

Wetland Delineation Report

for the

Marble River Wind Farm Clinton County, New York



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TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	SITE LOCATION.....	2
3.0	SITE DESCRIPTION	2
4.0	SITE HYDROGRAPHY	2
5.0	METHODS	4
5.1	Wetland Field Delineation Methods.....	4
5.2	Surface Waterbody Field Delineation Methods	6
6.0	INFORMATION REVIEW	6
6.1	Mapped Wetlands	6
6.1.1	NYSDEC Mapped Wetlands	6
6.1.2	NWI Mapped Wetlands	7
6.2	Soils	7
7.0	DELINEATION RESULTS	7
7.1	Wetlands	7
7.2	NYSDEC Wetlands and Adjacent Areas.....	8
7.3	Surface Waterbodies.....	8
7.4	Soils	9
7.5	Vegetation.....	9
7.6	Hydrology.....	10
8.0	JURISDICTIONAL DETERMINATION	10
9.0	REFERENCES	12

FIGURES

Figure 1.	Project Location Map	14
Figure 2.	Hydrography and Drainage Boundaries	15
Figure 3.	Hierarchical Drainage System Intersecting the Site.....	16
Figure 4.	NYSDEC Mapped Wetlands.....	17
Figure 5.	National Wetlands Inventory Mapped Wetlands	18
Figure 6.	NRCS Soil Survey (Plates 1 through 8)... ..	19
Figure 7.	Delineated Wetlands and Surface Waterbodies (Plates 1 through 8).....	27
Figure 8.	Delineated Wetlands within the Project Footprint	35



TABLES

Table 6.1 NYSDEC Mapped Wetlands within the Site.....	36
Table 6.2 NYSDEC Mapped Wetlands within the Survey Area.....	36
Table 6.3 NWI Mapped Wetlands within the Site.....	36
Table 6.4 NWI Mapped Wetlands within the Survey Area.....	37
Table 7.1 Delineated Wetland Polygons.....	38
Table 7.2 Delineated Wetland Polygons by Project Component.....	53
Table 7.3 Delineated Wetland Polygon Covertypes.....	54
Table 7.4 Delineated NYSDEC Wetland Acreage.....	55
Table 7.5 Delineated NYSDEC Wetland Covertypes.....	60
Table 7.6 Delineated NYSDEC Wetland Adjacent Area Acreage.....	61
Table 7.7 Delineated Surface Waterbody Polygons.....	65
Table 7.8 Delineated Surface Waterbody Polygon Lengths.....	69
Table 7.9 Delineated Wetland Polygon Community Types.....	72
Table 7.10 Plant Species Encountered in Wetlands.....	73
Table 7.11 Plant Species Encountered in Uplands.....	78
Table 7.12 Non-tidal Hydrology Regimes.....	83
Table 8.1 Delineated Wetland Polygons within Project Footprint.....	84
Table 8.2 Delineated Surface Waterbodies within Project Footprint.....	94

ATTACHMENTS

- Attachment 1. Wetland Data Forms and Sketch Sheets
- Attachment 2. Stream Polygon Data Sheets
- Attachment 3. Select Site Photographs
- Attachment 4. USDA NRCS Hydric Soil Unit Descriptions
- Attachment 5. Edinger Ecological Communities
- Attachment 6. Jurisdictional Determination Forms
- Attachment 7. Duplicate Oversized Figure



1.0 INTRODUCTION

Horizon Wind Energy contracted with Tetra Tech EC, Inc. (TtEC) to delineate wetlands associated with the proposed Marble River Wind Farm located in Clinton County, New York (the Site). The Site comprises approximately 18,520 acres and includes rural, agricultural and undeveloped areas. The proposed approximately 218-megawatt (mw) project includes the construction of 109 wind driven turbines (Figure 1). Electricity generated from the turbines would be transmitted to a substation via an electric collection system and then to an existing 230 kilovolt (kV) New York Power Authority transmission line that bisects the Site. Project components assessed as part of this wetland delineation report include proposed turbine and meteorological tower locations, access roads, underground electric collection lines, an overhead electric collection line, a substation and an operations and maintenance (O&M) building/temporary laydown area. In addition, three public road widening, 13 public road intersection improvement, and seven potential public road culvert replacement areas were also surveyed for the presence of wetlands as part of this effort. The State Plane NY East (feet) NAD 83 coordinates for the approximate center of the Site are 2227217.5 N and 642639.4 E.

Wetlands within the project area fall under the jurisdiction of the New York State Department of Environmental Conservation (NYSDEC) and the U.S. Army Corps of Engineers (USACE). New York State's freshwater wetlands are protected under Article 24 of the Environmental Conservation Law, commonly known as the Freshwater Wetlands Act. The NYSDEC defines wetlands as "Those areas of land and water that support a preponderance of characteristic wetlands plants that out-compete upland plants because of the presence of wetlands hydrology (such as prolonged flooding) or hydric (wet) soils. Freshwater wetlands commonly include marshes, swamps, bogs, and fens" (NYSDEC, 2007). The USACE defines wetlands as "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (USACE, 1987).

This report provides a description of the Federal and State freshwater wetlands identified at the Site. Included are descriptions of the Site, methods used to determine the presence of wetlands, information reviewed (concerning wetlands, soils, and threatened and endangered species), field survey results (relating to delineated wetlands, surface waterbodies, vegetation, soils, and hydrology), a summary of NYSDEC wetlands and adjacent areas and a literature cited section. Attachments include delineated wetland data forms and sketch sheets, stream polygon data sheets, select Site photographs and agency correspondence regarding the presence of threatened and endangered species.



2.0 SITE LOCATION

The Site is located in the Townships of Clinton and Ellenburg, both in the northwest corner of Clinton County, New York (Figure 1, Project Location Map). Canada, Mooers Township, Adirondack Park and Franklin County surround the Site to the north, east, south and west, respectively. Nearly all of the Site (approximately 90 percent) is located in the Township of Clinton, with a smaller portion of the Site (approximately 10 percent) located in the northern portion of the Township of Ellenburg. The Site is located on a plateau with limited topographic relief. Site elevations range from 800 feet above mean sea level (msl) in the northern portion of the Site to 1,500 feet msl in the southern portion of the Site.

Highways, and major and minor local roads bisect the Site. Minor local roads are seasonal roads and are not maintained during winter months. Rural residential properties and agricultural properties border the highways and major local roads with undeveloped and seasonal use properties occurring on the minor local roads. Highways that bisect the Site include U.S. Federal Highway 11 and State Highways 189 and 190. Major local roads including Frontier, Liberty Pole, Merchia, Whalen, Looby, Lagree, Campbell, Gagnier, Brandy Brook, Sancomb, Ryan, Number 5, Bohon, Clinton Mills and Jones Roads and minor seasonal use roads including Soucia, Robare Pond, Patnode and Jones Roads occur within the project boundaries. The hamlet of Churubusco, an abandoned railroad, a diner, and an electric transmission line also occur within the project boundaries. Structures within Churubusco are limited to a conglomeration of residential structures, a firehouse, a recreation field, a church and a cemetery. The diner (Filion's) is located on Route 11 near the Looby Road intersection. The abandoned railroad, located in the northern portion of the Site, and the electric transmission line, located in the southern portion of the Site, bisect the Site from east to west.

3.0 SITE DESCRIPTION

The project site supports rural communities that are largely dependent upon silviculture and agricultural as their economic basis. Approximately 40 percent of the project site is mapped as wetlands by the state and federal government. Land use in most of the northeast portion of the project area is associated with silviculture and forested tracts have existing logging roads and hunting trails. Many of the forested wetlands within this portion have been previously subjected to silvicultural harvesting with either the whole canopy and shrub components removed or the canopy selectively cut. The project area does not contain any virgin timber or climax forest, and most of the forest stands has been harvested three times or more over the last 200 years. In the southwest portion of the project the area agricultural land uses are dominant. In this area several wetlands have been farmed and are subject to annual plowing and discing for the growing and harvesting of cattle feed to support the dairy industry. In many cases the adjacent areas have also been plowed, ditched, and/or mechanically landcleared.

4.0 SITE HYDROGRAPHY

The project is located within 6 subwatersheds, the Chateaugay River; Direct Canadian Drainage; English River; Hinchinbrook & Collins Brooks; Shea Brook & Kellas Creek, and Upper Great



Chazy River. All Site drainage flows north to the St. Lawrence River, and east to Lake Champlain via the North Branch Great Chazy. Significant on-Site water bodies include Crystal Creek, Allen Brook, English River, Brandy Brook, un-named tributaries to the North Branch Great Chazy River, Hinchinbrook Brook, Dry Brook and Marble River.

The Site is situated along the drainage divide between the Lake Champlain (Hydrologic Unit Code 'HUC': 020100) and Saint Lawrence (HUC: 041503) Drainage Basins. A map of the drainage boundaries and a flow chart identifying the hierarchy of the Site drainage are presented in Figures 2 and 3, respectively.

Saint Lawrence Drainage Basin

The northern 89 percent of the Site (16,524 acres or 25.82 square miles) is located in the Saint Lawrence Drainage Basin, which drains roughly 3.55 million acres (5,600 square miles) in New York State. Tributary headwaters of this basin originate high in the Adirondack Mountains and flow north to the Saint Lawrence River. Major tributaries in this basin include the Salmon, Saint Regis, Raquette, Grass, Oswegatchie, and Indian Rivers. Within this drainage basin, the Site falls within the English-Salmon Watershed (HUC: 04150307), which contains 1,096 miles of streams and 34,010 acres of NYSDEC-regulated (>12.4 acres) wetlands. The English-Salmon Watershed comprises 13 smaller subwatersheds, five of which intersect the Site: Chateaugay River; Direct Canadian Drainage; English River; Hinchinbrook & Collins Brooks; and Shea Brook & Kellas Creek. These subwatersheds occupy 2,843; 5,096; 5,698; 2,016; and 871 acres of the Site, respectively.

The English River and its associated tributaries including Crystal Creek and Allen Brook drain the eastern portion of the Site; Hinchinbrook Brook, Marble River, and their tributaries drain the western portion of the Site; and tributaries flowing directly into Canada drain the northern portion of the Site. All of these watercourses eventually drain to the Chateaugay River in Canada with the exception of Marble River and its tributaries which drain to the Chateaugay River within the U.S. The Chateaugay River, a designated Traditional Navigable Water (TNW) for the project, flows north to the Saint Lawrence River.

Lake Champlain Drainage Basin

The remaining 11 percent of the Site (1,996 acres or 3.12 square miles), is located in the Lake Champlain Drainage Basin. This basin drains approximately 1.93 million acres (3,000 square miles) in New York to Lake Champlain via major tributaries that include the Great Chazy, Saranac, Ausable, and Boquet Rivers. Lake Champlain drains north to Southern Quebec via the Richelieu River and discharges to the Saint Lawrence River. Within the Lake Champlain Drainage Basin, the Site is situated within the Northern Lake Champlain Watershed (HUC: 02010006), which contains 655 miles of streams and 35,120 acres of NYSDEC-regulated wetlands. The entire portion of the Site within the Northern Lake Champlain watershed is associated with one of ten subwatersheds, the Upper Great Chazy River Subwatershed.

Within the Lake Champlain drainage basin, the North Branch Great Chazy River, a TNW, and its tributaries including Brandy Brook drain the southeastern portion of the Site. The North



Branch Great Chazy River flows east where it joins the Great Chazy River and eventually drains to Lake Champlain.

5.0 METHODS

5.1 Wetland Field Delineation Methods

Field delineations were conducted at the proposed Marble River Wind Farm in 2005 from September 19 through November 7 and in 2006 from May 2 through December 21. Additional wetland delineations were conducted in 2007 from May 2 through August 23, partially in an effort to avoid and minimize wetland impacts. Information reviewed prior to field mobilization included USGS 7.5-minute topographic maps, NYSDEC Freshwater Wetland Maps and United States Department of the Interior National Wetland Inventory (NWI) Maps that were associated with the project. The characterized area, hereafter referred to as the survey area, included a 200-foot radius around each of the proposed 109 turbine locations (314 acres); a 250-foot radius around each of the three meteorological towers (13.4 acres); 50 feet either side of the proposed access road centerline (100-foot total corridor width); 25 feet either side of proposed access road turnaround centerlines (50-foot total corridor width); 25 feet either side of the proposed underground electric collection line centerline (50-foot total corridor width); 100 feet either side of the proposed overhead electric collection line centerline (200-foot total corridor width); and the footprint of disturbance for the substation and O&M building/temporary laydown area (8.4 and 15.9 acres, respectively). To ensure that all NYSDEC adjacent area impacts were included, wetlands that occurred within NYSDEC mapped wetlands and within 100 feet of the survey area were also delineated. Approximately 42 miles of access roads (40.01 miles of access roads and 2.11 miles of access roads turnarounds), 56.28 miles of underground electric collection lines (16.57 miles of underground electric collection line and 39.71 miles of underground electric collection lines co-located along access roads) and 9.89 miles of overhead electric collection lines (which include approximately 7.3 miles of temporary access road) are proposed for the Marble River Wind Farm.

Proposed public road improvements also surveyed as part of the project include seven culvert replacements, 13 intersection improvements, and three road widenings. Culverts to be replaced are located on Bootleg Road (two culverts), Ryan Road (two culverts), Lagree Road (one culvert), Gagnier Road (one culvert) and the intersection of Lagree Road and Route 189 (one culvert). Intersection improvements are proposed for the junctions of Merchia, Lagree and Liberty Pole Roads with Route 189; Patnode, Looby, Gagnier and Brandy Brook Roads with Route 11; Sancomb, Ryan and Brandy Brook Roads with Route 190; Route 11 and Route 189; Whalen and Looby Roads; and Campbell and Gagnier Roads. Road widenings include portions of Patnode Road (from Gagnier Road south to Turbine 62 Access Road); LaGree Road (from Turbine 83 Access Road east to Turbine 42 Access Road); and Merchia Road (from Turbine 31 Access Road east to Turbine 208 Access Road). Property access restrictions limited the survey at most culvert locations to within 20 feet of the road centerline.

Wetland boundaries were delineated in the field using the Routine Onsite Determination Method as described in the Corps of Engineers Wetlands Delineation Manual (USACE, Environmental Laboratory, 1987) for USACE jurisdictional wetlands and the Routine Delineation Procedure as



described in the 1985 New York State Freshwater Wetlands Delineation Manual (Browne *et al.* 1995) for NYSDEC jurisdictional wetlands. These methods incorporate a three-parameter approach using vegetation, soils and hydrology to identify the presence of freshwater wetlands. Wetland boundaries were initially identified through visual assessment of vegetation and hydrology. This visual boundary was used to establish two sample locations (one wetland station and one upland station) to verify the boundary of the wetland by analyzing dominant vegetation, soil classification, and hydrology at each sample station. Wetland boundaries and sample stations were identified with pink and blue surveyor flagging, respectively, and corresponding GPS waypoints were recorded using Trimble[®] GeoXT™ handheld units. This unit generally provides sub-meter accuracy; however, accuracy can range within three to five meters.

Dominant vegetation in each strata (tree, shrub, and herbaceous) was identified using an appropriate regional field guide (Newcomb, 1977) and assigned a wetland indicator status obtained from Reed, 1988. Cover classes for wetlands were based on the National Wetland Inventory classification hierarchy (Cowardin *et al.* 1979). Cover classes were assigned by determining the most abundant cover class in the wetland. A wetland was assigned multiple cover classes if more than one class comprised at least 30 percent aerial coverage. The plant communities of each wetland sample and corresponding upland sample were categorized according to a list of ecological communities known to occur in New York State as described in Edinger *et al.*, 2002. Soil profiles were examined using a hand auger or spade shovel at depths no less than 18 inches unless the auger or spade was refused, typically due to shallow bedrock. Soil characteristics were recorded in standard soil log format using a Munsell Soil Color Chart (Kollmorgen Corporation, 2000). A visual assessment of primary wetland hydrology indicators (*e.g.*, inundation or soil saturation), and secondary wetland hydrology indicators (*e.g.*, oxidized rhizospheres or water-stained leaves) was conducted. Sketch maps and site photographs were recorded concurrent with sample station data. Sample station data sheets (including sketch maps), and wetland photographs recorded during the field efforts are provided in Attachments 1 and 3, respectively.

Nomenclature for delineated wetlands consists of an alphanumeric coding. Wetlands delineated within 200 feet of a Wind Turbine Generator (WTG) were identified as WTG wetlands. Wetlands delineated within 250 feet of a meteorological tower were identified as MET wetlands. Wetlands delineated within the 100-foot right-of-way of an access road, the 50 foot right-of-way of an underground electric collection line or the 200-foot right-of-way of the overhead electric collection line were identified as AR, IC and OH wetlands, respectively. Wetlands associated with culverts were identified as CV wetlands. Intersection improvement and road widening wetlands were identified as AR wetlands. WTG wetlands were further identified by the turbine number they were associated with (*i.e.*, a wetland within 200 feet of Turbine 33 would be identified as WTG33), while a consecutive numbering system was employed for the AR, IC and OH wetlands. Wetlands were not identified within the footprint of the O&M building/temporary laydown area. One wetland that was delineated within the substation footprint was identified as a SS wetland. Changes to the project layout resulted in some wetland labels that no longer reflect the project components that the wetlands are currently associated with. For example, an AR wetland may also occur within a WTG location and/or an electric collection line right-of-



way. Some wetland labels refer to project components that are no longer part of the proposed layout; for example, wetlands labeled as SA, RD and CW.

5.2 Surface Waterbody Field Delineation Methods

Surface waterbodies were identified within the survey area of the Site and flagged with orange surveyor flagging and corresponding GPS waypoints were recorded. For streams greater than five feet in width both banks were delineated. For streams less than five feet in width only the centerline of the water course was delineated. Waterbodies were photo-documented and their characteristics, including width, depth, substrate and bankside vegetation, were recorded on stream datasheets. Wetland drainage patterns were noted on sketch maps but not recorded on stream sheets unless a distinct bed and bank were observed. Waterbody nomenclature was similar to that established for wetlands with the addition of “-ST” suffix to indicate the presence of a stream versus a wetland. Copies of stream data sheets and stream photographs recorded during the field effort are provided in Attachments 2 and 3, respectively.

6.0 INFORMATION REVIEW

6.1 Mapped Wetlands

State and NWI data regarding mapped wetlands were reviewed for the Site. Based on the review, 73 NYSDEC mapped wetlands, totaling 7,670 acres and 739 NWI mapped wetland polygons, totaling 5,618 acres, occur throughout the Site. The NYSDEC mapped wetlands are distributed somewhat evenly throughout the Site, while the NWI mapped wetlands are more prevalent in the northeast portion of the Site. Approximately 41 percent of the Site’s surface area is mapped as NYSDEC wetlands and approximately 30 percent is mapped as NWI wetlands. In several locations both NYSDEC and NWI mapped wetlands coincide, but this is not always true

Individual NYSDEC and NWI mapped wetlands are crossed by the project at multiple locations. Mapped wetlands were not identified within the substation and O&M building/temporary laydown area. Maps of the NYSDEC and NWI wetlands associated with the Site are provided as Figures 4 and 5, respectively.

6.1.1 NYSDEC Mapped Wetlands

Seven thousand six hundred and seventy (7,670) acres of NYSDEC wetlands are mapped within the 18,520-acre proposed Marble River Wind Farm Site. The NYSDEC Freshwater Wetlands Act (1975) rank wetlands in one of four classes ranging from Class I, which provide the most benefits, to Class IV, which provide the fewest benefits. Class I and Class IV wetlands were not identified within the Site. Table 6.1 provides the number of mapped NYSDEC wetlands within the proposed Marble River Wind Farm Site by class.

Based on the State wetland maps, NYSDEC mapped wetlands are crossed approximately 39 times within the survey area, totaling approximately 239 acres. Table 6.2 provides the number of polygons and associated acreage for NYSDEC mapped wetlands identified within the survey area.



6.1.2 NWI Mapped Wetlands

Five thousand six hundred and eighteen (5,618) acres of NWI mapped wetlands are located within the proposed 18,520-acre Marble River Wind Farm Site. The NWI inventory maps wetlands by cover class. Table 6.3 provides the number and acreage, by cover class, of the NWI mapped wetlands identified within the proposed Site.

Based on the NWI wetland maps, NWI mapped wetlands are crossed approximately 147 times within the survey area, totaling approximately 121 acres. Table 6.4 provides the number of polygons and acreage of the federally mapped wetlands identified within the survey area by cover class.

6.2 Soils

A review of the USDA NRCS Soil Survey Geographic Database for Clinton County, New York was conducted to determine what soils were present within the survey area. A soils map was generated from the METADATA files corresponding to the project area and is provided as Figure 6. Fifty-four (54) mapped soil units were identified within the survey area of the proposed Marble River Wind Farm. Twenty-three (23) of the 54 mapped soil units were identified as wetland soils (hydric soils and soils with hydric inclusions). The descriptions for these 23 hydric soil units are provided in Attachment 4.

7.0 DELINEATION RESULTS

Four hundred and thirty-four (434) wetland polygons and 100 surface waterbody polygons were delineated within the survey area of the proposed Marble River Wind Farm. The extent of impact to these polygons is described in Section 8 of this report.

