F	1	2.319
PFO1/SS4E	1	1.083
PFO2/SS1E	1	2.136
PFO4/SS1B	7	52.624
PFO4/SS1C	1	1.826
PFO4/SS1E	15	117.066
PFO4/SS1Eb	4	24.097
PFO4/SS1Eh	2	15.633
PFO4/SS3Ba	1	2.428
PSS1/FO1A	2	2.897
PSS1/FO1B	55	341.722
PSS1/FO1C	47	202.019

PSS1/FO1Cb	1	3.68
PSS1/FO1Cd	1	12.493
PSS1/FO1Ch	2	4.042
PSS1/FO1E	197	1258.828
PSS1/FO1Eb	18	120.336
PSS1/FO1Ed	6	74.909
PSS1/FO1Eh	9	33.522
PSS1/FO1Fb	2	7.403
PSS1/FO2E	1	3.654
PSS1/FO4B	8	32.453
PSS1/FO4E	23	104.576
PSS1/FO4Eb	2	11.702
PSS1/FO5Eb	1	7.08
PSS1/FO5Fb	3	15.783
PSS1/FO5Fh	4	13.082
PSS4/FO1E	2	22.653
PSS4/FO4E	1	3.942
PSS3/FO4Eb	1	1.54
PFO5/SS1Eb	4	51.251
PFO5/SS1Fb	2	9.845
PFO5/SS1Fh	2	4.001
Sub-Total	805	6090.891

PSS1/3B	2	9.17
PSS1/3E	3	6.647
PSS1/3Eb	1	8.477
PSS1/4B	1	3.015
PSS1/4E	4	8.692
PSS1/4Eh	1	2.217
PSS1A	13	16.534
PSS1Ad	1	0.534
PSS1Ah	2	2.113
PSS1B	110	273.095
PSS1Bd	4	7.792
PSS1Bh	1	1.103
PSS1C	101	152.176
PSS1Cd	1	0.68
PSS1Ch	22	20.35
PSS1E	738	1638.184
PSS1Eb	104	568.705
PSS1Ed	6	20.931
PSS1Eh	91	229.379
PSS1Ex	2	2.347
PSS1F	47	27.893
PSS1Fb	19	26.736
PSS1Fd	1	1.382
PSS1Fh	34	30.522
PSS1Fx	2	0.552
PSS3/1E	1	1.299

PSS3/4Bg	1	0.963
PSS3B	1	0.424
PSS3Ba	10	35.526
PSS3E	2	0.739
PSS3Eh	1	0.537
PSS4/1E	1	6.017
PSS4/1Eb	1	2.6
PSS4B	1	0.307
PSS4E	8	12.61
PSS4Eb	1	4.718
Sub-Total	1339	3124.966
PUB/ABFh	2	1.755
PUB/ABHh	4	2.767
PUB/ABHx	1	0.409
Sub-Total	7	4.931
PUB/EM1Eb	1	2.593
PUB/EM1Eh	1	0.981
PUB/EM1F	9	4.187
PUB/EM1Fb	21	81.149
PUB/EM1Fh	38	130.095
PUB/EM1Fx	3	0.623
PUB/EM1Hh	1	14.135
PUB/EM2Fh	4	32.062
PUB/EM2H	1	12.604
PUB/EM2Hh	1	1.179
PEM2/UBFh	1	3.054
PEM2/UBHh	2	3.243
PEM/UBF	1	0.259
PEM1/UBF	5	2.229
PEM1/UBFb	8	24.962
PEM1/UBFh	12	24.779
PEM1/UBFx	2	0.284
Sub-Total	111	338.418
PUB/FO1F	1	0.783
PUB/FO5Fb	22	114.56
PUB/FO5Fh	4	12.82
PUB/FO5Hb	1	14.945
PUB/FO5Hh	1	4.83
PFO5/UBFb	7	24.4
PFO5/UBFh	1	3.258
Sub-Total	37	175.596
PUB/SS1F	12	20.57
PUB/SS1Fb	19	68.372
PUB/SS1Fh	21	41.051
PUB/SS1Fx	2	2.594

PSS1/UBF	8	21.87
PSS1/UBFb	6	59.646
PSS1/UBFh	9	19.894
Sub-Total	77	233.997
PUBF	162	61.121
PUBFb	222	296.83
PUBFh	246	137.629
PUBFx	75	37.865
PUBH	82	232.432
PUBHb	8	57.981
PUBHh	1192	1032.499
PUBHx	142	89.226
PUBKh	1	0.894
PUBKx	6	2.42
PUSAh	2	4.572
PUSAx	8	8.095
PUSC	1	0.318
PUSCh	7	5.052
PUSCx	9	3.107
Sub-Total	2163	1970.041
Pf	12	40.991
Pfd	5	32.086
Pfh	4	15.909
Sub-Total	21	88.986
R2UBH	9	4878.197
R2USA	1	0.215
R2USC	2	2.935
R3UBH	12	618.172
R3USA	1	0.258
Sub-Total	25	5499.777
Wetland Sub total	10776	63755.09
Upland	633	475897.4
Grand Total	11409	539652.5

APPENDIX B. Raw digital data summaries for linear wetlands based on NWI mapping for Saratoga County, New York.