7.1 Wetlands

Four hundred and thirty-four (434) wetland polygons comprising 140.94 acres were delineated within the proposed Marble River Wind Farm survey area. The distribution of delineated wetlands included 25.16 acres in the turbine survey area, 0.40 acre within the meteorological tower survey area, 44.99 acres associated with access roads, 16.55 acres associated with underground electric collection lines, 52.65 acres associated with overhead electric collection lines, 0.10 acre associated with road improvements, and 1.10 acre associated with the substation. When calculating wetland acreage that occurs within more than one project component, the turbine areas and overhead electric collection lines took precedence over the access roads which took preference over the underground electric collection lines. Delineated wetlands and their associated project components are provided in Table 7.1. Wetland locations are depicted on Figure 7 (plates 1 through 8) and on a duplicate oversized figure, provided as Attachment 7.

Three hundred and five (305) of the 434 delineated wetland polygons within the survey area occurred solely within one project component. The remaining 129 wetland polygons are associated with more than one project component (Table 7.2).

Wetland location, with respect to project component, is provided in Table 7.2. On occasion, the wetland prefix (AR, IC, WTG, and etc.) differs from the actual component presented in Table 7.2



due to changes made in the project layout to avoid or minimize wetland impacts after field delineations were completed. In addition, several turbines were moved after field delineation of wetlands and some wetland labels no longer correspond to the actual turbine number.

Predominant wetland covertypes encountered at the Site included palustrine deciduous forest (PFO1), palustrine scrub shrub (PSS), and palustrine emergent (PEM) as defined by Cowardin and others (1979). Acreages of delineated wetland polygons by covertype are provided in Table 7.3. Specific community characteristics of all wetland covertypes encountered during field efforts are summarized in Section 7.5 and discussed in detail in Attachment 6.

7.2 NYSDEC Wetlands and Adjacent Areas

Delineated wetlands that were located within the boundaries of NYSDEC mapped wetland polygons were designated as NYSDEC wetlands. A 100-foot adjacent area was generated for each wetland identified as a NYSDEC wetland. Adjacent areas from more than one wetland were joined to prevent an over estimate of adjacent areas acreage.

Two hundred and five (205) of the 434 wetlands that are intersected by the proposed Marble River Wind Farm project (47 percent) were identified as NYSDEC wetlands (100.17 acres total). A list of each state regulated wetland delineated in the field and their acreages within the survey area are provided in Table 7.4. Wetland acreages, summarized by Cowardin covertypes, are presented in Table 7.5.

One hundred and seventy-five (174.84) acres of NYSDEC adjacent area also occurs within the survey area. The acreages of the state regulated adjacent areas that occur within the survey area, and their wetland associations, are provided in Table 7.6.

7.3 Surface Waterbodies

One hundred (100) surface waterbody polygons, totaling 13,336 linear feet, were identified within the survey area during the field delineation effort. The surface waterbodies consist of 60 streams (18 perennial, 42 intermittent), 16 stream polygons at existing culverted locations (4 perennial, 12 intermittent), 19 drainage ditches/swales, roadside ditches or field drainages (all intermittent), two perennial ponds, one intermittent pond/stream, one intermittent pond outfall and one intermittent wetland drainage. Six surface waterbodies are located within a turbine location; one surface waterbody is located within a turbine location and an access road; 25 surface waterbodies are crossed by access roads; 27 surface waterbodies are crossed by access roads and underground electric collection lines; 16 surface waterbodies are crossed by underground electric collection lines; 20 are crossed by overhead electric collection lines; and seven surface waterbodies are crossed by public road improvements.

Table 7.7 lists each surface waterbody identified during the delineation effort that is crossed by the project, its NYSDEC classification and location. Other descriptive information including flow regime, real-time velocity, and direction, and stream width, depth, substrate, bank vegetation and wetland association are also provided in Table 7.7. The length of stream polygon by project component for each of the delineated surface waterbodies is provided in Table 7.8. Surface waterbody polygons are depicted on the Delineated Wetlands and Surface Waterbodies Map provided as Figure 7.



Under the Environmental Conservation Law (Article 15), New York regulates surface freshwater resources as best usage classifications (6 NYCRR Part 701) or as Wild, Scenic and Recreation Rivers (6 NYCRR Part 666). Wild, Scenic and Recreation Rivers were not identified at the Site. State water quality classifications of watercourses within the survey area fall into two categories, Class C and Class D streams. Classification C waters support fisheries and are suitable for non-contact activities and Classification D waters are suitable for fishing and contact recreation. Class C Waters may also have a standard of (T), indicating that it may support a trout population. In addition, small lakes and ponds with a surface area of 10 acres or less, located within the course of a stream, are considered to be part of a stream and are subject to regulation under the stream protection category of Protection of Waters. Only streams classified as A, AA, B, BB, or C(T) are regulated by the State.

Ninety nine (99) of the 100 waterbody polygons surveyed are not regulated by the State as they are either classified as a D stream or not classified by the NYSDEC at all. The English River, located in the northeastern portion of the Site, is crossed by an access road and overhead electric collection line to the southwest of the Clinton Mills Road and Soucia Road intersection. A portion of this stream is classified as a Class C(T) stream, indicating that it supports a trout population.

7.4 Soils

Multiple soil borings were inspected during the wetland boundary determination, but soil data were recorded only for paired wetland sample stations along delineated boundaries. At least one wetland and one upland soil boring were examined for each delineated wetland. Additional soil borings were examined in cases where wetlands were extensive and included several covertypes. Extremely shallow bedrock was encountered at many of the Site sample stations and refusal of auger was routinely met at or about six inches.

Generally wetland soils included low chroma horizons that ranged from a dark gray to very dark brown. Occasionally a gray to grayish brown clay layer was also encountered. Soil textures varied and included silt loam, sandy loam, and clay loam. Encounters of pure clay textures were rare. A black organic soil was encountered at one wetland (AR80A), believed to be a rich shrub fen. Deep (three feet and greater) organic peaty soils were encountered along the overhead electric collection line west of LaFrancis Road. Upland soils varied but generally consisted of a brown to dark brown silt or sandy loam.

7.5 Vegetation

Wetlands delineated at the Site consisted of palustrine systems. Vegetative species composition of these wetlands was used to differentiate them into plant communities defined by Edinger et al.'s *Ecological Communities of New York State* (2002). Red maple-hardwood swamp, shrub swamp and shallow emergent marsh communities occurred most frequently at the Site. Less common wetland communities included Northern white cedar swamp, inland poor fen, deep emergent marsh, spruce-fir swamp, black spruce-tamarack bog, and red maple-tamarack peat swamp. Despite being classified as upland community types, balsam flat, pastureland, cropland/row crops, cropland/field crops, successional old field, mowed lawn, and northern



successional hardwood communities were also used to describe wetlands found at the Site. For several delineated wetlands, these upland community designations provided the closest match to vegetation composition characterized at field sample stations within the delineated boundaries. A complete list of ecological communities found at the Site is described in Attachment 5 and the acreages of these communities within the survey area are presented in Table 7.9. Complete lists of plants species found in wetlands and adjacent uplands during the field effort are provided after the summaries in Tables 7.10 and 7.11, respectively.

7.6 Hydrology

Primary indicators of wetland hydrology predominantly consisted of inundated and saturated soils and evidence of drainage patterns in the wetlands. Secondary indicators of wetland hydrology included the presence of oxidized root channels in the upper 12 inches and water stained leaves. Fifty six (56) of the 100 surface waterbodies delineated at the Site (56 percent) were associated with one of the Site's delineated wetlands.

Hydrology strongly influences the plant communities, which develop within wetlands, and consists of a variety of water regimes. These water regimes are in turn defined in length of the growing season, which is equal to the frost-free period of the seasonal year. The rest of the year is defined as the dormant season, a time when even extended periods of flooding may have little influence on the development of plant communities. Common water regimes found in palustrine systems are presented in Table 7.12. The most common hydrological regimes associated with wetlands in the survey area were the saturated and seasonally flooded regimes. In the saturated wetlands, the surface of the wetland soil expands or rises as it gets wetter, thus they are not considered flooded.

8.0 JURISDICTIONAL DETERMINATION

Three hundred and thirty seven (337) (74.46 acres) of the 434 wetland polygons and 94 (9,685.6 linear feet) of the 100 surface waterbodies delineated at the proposed Marble River Wind Farm are located within the project footprint (Figure 8). However, not all the wetlands within the project footprint would be affected as a result of construction of the proposed project. Approved Jurisdictional Determination Forms, as provided in the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (May 20, 2007), were completed for each wetland poyygon and surface waterbody. A list of the wetland polygons within the project footprint, including acreage and findings regarding isolated or tributary status are provided in Table 8.1 and a list of the surface waterbodies within the project footprint, including length are provided in Table 8.2. Copies of the associated jurisdictional determination forms are provided in Attachment 6.

Ninety (90) of the 337 affected wetland polygons (27 percent), were determined to be isolated; however, they meet the interstate commerce criteria of the significant nexus determination. Seventeen (17) of the project's 94 surface waterbodies (18 percent) were not identified as waters of the U.S.; and therefore, were considered as non-jurisdictional. All Site wetlands could potentially support recreational use such as hunting, snowmobiling or all-terrain vehicle (ATV) use for interstate or foreign travelers. In addition, Site wetlands have been historically logged. Silviculture continues today in the north and north east portions of the Site and is expected to



continue into the future. Dairy farming occurs in the central and southern portions of the Site. This prevalent agricultural industry includes all portions of the landscape, including wetlands.



9.0 REFERENCES

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Insert Figure 1



Insert Figure 2



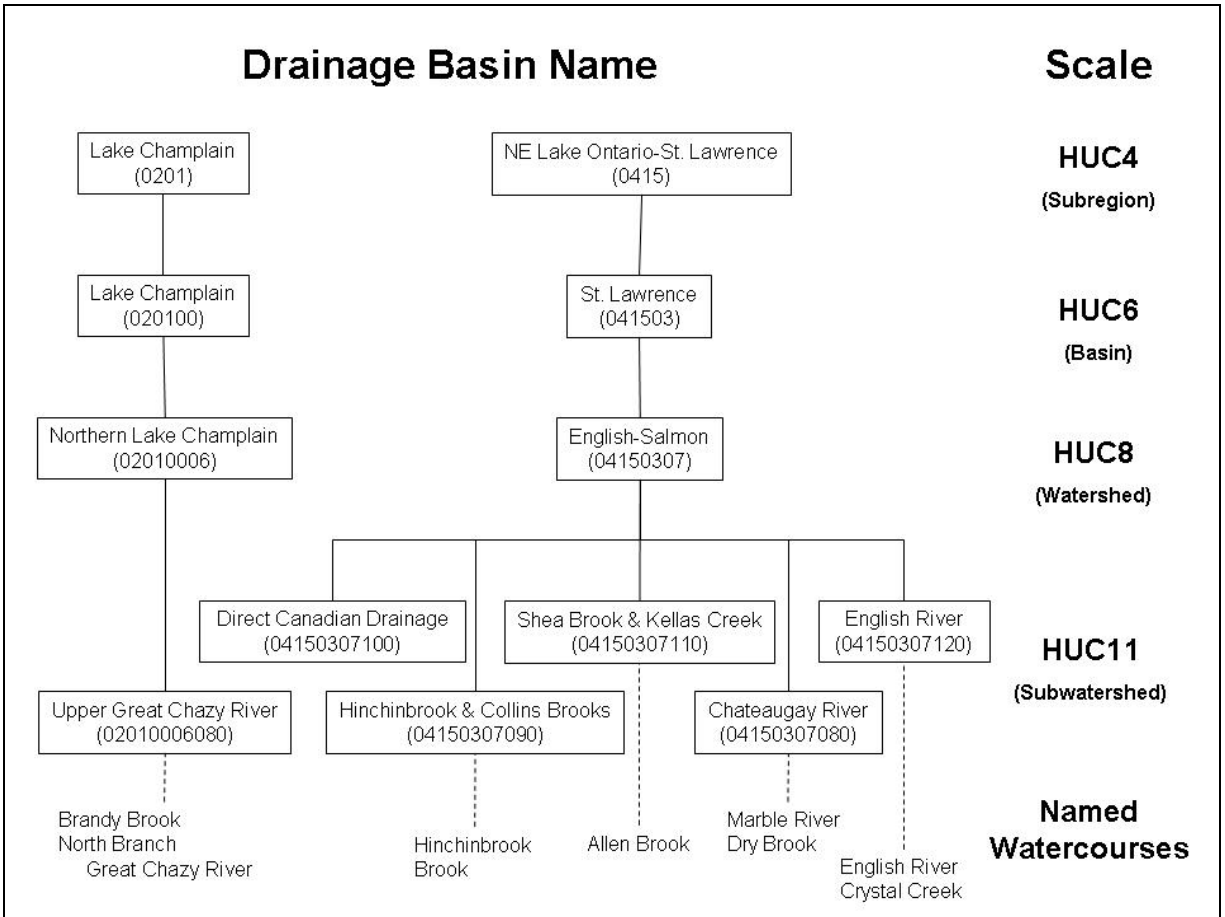


Figure 3

Hierarchical Drainage System Intersecting The Site



Insert Figure 4



Insert Figure 5



Insert Figure 6 (page 1 of 8)



Insert Figure 6 (page 2 of 8)



Insert Figure 6 (page 3 of 8)



Insert Figure 6 (page 4 of 8)



Insert Figure 6 (page 5 of 8)



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Insert Figure 7 (page 8 of 8)



Insert Figure 8



Table 6.1 NYSDEC Mapped Wetlands within the Site Marble River Wind Farm Clinton County, New York		
Class	Number of Mapped Wetlands	Acreage
I	0	0
II	61	4,162
III	12	3,508
IV	0	0
Total	73	7,670

Table 6.2 NYSDEC Mapped Wetlands within the Survey Area Marble River Wind Farm Clinton County, New York		
Class	Number of Polygons	Acreage
I	0	0
II	30	132
III	9	107
IV	0	0
Total	39	239

Table 6.3 NWI Mapped Wetlands within the Site Marble River Wind Farm Clinton County, New York		
Class	Number of Mapped Wetland Polygons	Acreage
PFO ¹	211	2,230
PFO/PSS	17	222
PSS ²	313	2,428
PSS/PEM	19	139
PEM ³	124	482
PUB ⁴	55	118
Total	739	5,618

¹ Palustrine Forested

² Palustrine Scrub Shrub

³ Palustrine Emergent

⁴ Palustrine Unconsolidated Bottom



Table 6.4 NWI Mapped Wetlands within the Survey Area Marble River Wind Farm Clinton County, New York		
Cover Class	Number of Polygons⁵	Acreage
PFO ¹	47	50
PFO/PSS	6	6
PSS ²	76	53
PSS/PEM	2	3
PEM ³	13	8
PUB ⁴	3	0.5
Total	147	120.5

¹ Palustrine Forested

² Palustrine Scrub Shrub

³ Palustrine Emergent

⁴ Palustrine Unconsolidated Bottom



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type¹	Community	AR²	IC³	OH⁴	WTG⁵	MET⁶	RD⁷	SUB⁸	Total
AR1-A	Between Turbines 100-R and 109	9/19/05, 5/3/07	PEM	Shallow emergent marsh	0.091							0.091
AR2-A, WTG89R	Turbine 89-R	9/19/05, 7/10/06	PSS	Shrub swamp	0.004			0.519				0.523
AR3-A	Turbine 95	9/20/05	PEM	Successional old field				0.098				0.098
AR3-B	Access Road between Star Road and Turbine 95	9/20/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.017			0.007				0.024
AR4-A	Between Star Road and Turbine 95	9/25/05	PEM	Pastureland	0.024	0.004						0.028
AR5-A	Between Star Road and Turbine 95	9/25/05	PEM	Successional old field	0.038							0.038
AR6A	Between Star Road and Turbine 95	9/25/05, 5/3/07	PEM	Shallow emergent marsh	0.015							0.015
AR11-B	Access Road between Turbines 90 and 91	9/30/05, 10/15/6	PEM	Shallow emergent marsh	0.034							0.034
AR12-A	Turbine 90	9/30/05	PSS/PEM	Shrub swamp/Shallow emergent marsh				0.029				0.029
AR16-A	Between Turbine 48-W and Route 189	10/6/05	PEM	Cropland/row crops	0.011							0.011
AR16-B/C	Between Turbine 48-W and Route 189	10/6/05, 5/5/07	PEM	Cropland/row crops	0.107							0.107
AR18-A, OH1201-A	Overhead Transmission Line between Turbines 51 and 81	10/6/05, 8/24/06, 5/6/07	PFO1	Red maple-hardwood swamp			2.746					2.746
AR22-A	Access Road between Turbines 62 and 66	10/7/05	PEM	Shallow emergent marsh	0.034	0.001						0.035
AR23-B	Between Turbines 62 and 63	10/7/05	PEM	Shallow emergent marsh	0.006							0.006
AR24-A	Between Turbines 62 and 63	10/7/05	PEM	Shallow emergent marsh	0.012							0.012
AR25-A	Between Turbines 62 and 63	10/7/05, 5/5/07	PFO1/PEM	Red maple-hardwood swamp/Shallow emergent marsh	0.056	0.014						0.070
AR26-A/B	Between Turbines 42 and 44	10/8/05, 5/30/07	PEM	Cropland/field crops	0.416	0.035		0.086				0.537
AR30-A/B/C	Turbine 45	10/10/05	PSS/PEM	Shrub swamp/Shallow emergent marsh				0.008				0.008
AR33-A	Access Road to Turbine 45	10/11/05, 5/7/07	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.002							0.002
AR35-A	Between Turbine 45 and Route 11	10/11/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.136	0.007						0.143
AR36-A	Between Turbine 45 and Route 11	10/11/05	PEM	Shallow emergent marsh	0.037							0.037
AR37-A	Between Turbine 45 and Route 11	10/11/05	PEM	Shallow emergent marsh	0.060							0.060
AR38-A	Between Turbine 45 and Route 11	10/11/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.096	0.020						0.116
AR39-A	Between Turbine 45 and Route 11	11/11/05	PEM	Shallow emergent marsh	0.050	0.012						0.062
AR40-A	Between Turbine 45 and Route 11	11/11/05	PEM	Shallow emergent marsh	0.022	0.005						0.027
AR41-A	Between Turbine 78 and Route 11	10/11/05, 5/7/07, 5/21/07	PEM	Shallow emergent marsh	0.553	0.025						0.577
AR45-A/B, AR131	Interconnect and Access Road from Route 189 to Turbine 11	10/12/05, 10/13/06	PEM	Shallow emergent marsh	0.178	0.128						0.306
AR46-A	Between Turbines 115 and 156	10/13/05	PSS	Shrub swamp	0.017							0.017
AR53-A	Soucia Road	10/17/05	PEM	Pastureland	0.004							0.004
AR54-A/B	Soucia Road	10/17/05, 5/25/07	PEM	Pastureland			0.582					0.582
AR55-A	Soucia Road	10/17/05, 5/25/07	PEM	Pastureland	0.535							0.535
AR56-A	Soucia Road	10/17/05, 5/25/07	PEM	Pastureland	0.376							0.376
AR57-A/B	Soucia Road	10/17/05, 8/2/06, 6/01/07, 8/23/07	PSS/PEM	Shrub swamp/Pastureland	0.814							0.814
AR58-A	Soucia Road	10/18/05	PSS	Shrub swamp	0.680							0.680
AR58-B	Soucia Road	10/18/05, 5/25/07	PSS	Shrub swamp	0.921							0.921
AR59-A	Soucia Road	10/18/05, 5/25/07	PSS	Shrub swamp		0.003	0.407					0.410
AR60-A	Soucia Road	10/18/05, 5/25/07	PFO1	Red maple-hardwood swamp			0.061					0.061



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type¹	Community	AR²	IC³	OH⁴	WTG⁵	MET⁶	RD⁷	SUB⁸	Total
AR61-A	Soucia Road	10/18/05	PEM	Shallow emergent marsh			0.005					0.005
AR62-A	Soucia Road	10/18/05	PSS	Shrub swamp			0.695					0.695
AR62-B	Soucia Road	10/19/05	PSS	Shrub swamp			0.343					0.343
AR63-A	Soucia Road	10/19/05	PSS/PEM	Shrub swamp/Shallow emergent marsh			0.024					0.024
AR64-A/B	Soucia Road	10/19/05, 5/25/07	PFO1	Red maple-hardwood swamp			0.131					0.131
AR65-A	Access Road from Soucia Road to Turbine 155	10/19/05, 5/10/07	PEM	Shallow emergent marsh			0.071					0.071
AR65-B	Access Road from Soucia Road to Turbine 155	10/19/05	PEM	Shallow emergent marsh			0.083					0.083
AR66-A	Access Road Between Turbines 155 and 117	10/20/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.013							0.013
AR68-A	Access Road Between Turbines 155 and 117	10/20/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.005							0.005
AR70-A	Between Turbines 155 and 117	10/20/05	PEM	Shallow emergent marsh	0.043	0.001						0.044
AR71-A	Between Turbines 155 and 117	10/20/05	PEM	Shallow emergent marsh	0.040	0.0004						0.040
AR72-A	Between Turbines 155 and 117	10/20/05, 5/10/07	PSS	Shrub swamp	0.106	0.009						0.115
AR79A	Access and Interconnect from Turbine 9A to Turbine 148A; along Robare Pond Road	10/23/05	PSS	Shrub swamp	0.367							0.367
AR79-B	Access and Interconnect from Turbine 9A to Turbine 148A; along Robare Pond Road	10/23/05	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.298	0.056						0.354
AR79C	Access and Interconnect from Turbine 9A to Turbine 148A; along Robare Pond Road	10/25/05	PFO4/PSS	Northern white cedar swamp/Shrub swamp	0.009	0.001						0.010
AR80/81-A	Between Turbines 9A and 10A	5/17/06, 9/07/06	PSS	Rich Shrub Fen/Shrub swamp	0.040	0.010						0.051
AR81-A	Between Turbines 9A and 10A	5/17/06, 10/12/6	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.049	0.006						0.055
AR102-A	Between Turbines 57 and 59	10/7/05	PEM	Pastureland	0.085	0.007						0.092
AR103-A/B	Between Turbines 53 and 58	10/7/05, 5/5/07	PEM	Shallow emergent marsh	0.158	0.089						0.247
AR104-A/B	Turbine 52	10/7/05	PSS/PEM	Shrub swamp / Cropland/field crops				0.055				0.055
AR105-A	Between Turbines 52 and 53	10/7/05	PSS/PEM	Shrub swamp / Cropland/field crops	0.106	0.016						0.123
AR111-A/B	Between Turbines 55 and 206	5/20/06	PFO1	Red maple-hardwood swamp	0.160	0.011						0.171
AR114-A/B	Access Road and Interconnect Between Turbines 84 and 84A	10/10/05	PFO1	Successional northern hardwoods	0.104	0.006						0.110
AR115-A/B/C	Interconnect between Turbine 84A and 87	10/10/05, 5/7/07	PSS	Shrub swamp	1.517	0.420						1.937
AR117-A	Between Whalen Road and Turbine 36A	10/11/05	PSS	Shrub swamp		0.006						0.006
AR118-A	Between Whalen Road and Turbine 36A	10/11/05, 12/20/06, 5/8/07	PEM	Shallow emergent marsh	0.084							0.084
AR118-B	Between Whalen Road and Turbine 36A	10/11/05, 12/20/06	PEM	Shallow emergent marsh	0.106							0.106
AR120-Y	Between Turbines 117 and 119	10/21/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.016	0.005						0.021
AR124-A	Between Turbines 117 and 119	10/21/05	PEM	Shallow emergent marsh	0.030							0.030
AR125-A	Between Turbines 117 and 119	10/21/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.025	0.000						0.025
AR200-A	Access Road From Soucia Road to Turbine 155	10/17/05, 5/25/07	PEM	Shallow emergent marsh			0.035					0.035
AR201-A	Access Road From Soucia Road to Turbine 155	10/17/05, 9/14/06, 5/25/07	PSS	Shrub swamp			0.310					0.310
AR202-A	Access Road From Soucia Road to Turbine 155	10/17/05	PSS	Shrub swamp			0.426					0.426



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type ¹	Community	AR ²	IC ³	OH ⁴	WTG ⁵	MET ⁶	RD ⁷	SUB ⁸	Total
AR203-A/B	Access Road From Soucia Road to Turbine 155	10/17/05, 5/25/07	PSS/PEM	Shrub swamp/Shallow emergent marsh			0.810					0.810
AR204-A	Access Road From Soucia Road to Turbine 155	10/17/05	PEM	Shallow emergent marsh			0.032					0.032
AR205-A	Access Road From Soucia Road to Turbine 155	10/17/05	PSS	Shrub swamp			0.174					0.174
AR205-B	Access Road From Soucia Road to Turbine 155	10/17/05, 5/24/07	PSS/PEM	Shrub swamp/Shallow emergent marsh			0.186					0.186
AR206-A	Access Road From Soucia Road to Turbine 155	10/18/05, 5/10/07	PEM	Shallow emergent marsh			0.123					0.123
AR206-B	Access Road From Soucia Road to Turbine 155	10/18/05	PEM	Shallow emergent marsh			0.053					0.053
AR207-A	Access Road From Soucia Road to Turbine 155	10/19/05	PSS/PEM	Shrub swamp/Shallow emergent marsh			0.013					0.013
AR208-A	Access Road From Soucia Road to Turbine 155	10/19/05	PEM	Shallow emergent marsh			0.168					0.168
AR208-B	Access Road from Soucia Road to Turbine 155	10/19/05	PEM	Shallow emergent marsh			0.116					0.116
AR209-A	Between Turbines 155 and 117	10/20/05	PFO1/PEM	Red maple-hardwood swamp/Shallow emergent marsh	0.033							0.033
AR210-D	Between Turbines 155 and 117	10/19/05	PEM	Shallow emergent marsh	0.003	0.004						0.007
AR212-A	Between Turbines 115 and 155	10/21/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.002							0.002
AR213-A	Between Turbines 115 and 155	10/21/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.025							0.025
AR213-B	Between Turbines 115 and 155	10/21/05	PFO1	Red maple-hardwood swamp	0.025							0.025
AR213-C	Between Turbines 115 and 155	10/21/05	PEM	Shallow emergent marsh	0.027							0.027
AR214-A	Between Turbines 115 and 155	10/21/05	PSS	Shrub swamp	0.023							0.023
AR218-B	Between Turbines 116 and 119	10/24/05, 5/24/07	PEM	Shallow emergent marsh	0.028	0.008						0.036
AR360-A	Between Merchia Road and Turbine 208	7/21/06, 8/29/06	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.135	0.035						0.171
AR367-A	Turbine 1-A	12/20/06	PEM	Cropland/field crops	0.018			0.146				0.164
AR370-A	Turbine 95	12/20/06, 5/3/07	PEM	Successional old field				0.382				0.382
AR500-A	Access Road between Turbines 21 and 148	11/7/05	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.009							0.009
AR502-A	Along abandoned Railroad Tracks; east of Turbine 209	11/3/05	PSS	Shrub swamp		0.831						0.831
AR505-A/B	Along abandoned Railroad Tracks; east of Turbine 209	5/7/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp		0.015						0.015
AR506, OH1206	Access Road between Turbines 146-R and 147	5/7/06, 8/25/06, 11/7/06	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.137	0.009	3.624	0.004				3.775
AR507-A	Overhead transmission Line between Turbines 135 and 146-R	11/7/06, 5/11/07	PSS/PEM	Shrub swamp/Shallow emergent marsh			0.453					0.453
AR508-A/B	Between Turbines 141 and 147	11/8/05, 8/25/06	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.067	0.005						0.073
AR509-A/B	Between Turbines 141 and 147	11/8/05, 8/25/06	PFO1	Red maple-hardwood swamp	0.197	0.012	1.834					2.043
AR513-A/B	Access Road between Turbines 4-A and 173	5/10/06, 7/27/06	PFO1	Red maple-hardwood swamp	0.274	0.032						0.307
AR514-A	Turbine 173	5/9/06	PSS/PEM	Shrub swamp/Shallow emergent marsh				0.085				0.085
AR520-A	Between Route 189 and Turbine 15	11/10/05	PFO4	Northern white cedar swamp	0.326			0.100				0.425



**Table 7.1
Delineated Wetland Polygons
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Wetland ID	Location	Delineation Date	Cover Type¹	Community	AR²	IC³	OH⁴	WTG⁵	MET⁶	RD⁷	SUB⁸	Total
AR521-A/B	Between Route 189 and Turbine 15	11/10/05	PEM	Cropland/field crops	0.111	0.003						0.114
AR522-A	Between Route 189 and Turbine 15	11/10/05	PEM	Cropland/field crops	0.060							0.060
AR523-A	Between Turbines 137-W and 155	11/10/05	PEM	Shallow emergent marsh	0.022							0.022
AR524-A	Between Turbines 137-W and 155	11/10/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.236							0.236
AR524-B	Between Turbines 137-W and 155	11/10/05	PFO1/PEM	Red maple-hardwood swamp/Shallow emergent marsh	0.061	0.025						0.086
AR524-D	Between Turbines 137-W and 155	11/10/05	PFO1/PEM	Red maple-hardwood swamp/Shallow emergent marsh	0.030							0.030
AR525-A	Between Turbines 137-W and 138	11/11/05	PFO1	Red maple-hardwood swamp	0.030	0.049						0.079
AR526-A/B	Between Turbines 137-W and 138	11/11/05, 5/10/07	PSS	Shrub swamp	0.166							0.166
AR530-A/B	Between Turbines 139 and 140	11/11/05, 5/10/07	PFO1	Red maple-hardwood swamp	0.092	0.011						0.103
AR531-A	Between Turbines 139 and 140	11/11/05	PSS	Shrub swamp	0.031	0.010						0.041
AR534-A	Access Road between Route 189 and Turbine 148	5/15/06	PFO1/PSS	Successional northern hardwoods/Shrub swamp	0.016							0.016
AR534-B	Access Road between Route 189 and Turbine 148	5/15/06	PEM	Shallow emergent marsh	0.057							0.057
AR538-A	Access Road between Route 189 and Turbine 148	5/16/06	PSS	Shrub swamp	0.099							0.099
AR540-A	Between Turbine 12 and Brandy Brook Road	5/21/06	PSS	Shrub swamp	0.033							0.033
AR599-A1	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	5/2/06	PSS	Shrub swamp	0.009							0.009
AR599-A2	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	5/2/06, 5/9/07	PSS	Shrub swamp	0.024							0.024
AR599-B1	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	5/2/06	PSS	Shrub swamp	0.001							0.001
AR599-B2	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	5/2/06	PSS	Shrub swamp	0.019							0.019
AR601-A	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/7/05	PEM	Shallow emergent marsh	0.014							0.014
AR602-A	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/7/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.065							0.065
AR602-B	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	5/2/06	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.102							0.102
AR603-A	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/7/05	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.424							0.424
AR603-B	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	5/3/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.314							0.314
AR604-A	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/7/05	PEM	Shallow emergent marsh	0.077							0.077
AR604-B	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/7/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.069							0.069
AR605-A	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/8/05	PFO4/PSS	Spruce-fir swamp/Shrub swamp	0.165							0.165



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type ¹	Community	AR ²	IC ³	OH ⁴	WTG ⁵	MET ⁶	RD ⁷	SUB ⁸	Total
AR605-B	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/8/05, 5/10/07	PFO4/PSS	Spruce-fir swamp/Shrub swamp	0.133							0.133
AR606-A/C	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	5/3/06	PFO1/PFO4/PSS/PEM	Red maple-hardwood swamp/Balsam flats/Shrub swamp/Shallow emergent marsh	1.223							1.223
AR606-B	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	5/3/06	PSS/PEM	Rich Shrub Fen	1.187							1.187
AR607-A	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/8/05	PFO4/PSS	Balsam flats/Shrub swamp	0.135							0.135
AR607-B	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/8/05, 5/10/07	PFO4/PSS/PEM	Balsam flats/Shrub swamp	0.103							0.103
AR608-A	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/8/05, 5/10/07	PFO1/PEM	Red maple-hardwood swamp/Shallow emergent marsh	0.104							0.104
AR609-A	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/8/05, 5/9/07	PFO1/PFO4/PSS	Balsam flats/Shrub swamp	0.336							0.336
AR609-B	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	5/4/06, 5/9/07	PFO1/PFO4/PSS	Balsam flats/Shrub swamp	0.275							0.275
AR610-A	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/8/05, 5/9/07	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.335							0.335
AR610-B	Access Road between Clinton Mills Road and Turbine 124; Bootleg Road	11/8/05, 5/9/07	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.383							0.383
AR611-A/B/C/D/E	Access Road between Clinton Mills Road and Turbine 125	5/4-5/06, 5/9/07	PFO1/PFO4/PSS/PEM	Red maple-hardwood swamp/Balsam flats/Shrub swamp/Shallow emergent marsh	1.567	0.133						1.699
AR611-B	Access Road between Clinton Mills Road and Turbine 125	5/4-5/06, 5/9/07	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.512							0.512
AR615-A	Access Road between Turbines 120 and 122; Along Bootleg Road	5/5/06	PFO1/PSS	Successional northern hardwoods/Shrub swamp	0.259			0.005				0.264
AR615-B	Access Road between Turbines 120 and 122; Along Bootleg Road	5/5/06, 5/9/07	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.387	0.043						0.430
AR617-A	Turbine 134-S	11/10/05	PSS/PEM	Shrub swamp / Cropland/field crops	0.024			0.358				0.383
AR618-A	Access Road Between Turbines 133 and 134-S	11/10/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.126	0.022						0.148
AR618-B	Access Road Between Turbines 133 and 134-S	5/8/06, 7/27/06, 5/23/07	PSS	Shrub swamp	0.717							0.717
AR618-C	Access Road Between Turbines 133 and 134-S	11/10/05	PSS	Shrub swamp	0.091	0.011						0.103
AR619-A	Between Turbines 132 and 133	11/11/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.082	0.017						0.099
AR619-B	Between Turbines 132 and 133	5/8/06, 10/12/06	PSS	Shrub swamp	0.245							0.245
AR622-A/B/C	Access Road between Turbine 2-A and Poupore Road	7/15/06	PFO1/PFO4/PEM	Balsam flats/Shallow emergent marsh	0.153	0.020						0.174
AR623-A	Turbine 5-A	5/13/06	PFO1	Successional northern hardwoods	0.031			0.058				0.089
AR625-A	Access Road from Santamore/Frontier Road to Turbine 13	12/7/05, 9/12/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.488							0.488
AR625-B	Access Road from Santamore/Frontier	12/7/05	PFO1/PSS	Red maple-hardwood swamp/Shrub	0.414							0.414



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type ¹	Community	AR ²	IC ³	OH ⁴	WTG ⁵	MET ⁶	RD ⁷	SUB ⁸	Total
	Road to Turbine 13			swamp								
AR630-A/B	Between Turbines 50 and 81	12/8/05, 10/9/06, 5/6/07	PFO1	Red maple-hardwood swamp	0.355	0.008						0.363
AR701-A/B	Turbine 125	5/5/06, 5/10/07	PSS	Shrub swamp				0.289				0.289
AR702-A	Access Road/Interconnect between Turbines 133 and 134S	5/7/06	PSS	Shrub swamp	0.010	0.002						0.012
AR703-A	Access Road Between Turbines 133 and 134-S	5/8/06, 5/25/07, 8/2/07	PEM	Cropland/field crops	0.410	0.035		0.048				0.493
AR709-A/B	Turbine 117	5/10/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.003			0.071				0.073
AR710-A	Between Turbines 117 and 119	5/11/06	PFO1/PSS	Successional northern hardwoods/Shrub swamp	0.024							0.024
AR711-B	Between Turbines 116 and 119	5/11/06	PFO1	Red maple-hardwood swamp	0.014	0.002						0.017
AR713-B	Interconnect between Turbines 31 and 36A	5/16/06, 7/29/06	PSS	Shrub swamp		0.171						0.171
AR719-A/B/C	Access Road between Campbell Road and Turbine 77	5/19/06, 5/4/07	PEM	Mowed lawn / Cropland/field crops	2.204							2.204
AR720-A	Access Road between Patnode road and Turbine 58	5/20/06	PSS	Shrub swamp	0.113							0.113
AR724-A	Between Turbines 73-W and 64	5/21/06, 5/4/07	PFO1	Red maple-hardwood swamp	0.073	0.664						0.737
AR725-A/B/C	Between Turbines 60 and 64	5/22/06, 5/4/07	PSS	Shrub swamp	0.181	0.029						0.210
AR725-D	Between Turbines 60 and 64	5/23/06, 5/4/07	PSS	Shrub swamp	0.139	0.024						0.162
AR736-A	Turbine 161A	7/13/06	PEM	Cropland/field crops		0.008		0.024				0.032
AR737-A	Between Moore Road and Turbines 161 and 161A	7/13/06	PEM	Pastureland	0.097							0.097
AR802-A	Overhead transmission Line between Turbines 135 and 146-R	5/8/06, 11/7/06	PFO1/PSS/PEM	Red maple-hardwood swamp/Shrub swamp/Shallow emergent marsh			0.504					0.504
AR803-A/B/C	Between Clinton Mills Road and Turbine 135	5/9/06, 8/26/06, 5/1/07	PSS/PEM	Shrub swamp/Shallow emergent marsh			0.961					0.961
AR804-A	Turbine 147	5/8/06	PFO1	Red maple-hardwood swamp	0.003	0.003		0.041				0.047
AR805-A/B	Between Turbines 141 and 147	5/9/06	PFO1/PEM	Red maple-hardwood swamp/Shallow emergent marsh	0.128	0.006						0.134
AR807-A	Between Turbines 112 and 113-R	5/10/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.015	0.004						0.019
AR808-A	Between Turbines 112 and 113-R	5/11/06	PFO1	Red maple-hardwood swamp	0.005							0.005
AR809-A	Between Turbines 112 and 113-R	5/11/06, 5/10/07	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.044	0.008						0.051
AR816-A	Access Road Between Turbines 112 and 114	5/15/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.047							0.047
AR825-A/B	Overhead Transmission Line Between Route 11 and Turbine 51	5/20/06, 8/23/06, 11/8/06, 5/4/07	PFO1	Red maple-hardwood swamp	0.529	0.033	1.704					2.267
AR828-A	Between Brandy Brook Road and Turbine 12	5/21/06	PFO1	Red maple-hardwood swamp	0.032							0.032
AR852-A/B	Between Turbines 51 and 75A-W	5/20/06, 8/23/06, 5/6/07	PFO1	Red maple-hardwood swamp	0.603	0.010						0.613
AR902-A	Access Road Between Clinton Mills Road and Turbine 120	5/6/06	PFO1	Red maple-hardwood swamp	0.074							0.074
AR904-A	Access Road from Clinton Mills Road to Turbine 122	5/06/06, 5/9/07	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.078							0.078



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type¹	Community	AR²	IC³	OH⁴	WTG⁵	MET⁶	RD⁷	SUB⁸	Total
AR906-A	Turbine 95	5/6/06, 7/10/06	PSS/PEM	Shrub swamp/Shallow emergent marsh				0.200				0.200
AR907-A	Access Road between Turbines 94 and 95	7/10/06	PEM	Successional old field	0.019	0.005						0.024
AR909-A	Between Star Road and Turbine 95	7/11/06	PEM	Pastureland	0.030							0.030
AR910-A	Turbine 97	7/11/06	PFO1	Red maple-hardwood swamp				0.023				0.023
AR917-A	Culvert on Lagree Road between Rt 189 and Turbine 42	5/17/06	PSS	Shrub swamp						0.027		0.027
AR917-C	Culvert on Lagree Road between Rt 189 and Turbine 42	5/7/07	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp						0.033		0.033
AR925-A/B/C, IC	Interconnect Between Turbines 67 and 89-R	5/23/06, 7/13/06, 12/21/06	PFO1	Red maple-hardwood swamp		0.060						0.060
AR926-A/B	Overhead Transmission Line between Turbines 67 and 73-W	5/23/06, 5/4/07	PFO1	Red maple-hardwood swamp			12.113					12.113
AR927-A/B	Overhead Transmission Line between Turbines 67 and 73-W	5/23/06, 8/19/06	PFO1	Red maple-hardwood swamp	0.007		0.011					0.018
AR939-A	Access Road Between Turbines 13 and 19	7/18/06	PFO1/PSS/PEM	Red maple-hardwood swamp/Shrub swamp/Shallow emergent marsh	0.022							0.022
AR939-B	Access Road Between Turbines 13 and 19	7/18/06, 10/13/06, 5/8/07	PFO1/PSS/PEM	Red maple-hardwood swamp/Shrub swamp/Shallow emergent marsh	0.434							0.434
AR939-C	Access Road Between Turbines 13 and 19	7/18/06, 10/23/06, 5/8/07	PFO1	Red maple-hardwood swamp	0.035							0.035
AR939-D	Access Road Between Turbines 13 and 19	10/13/06	PFO1	Red maple-hardwood swamp	0.009							0.009
AR940-A/B	Access Road to Turbine 13	7/18/06	PFO1	Red maple-hardwood swamp	0.168	0.016						0.184
AR941,IC942	Turbine 19	7/19/06, 7/20/06, 5/8/07, 5/23/07	PFO1/PFO4	Balsam flats/Hemlock hardwood swamp	0.195	0.967		0.366				1.527
AR943-A	Between Turbines 112 and 114	7/24/06	PFO1	Red maple-hardwood swamp	0.005							0.005
AR945-A	Between Turbines 112 and 114	7/24/06	PEM	Shallow emergent marsh	0.008							0.008
AR946-B	Between Turbines 112 and 114	7/24/06	PFO1/PEM	Red maple-hardwood swamp/Shallow emergent marsh	0.015							0.015
AR947-A	Access Road between Turbines 106 and 119	7/25/06, 5/10/07	PFO1/PFO4	Red maple-hardwood swamp	0.040							0.040
AR949-A	Between Turbines 137-W and 155	7/25/06	PEM	Shallow emergent marsh	0.215							0.215
AR950-A	Between Turbines 137-W and 138	7/25/06	PFO1	Red maple-hardwood swamp	0.013	0.011						0.024
AR951-A	Between Turbines 137-W and 138	7/25/06	PFO1/PEM	Red maple-hardwood swamp/Shallow emergent marsh	0.021	0.012						0.033
AR952-A	Access Road and Interconnect between Turbines 138 and 139	7/26/06	PFO1	Red maple-hardwood swamp	0.048							0.048
AR954-A	Access Road and Interconnect between Turbines 138 and 139	7/26/06	PFO1	Red maple-hardwood swamp	0.121							0.121
AR955-A	Interconnect between Turbines 4-A and 5-A; Along Poupore Road	7/27/06	PEM	Successional old field		0.0001						0.000
AR958-A,IC962	Access Road Between Looby Road and Turbine 84A	7/28/06,10/26/06	PSS	Shrub swamp	1.207	0.574		0.995				2.776
AR964-A	Access Road between Whalen Road and Turbine 36-A	7/28/06	PFO1	Successional northern hardwoods	0.026							0.026
AR965-A/B	Turbine 36-A	7/29/06, 10/14/06, 5/30/07	PFO1/PFO4	Balsam flats				0.003				0.003
AR967-A/B	Turbine 85	7/31/06, 9/08/06	PFO1/PEM	Successional northern hardwoods/Shallow emergent marsh	0.598			1.203				1.801
AR967-D	Between Lagree Road and Turbine 85	7/31/06, 10/14/06, 5/7/07	PFO1/PEM	Successional northern	0.125	0.031						0.156