New calculations of linear Wetlands

Attribute	Count	Length		
		Meters	Feet	Miles
PEM1/SS1E	1	87.0228	285.5218068	0.05407783
PEM1/UBFx	1	461.6177	1514.567674	0.286859117
PEM1A	34	7791.9646	25565.43585	4.84209355
PEM1B	82	11597.094	38050.06541	7.206682389
PEM1C	130	26677.4974	87528.86897	16.57796778
PEM1Cd	1	104.0289	341.3188209	0.064645785
PEM1Ch	2	217.6568	714.1319608	0.135256593
PEM1Cx	17	3014.9543	9892.065058	1.873557122
PEM1E	220	29520.6859	96857.37044	18.34478596
PEM1Eb	2	260.8941	855.9935421	0.162125177
PEM1Ed	3	215.5201	707.1214481	0.133928802
PEM1Eh	8	1004.6502	3296.257306	0.624311134
PEM1Ex	29	6967.2453	22859.53183	4.329595328
PEM1F	10	832.138	2730.244778	0.517108361
PEM1Fh	10	912.906	2995.244586	0.567299325
PEM1Fx	10	2161.0246	7090.321713	1.342906932
Sub-Total	560	91826.9007	301284.0612	57.06320119
PFO1/4A	2	1329.2416	4361.24169	0.826019176
PFO1/4B	1	157.0833	515.3903073	0.097614924
PFO1/4E	2	263.6931	865.1770611	0.163864535
PFO1A	284	113298.6718	371732.9422	70.40621925
PFO1Ah	1	105.8351	347.2449631	0.065768196
PFO1B	4	536.03	1758.71443	0.333100513
PFO1C	305	82525.7649	270767.0346	51.28327636
PFO1Cb	4	1001.5034	3285.932655	0.622355645
PFO1Ch	28	5396.46	17705.78526	3.353475728
PFO1Cx	12	2679.2328	8790.562817	1.664932598
PFO1E	242	43731.8446	143484.1821	27.1759041
PFO1Eb	4	671.6825	2203.790283	0.41739788
PFO1Ed	1	392.6396	1288.250528	0.24399465
PFO1Eh	16	2602.8056	8539.805174	1.6174391
PFO1Ex	1	101.6987	333.6734347	0.063197749
PFO4A	2	276.8845	908.4580445	0.172061954
PFO4B	1	170.9795	560.9837395	0.10625032
PFO4E	11	2485.1958	8153.92742	1.544353853
PFO4Eb	1	349.8375	1147.816838	0.217396509
Sub-Total	922	258077.0843	846750.9136	160.374623
PSS1/EM1B	1	63.0211	206.7722291	0.03916266
PSS1/EM1C	2	590.0141	1935.836262	0.366647388
PSS1/EM1E	1	248.6124	815.6972844	0.154493066
Sub-Total	4	901.6476	2958.305776	0.560303114
PSS1/FO1C	2	672.8027	2207.465659	0.418093996
PFO1/SS1A	1	235.2531	771.8654211	0.146191311

PFO1/SS1C	2	549.9877	1804.509644	0.341774127
PSS1/FO1E	2	254.5017	835.0200777	0.158152803
Sub-Total	7	1712.5452	5618.860801	1.064212236
PSS1A	37	11657.7037	38248.92584	7.244346554
PSS1B	12	2191.2769	7189.579509	1.361706359
PSS1Bd	1	90.0998	295.6174438	0.055989944
PSS1C	124	25256.202	82865.59876	15.69474441
PSS1Cd	3	625.0648	2050.837609	0.388428643
PSS1Ch	2	158.0034	518.4091554	0.098186694
PSS1Cx	4	857.98	2815.03238	0.533167133
PSS1E	189	30120.571	98825.59345	18.7175674
PSS1Eb	2	234.6907	770.0201867	0.145841823
PSS1Ed	1	122.4543	401.7725583	0.076095723
PSS1Eh	10	1300.7127	4267.638369	0.808290707
PSS1Ex	4	1022.1816	3353.77783	0.635205521
PSS1F	9	1380.7869	4530.361819	0.858050528
PSS1Fb	3	189.1069	620.4597389	0.117515075
PSS1Fh	5	602.4516	1976.6437	0.374376317
PSS1Fx	6	572.9318	1879.789236	0.356032081
PSS4Ba	1	69.9034	229.3530554	0.043439469
Sub-Total	413	76452.1215	250839.4106	47.50898438
PUB/EM1Fh	1	50.6902	166.3145462	0.031499975
PUBF	107	8424.82	27641.83442	5.235363439
PUBFb	3	279.2626	916.2605906	0.173539756
PUBFh	48	3075.1561	10089.58716	1.910967809
PUBFx	53	10203.69	33478.30689	6.340791325
PUBH	6	535.0133	1755.378637	0.332468714
PUBHh	33	3471.3515	11389.50427	2.157172109
PUBHx	47	9465.2622	31055.52528	5.881916488
Sub-Total	298	35505.2459	116492.7118	22.06371961
Pf	2	46.4399	152.3693119	0.028858748
Pfd	1	45.8698	150.4988138	0.028504475
Sub-Total	3	92.3097	302.8681257	0.057363223
R2UBH	94	20239.3628	66405.34935	12.57717317
R2UBHx	5	993.702	3260.336262	0.617507688
R3UBF	42	5570.9611	18278.32337	3.461914446
R3UBH	1264	539797.6525	1771076.098	335.4418129
R3UBHh	1	35.4328	116.2550168	0.0220187
R3UBHx	6	2116.2411	6943.387049	1.315077507
R3USA	1	270.193	886.503233	0.167903712
R4SBA	63	24739.3699	81169.87264	15.37357388
R4SBC	299	115931.0736	380369.8525	72.04205006
R4SBCx	4	615.9681	2020.991336	0.382775759
R4SBF	36	23571.7614	77338.94915	14.64799697
Sub-Total	1815	733881.7183	2407865.918	456.0498048
Grand Total	4022	1198449.573	3932113.05	744.7422116