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type ¹	Community	AR ²	IC ³	OH ⁴	WTG ⁵	MET ⁶	RD ⁷	SUB ⁸	Total
				hardwoods/Shallow emergent marsh								
AR967-E	Between Lagree Road and Turbine 85	7/31/06, 9/1/06, 5/7/07	PFO1/PEM	Successional northern hardwoods/Shallow emergent marsh	0.261	0.031						0.292
AR968-A	Between Lagree Road and Turbine 85	7/31/06, 5/7/07	PEM	Shallow emergent marsh	0.030							0.030
AR986-B	Access Road between Bootleg Road and Turbine 124	8/16/06	PFO1	Red maple-hardwood swamp	0.108	0.009						0.117
AR1008-A	Access Road from Patnode Road to Turbine 204	7/12/06	PFO1/PFO4	Balsam flats	0.032	0.013						0.044
AR1009-A	Overhead Transmission Line/Interconnect between Turbines 67 and 89-R	7/13/06, 5/3/07	PFO1	Red maple-hardwood swamp	0.030		0.310					0.339
AR1017-A	Turbine 15A	7/18/06	PEM	Successional old field	0.003			0.031				0.034
AR/IC1021-A/B	Between Turbines 31 and 172	7/20, 10/26, 5/23/07	PFO1	Red maple-hardwood swamp	1.218	0.078						1.297
AR1026-A	Access Road between Bootleg Road and Turbine 125	7/21/06	PFO1	Red maple-hardwood swamp	0.088							0.088
AR1027-A/B	Between Bootleg Road and Turbine 124	7/22/06	PFO1	Red maple-hardwood swamp	0.249	0.016						0.265
AR1028-A/B	Between Bootleg Road and Turbine 124	8/16/06, 5/9/07	PFO1	Red maple-hardwood swamp	0.520	0.020						0.540
AR1029-A/B	Between Turbines 137-W and 155	7/25/06	PFO1	Red maple-hardwood swamp	0.245	0.046						0.291
AR1030-A/B	Between Turbines 137-W and 138	11/11/05	PFO1	Red maple-hardwood swamp	0.213	0.034						0.247
AR1031-A	Turbine 139	8/16/06, 10/11/06	PFO1	Red maple-hardwood swamp	0.050	0.014		0.095				0.160
AR1032-A	Between Turbines 139 and 140	7/26/06	PFO1	Red maple-hardwood swamp	0.186	0.006						0.192
AR1033-A/B	Between Turbines 139 and 140	7/26/06	PFO1	Red maple-hardwood swamp	0.120	0.006						0.125
AR1034-A	Access Road between Poupore Road and Turbine 175	7/26/06	PFO4	Northern white cedar swamp	0.199							0.199
AR1035-A	Between Turbines 21 and 148	7/27/06	PFO4	Northern white cedar swamp	0.028							0.028
AR1036-A	Between Soucia Road and Turbine 133	7/28/06	PFO1	Red maple-hardwood swamp	0.033							0.033
AR1037-A/D/C	Between Route 189 and Turbine 201	7/28/06	PEM	Cropland/field crops	1.441	0.088						1.528
AR1042-A	Access Road from Route 189 to Turbine 28A	8/1/06, 10/26/06	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.350							0.350
AR1044-A/B	Access Road from Route 189 to Turbine 28	8/2/06	PFO4/PSS	Balsam flats/Shrub swamp	0.973							0.973
AR1105-A	Turbine 207	9/06/06, 5/10/07	PSS/PEM	Shrub swamp/Pastureland		0.085		1.378				1.464
AR1105-B	Access Road between Poupore Road and Turbine 207	9/6/07	PSS/PEM	Shrub swamp/Pastureland	0.078							0.078
AR1105-C	Between Poupore Road and Turbine 4-A	9/7/06	PEM	Pastureland		0.041						0.041
AR1108-A	Turbine 209	8/30/06, 5/9/07, 8/2/07	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.144	0.002		0.439				0.586
AR1151-A	Turbine 10A	9/7/06	PSS	Shrub swamp				0.276				0.276
AR1275-A/B	Between Turbines 138 and 139	9/25/06	PFO1	Red maple-hardwood swamp	0.00002							0.000
AR1307-A	Between Turbines 155 and 117	10/11/06	PFO1/PEM	Red maple-hardwood swamp/Shallow emergent marsh	0.163	0.002						0.164
AR1312-A	Between Turbines 84 and 85	10/14/06	PFO1/PSS/PEM	Red maple-hardwood swamp/Shrub swamp/Shallow emergent marsh	0.196	0.001						0.198
AR1315-A	Access Road between Turbines 55 and 206	10/15/06	PFO1	Red maple-hardwood swamp	0.0004							0.000
AR1316-A	Turbine 206	10/15/06	PFO1	Red maple-hardwood swamp				0.0004				0.000
CV1173-A	Access Road between Looby Road and Turbine 87	9/15/06	PFO1	Successional northern hardwoods	0.020							0.020



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type ¹	Community	AR ²	IC ³	OH ⁴	WTG ⁵	MET ⁶	RD ⁷	SUB ⁸	Total
CV1400-A	Culvert on Gagnier between Campbell and Patnode Roads	5/31/07	PEM	Cropland/field crops						0.011		0.011
CV1400-B/C	Culvert on Gagnier between Campbell and Patnode Roads	5/31/07	PEM	Pastureland						0.028		0.028
CW715-B, IC1022	Merchia Road Between Turbines 31 and 208	5/17/06, 7/20/06	PSS	Shrub swamp	1.322	0.181						1.503
CW715-C	Access Road from Merchia Road to Turbine 31	8/2/06	PFO1/PFO4/PEM	Red maple-hardwood swamp/Balsam flats/Shallow emergent marsh	0.005							0.005
CW829-A	Between Turbines 42 and 83 and ; Along Lagree Road	5/21/06, 9/13/0/06	PFO4	Northern white cedar swamp	0.526							0.526
CWIC705-A/B	Between Soucia Road and Turbine 133	5/9/06	PSS	Shrub swamp	0.326	0.001						0.327
CWIC722-A	Access Road to Turbine 57	5/20/06	PEM	Cropland/field crops	0.035							0.035
CWIC723-A	Access Road to Turbine 57	5/20/06	PEM	Shallow emergent marsh	0.007							0.007
CWIC704-A/B	Soucia Road	5/9/06, 5/25/07	PFO1/PSS	Red maple-hardwood swamp/shrub swamp			0.017					0.017
IC360-A	Interconnect from Clinton Mills Road/RR tracks to Turbine 209	12/19/06	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.312							0.312
IC361-A	Interconnect from Clinton Mills Road/RR tracks to Turbine 209	12/19/06, 9/15/07	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.227							0.227
IC362-A	Access Road/Interconnect to Turbine 209	12/19/06	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.016							0.016
IC363-A	Access Road/Interconnect to Turbine 209	12/19/06, 9/15/07	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.047							0.047
IC364-A	Interconnect between Swamp Road and Turbine 201	12/20/06	PSS/PEM	Shrub swamp/Shallow emergent marsh		0.378						0.378
IC364-A/B	Interconnect from Swamp Road to Turbine 201	8/03/07	PSS/PEM	Shrub swamp/Shallow emergent marsh		0.482						0.482
IC365-A	Along Route 189; North of Turbines 28 and 28A	12/20/06	PSS/PEM	Shrub swamp/Shallow emergent marsh		0.084						0.084
IC366-A	Along Route 189; North of Turbines 28 and 28A	12/20/06	PSS/PEM	Shrub swamp/Shallow emergent marsh		0.157						0.157
IC371-C	Star Road between Tacey and Bohem Roads	12/21/2006	PEM	Shallow emergent marsh		0.037						0.037
IC535-A/B	Turbine 148	5/16/06	PFO1/PFO4	Balsam flats				0.254				0.254
IC727-A/B	Interconnect between Turbines 64 and 202	5/23/06, 7/19/06	PFO1	Red maple-hardwood swamp		0.759						0.759
IC738-A	Between Star Road and Turbine 98	7/13/06, 10/17/06	PEM	Pastureland	0.621	0.085						0.707
IC739-A	Between Star Road and Turbine 91	7/14/06, 5/3/07	PEM	Pastureland		0.064						0.064
IC818	Interconnect between Turbines 44 and 46	8/4/06	PSS	Shrub swamp		0.384						0.384
IC818-A	Interconnect between Turbines 44 and 46	5/17/06, 8/4/06	PFO4/PSS	Northern white cedar swamp/Shrub swamp		0.254		0.089				0.344
IC818-B	Interconnect between Turbines 44 and 46	8/4/06	PSS	Shrub swamp		0.521		0.082				0.603
IC819-A/B	Turbine 48-W	5/18/06	PFO1	Red maple-hardwood swamp				0.339				0.339
IC820-A	Between Route 189 and Turbine 48-W	5/18/06	PEM	Pastureland	0.035							0.035
IC827-A/B/C	Overhead Transmission Line Between Route 11 and Turbine 51	5/20/06, 8/23/06, 5/6/2007	PFO4	Spruce-fir swamp			0.484					0.484
IC919-A	Turbine 84 and Access Road along Lagree Road at Turbine 83	5/20/06, 5/7/07	PFO1/PFO4	Balsam flats	0.162	0.019		0.017				0.199
IC963-A	Interconnect between Turbines 36A and	7/28/06	PEM	Pastureland		0.016						0.016



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type ¹	Community	AR ²	IC ³	OH ⁴	WTG ⁵	MET ⁶	RD ⁷	SUB ⁸	Total
	84A											
IC963-B	Interconnect between Turbines 36A and 84A	7/28/06	PEM	Pastureland		0.008						0.008
IC969-A/B	Between Turbines 84 and 85	8/1/06, 10/14/06	PFO1/PFO4	Balsam flats	0.460	0.027						0.487
IC970-A	Between Turbines 84 and 85	8/1/06	PFO1	Red maple-hardwood swamp	0.083	0.013						0.096
IC970-B	Between Turbines 84 and 85	8/1/06	PFO1	Red maple-hardwood swamp	0.115							0.115
IC971-A	Between Lagree Road and Turbine 42	8/1/06, 9/11/06, 5/7/07	PFO1	Red maple-hardwood swamp	0.040							0.040
IC972-A	Between Lagree Road and Turbine 83	8/1/06	PEM	Shallow emergent marsh	0.020							0.020
IC973-A	Between Lagree Road and Turbine 83	8/1/06	PEM	Shallow emergent marsh	0.005							0.005
IC977-B	Interconnect from Gagnier Road to Turbine 58; along Patnode Road	8/3/06	PEM	Pastureland		0.032						0.032
IC977-C	Interconnect from Gagnier Road to Turbine 58; along Patnode Road	8/3/06	PEM	Pastureland		0.033						0.033
IC978-A	Interconnect between Lagree Road and Turbine 46; Along Route 189	8/3/06, 5/5/07	PSS	Shrub swamp		1.568						1.568
IC978-F	Interconnect between Lagree Road and Turbine 46; Along Route 189	8/4/06, 5/5/07	PSS	Shrub swamp		0.294						0.294
IC978-G	Interconnect between Lagree Road and Turbine 46; Along Route 189	8/4/06, 5/5/07	PSS	Shrub swamp		0.141						0.141
IC980-A	Interconnect Between Turbines 120 and 138	8/15/06, 5/10/07	PEM	Shallow emergent marsh		0.157						0.157
IC980-A/B	Interconnect between Turbines 44 and 46	8/4/06, 5/6/07	PFO1/PEM	Red maple-hardwood swamp/Shallow emergent marsh		0.150						0.150
IC981-A	Interconnect Between Turbines 120 and 138	8/15/06, 9/10/06	PFO1	Red maple-hardwood swamp		0.072						0.072
IC983-A/B	Interconnect Between Turbines 120 and 138	8/15/06	PEM	Shallow emergent marsh		0.164						0.164
IC1005-A	Overhead Transmission Line/Interconnect between Turbines 67 and 89-R	7/12/06	PFO1	Red maple-hardwood swamp			0.079					0.079
IC1006-A	Overhead Transmission Line/Interconnect between Turbines 67 and 89-R	8/18/06, 5/2/07	PFO1/PEM	Successional northern hardwoods	0.137		0.269					0.406
IC1007-A	Overhead Transmission Line/Interconnect between Turbines 67 and 89-R	7/12/06, 5/3/07	PFO1	Red maple-hardwood swamp	0.014		0.002					0.015
IC1010-A	Overhead Transmission Line/Interconnect between Turbines 67 and 89-R	7/13/06, 5/3/07	PFO1	Red maple-hardwood swamp		0.035	0.020					0.055
IC1014-A/B	Interconnect between Poupore Road and Turbine 3-A	7/17/06, 10/12/06	PSS	Shrub swamp		0.091						0.091
IC1015-A	Interconnect between Poupore Road and Turbine 3-A	7/17/06	PSS	Shrub swamp		0.051						0.051
IC1015-B	Interconnect between Poupore Road and Turbine 3-A	7/17/06	PEM	Shallow emergent marsh		0.015						0.015
IC1016-A	Interconnect between Poupore Road and Turbine 3-A	10/12/06	PEM	Shallow emergent marsh	0.001	0.021						0.022
IC1016-A/B	Interconnect between Poupore Road and Turbine 3-A	7/17/06, 10/12/06, 8/23/07	PEM	Shallow emergent marsh		0.758						0.758



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type¹	Community	AR²	IC³	OH⁴	WTG⁵	MET⁶	RD⁷	SUB⁸	Total
IC1023-A	Between Turbines 172 and 208	7/20/06	PSS	Shrub swamp	0.049							0.049
IC1024-A	Between Turbines 172 and 208	7/20/06	PFO1	Red maple-hardwood swamp	0.235							0.235
IC1038-A	Intersection of Route 189 and Swamp Road	7/29/06	PFO2/PSS	Black spruce-tamarack bog		0.010						0.010
IC1038-B	Intersection of Route 189 and Swamp Road	7/29/06	PFO2/PFO1/PSS	Red maple-tamarack peat swamp/Shrub swamp		0.104						0.104
IC1039-A/B	Interconnect from Route 189 to Turbine 28A	7/31/06	PFO4/PSS	Balsam flats/Shrub swamp		0.018						0.018
IC1047-A	Interconnect between Turbines 45 and 77; along Campbell Road	8/3/06	PFO1	Red maple-hardwood swamp		0.251						0.251
IC1048-A	Interconnect between Turbines 45 and 77; along Campbell Road	8/3/06	PFO1/PFO4/PSS	Balsam flats/Shrub swamp		0.039						0.039
IC1049-A	Interconnect between Turbines 45 and 77; along Campbell Road	8/3/06	PSS	Shrub swamp		0.216						0.216
IC1050-A	Interconnect between Turbines 45 and 77; along Campbell Road	8/4/06	PFO1	Red maple-hardwood swamp		0.161						0.161
IC1052-A	Interconnect Between Turbines 120 and 138	8/16/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp		0.011						0.011
IC1054-A	Interconnect Between Turbines 120 and 173	8/17/06	PFO1	Red maple-hardwood swamp		0.010						0.010
IC1154-A	Interconnect Between Turbines 120 and 138	9/10/06	PFO1	Red maple-hardwood swamp		0.006						0.006
IC1156-A/B	Interconnect Between Turbines 120 and 173	9/10/06, 5/9/07	PFO1	Red maple-hardwood swamp		0.123						0.123
IC1300-B	Interconnect between Campbell Road and Turbine 45	10/9/06	PFO1	Red maple-hardwood swamp		0.092						0.092
IC1311-A	Interconnect between Poupore Road and Turbine 3-A	10/12/06	PEM	Cropland/field crops		0.004						0.004
MET1003-A/B/C	Access Road/Interconnect between Turbines 133 and 134S	5/24/07	PEM	Shallow emergent marsh	0.019							0.019
MET1544-A	Met Tower Number 3 by Turbine 57	8/02/07	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.005							0.005
MET1544-B	Met Tower Number 3 by Turbine 57	8/02/07	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.027							0.027
MET1545-A	Interconnect from Met Tower Number 3 to Turbine 57	8/02/07, 8/23/07	PSS/PEM	Shrub swamp/Shallow emergent marsh					0.101			0.101
MET1546-A	Met Tower Number 3	8/02/07	PEM	Shallow emergent marsh					0.037			0.037
MET1548-A	Met Tower Number 3 by Turbine 57	8/02/07	PEM	Shallow emergent marsh	0.099							0.099
MET1548-B	Met Tower Number 3 by Turbine 57	8/02/07	PEM	Shallow emergent marsh	0.022							0.022
MET1549-A	Met Tower Number 1 by Turbine 3A	8/03/07	PEM	Shallow emergent marsh					0.024			0.024
MET1550-A	Met Tower Number 1 by Turbine 3A	8/03/07, 8/23/07	PFO1/PSS/PEM	Red maple-hardwood swamp/Shrub swamp/Shallow emergent marsh	0.042	0.014			0.234			0.291
MET1551-A	Met Tower Number 3 by Turbine 57	8/03/07	PEM	Shallow emergent marsh	0.069							0.069
MET1551-B	Met Tower Number 3 by Turbine 57	8/03/07	PEM	Shallow emergent marsh	0.056							0.056
MIT1560-A	Access Road along Soucia Road	8/23/07	PSS/PEM	Shrub swamp/Pastureland			0.124					0.124
OH1110-A,IC1123	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/06/06,9/11/06	PFO1	Red maple-hardwood swamp			0.155					0.155
OH1110-B	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/6/2006	PFO1	Red maple-hardwood swamp			0.065					0.065
OH1111-A/B	Overhead Transmission Line Between	9/6/2006	PEM	Shallow emergent marsh			1.236					1.236



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type¹	Community	AR²	IC³	OH⁴	WTG⁵	MET⁶	RD⁷	SUB⁸	Total
	Turbine 81 and LaFrancis Road											
OH1113-A/B	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/6/2006	PFO1	Red maple-hardwood swamp			0.197					0.197
OH1114-A	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/7/2006	PFO1	Red maple-hardwood swamp			0.17					0.170
OH1115-A	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/7/2006	PFO1	Red maple-hardwood swamp			0.329					0.329
OH1116-A	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/7/2006	PFO1	Red maple-hardwood swamp			0.376					0.376
OH1117-A	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/07/06, 9/8/06	PFO1	Red maple-hardwood swamp			0.509					0.509
OH1117-B	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/8/2006	PFO1	Red maple-hardwood swamp			0.415					0.415
OH1118-A/B	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/8/2006	PFO1	Red maple-hardwood swamp			0.733					0.733
OH1119-A	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/8/2006	PFO1	Red maple-hardwood swamp			0.338					0.338
OH1120-A/B/C/D	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/9/06,5/5/07	PFO1	Red maple-hardwood swamp			13.13					13.126
OH1121-A	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	9/10/2006	PFO1	Red maple-hardwood swamp			0.007					0.007
OH1200-A	Overhead Transmission Line Between Gagnier Road and Route 11	10/17/06	PFO1	Successional northern hardwoods			1.081					1.081
OH1204-A	Overhead Transmission Line Between LaFrancis Road and Turbine 146-R	8/25/06	PFO1	Red maple-hardwood swamp			0.084					0.084
OH1205-A	Overhead Transmission Line Between LaFrancis Road and Turbine 146-R	8/25/06	PFO1	Red maple-hardwood swamp			0.010					0.010
OH1326-A	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	10/16/06	PSS	Shrub swamp			0.046					0.046
OH1327-A	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	10/16/06	PSS	Shrub swamp			0.009					0.009
OH1328-A/B/C	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	10/16/06	PSS	Shrub swamp			0.337					0.337
OH1329-A/B/C/D	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	10/16/06, 7/26/07	PSS	Shrub swamp			0.321					0.321
OH1330-A/B	Overhead Transmission Line Between Gagnier Road and Turbine 73-W	10/16/06	PFO1/PFO4	Balsam flats			0.446					0.446
OH1350-A/B	Overhead Transmission Line Between LaFrancis Road and Turbine 146-R	8/24/06, 9/11/06, 11/6/06	PFO1	Red maple-hardwood swamp			0.685					0.685
OH1352-A	Overhead Transmission Line Between LaFrancis Road and Turbine 146-R	11/6/06	PFO1	Red maple-hardwood swamp			0.057					0.057
OH1353-A	Overhead Transmission Line Between LaFrancis Road and Turbine 146-R	11/6/06	PFO1	Red maple-hardwood swamp			0.979					0.979
OH1354-A	Overhead Transmission Line Between LaFrancis Road and Turbine 146-R	11/6/06	PFO1	Red maple-hardwood swamp			0.053					0.053



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type¹	Community	AR²	IC³	OH⁴	WTG⁵	MET⁶	RD⁷	SUB⁸	Total
OH1355-A	Overhead Transmission Line Between LaFrancis Road and Turbine 146-R	11/6/06	PFO1	Red maple-hardwood swamp			0.016					0.016
OH1357-A	Overhead Transmission Line Between LaFrancis Road and Turbine 146-R	11/7/06	PFO1	Red maple-hardwood swamp			0.058					0.058
RW1163-A	Southeast corner of Rt 189 and Liberty Pole Road intersection	9/12/06	PSS	Shrub swamp						0.002		0.002
RW1163-B	Southeast corner of Rt 189 and Liberty Pole Road intersection	9/12/06	PSS	Shrub swamp						0.001		0.001
SA821-A	Overhead Transmission Line Between Turbine 81 and LaFrancis Road	5/18/06, 5/5/07	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.010	0.007	0.709					0.727
WET AG. FIELD	Turbine 206	5/20/06	PEM	Cropland/field crops				0.045				0.045
WTG1A, AR905	Between Turbines 89-R and 100-R	9/19/05, 7/10/06, 5/3/07	PSS	Shrub swamp	0.220	0.003						0.223
WTG1A-A/B	Turbine 1-A	7/16/06	PFO4/PEM	Northern white cedar swamp/Pastureland	0.274			0.436				0.710
WTG2A-A	Turbine 2-A	7/15/06	PEM	Shallow emergent marsh				0.053				0.053
WTG5A-A	Access Road between Poupore Road and Turbine 5-A	5/12/06	PSS	Shrub swamp	0.137	0.008						0.145
WTG5A-C/D	Access Road between Poupore Road and Turbine 5-A	7/27/06	PSS	Shrub swamp	0.276							0.276
WTG11-A	Turbine 11	7/18/06	PSS/PEM	Shrub swamp/Shallow emergent marsh				0.099				0.099
WTG15-1A	Access Road between Turbines 94 and 95	9/20/05	PEM	Successional old field	0.208	0.003		0.007				0.217
WTG15A-ALT-A	Turbine 15A	10/12/05	PEM	Cropland/field crops				0.197				0.197
WTG15A-B	Turbine 15A	7/18/06	PEM	Successional old field				0.449				0.449
WTG15-ALT-B	Between Turbines 15 and 15A	10/12/05, 5/9/07	PFO4/PEM	Northern white cedar swamp/Shallow emergent marsh	0.048							0.048
WTG21-A	Turbine 21	5/15/06	PFO1/PFO4/PEM	Red maple-hardwood swamp/Balsam flats/Pastureland				0.099				0.099
WTG28A-A	Turbine 28A	7/29/06, 10/26/06	PFO1/PFO4	Red maple-hardwood swamp/Balsam flats				0.740				0.740
WTG28A-B	Turbine 28A	7/29/06, 5/9/07	PFO1/PFO4	Red maple-hardwood swamp/Balsam flats				0.093				0.093
WTG31-R-A	Turbine 31	5/16/06, 8/2/06, 10/13/06	PFO1/PFO4	Northern white cedar swamp				0.131				0.131
WTG31-R-B	Turbine 31	5/16/06, 8/2/06, 10/13/06	PFO1/PFO4	Northern white cedar swamp				0.002				0.002
WTG31-R-B-A	Interconnect between Turbines 31 and 36A	12/20/06	PFO1	Red maple-hardwood swamp							1.505	1.505
WTG36A-A/B	Turbine 36A	5/15/06	PFO1	Balsam flats				0.023				0.023
WTG44-A/B/C	Turbine 44	5/17/06	PFO1	Red maple-hardwood swamp				0.290				0.290
WTG47-A	Turbine 47	5/18/06	PSS/PEM	Shrub swamp/Pastureland				0.008				0.008
WTG47-C	Turbine 47	5/18/06	PFO1/PFO4/PSS	Spruce-fir swamp	0.000			0.410				0.410
WTG48B	Turbine 117	10/21/05	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.021			0.018				0.039
WTG50-A	Turbine 50	5/19/06	PFO1/PFO4	Balsam flats				0.010				0.010
WTG51-A	Turbine 51	5/19/06	PFO1	Red maple-hardwood swamp	0.026	0.005		0.003				0.035
WTG52-A	Turbine 52	10/7/05	PEM	Cropland/field crops				0.016				0.016
WTG55-A	Turbine 55	10/15/06	PFO1	Red maple-hardwood swamp				0.025				0.025
WTG57-A/B	Turbine 57	5/20/06, 10/13/06, 5/5/07, 8/23/07	PSS/PEM	Shrub swamp/Shallow emergent marsh	0.482	0.007		0.381				0.870



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type¹	Community	AR²	IC³	OH⁴	WTG⁵	MET⁶	RD⁷	SUB⁸	Total
WTG58-A	Turbine 58	5/20/06	PEM	Shallow emergent marsh	0.035			0.156				0.192
WTG59-B	Turbine 59	5/19/06, 5/5/07	PEM	Shallow emergent marsh				0.578				0.578
WTG64-A	Turbine 64	5/22/06, 8/29/06	PSS	Shrub swamp				0.266				0.266
WTG67, SUB1058	Turbine 67	8/18/06, 8/29/06	PFO1/PEM	Successional northern hardwoods/Shallow emergent marsh							1.097	1.097
WTG67-A	Turbine 67	7/16/06, 8/18/06, 5/2/07	PFO1	Successional northern hardwoods	0.052			0.588				0.640
WTG70R-A,IC1012	Interconnect Between Turbines 67 and 89-R	5/23/06, 12/21/06	PFO1/PSS/PEM	Red maple-hardwood swamp/Shrub swamp/Shallow emergent marsh		0.310						0.310
WTG77-A	Turbine 77	5/19/06	PSS	Shrub swamp				0.151				0.151
WTG78-A	Turbine 78	5/18/06	PEM	Cropland/field crops				0.059				0.059
WTG84-A	Turbine 84	5/19/06	PFO1/PFO4	Balsam flats				0.530				0.530
WTG85-A/B	Turbine 85	5/18/06	PFO1/PSS	Successional northern hardwoods/Shrub swamp				0.138				0.138
WTG87-A/C	Turbine 87	5/18/06, 7/29/06	PSS	Shrub swamp	0.458	0.006		0.445				0.908
WTG90-A	Turbine 90	7/13/06, 5/3/07	PEM	Shallow emergent marsh				0.036				0.036
WTG91-A	Turbine 91	7/14/06	PEM	Shallow emergent marsh				0.271				0.271
WTG93-A	Turbine 93	7/11/06	PEM	Shallow emergent marsh				0.060				0.060
WTG97-A	Turbine 97	7/11/06	PEM	Shallow emergent marsh				0.050				0.050
WTG112-A	Turbine 112	5/11/06	PSS/PEM	Shrub swamp/Shallow emergent marsh				0.101				0.101
WTG112-B/C/D	Turbine 112	5/11/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp				0.122				0.122
WTG114-A/B	Turbine 114	5/12/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp				0.311				0.311
WTG115-A	Turbine 115	5/10/06	PFO1	Red maple-hardwood swamp				0.104				0.104
WTG116-A	Turbine 116	7/25/06	PEM	Shallow emergent marsh				0.015				0.015
WTG116-B	Turbine 116	7/25/06	PFO4/PEM	Northern white cedar swamp/Shallow emergent marsh				0.118				0.118
WTG116-C	Turbine 116	7/25/06	PEM	Shallow emergent marsh				0.019				0.019
WTG117-708A	Turbine 117	5/10/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp				0.124				0.124
WTG119-A	Turbine 119	5/10/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp				0.00001				0.000
WTG119-B/C	Turbine 119	5/10/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.016			0.581				0.597
WTG120-A	Turbine 120	5/5/06, 9/10/06, 5/9/07	PFO1	Red maple-hardwood swamp		0.057		0.332				0.389
WTG120-B	Turbine 120	5/5/06	PFO1	Red maple-hardwood swamp				0.138				0.138
WTG120-C	Turbine 120	10/27/06	PFO1	Red maple-hardwood swamp/Shrub swamp				0.056				0.056
WTG122-A	Turbine 122	5/6/06	PFO1	Red maple-hardwood swamp				0.053				0.053
WTG124-A	Turbine 124	7/21/06	PFO1	Red maple-hardwood swamp	0.001			0.011				0.013
WTG124-B	Turbine 124	7/21/06	PFO1	Red maple-hardwood swamp				0.303				0.303
WTG132-A	Turbine 132	5/8/06	PFO1	Red maple-hardwood swamp				0.345				0.345
WTG134S-B	Turbine 134-S	5/7/06	PSS	Shrub swamp				0.396				0.396
WTG137-A	Between Turbine 137-W and 138	5/11/06, 5/10/07	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.045	0.021						0.066



**Table 7.1
Delineated Wetland Polygons
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Location	Delineation Date	Cover Type ¹	Community	AR ²	IC ³	OH ⁴	WTG ⁵	MET ⁶	RD ⁷	SUB ⁸	Total
WTG137W-A	Turbine 137-W	7/24/06	PFO1	Red maple-hardwood swamp				0.466				0.466
WTG138-A	Turbine 138	5/11/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.220	0.122		0.197				0.539
WTG140-A/D	Turbine 140	5/15/06	PFO1	Red maple-hardwood swamp	0.003			0.218				0.221
WTG140-C	Turbine 140	5/15/06	PFO1	Red maple-hardwood swamp				0.343				0.343
WTG140-D	Turbine 140	5/11/06	PFO1	Red maple-hardwood swamp				0.126				0.126
WTG155-A/B	Turbine 155	5/15/06, 10/27/06	PFO1/PSS	Red maple-hardwood swamp/Shrub swamp	0.028			0.658				0.686
WTG155-C	Turbine 155	5/15/06	PEM	Shallow emergent marsh				0.038				0.038
WTG156-A	Turbine 156	5/11/06	PFO1	Red maple-hardwood swamp				0.313				0.313
WTG156-B/C	Turbine 156	5/12/06	PFO1	Red maple-hardwood swamp				0.043				0.043
WTG161A-A	Turbine 161A	7/13/06	PEM	Pastureland				0.176				0.176
WTG173-D	Turbine 173	7/27/06	PFO1	Red maple-hardwood swamp				0.230				0.230
WTG175-A	Turbine 175	7/26/06, 9/07/06	PFO1	Successional northern hardwoods	0.049			0.871				0.920
WTG175A-WA	Turbine 75A-W	5/20/06	PFO4	Balsam flats				0.031				0.031
WTG175A-WB	Turbine 75A-W	5/20/06	PFO4	Balsam flats				0.013				0.013
WTG175-B	Turbine 175	7/26/06	PFO1	Successional northern hardwoods				0.058				0.058
WTG201-A	Turbine 201	7/28/06	PFO1	Red maple-hardwood swamp				0.781				0.781
WTG202A-A	Turbine 202	7/28/06	PFO1	Red maple-hardwood swamp	0.020			0.431				0.451
WTG204-A/B	Turbine 204	7/12/06	PFO1	Red maple-hardwood swamp				0.037				0.037
WTG208-R-A/B	Turbine 208	7/21/06, 8/29/06, 10/26/06, 5/8/07	PFO4	Balsam flats	0.024	0.002		1.258				1.284
WTG209-A	Turbine 209	8/30/06, 5/8/07	PFO1	Red maple-hardwood swamp				0.001				0.001
WTG1051-A/B	Interconnect between Turbines 52 and 77	8/28/06, 9/11/06	PEM	Cropland/field crops		1.009		0.676				1.686
Total					44.99	16.55	52.65	25.16	0.40	0.10	1.10	140.94

¹ Covertypes include the following: PFO1 (Palustrine Broad Leaved Deciduous Forest); PFO2 (Palustrine Needle Leaved Deciduous Forest); PFO4 (Palustrine Needle Leaved Evergreen Forest); PSS (Palustrine Scrub Shrub; and PEM (Palustrine Emergent).

² AR (Access Road)

³ IC (Underground Electric Collection Line)

⁴ OH (Overhead Electric Collection Line) ⁵ WTG (Wind Turbine Generator)

⁶ MET (Meteorological Tower) ⁷ RD (Public Road Improvement)

⁸ SUB (Substation)



Table 7.2
Delineated Wetland Polygons by Project Component
Marble River Wind Farm
Clinton County, New York

Project Component	Wetland Polygons
Turbines	69
Access roads	124
Underground electric collection lines	45
Overhead electric collection lines	57
Road Improvements	6
Meteorological Towers	3
Substation	1
Turbine and access roads	21
Turbine and underground electric collection lines	6
Turbine, access roads and underground electric collection lines	14
Turbine, access road, underground electric collection lines and overhead electric collection lines	1
Access roads and underground electric collection lines	77
Access roads, underground electric collection lines and meteorological tower	1
Access roads and overhead electric collection lines	4
Access roads, underground and overhead electric collection lines	3
Underground and overhead electric collection lines	2
Total	434



Table 7.3 Delineated Wetland Polygon Covertypes Marble River Wind Farm Clinton County, New York	
Cowardin Covertypes	Acreage
PFO1 ¹	56.20
PFO4 ²	2.99
PFO1/PFO4	4.51
PFO1/PSS ³	6.76
PFO2 ⁴ /PSS	0.01
PFO4/PSS	1.78
PFO1/PFO4/PSS	1.06
PFO1/PFO2/PSS	0.10
PFO1/PSS/PEM ⁵	1.76
PFO4/PSS/PEM	0.10
PFO1/PFO4/PSS/PEM	2.92
PFO1/PEM	4.57
PFO4/PEM	0.88
PFO1/PFO4/PEM	0.28
PSS	21.63
PSS/PEM	16.91
PEM	18.48
Total	140.94

¹ = Palustrine Deciduous Forest Wetland

² = Palustrine Coniferous Forest Wetland

³ = Palustrine Scrub Shrub Wetland

⁴ = Palustrine Needle Leaved Deciduous Forest Wetland

⁵ = Palustrine Emergent Wetland



**Table 7.4
Delineated NYSDEC Wetland Acreage
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Covertypes	Project Component					Total
		WTG ¹	AR ²	IC ³	OH ⁴	RD ⁵	
AR1-A	PEM ⁶		0.091				0.091
AR3-A	PEM	0.098					0.098
AR3-B	PSS ⁷ /PEM	0.007	0.017				0.024
AR4-A	PEM		0.024	0.004			0.028
AR5-A	PEM		0.038				0.038
AR16-A	PEM		0.011				0.011
AR16-B/C	PEM		0.107				0.107
AR18-A,OH1201-A	PFO1 ⁸				2.746		2.746
AR22-A	PEM		0.034	0.001			0.035
AR35-A	PSS/PEM		0.136	0.007			0.143
AR41-A	PEM		0.553	0.025			0.577
AR62-A	PSS				0.695		0.695
AR62-B	PSS				0.343		0.343
AR63-A	PSS/PEM				0.024		0.024
AR64-A/B	PFO1				0.131		0.131
AR66-A	PSS/PEM		0.013				0.013
AR68-A	PSS/PEM		0.005				0.005
AR79A	PSS		0.367				0.367
AR79-B	PFO1/PSS		0.298	0.056			0.354
AR79C	PFO4 ⁹ /PSS		0.009	0.001			0.010
AR111-A/B	PFO1		0.160	0.011			0.171
AR114-A/B	PFO1		0.104	0.006			0.110
AR115-A/B/C	PSS		1.502	0.164			1.665
AR117-A	PSS			0.006			0.006
AR205-A	PSS				0.174		0.174
AR205-B	PSS/PEM				0.186		0.186
AR209-A	PFO1/PEM		0.033				0.033
AR360-A	PSS/PEM		0.135	0.035			0.171
AR370-A	PEM	0.382					0.382
AR502-A	PSS			0.831			0.831
AR505-A/B	PFO1/PSS			0.015			0.015
AR506, OH1206	PSS/PEM	0.004	0.137	0.009	3.624		3.775
AR507-A	PSS/PEM				0.453		0.453
AR509-A/B	PFO1		0.197	0.012	1.834		2.043
AR513-A/B	PFO1		0.274	0.032			0.307
AR514-A	PSS/PEM	0.085					0.085
AR524-A	PSS/PEM		0.236				0.236
AR524-B	PFO1/PEM		0.061	0.025			0.086
AR524-D	PFO1/PEM		0.030				0.030
AR525-A	PFO1		0.030	0.049			0.079



**Table 7.4
Delineated NYSDEC Wetland Acreage
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Covertypes	Project Component					Total
		WTG ¹	AR ²	IC ³	OH ⁴	RD ⁵	
AR526-A/B	PSS		0.166				0.166
AR530-A/B	PFO1		0.092	0.011			0.103
AR531-A	PSS		0.031	0.010			0.041
AR534-A	PFO1/PSS		0.017				0.017
AR534-B	PEM		0.057				0.057
AR602-A	PSS/PEM		0.065				0.065
AR602-B	PSS/PEM		0.102				0.102
AR603-A	PFO1/PSS		0.424				0.424
AR603-B	PFO1/PSS		0.314				0.314
AR604-A	PEM		0.077				0.077
AR604-B	PSS/PEM		0.069				0.069
AR605-A	PFO4/PSS		0.165				0.165
AR605-B	PFO4/PSS		0.133				0.133
AR606-A/C	PFO1/PFO4/PSS/PEM		1.223				1.223
AR606-B	PSS/PEM		1.187				1.187
AR607-A	PFO4/PSS		0.135				0.135
AR607-B	PFO4/PSS/PEM		0.103				0.103
AR608-A	PFO1/PEM		0.104				0.104
AR609-A	PFO1/PFO4/PSS		0.336				0.336
AR609-B	PFO1/PFO4/PSS		0.275				0.275
AR610-A	PSS/PEM		0.335				0.335
AR610-B	PSS/PEM		0.383				0.383
AR611-A/B/C/D/E	PFO1/PFO4/PSS/PEM		1.567	0.133			1.699
AR611-B	PFO1/PSS		0.512				0.512
AR615-A	PFO1/PSS	0.005	0.259				0.264
AR615-B	PFO1/PSS		0.387	0.043			0.430
AR617-A	PSS/PEM	0.358	0.024				0.383
AR619-A	PSS/PEM		0.082	0.017			0.099
AR619-B	PSS		0.245				0.245
AR625-A	PFO1/PSS		0.488				0.488
AR625-B	PFO1/PSS		0.414				0.414
AR713-B	PSS			0.171			0.171
AR720-A	PSS		0.113				0.113
AR724-A	PFO1		0.073	0.664			0.737
AR802-A	PFO1/PSS/PEM				0.504		0.504
AR803-A/B/C	PSS/PEM				0.961		0.961
AR825-A/B	PFO1		0.529	0.033	1.704		2.267
AR852-A/B	PFO1		0.603	0.010			0.613
AR902-A	PFO1		0.074				0.074
AR906-A	PSS/PEM	0.200					0.200
AR907-A	PEM		0.019	0.005			0.024



**Table 7.4
Delineated NYSDEC Wetland Acreage
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Covertypes	Project Component					Total
		WTG ¹	AR ²	IC ³	OH ⁴	RD ⁵	
AR909-A	PEM		0.030				0.030
AR917-A	PSS					0.027	0.027
AR917-C	PFO1/PSS					0.033	0.033
AR925-A/B/C, IC	PFO1			0.060			0.060
AR926-A/B	PFO1				12.11 3		12.113
AR941,IC942	PFO1/PFO4	0.366	0.195	0.967			1.527
AR949-A	PEM		0.215				0.215
AR950-A	PFO1		0.013	0.011			0.024
AR952-A	PFO1		0.048				0.048
AR954-A	PFO1		0.121				0.121
AR958-A,IC962	PSS	0.995	1.207	0.574			2.776
AR965-A/B	PFO1/PFO4	0.003					0.003
AR967-A/B	PFO1/PEM	1.203	0.598				1.801
AR967-D	PFO1/PEM		0.125	0.031			0.156
AR967-E	PFO1/PEM		0.261	0.031			0.292
AR986-B	PFO1		0.108	0.009			0.117
AR/IC1021-A/B	PFO1		1.218	0.078			1.297
AR1026-A	PFO1		0.088				0.088
AR1027-A/B	PFO1		0.249	0.016			0.265
AR1028-A/B	PFO1		0.520	0.020			0.540
AR1029-A/B	PFO1		0.245	0.046			0.291
AR1030-A/B	PFO1		0.213	0.034			0.247
AR1031-A	PFO1		0.050	0.014			0.065
AR1031-A	PFO1	0.095					0.095
AR1032-A	PFO1		0.186				0.186
AR1032-A	PFO1			0.006			0.006
AR1033-A/B	PFO1		0.120	0.006			0.125
AR1037-A/D/C	PEM		1.441	0.088			1.528
AR1105-A	PSS/PEM			0.085			0.085
AR1105-A	PSS/PEM	1.378					1.378
AR1105-B	PSS/PEM		0.078				0.078
AR1108-A	PFO1/PSS	0.439	0.143	0.002			0.585
AR1275-A/B	PFO1		0.00002				0.00002
AR1307-A	PFO1/PEM		0.163	0.002			0.164
AR1312-A	PFO1/PSS/PEM		0.00000 3	0.001			0.001
CW715-B, IC1022	PSS		1.322	0.181			1.503
CW715-C	PFO1/PFO4/PEM		0.005				0.005
CW829-A	PFO4		0.526				0.526
IC360-A	PSS/PEM		0.313	0.184			0.497



**Table 7.4
Delineated NYSDEC Wetland Acreage
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Covertypes	Project Component					Total
		WTG ¹	AR ²	IC ³	OH ⁴	RD ⁵	
IC361-A	PSS/PEM		0.227				0.227
IC364-A	PSS/PEM			0.378			0.378
IC364-A/B	PSS/PEM			0.482			0.482
IC366-A	PSS/PEM			0.157			0.157
IC727-A/B	PFO1			0.759			0.759
IC738-A	PEM		0.621	0.085			0.707
IC818-A	PFO4/PSS	0.089		0.254			0.344
IC818-B	PSS	0.082		0.521			0.603
IC827-A/B/C	PFO4				0.484		0.484
IC919-A	PFO1/PFO4	0.017	0.162	0.019			0.199
IC969-A/B	PFO1/PFO4		0.460	0.027			0.487
IC971-A	PFO1		0.040				0.040
IC978-A	PSS			1.568			1.568
IC983-A/B	PEM			0.164			0.164
IC1014-A/B	PSS			0.091			0.091
IC1015-A	PSS			0.051			0.051
IC1038-A	PFO2 ¹⁰ /PSS			0.010			0.010
IC1038-B	PFO2/PFO1/PSS			0.104			0.104
IC1039-A/B	PFO4/PSS			0.018			0.018
IC1047-A	PFO1			0.251			0.251
IC1048-A	PFO1/PFO4/PSS			0.039			0.039
IC1049-A	PSS			0.216			0.216
IC1050-A	PFO1			0.161			0.161
IC1052-A	PFO1/PSS			0.011			0.011
IC1156-A/B	PFO1			0.123			0.123
IC1300-B	PFO1			0.092			0.092
IC1311-A	PEM			0.004			0.004
MET1003-A/B/C	PEM		0.019				0.019
MET1544-A	PSS/PEM		0.005				0.005
MET1544-B	PSS/PEM		0.027				0.027
MET1548-A	PEM		0.099				0.099
MET1548-B	PEM		0.022				0.022
OH1110-A,IC1123	PFO1				0.15		0.155
OH1110-B	PFO1				0.07		0.065
OH1111-A/B	PEM				1.24		1.236
OH1117-A	PFO1				0.51		0.509
OH1117-B	PFO1				0.41		0.415
OH1119-A	PFO1				0.34		0.338
OH1120-A/B/C/D	PFO1				13.13		13.126
OH1200-A	PFO1				1.081		1.081
OH1350-A/B	PFO1				0.685		0.685



**Table 7.4
Delineated NYSDEC Wetland Acreage
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Covertypes	Project Component					Total
		WTG ¹	AR ²	IC ³	OH ⁴	RD ⁵	
RW1163-A	PSS					0.002	0.002
RW1163-B	PSS					0.001	0.001
WTG1A, AR905	PSS		0.220	0.003			0.223
WTG5A-A	PSS		0.137	0.008			0.145
WTG15-1A	PEM	0.007	0.208	0.003			0.217
WTG21-A	PFO1/PFO4/PEM	0.099					0.099
WTG28A-A	PFO1/PFO4	0.740					0.740
WTG28A-B	PFO1/PFO4	0.093					0.093
WTG31-R-B	PFO1/PFO4	0.002					0.002
WTG31-R-B-A	PFO1			1.505			1.505
WTG52-A	PEM	0.016					0.016
WTG57-A/B	PSS/PEM	0.381	0.482	0.007			0.870
WTG58-A	PEM	0.156	0.035				0.192
WTG64-A	PSS	0.266					0.266
WTG70R-A,IC1012	PFO1/PSS/PEM			0.310			0.310
WTG77-A	PSS	0.151					0.151
WTG78-A	PEM	0.059					0.059
WTG84-A	PFO1/PFO4	0.530					0.530
WTG85-A/B	PFO1/PSS	0.138					0.138
WTG87-A/C	PSS	0.445	0.458	0.006			0.908
WTG93-A	PEM	0.060					0.060
WTG119-A	PFO1/PSS	0.0000 1					0.0000 1
WTG120-B	PFO1	0.138					0.138
WTG124-B	PFO1	0.303					0.303
WTG134S-B	PSS	0.396					0.396
WTG137-A	PFO1/PSS		0.045	0.021			0.066
WTG137W-A	PFO1	0.466					0.466
WTG140-A/D	PFO1	0.218	0.003				0.221
WTG140-C	PFO1	0.343					0.343
WTG140-D	PFO1	0.126					0.126
WTG155-A/B	PFO1/PSS	0.658	0.028				0.686
WTG155-C	PEM	0.038					0.038
WTG173-D	PFO1	0.230					0.230
WTG175A-WA	PFO4	0.031					0.031
WTG202A-A	PFO1	0.431	0.020				0.451
WTG204-A/B	PFO1	0.037					0.037
WTG208-R-A/B	PFO4	1.2582 6	0.024	0.002			1.284
WTG209-A	PFO1	0.001					0.001
WTG1051-A/B	PEM			1.009			1.009



Table 7.4 Delineated NYSDEC Wetland Acreage Marble River Wind Farm Clinton County, New York							
Wetland ID	Covertypes	Project Component					Total
		WTG ¹	AR ²	IC ³	OH ⁴	RD ⁵	
WTG1051-A/B	PEM	0.676					0.676
TOTAL		14.301	28.927	13.29 2	43.58 4	0.063	100.16 7

¹ = Turbine Location

² = Access Road

³ = Underground Electric Collection Line

⁴ = Overhead Electric Collection Line

⁵ = Public Road Improvement

⁶ = Palustrine Emergent Wetland

⁷ = Palustrine Scrub Shrub Wetland

⁸ = Palustrine Deciduous Forest Wetland

⁹ = Palustrine Coniferous Forest Wetland

¹⁰ = Palustrine Needle Leaved Deciduous Forest Wetland

Table 7.5 Delineated NYSDEC Wetland Covertypes Marble River Wind Farm Clinton County, New York	
Cowardin Covertypes	Acreage
PFO1 ¹	46.69
PFO4 ²	2.33
PFO1/PFO4	3.58
PFO1/PSS ³	4.75
PFO2 ⁴ /PSS	0.01
PFO4/PSS	0.80
PFO1/PFO4/PSS	0.65
PFO1/PFO2/PSS	0.10
PFO1/PSS/PEM ⁵	0.82
PFO4/PSS/PEM	0.10
PFO1/PFO4/PSS/PEM	2.92
PFO1/PEM	2.67
PFO1/PFO4/PEM	0.10
PSS	13.74
PSS/PEM	13.08
PEM	7.82
Total	100.17

¹ = Palustrine Deciduous Forest Wetland

² = Palustrine Coniferous Forest Wetland

³ = Palustrine Scrub Shrub Wetland

⁴ = Palustrine Needle Leaved Deciduous Forest Wetland

⁵ = Palustrine Emergent Wetland



**Table 7.6
Delineated NYSDEC Wetland Adjacent Area Acreage
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Project Component					Total
	AR ¹	IC ²	OH ³	WTG ⁴	MET ⁵	
AR1029-A/B, WTG137W-A, WTG137W-B	0.547	0.103		1.241		1.891
AR1030-A/B	0.559	0.085				0.645
AR1037-A/D/C, IC364-A/B, MIT-001-A, IC364-A, IC978-A, IC978-E, IC1038-B, IC1038-A	1.295	1.383		0.109		2.787
AR1105-A,AR1105-B	0.928	0.510		1.263		2.700
AR110-A,WTG70R-A,IC1012,AR926-A/B,AR925-A/B/C, IC,WTG70R-C/D		1.055	2.097			3.152
AR111-A/B	0.481	0.022				0.503
AR114-A/B	0.527	0.025				0.552
AR1153-A	0.377	0.012				0.389
AR117-A, AR713-A, AR713-B	0.379	0.267				0.646
AR16-A,B/C	0.545	0.011				0.556
AR18-A,OH1201-A, IC823/4-A/B/C			1.254			1.254
AR1-A	0.643	0.033				0.677
AR205-A, AR205-B			1.317			1.317
AR219-A/B, WTG119-A, WTG54-ALT-A, WTG54-ALT-B				0.623		0.623
AR22-A	0.605	0.014				0.619
AR35-A	0.564	0.029				0.593
AR41-A, WTG78-A	0.948	0.032		1.261		2.241
AR4-A	0.526	0.022				0.548
AR501-A, AR501-B, AR501-C				0.021		0.021
AR502-A,IC361-A,IC360-A,AR700-A,AR505-A/B	1.886	3.338				5.224
AR504-A, WTG21-A	0.015			1.188		1.203
AR507-A, AR506, OH1206, AR802-A	1.078	0.063	6.647	0.422		8.210
AR509-A/B	0.794	0.028	1.289			2.111
AR516-A, WTG173-D, IC1053-A, WTG4A, AR513-A/B, WTG173-C, CWIC911-A/B, WTG173-B, WTG173-A, AR514-A	1.075	1.348		1.525		3.947
AR524-D, AR948-A, AR949-A, WTG155-C, WTG155-A/B, AR524-C, AR524-B, AR524-A	3.069	0.533		1.642		5.244
AR525-A, AR950-A, WTG137-A, AR526-A/B	2.204	0.346		0.001		2.551
AR530-A/B, AR1033-A/B, AR1032-A, WTG140-D, WTG140-C, WTG140-A/D, WTG139-A,AR532-A,	2.056	0.091		2.379		4.526



**Table 7.6
Delineated NYSDEC Wetland Adjacent Area Acreage
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Project Component					Total
	AR ¹	IC ²	OH ³	WTG ⁴	MET ⁵	
AR531-A						
AR534-A, AR534-B, AR534-B, AR534-A	0.633					0.633
AR605-B, AR602-B, AR603-B, AR604-A, AR604-B, AR603-A, AR602-A, AR605-A	2.246					2.246
AR606-B, AR606-A/C	1.501					1.501
AR607-B, AR1026-A, AR1027-A/B, AR1028-A/B, AR986-B, WTG124-B, AR613-C, AR613-A/B, AR611-B, AR611-A/B/C/D/E, AR609-B, AR608-A, AR610-A, AR610-B, AR609-A, AR607-A	9.608	0.318		0.812		10.738
AR615-B, AR902-A, WTG120-B, AR615-A	1.860	0.059		1.266		3.185
AR617-A, MET1003-A/B/C, MET1003-A/B/C, MET1002-A, AR1000-A, AR1001-A, WTG134S-B	1.270	0.034		1.405		2.708
AR619-A, AR619-B	1.678	0.045				1.723
AR625-B, AR625-A	0.732					0.732
AR62-A, AR62-B			1.175			1.175
AR63-A, AR64-A/B			1.245			1.245
AR66-A, AR1307-A, AR211-A, AR209-A, AR68-A, AR67-A	3.008	0.087				3.096
AR711-A	0.382					0.382
AR720-A	1.341	0.373				1.714
AR724-A	1.579	0.170				1.748
AR730	0.226					0.226
AR76A, AR79B, AR79B, AR79C, AR79A, AR77A	1.110	0.035				1.145
AR803-A/B/C			2.204			2.204
AR909-A	0.536	0.028				0.564
AR941, IC942	1.878	1.131		0.845		3.855
AR954-A, AR1275-A/B, IC985-A, AR952-A, AR1031-A	1.376	0.262		0.775		2.413
AR958-A, IC962, AR115-A/B/C, AR115-A/B/C, AR958-B	2.101	0.591		1.604		4.296
AR965-A/B				0.675		0.675
CW715-B, IC1022, AR360-A, WTG208-R-A/B, CW715-C, AR/IC1021-A/B	4.483	0.187		1.616		6.287
IC1014-A/B, IC1311-A		0.617				0.617
IC1015-A		0.371				0.371
IC1039-A/B	0.073	0.464				0.537



**Table 7.6
Delineated NYSDEC Wetland Adjacent Area Acreage
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Project Component					Total
	AR ¹	IC ²	OH ³	WTG ⁴	MET ⁵	
IC1045-A/B,IC1300-A,IC1300-B		0.453				0.453
IC1047-A,IC1048-A		0.712				0.712
IC1049-A		0.449				0.449
IC1050-A	0.025	0.505				0.530
IC366-A		0.344				0.344
IC371-B,IC371-A		0.289				0.289
IC716-A/B	0.003	0.007				0.010
IC717-A/B,AR1312-A,AR967-A/B,AR967-A/B,WTG85-A/B,AR967-E,AR967-D,AR967-E	3.077	0.201		1.481		4.758
IC718-B/C/D, WTG77-A				0.894		0.894
IC727-A/B		0.860				0.860
IC738-A	1.650	0.034				1.684
IC818-A,IC818-B		0.636		1.445		2.081
IC919-A,CW829-B,WTG84-A,CW829-A	0.996	0.090		1.372		2.458
IC922-A/B/C		0.012		0.330		0.342
IC923-A		0.235	0.322			0.557
IC969-A/B	0.532	0.027				0.558
IC971-A	0.689					0.689
IC982-A,AR1258-AR1263,AR1258-AR1263,AR1258-C,AR1258-B,AR1257-C,AR1257-A/B,WTGA-B/C,WTGA-A,IC1155-A,IC1052-A,IC983-A/B		2.810				2.810
IC988-A,IC1156-A/B,IC1157-A,IC988-A		1.804				1.804
MET1544-B,MET1544-A	0.285				0.130	0.415
MET1548-B,MET1548-A	0.614					0.614
OH1120-A/B/C/D			1.643			1.643
OH1117-A,OH1117-B,OH1119-A			4.229			4.229
OH1200-A			2.499			2.499
OH1350-A/B,IC1123-A,OH1110-B,OH1110-A,IC1123,OH1111-A/B			3.401			3.401
WTG13-A				0.249		0.249
WTG15-1A,AR370-A,AR906-A,AR907-A,WTG95-908A,AR5-A,AR3-A,AR3-B	1.536	0.055		2.035		3.625



**Table 7.6
Delineated NYSDEC Wetland Adjacent Area Acreage
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Project Component					Total
	AR ¹	IC ²	OH ³	WTG ⁴	MET ⁵	
WTG172-A	0.074	0.018		0.078		0.170
WTG175A-WA,AR825-A/B,AR852-A/B,IC827-A/B/C	1.292	0.031	3.070	0.680		5.072
WTG175-B	0.323					0.323
WTG1A, AR905	1.000	0.003				1.003
WTG202A-A	0.380	0.003		0.860		1.243
WTG204-A/B				0.619		0.619
WTG209-A,AR1305-A,AR1105-A,AR1105-B,AR1106-A,AR1107-A,AR1108-A	0.250	0.007		1.590		1.846
WTG28A-A, WTG28A-B				1.883		1.883
WTG31-R-B,WTG31-R-B-A		0.250		0.537		0.787
WTG52-A,WTG1051-A/B		0.181		1.642		1.824
WTG58-A	0.636	0.006		0.886		1.528
WTG59-A, WTG57-A/B	1.484	0.212		1.533		3.229
WTG5A-A/B, AR915-B, WTG5A-A	0.545	0.023				0.568
WTG64-A				0.778		0.778
WTG87-A/C, WTG87-B	1.762	0.159		1.789		3.710
WTG93-A				0.557		0.557
Total	75.87	24.53	32.39	41.91	0.130	174.84
	0	7	2	2		1

¹ = Access Road

² = Underground Electric Collection Line

³ = Overhead Electric Collection Line

⁴ = Turbine Location

⁵ = Meteorological Tower



Table 7.7
Delineated Surface Waterbody Polygons
Marble River Wind Farm
Clinton County, New York

NYSDEC Stream ID Number	Waterbody Name	NYSDEC Classification ¹	TtEC Channel Identifier	Location	Waterbody Type	Survey Date	Flow Regime	Flow Direction	Real-time Velocity	Width (feet) ²	Depth (feet) ²	Substrate	Bank Vegetation ³	Delineated Wetland Association
N/A	Unnamed	N/A	AG FIELD DITCH	Between Patnode Road and Turbine 206	Field Drainage	5/20/2006	Intermittent	North	N/R	<5	N/R	N/R	PSS	None
A15P910-16	Hinchinbrook Brook	D	AR1037-ST/IC364-A/B-ST	Between Route 189 and Turbine 201	Stream	07/28/06 and 05/31/07	Perennial	North	Medium	6	0.5	Muck	PSS/PEM	AR1037-A/D/C
N/A	Unnamed	N/A	AR104-A/B-ST	Turbine 52	Stream	10/7/2005	Perennial	North	Low	4	0.5	Hard pan	PSS/PEM	None
N/A	Unnamed	N/A	AR113-A-ST	Interconnect Between Turbines 44 and 46	Drainage ditch	10/10/2005	Intermittent	North	Medium	2	1	Cobble	Gravel road	None
A15P910-15	Unnamed	D	AR114-A/B-ST	Access Road at Turbine 84	Stream	10/10/2005	Intermittent	North, northwest	N/R	<5	N/R	N/R	PFO1	None
A15P910-16	Hinchinbrook Brook	D	AR115A/B/C-ST	Access Road at Turbine 84A	Stream	10/10/2005	Intermittent	West, southwest	N/R	<5	N/R	N/R	PEM	None
N/A	Unnamed Tributary to A15P910-15	N/A	AR118-A/B-ST	Access Road at Turbine 36A	Stream	10/11/2005	Perennial	West	Low	3	0.5	Cobble, Gravel, Muck	PEM	AR118-B
N/A	Unnamed	N/A	AR118-A/B-ST	Between Turbines 90 and 91	Stream	10/15/2006	Perennial	West	Low	3	0.5	Cobble, Gravel, Muck	PEM	None
A15P910-15	Unnamed	D	AR118-A/B-ST	Access Road at Turbine 36A	Stream	10/11/2005	Perennial	West	Low	3	0.5	Cobble, Gravel, Muck	PEM	AR118-A,B
N/A	Unnamed	N/A	AR1308-A-ST	Between Turbines 1-A and 3-A	Field Drainage	10/15/2006	Intermittent	North, South	N/A	4	1	Grass	Agriculture Field	None
N/A	Unnamed	N/A	AR1317-A-ST	Turbine 206	Stream	10/15/2006	Intermittent	North	N/A	2	1.5	Soil	Upland Forest	None
N/A	Unnamed	N/A	AR1543-A-STA	West of access road to Turbine 133	Roadside Ditch	8/2/2007	Intermittent	South	Dry	4	2	Muck	Early successional	AR618B/C
A7P830-29	Unnamed	D	AR1-A/B/ST	Between Turbines 100-R and 109	Stream	7/10/2006	Intermittent	Northeast	N/A	4	1	Silt loam	PEM	AR1-A
A15P910-6	Unnamed	DD	AR205-A/B-STA	Logging Road North of Soucia Road	Stream	10/17/2005	Perennial	East	Medium	6	1	Silt, Cobble	PSS/PEM	AR205-A/B
A15P910-6	Unnamed	DD	AR205-A/B-STB/C	Logging Road North of Soucia Road	Stream	10/17/2005	Perennial	East	Medium	8	1	Silt, Cobble	PSS/PEM	AR205-A/B
N/A	Unnamed	N/A	AR206-A/B-STA	Logging Road North of Soucia Road	Stream	10/18/2005	Intermittent	South	Low	1.5	0.5	Cobble, Rock	PFO1	AR206-A
N/A	Unnamed	N/A	AR206-A/B-STB	Logging Road North of Soucia Road	Stream	10/18/2005	Intermittent	Southwest	N/R	1.5	0.5	Silt loam, Rock	PFO1	AR206-A/B
N/A	Unnamed	N/A	AR208A-STA	Logging Road North of Soucia Road	Pond	10/19/2007	Perennial	N/A	N/A	30	2	Silt Loam	PEM	AR208A
N/A	Unnamed	N/A	AR210-A/B/C/D-STA	Between Turbines 115 and 155	Stream	10/19/2005	Intermittent	South, southwest	Low	2	0.5	Silt loam, Muck	PFO1	WTG155-A/B and AR210-D
N/A	Unnamed	N/A	AR210-A/B/C/D-STB	Between Turbines 115 and 155	Stream	10/19/2005	Intermittent	East, southeast	Low	3	0.5-1.5	Silt loam, Muck	PFO1	WTG155-A/B
N/A	Unnamed	N/A	AR210-STC	Between Turbines 115 and 155	Stream	10/19/05 and 05/10/07	Intermittent	South, southwest	Low	2-Jan	0.5-1	Silt loam, Muck	PFO1	AR210-C
N/A	Unnamed	N/A	AR212-STA	Between Turbines 115 and 155	Stream	10/21/2005	Intermittent	Southwest	Dry	1	2	Silt loam	Upland Forest	AR212-A
N/A	Unnamed	N/A	AR213-A-STA	Between Turbines 115 and 155	Stream	10/21/2005	Intermittent	Southeast	Medium	3-Jan	0.5-1	Silt loam	Upland Forest	213-A/C
N/A	Unnamed	N/A	AR215-A-ST	Between Turbines 115 and 156	Stream	10/21/2005	Intermittent	East, southeast	Low	3-Jan	0.5-1	Gravel	Upland Forest, Open Early Successional	None
N/A	Unnamed	N/A	AR217-A-ST	Between Turbines 106 and 119	Stream	10/24/2005	Intermittent	North	High	3-Jan	0.5-1	Loam	Upland Forest	AR711-A
N/A	Unnamed	N/A	AR217-B-ST	Between Turbines 106 and 119	Stream	10/24/2005	Intermittent	North	High	4-Jan	0.5-1	Loam	Upland Forest	AR711-B
N/A	Unnamed	N/A	AR217-C-ST	Between Turbines 106 and 119	Stream	10/24/2005	Intermittent	North	Medium	1.5-3	1	Loam	Upland Forest	None
N/A	Unnamed	N/A	AR218-A/B-ST	Between Turbines 106 and 119	Stream	10/24/05 and 05/24/07	Intermittent	North	High	5-Feb	1	Silt loam	PEM	AR218-B
N/A	Unnamed	N/A	AR351-A-ST	Turbine 120	Stream	10/27/2006	Intermittent	North	Stagnant	2.5	1	Silt, Sand	PFO1	WTG120-C
A15P910-6	Unnamed	DD	AR506-A/B-ST	Interconnect Between 146-R and 147	Stream and pond	11/7/2005	Intermittent	Southeast	Low	10-May	0.5	Sand	PEM	AR506 and OH1206
A15P910-6	Unnamed	DD	AR52-A/B/C-ST	Between Turbines 137-W and 155	Stream	11/10/2005	Intermittent	Southwest	N/R	<5	N/R	N/R	PFO1	None
A15P910-12	Unnamed	D	AR534-A/B-ST	Between Route 189 and Turbines 21 and 148	Stream	5/15/2006	Intermittent	North	N/A	6-Mar	1	Cobble, Muck	PSS	None
N/A	Unnamed	N/A	AR541-ST	Between Star Road and Turbine 200	Field Drainage	12/8/2005	Intermittent	South	N/R	<5	N/R	N/R	PSS	None
N/A	Unnamed	N/A	AR58-A-ST	Soucia Road	Stream	10/18/2005	Intermittent	East	Low	5-Mar	>0.5	Sand, Gravel	PSS/PEM	AR58-A
N/A	Unnamed	N/A	AR58-B-ST	Soucia Road	Stream	10/18/2005	Intermittent	East	Low	5-Mar	>.5	Sand, Gravel	PSS/PEM	AR59-A
A15P910-5	English River	D	AR599-A-ST	Bootleg Road	Stream	5/2/2006	Perennial	South, southeast	Medium	10-May	2	Cobble	PSS	None



**Table 7.7
Delineated Surface Waterbody Polygons
Marble River Wind Farm
Clinton County, New York**

NYSDEC Stream ID Number	Waterbody Name	NYSDEC Classification ¹	TtEC Channel Identifier	Location	Waterbody Type	Survey Date	Flow Regime	Flow Direction	Real-time Velocity	Width (feet) ²	Depth (feet) ²	Substrate	Bank Vegetation ³	Delineated Wetland Association
N/A	Unnamed	N/A	AR606-A-ST	Bootleg Road	Culvert	N/A	Perennial	NR	NR	NR	NR	NR	N/A	AR606B
N/A	Unnamed	N/A	AR606-B-ST	Bootleg Road	Culvert	N/A	Perennial	NR	NR	NR	NR	NR	N/A	AR606B
N/A	Unnamed	N/A	AR60A-ST	West of Soucia Road	Stream	5/25/2007	Intermittent	East	Low	2	1	Silt	PEM	AR60A
A15P910-6	Unnamed	DD	AR619-A/B-ST	Between Turbines 132 and 133	Stream	5/8/2006	Perennial	Northeast	Medium	Mar-50	0.5	Silt loam	PSS	AR619-A/B
N/A	Unnamed	N/A	AR62-B-ST	Soucia Road	Stream	10/19/2005	Intermittent	East	Medium	5-Mar	0.5	Gravel	PSS/PEM	AR62-B
A15P910-6	Unnamed	DD	AR64-A/B-ST	Soucia Road	Stream	10/19/2005	Intermittent	East	Low	8-May	0.5	Clay, Muck	PEM	AR64-A/B
N/A	Unnamed	N/A	AR69-A-ST	Between Turbines 115 and 155	Stream	10/20/05 and 05/19/07	Intermittent	South, southwest	Stagnant	3-Feb	0.5	Muck	PEM	AR1307-A
N/A	Unnamed	N/A	AR721-A-ST	Between Patnode Road and Turbine 58	Man-made Ditch	5/20/2006	Intermittent	West	Low	5-Mar	1	Muck	PFO1	None
N/A	Unnamed	N/A	AR724-A-ST	Access Road to Turbine 73-W	Stream	05/21/06, 07/15/06	Intermittent	South	Medium	2-Jan	1	Sandy loam, Gravel	PSS	AR724-A
A15P910-12	Unnamed	D	AR79-A/B-ST1/2	Between Turbines 9A and 148A	Stream	10/23/2005	Perennial	North	Medium	15-20	1.5	Sand, Gravel	PFO1	None
A15P910-4	English River	C(T)	AR803-A/B-ST	Between Clinton Mill Road and Turbine 135	Stream	05/09/06 and 05/11/07	Perennial	East	Medium	10	1	Boulder, Muck	PSS/PEM	None
N/A	Unnamed	N/A	AR811-B-ST	Between Turbines 112 and 114	Stream	05/15/06 and 05/25/07	Intermittent	South	Low	3	1	Silt	PEM	None
N/A	Unnamed	N/A	AR814-A-ST	Between Turbines 115 and 156	Stream	05/12/06 and 05/25/07	Intermittent	South	Stagnant	5	1	Cobble, Sand, Muck	PEM/PSS	None
N/A	Unnamed	N/A	AR944-A-ST	Between Turbines 112 and 114	Stream	7/24/2006	Intermittent	Southwest	Dry	10	3	Organic matter, Leaf litter	PEM	None
N/A	Unnamed	N/A	AR946-A-ST	Between Turbines 112 and 114	Stream	07/24/06 and 05/10/07	Intermittent	Southeast	Dry	4	2	Organic matter, Leaf litter	PEM	AR946-B
N/A	Unnamed	N/A	AR953-B/C-ST	Between Turbines 138 and 139	Stream	7/26/2006	Perennial	Southwest	Low	3	1.5	Silt, Gravel	PEM	WTG138-A
N/A	Unnamed	N/A	AR967-A-ST	Access Road at Turbine 85	Stream	9/8/2006	Intermittent	Northeast	Dry	1	1	Silt	PEM	AR967-A/B
N/A	Unnamed	N/A	CV1172-A-ST	Between Turbines 31 and 172	Culvert	9/14/2006	Intermittent	N/R	N/R	<5	N/R	N/R	PFO1	None
N/A	Unnamed	N/A	CV1173-A-ST	Intersection of Looby Road and Jones Road	Stream	9/15/2006	Intermittent	South	N/R	<5	N/R	N/R	PFO1	None
N/A	Unnamed	N/A	CV1173-B-ST	Intersection of Looby Road and Jones Road	Stream	9/15/2006	Intermittent	South	N/R	<5	N/R	N/R	PFO1	None
N/A	Unnamed Tributary to Marble River	N/A	CV1220-A-ST2	Between Gagnier Road and Turbine 58	Stream	9/18/2006	Intermittent	West	N/R	<5	N/R	N/R	PEM	IC977-C
N/A	Unnamed	N/A	CV1227-A-ST	Intersection of Lagree Road and Route 189	Culvert	09/18/06 and 05/06/07	Intermittent	North	Dry	2	1	N/A	PEM	IC-978A
N/A	Unnamed	N/A	CV1228-A-ST	Lagree Road and AR917-A	Culvert	9/18/2006	Intermittent	North	Low	1	1	N/A	PEM	AR917-A
N/A	Unnamed	N/A	CV1229-A-ST	Lagree Road and AR917-A	Culvert	9/18/2006	Intermittent	North	Low	1	1	N/A	PEM	AR917-A
N/A	Unnamed	N/A	CV1230-A-ST	Lagree Road and IC971-A	Culvert	9/18/2006	Intermittent	North	N/R	<5	N/R	N/A	PEM	None
N/A	Unnamed	N/A	CV1232-A/B-ST	Looby Road Between Turbine 84A and Rail Road Tracks	Field Drainage	9/18/2006	Intermittent	West	Low	2	1	Grass	PFO1	IC962A
N/A	Unnamed	N/A	CV1244-A/B-ST	Poupore Road Between Turbines 2-A and 5-A	Field Drainage	9/19/2006	Intermittent	North	Dry	1	0.5	Grass	PEM	None
N/A	Unnamed	N/A	CV1251-A/B-ST	Campbell Road	Wetland Drainage	9/19/2006	Intermittent	West	Dry	1	0.5	N/R	PSS/PEM	IC1050-A
N/A	Unnamed	N/A	CV1400-A/B-ST	Gagnier Road between Campbell and Patnode Roads	Stream	5/31/2007	Intermittent	North	Stagnant	3	1	Muck, Rock	PEM	CV1400A/B
N/A	Unnamed	N/A	IC1006-A-ST	Between Turbine 67 and 89R	Stream	07/12/06 and 05/02/07	Intermittent	North	N/A	3	0.5	Silt loam	PFO1	IC1006-A
N/A	Unnamed	N/A	IC1014-A/B-ST	Between Poupore Road and Turbine 3-A	Culvert	10/12/2006	Perennial	West	Medium	5.5	2.5	Sand, Gravel	PSS/PEM	None
A15P910-28	Unnamed Tributary to Dry Brook	D	IC1300-A/B-ST	Between Turbine 45 and Campbell Road	Stream	10/9/2006	Perennial	South	Medium	5	3	Pebble, Cobble	PSS/PEM	None
A15P910-16	Unnamed	D	IC714-A/B-ST A	Between Turbines 31 and 36A	Stream	05/16/06 & 05/30/07	Perennial	West	Medium	8	2	Silt, Sand, Gravel	PSS	WTG31-R-B-A
A15P910-16	Unnamed	D	IC714-A/B-ST B	Between Turbines 31 and 36A	Stream	5/30/2007	Intermittent	South Southwest	Stagnant	5	1	Muck	PSS	IC714A/B
A7P830-	Brandy Brook	D	IC726-A/B-ST	Between Turbines 64 and 202	Stream	5/22/2006	Perennial	East	High	40	4	Gravel, Cobble	PFO1	None



**Table 7.7
Delineated Surface Waterbody Polygons
Marble River Wind Farm
Clinton County, New York**

NYSDEC Stream ID Number	Waterbody Name	NYSDEC Classification ¹	TtEC Channel Identifier	Location	Waterbody Type	Survey Date	Flow Regime	Flow Direction	Real-time Velocity	Width (feet) ²	Depth (feet) ²	Substrate	Bank Vegetation ³	Delineated Wetland Association
29														
N/A	Unnamed	N/A	IC959-A-ST	Between 36-A and 84A	Roadside Ditch	7/28/2006	Intermittent	North	Dry	5	0	Grass	PEM	None
N/A	Unnamed	N/A	IC960-A-ST	Between 36-A and 84A	Roadside Ditch	7/28/2006	Intermittent	North	Dry	<5.0	N/R	Grass	PEM	None
N/A	Unnamed	N/A	IC961-A-ST	Between 36-A and 84A	Roadside Ditch	7/28/2006	Intermittent	South	Stagnant	5-Mar	0.5	Gravel, Fill	PEM	AR958-A and IC962
N/A	Unnamed	N/A	IC966-A-ST	Between 84A and 87	Field Drainage	7/29/2006	Intermittent	North	Dry	<5.0	N/R	Organic matter	PEM	None
A15P910-15	Unnamed	D	IC969-A/B-ST	Between 84 and 85	Culvert	08/01/06 and 05/07/07	Perennial	Northwest	Low	5	0.5	Silt, Cobble, Boulder	PSS	IC969-A/B
N/A	Unnamed	N/A	IC972-A-ST	Access Road at Turbine 83	Stream	9/13/2006	Intermittent	N/R	N/R	<5	N/R	N/R	PFO1	None
N/A	Unnamed	N/A	IC977-A-ST	Patnode Road Between Turbine 58 and Gagnier Road	Drainage Swale	8/3/2006	Intermittent	South	Dry	4	1	Loam	PEM	None
N/A	Unnamed	N/A	IC977-C-ST	Patnode Road Between Turbine 58 and Gagnier Road	Drainage Swale	8/3/2006	Intermittent	South	Dry	4	1	Loam	PEM	IC977-C
N/A	Unnamed	N/A	IC978-C-ST	Route 189 Between Turbine 46 and Lagree Road	Drainage Swale	8/3/2006	Intermittent	North	Stagnant	4	1	Loam	PEM	IC978-F/G
N/A	Unnamed tributary to Marble River	D	IC371-B-ST	Star Road Between Tacey Road and Turbine 200	Stream	N/A	Intermittent	North	Dry	1.5-2	0.5	Silt	PEM	IC371-A
N/A	Unnamed Tributary to Marble River	D	MET1548-A/B-ST	Met Tower Number 3 access road west of Turbine 57	Stream	8/2/2007	Perennial	North	Low	8	2	Sand, rock and gravel	PEM	MET1548A/B
N/A	Unnamed Tributary to Marble River	D	MET1551A/B-ST	Met Tower Number 3 access road west of Turbine 57	Culvert	8/3/2007	Intermittent	N/D	Stagnant	2	1	Silt and cobble	N/A	MET1551A/B
N/A	Unnamed Tributary to A15P910-6	N/A	OH1110-A/B-ST	Overhead Transmission Line at La Francis Road	Culvert	9/6/2006	Intermittent	North	Dry	2	1	Silt, Cobble	PEM	OH1110A/B
N/A	Unnamed	N/A	OH1120-STA	Overhead transmission Line Northeast of Turbine 47	Stream	09/08/06 and 5/31/07	Perennial	North	Low	5	1.5	Muck	PSS/PFO	OH1120-A/B/C/D
N/A	Unnamed	N/A	OH1120-STB	Overhead transmission Line Northeast of Turbine 47	Stream	5/31/2007	Intermittent	Northwest	Low	4	1	Muck; Rock	PSS/PFO	OH1120-A/B/C/D
N/A	Unamed Tributary to A15P910-28	N/A	OH1332-A-ST	Between Route 11 and Turbine 75A-W	Culvert	10/17/2006	Intermittent	North	Dry	2	1	Cobble, Herbaceous	PEM	None
N/A	Unnamed	N/A	OH1401-A-ST	OH between Gagnier Road and Turbine 73W	Pond	5/4/2007	Perennial	N/A	N/A	200 x 75	N/R	N/R	Fringe PEM	None
N/A	Unnamed	N/A	OH1503A-ST	OH west of La Francis Road	Roadside ditch	7/17/2007	Intermittent	West	Stagnant	4	1	Muck	Fringe PEM	OH1110B
N/A	Unnamed	N/A	OH1503B-ST	OH west of La Francis Road	Roadside ditch	7/17/2007	Intermittent	West	Stagnant	2	1	Muck	Fringe PEM	OH1110A
N/A	Unnamed	N/A	RD-3A	Merchia Road	Culvert	07/21/06 and 04/08/07	Intermittent	North	N/R	<5	N/R	N/R	PFO1	None
N/A	Unnamed	N/A	RD-3B	Merchia Road	Culvert	07/21/06 and 04/08/07	Intermittent	North	N/R	<5	N/R	N/R	PFO1	None
N/A	Unnamed	N/A	RD-4	Merchia Road	Culvert	7/21/2006	Intermittent	North	N/R	<5	N/R	N/R	PFO1	None
N/A	Unnamed	N/A	RD-5	Merchia Road	Culvert	7/21/2006	Intermittent	North	N/R	<5	N/R	N/R	PFO1	None
N/A	Unnamed	N/A	RW1163-B-ST	Turning radii southeast of Liberty Pole and Route 189 intersection	Stream	9/12/2006	Perennial	West	Low	6-Apr	2-Jan	Cobble, Silt	PSS/PEM	RW1163-/B
N/A	Unnamed	N/A	WTG115-B-ST	Turbine 115	Stream	7/25/2006	Intermittent	South	Dry	2	1	Organic matter, Leaf litter	N/R	None
N/A	Unnamed	N/A	WTG155-D/E-ST	Turbine 155	Pond Outfall	10/27/2006	Intermittent	West	Medium	2	1	Sand, Rock	PSS/PEM	None
N/A	Unnamed	N/A	WTG206-ST	Turbine 206	Drainage Ditch	12/07/05, 10/15/06	Intermittent	N/R	N/R	<5	N/R	N/R	Upland Tree Line	None
N/A	Unnamed	N/A	WTG206-ST-A	Turbine 206	Man-made Ditch	5/20/2006	Intermittent	Northeast	Stagnant	5	1	Organic matter, Leaf litter	PFO1	None



Table 7.7
Delineated Surface Waterbody Polygons
Marble River Wind Farm
Clinton County, New York

NYSDEC Stream ID Number	Waterbody Name	NYSDEC Classification ¹	TtEC Channel Identifier	Location	Waterbody Type	Survey Date	Flow Regime	Flow Direction	Real-time Velocity	Width (feet) ²	Depth (feet) ²	Substrate	Bank Vegetation ³	Delineated Wetland Association
A15P910-12	Unnamed	D	WTG5-A/B-ST	Access Road at Turbine 5-A	Stream	5/13/2006	Intermittent	West	Medium	6	1.5	Cobble, Rock	PSS	None

N/A = Not Applicable

N/D = Note Determined

N/R = Not Recorded

1 = Classifications Defined in Section 5.2

2 = Measurements from Observed High Water (OHW)

3 = Bank Vegetation include: PFO1 (Palustrine Broad Leaved Deciduous Forest); PSS (Palustrine Scrub Shrub); and PEM (Palustrine Emergent)



**Table 7.8
Delineated Surface Waterbody Polygon Lengths
Marble River Wind Farm
Clinton County, New York**

Stream ID	AR¹	IC²	OH³	WTG⁴	RD⁵	Total
AG FIELD DITCH	1.14					1.14
AR1037-ST/IC364-A/B-ST	122.84					122.84
AR104A/B-ST				251.63		251.63
AR113-A-ST		60.43				60.43
AR114-A/B-ST	117.93	9.06				126.99
AR115A/B/C-ST	106.18	8.02				114.20
AR118A/B-ST	74.42					74.42
AR118-A/B-ST	102.79	8.67				111.46
AR118-A/B-ST	34.78					34.78
AR1308-A-ST	100.25	8.67				108.92
AR1317-A-ST				51.59		51.59
AR1543-A-STA	154.01					154.01
AR1-A/B/ST	149.99	6.26				156.25
AR205-A/B-STA			162.66			162.66
AR205-A/B-STB/C			223.20			223.20
AR206-A/B-STA			314.00			314.00
AR206-A/B-STB			106.52			106.52
AR208-ST			33.79			33.79
AR210-A/B/C/D-STA	102.17	8.71				110.88
AR210-A/B/C/D-STB	12.32					12.32
AR210-STC	75.74	5.49				81.23
AR212-STA	117.27	5.83				123.11
AR213-A-STA	267.31	14.23				281.54
AR215-A-ST	168.35	5.16				173.51
AR217-A-ST	185.67	6.84				192.52
AR217-B-ST	103.97	7.64				111.61
AR217-C-ST	27.98					27.98
AR218-A/B-ST	103.07	7.83				110.90
AR351-A-ST				108.26		108.26
AR506-A/B-ST	125.57	5.12				130.69
AR52-A/B/C-ST	63.78	40.39				104.17
AR534-A/B-ST	104.96					104.96
AR541-ST	438.48					438.48
AR58-A-ST			231.39			231.39
AR58-B-ST			89.51			89.51
AR599-A/B-ST	112.30					112.30
AR606-A-ST	20.71					20.71
AR606-B-ST	20.69					20.69
AR60-A-ST			162.78			162.78
AR619-A/B-ST	100.98	8.83				109.82
AR62-B-ST			103.00			103.00



**Table 7.8
Delineated Surface Waterbody Polygon Lengths
Marble River Wind Farm
Clinton County, New York**

Stream ID	AR¹	IC²	OH³	WTG⁴	RD⁵	Total
AR64-A/B-ST			175.83			175.83
AR69-A-ST	72.52					72.52
AR721-A-ST	31.51					31.51
AR724-A-ST	211.50	13.17				224.67
AR79-A/B-ST1/2	104.10	9.03				113.13
AR803-A/B-ST			314.14			314.14
AR811-B-ST	494.54	5.73				500.27
AR814-A-ST	90.63	8.39				99.01
AR944-A-ST	104.98	8.84				113.82
AR946-A-ST	134.31	6.01				140.32
AR953-B/C-ST	106.96	23.90				130.87
AR967-A-ST	62.08	5.25				67.33
CV1172-A-ST	46.75					46.75
CV1173-A-ST	46.28					46.28
CV1173-B-ST	44.61					44.61
CV1220-A-ST2		26.89				26.89
CV1227-A-ST		11.55				11.55
CV1228-A-ST					34.33	34.33
CV1229-A-ST					48.00	48.00
CV1230-A-ST					29.99	29.99
CV1232-A/B-ST		20.84				20.84
CV1244-A/B-ST		31.69				31.69
CV1251-A/B-ST		25.18				25.18
CV1400-A/B,CV1223-A-ST					165.1 6	165.16
IC1006-A-ST			105.38			105.38
IC1014-A/B-ST		55.00				55.00
IC1300-A/B-ST		50.04				50.04
IC714-A/B-ST-A		66.67				66.67
IC714-A/B-ST-B		91.04				91.04
IC726-A-ST		52.62				52.62
IC959-A-ST	20.37	166.63				187.00
IC960-A-ST		159.01				159.01
IC961-A-ST	100.11	810.12				910.23
IC966-A-ST		60.80				60.80
IC969-A/B-ST	111.08					111.08
IC972-A-ST	3.59					3.59
IC977-A-ST		185.91				185.91
IC977-C-ST		354.80				354.80
IC978-C-ST		79.17				79.17
IC371-B-ST			53.34			53.34
MET1548-A/B-ST	118.24					118.24
MET1551A/B-ST-A	17.96					17.96



**Table 7.8
Delineated Surface Waterbody Polygon Lengths
Marble River Wind Farm
Clinton County, New York**

Stream ID	AR¹	IC²	OH³	WTG⁴	RD⁵	Total
OH1110-A/B-ST			216.387 6			216.39
OH1120-STA			280.109 8			280.11
OH1120-STB			185.337 2			185.34
OH1401-A-ST			163.46			163.46
OH1503A-ST			180.605 4			180.61
OH1503B-ST			167.805 6			167.81
OH1332-A-ST			257.38			257.38
RD-3A	134.04					134.04
RD-3B	85.24					85.24
RD-4	80.24					80.24
RD-5	69.42					69.42
RW1163-B-ST					107.0 6	107.06
WTG115-B-ST				201.20		201.20
WTG155-D/E-ST				139.60		139.60
WTG206-ST	148.31			531.42		679.72
WTG206-ST-A				8.13		8.13
WTG5-A/B-ST	54.28	8.70				62.98
Total	5,609.3 4	2,554.1 6	3,526.61	1,291.8 3	384.5 4	13,366.4 9

¹ = Access Road

² = Underground Electric Collection Line

³ = Overhead Electric Collection Line

⁴ = Turbine Location

⁵ = Public Road Improvement



Table 7.9
Delineated Wetland Polygon Community Types
Marble River Wind Farm
Clinton County, New York

Edinger Community Type	Acreage
Balsam flats	3.33
Balsam flats/Hemlock hardwood swamp	1.53
Balsam flats/Shallow emergent marsh	0.17
Balsam flats/Shrub swamp	1.88
Black spruce-tamarack bog	0.01
Cropland/field crops	4.98
Cropland/row crops	0.12
Mowed lawn/Cropland/field crops	2.20
Northern white cedar swamp	1.31
Northern white cedar swamp/Pastureland	0.71
Northern white cedar swamp/Shallow emergent marsh	0.17
Northern white cedar swamp/Shrub swamp	0.35
Pastureland	2.88
Red maple-hardwood swamp	53.21
Red maple-hardwood swamp/Balsam flats	0.83
Red maple-hardwood swamp/Balsam flats/Pastureland	0.10
Red maple-hardwood swamp/Balsam flats/Shallow emergent marsh	0.005
Red maple-hardwood swamp/Balsam flats/Shrub swamp/Shallow emergent marsh	2.92
Red maple-hardwood swamp/Shallow emergent marsh	0.82
Red maple-hardwood swamp/Shrub swamp	6.37
Red maple-hardwood swamp/Shrub swamp/Shallow emergent marsh	1.76
Red maple-tamarack peat swamp/Shrub swamp	0.10
Rich Shrub Fen	1.19
Rich Shrub Fen/Shrub swamp	0.05
Shallow emergent marsh	7.05
Shrub swamp	21.58
Shrub swamp/Cropland/field crops	0.56
Shrub swamp/Pastureland	2.49
Shrub swamp/Shallow emergent marsh	12.68
Spruce-fir swamp	0.89
Spruce-fir swamp/Shrub swamp	0.30
Successional northern hardwoods	3.35
Successional northern hardwoods/Shallow emergent marsh	3.35
Successional northern hardwoods/Shrub swamp	0.44
Successional old field	1.24
Total	140.94



**Table 7.10
Plant Species Encountered in Wetlands
Marble River Wind Farm
Clinton County, New York**

Scientific Name	Common Name	Regional Indicator Status¹
<i>Abies balsamea</i>	Balsam Fir	FAC
<i>Acer negundo</i>	Box Elder	FAC+
<i>Acer rubrum</i>	Red Maple	FAC
<i>Acorus calamus</i>	Sweet Flag	OBL
<i>Agrostis gigantea</i>	Redtop	FACW
<i>Agrostis stolonifera</i>	Spreading Bentgrass	FACW
<i>Alisma subcordatum</i>	American Water Plantain	OBL
<i>Alnus rugosa</i>	Speckled Alder	FACW+
<i>Alopecurus pratensis</i>	Meadow Foxtail	FACW
<i>Amelanchier canadensis</i>	Canadian serviceberry	FAC
<i>Andromeda glaucophylla</i>	Bog Rosemary	OBL
<i>Aster junciformis</i>	Rush Aster	OBL
<i>Aster novi-belgii</i>	New York Aster	FACW+
<i>Aster puniceus</i>	Purple-Stemmed Aster	OBL
<i>Aster umbellatus</i>	Flat-Top White Aster	FACW
<i>Betula alleghaniensis</i>	Yellow Birch	FAC
<i>Betula populifolia</i>	Gray Birch	FAC
<i>Calla palustris</i>	Water Arum	OBL
<i>Caltha palustris</i>	Yellow Marsh Marigold	OBL
<i>Carex crinita</i>	Fringed Sedge	OBL
<i>Carex intumescens</i>	Greater Bladder Sedge	FACW+
<i>Carex lupulina</i>	Hop Sedge	OBL
<i>Carex lurida</i>	Shallow Sedge	OBL
<i>Carex scoparia</i>	Pointed Broom Sedge	FACW
<i>Carex stricta</i>	Tussock Sedge	OBL
<i>Carex vulpinoidea</i>	Fox Sedge	OBL
<i>Carpinus caroliniana</i>	American Hornbeam	FAC
<i>Chamaedaphne cayculata</i>	Leatherleaf	OBL
<i>Chamerion angustifolium</i>	Fireweed	FAC
<i>Chelone glabra</i>	Turtlehead	OBL
<i>Cinna arundinacea</i>	Wood Reed Grass	FACW
<i>Circaea alpina</i>	Small Enchanter's Nightshade	FACW
<i>Cladium moriscoides</i>	Twig Rush	OBL
<i>Clementatis virginiana</i>	Virginia Virgins-Bower	FAC



**Table 7.10
Plant Species Encountered in Wetlands
Marble River Wind Farm
Clinton County, New York**

Scientific Name	Common Name	Regional Indicator Status ¹
<i>Clintonia borealis</i>	Blue Beadlily	FAC
<i>Coptis trifolia</i>	Threelobed Goldthread	FACW
<i>Cornus amomum</i>	Silky Dogwood	FACW
<i>Cornus canadensis</i>	Canadian Bunchberry	FAC-
<i>Cornus racemosa</i>	Gray Dogwood	FAC
<i>Cornus sericea</i>	Red-Osier Dogwood	FACW+
<i>Corylus</i> spp.	Hazelnut	FACU-
<i>Dalibarda repens</i>	Robin Runaway / Dewdrop	FAC
<i>Eleocharis acicularis</i>	Least Spikerush	OBL
<i>Epilobium coloratum</i>	Purple-Leaf Willow-Herb	OBL
<i>Epilobium leptophyllum</i>	Linear-Leaf Willow-Herb	OBL
<i>Epilobium strictum</i>	Downy Willow-Herb	OBL
<i>Equisetum arvense</i>	Field Horsetail	OBL
<i>Equisetum sylvaticum</i>	Woodland Horsetail	FACW
<i>Equisetum</i> spp.	Horsetail species	FACW
<i>Eriophorum</i> spp.	Cotton Grass	OBL
<i>Eupatoriadelphus dubium</i>	Eastern Joepyeweed	FACW
<i>Eupatorium maculatum</i>	Spotted Joepyeweed	FACW
<i>Eupatorium perfoliatum</i>	Common Boneset	FACW+
<i>Euthamia graminifolia</i>	Lance-Leaved Golden-Rod	FAC
<i>Fraxinus pennsylvanica</i>	Green Ash	FACW
<i>Galium asprellum</i>	Rough Bedstraw	OBL
<i>Glyceria canadensis</i>	Rattlesnake Grass	OBL
<i>Glyceria maxima</i>	Reed Mannagrass	OBL
<i>Glyceria striata</i>	Fowl Mannagrass	OBL
<i>Hepatica</i> sp.	Hepatica	NI
<i>Huperzia lucidula</i>	Shining Firmoss / Shining Clubmoss	FACW-
<i>Hydrocotyle americana</i>	American Marsh Penny-Wort	OBL
<i>Hypericum boreale</i>	Northern St. Johnswort	OBL
<i>Ilex mucronata</i>	Catberry / Mountain Holly	OBL
<i>Ilex verticillata</i>	Common Winterberry	FACW+
<i>Impatiens capensis</i>	Spotted Touch-Me-Not	FACW
<i>Iris versicolor</i>	Harlequin Blueflag Iris	OBL
<i>Iris</i> sp.	Iris species	OBL
<i>Juncus canadensis</i>	Canada Rush	OBL



**Table 7.10
Plant Species Encountered in Wetlands
Marble River Wind Farm
Clinton County, New York**

Scientific Name	Common Name	Regional Indicator Status ¹
<i>Juncus effusus</i>	Soft Rush	FACW+
<i>Kalmia angustifolia</i>	Sheep Laurel	FAC
<i>Larix laricina</i>	Tamarack	FACW
<i>Ledum groenlandicum</i>	Bog Labrador Tea	OBL
<i>Leersia oryzoides</i>	Rice Cutgrass	OBL
<i>Leersia virginica</i>	Whitegrass	FACW
<i>Lemna</i> sp.	Duckweed	OBL
<i>Lycopus uniflorus</i>	Northern Bugleweed	OBL
<i>Lythrum salicaria</i>	Purple Loosestrife	FACW+
<i>Matteuccia struthiopteris</i>	Ostrich Fern	FACW
<i>Onoclea sensibilis</i>	Sensitive Fern	FACW
<i>Osmunda cinnamomea</i>	Cinnamon Fern	FACW
<i>Osmunda claytoniana</i>	Interrupted Fern	FAC
<i>Osmunda regalis</i>	Royal Fern	OBL
<i>Oxalis</i> sp.	Woodsorrel	NI
<i>Panicum clandestinum</i>	Deer-Tongue Grass	FAC+
<i>Phalaris arundinacea</i>	Reed Canary Grass	FACW+
<i>Phleum pratense</i>	Timothy	FACU
<i>Photinia melanocarpa</i>	Black Chokecherry	FAC
<i>Phragmites australis</i>	Common Reed	FACW
<i>Pilea pumila</i>	Canada Clearweed	FACW+
<i>Poa palustris</i>	Fowl Meadow Grass	FACW
<i>Polygonum hydropiper</i>	Marshpepper Smartweed	OBL
<i>Polygonum hydropiperoides</i>	Swamp Smartweed	OBL
<i>Polygonum lapathifolium</i>	Curlytop Knapweed	FACW+
<i>Polygonum pensylvanicum</i>	Pennsylvania Smartweed	FACW
<i>Polygonum persicaria</i>	Lady's Thumb	FACW
<i>Polygonum sagittatum</i>	Arrow-Leaf Tearthumb	OBL
<i>Populus grandidentata</i>	Bigtooth Aspen	FACU-
<i>Populus tremuloides</i>	Quaking Aspen	FACU
<i>Ranunculus acris</i>	Tall Buttercup	FAC+
<i>Ranunculus repens</i>	Creeping Buttercup	FAC
<i>Rhododendron viscosum</i>	Swamp Azalea	OBL
<i>Rubus hispidus</i>	Bristly Blackberry	FACW
<i>Rubus pubescens</i>	Dwarf Blackberry	FACW



**Table 7.10
Plant Species Encountered in Wetlands
Marble River Wind Farm
Clinton County, New York**

Scientific Name	Common Name	Regional Indicator Status ¹
<i>Salix bebbiana</i>	Beak Willow	FACW
<i>Salix fragilis</i>	Crack Willow	FAC+
<i>Salix sericea</i>	Silky Willow	OBL
<i>Sambucus canadensis</i>	American Elder	FACW-
<i>Sambucus nigra</i>	European Elderberry	FACW-
<i>Scirpus atrovirens</i>	Green Bulrush	OBL
<i>Scirpus cyperinus</i>	Woolgrass	FACW+
<i>Scirpus microcarpus</i>	Panicled Bulrush / Barberpole Bulrush	OBL
<i>Smilacina trifolia</i>	Three-leaved Solomon's Seal	OBL
<i>Solidago gigantea</i>	Late Goldenrod	FACW
<i>Solidago rugosa</i>	Rough-Stemmed Goldenrod	FAC
<i>Sparganium americanum</i>	Lesser Burreed	OBL
<i>Sphagnum</i> sp.	Sphagnum Moss	OBL*
<i>Spiraea alba</i>	Narrow-Leaf Meadowsweet	FACW+
<i>Spiraea latifolia</i>	Broad-Leaf Meadowsweet	FAC+
<i>Spiraea tomentosa</i>	Steeple-Bush	FACW
<i>Symplocarpus foetidus</i>	Skunk Cabbage	OBL
<i>Thalictrum pubescens</i>	Meadow Rue	FACW+
<i>Thelypteris palustris</i>	Eastern Marsh Fern	NI
<i>Thelypteris simulata</i>	Massachusetts Fern / Bog Fern	FACW
<i>Thuja occidentalis</i>	Northern White Cedar	FACW
<i>Triadenum virginicum</i>	Virginia Marsh St. Johnswort	OBL
<i>Typha angustifolia</i>	Narrow-Leaf Cattail	OBL
<i>Typha latifolia</i>	Broad-Leaf Cattail	OBL
<i>Ulmus americana</i>	American Elm	FACW-
<i>Ulmus rubra</i>	Slippery Elm	FAC
<i>Vaccinium corymbosum</i>	Highbush Blueberry	FACW-
<i>Vaccinium myrtilloides</i>	Velvetleaf Huckleberry	FAC
<i>Veratrum viride</i>	Green Flase Hellebore	FACW+
<i>Viburnum cassinoides</i>	Withe-rod	FACW
<i>Viburnum lentago</i>	Nannyberry	FAC
<i>Viburnum nudum</i>	Possumhaw Viburnum	OBL
<i>Viburnum trilobum</i>	American Cranberrybush	FACW
<i>Vitis riparia</i>	Riverbank Grape	FACW



**Table 7.10
Plant Species Encountered in Wetlands
Marble River Wind Farm
Clinton County, New York**

Scientific Name	Common Name	Regional Indicator Status ¹
Zizia aurea	Golden Alexanders	FAC

¹ Indicator Categories:

FAC = Facultative – Equally likely to occur in wetlands or non wetlands

FACW = Facultative wetland – Usually occurs in wetlands

FACU = Facultative upland – Usually occurs in uplands

OBL = Obligate wetland – In natural conditions, occurs almost always in wetlands

No indicator status

+ = More frequently found in wetlands

- = Less frequently found in wetlands



**Table 7.11
Plant Species Encountered in Uplands
Marble River Wind Farm
Clinton County, New York**

Scientific Name	Common Name	Regional Indicator Status ¹
<i>Abies balsamea</i>	Balsam Fir	FAC
<i>Abies fraseri</i>	Fraser Fir	FACU
<i>Abutilon theophrasti</i>	Velvetleaf	UPL
<i>Acer pensylvanicum</i>	Striped Maple	FACU
<i>Acer rubrum</i>	Red Maple	FAC
<i>Acer saccharum</i>	Sugar Maple	FACU-
<i>Achillea millefolium</i>	Common Yarrow	FACU
<i>Alnus crispa</i>	Mountain Alder	FAC
<i>Ambrosia artemisiifolia</i>	Annual Ragweed	FACU
<i>Amelanchier arborea</i>	Common serviceberry	FAC-
<i>Amelanchier laevis</i>	Shadbush Serviceberry	FAC
<i>Anaphalis margaritacea</i>	Pearly Everlasting	UPL*
<i>Anemonella thalictroides</i>	Rue Anemone	UPL*
<i>Anthoxanthum odoratum</i>	Sweet Vernalgrass	FACU
<i>Apocynum androsaemifolium</i>	Spreading Dogbane	NI
<i>Apocynum cannabinum</i>	Clasping-Leaf Dogbane	FACU
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	UPL*
<i>Arctium lappa</i>	Great Burdock	UPL*
<i>Asclepias syriaca</i>	Common Milkweed	UPL*
<i>Aster acuminatus</i>	Whorled Wood Aster	UPL*
<i>Aster vimineus</i>	Small White Aster	FAC
<i>Athyrium filix-femina</i>	Subarctic Lady Fern	FAC
<i>Barbarea verna</i>	Early Wintercress	FACU
<i>Betula alleghaniensis</i>	Yellow Birch	FAC
<i>Betula papyrifera</i>	Paper Birch	FACU
<i>Betula populifolia</i>	Gray Birch	FAC
<i>Brachyelytrum erectum</i>	Long Awned Woodgrass	UPL*
<i>Brassica rapa</i>	Field Mustard	UPL*
<i>Caulophyllum thalictroides</i>	Blue Cohosh	NI
<i>Centaurea maculosa</i>	Spotted Knapweed	UPL*
<i>Chenopodium album</i>	White Goosefoot	FACU+
<i>Cinna latifolia</i>	Wood Reedgrass	UPL*
<i>Cirsium arvense</i>	Canada Thistle	FACU
<i>Cirsium vulgare</i>	Bull Thistle	FACU-



**Table 7.11
Plant Species Encountered in Uplands
Marble River Wind Farm
Clinton County, New York**

Scientific Name	Common Name	Regional Indicator Status¹
<i>Claytonia caroliniana</i>	Carolina Springbeauty	FACU
<i>Clementatis virginiana</i>	Virginia Virgins-Bower	FAC
<i>Clintonia borealis</i>	Bluebead	FAC
<i>Cornus canadensis</i>	Canadian Bunchberry	FAC-
<i>Cornus mas</i>	Cornelian Cherry	NI
<i>Cornus rugosa</i>	Round-Leaved Dogwood	UPL*
<i>Corylus cornuta</i>	Beaked Hazelnut	FACU-
<i>Crataegus</i> sp.	Hawthorn	UPL*
<i>Dactylis glomerata</i>	Orchard Grass	FACU
<i>Daucus carota</i>	Queen Anne's Lace	UPL*
<i>Dryopteris carthusiana</i>	Spinulose Wood Fern	FAC+
<i>Dryopteris intermedia</i>	Common Wood Fern	FACU
<i>Echinochloa crusgalli</i>	Barnyard Grass	FACU
<i>Elymus repens</i>	Quack Grass	FACU-
<i>Epipactis helleborine</i>	Helleborine	UPL*
<i>Erigeron annuus</i>	White-Top Fleabane	FACU
<i>Erysimum cheiranthoides</i>	Worm-Seed Wallflower	FAC
<i>Erythronium americanum</i>	Trout Lily, Yellow	UPL*
<i>Euthamia graminifolia</i>	Lance-Leaf Goldenrod	FAC
<i>Fagus grandifolia</i>	American Beech	FACU
<i>Festuca elatior</i>	Meadow Fescue	UPL*
<i>Festuca arundinacea</i>	Giant Fescue	FACU
<i>Festuca elatior</i>	Meadow Fescue	UPL*
<i>Fragaria vesca</i>	Strawberry	UPL*
<i>Fragaria virginiana</i>	Virginia Strawberry	FACU
<i>Fraxinus americana</i>	White Ash	FACU
<i>Galium mollugo</i>	Wild Madder	UPL*
<i>Gaultheria procumbens</i>	Wintergreen	FACU
<i>Geum canadense</i>	White Avens	FACU
<i>Hamamelis virginiana</i>	Witch Hazel	FAC-
<i>Hieracium aurantiacum</i>	Hawkweed (Orange)	UPL*
<i>Hieracium pratense</i>	Hawkweed	UPL*
<i>Hordeum vulgare</i>	Common Barley	NI
<i>Hylotelephium telephioides</i>	Allegheny Stonecrop	NI
<i>Isotria</i> sp.	Fiveleaf Orchid	FACU



**Table 7.11
Plant Species Encountered in Uplands
Marble River Wind Farm
Clinton County, New York**

Scientific Name	Common Name	Regional Indicator Status¹
<i>Juncus tenuis</i>	Path Rush	FAC-
<i>Juniperus communis</i>	Common Juniper	UPL*
<i>Kalmia angustifolia</i>	Sheep Laurel	FAC
<i>Lactuca canadensis</i>	Wild Lettuce	FACU-
<i>Leontodon autumnalis</i>	Fall Dandelion	UPL*
<i>Leucanthemum vulgare</i>	Oxeye Daisy	FACU
<i>Linaria vulgaris</i>	Butter And Eggs	UPL*
<i>Lobelia inflata</i>	Indian-tobacco	FACU
<i>Lolium perenne</i>	Perennial Ryegrass	FACU-
<i>Lonicera morrowii</i>	Morrow's Honeysuckle	NI
<i>Lycopodium annotinum</i>	Stiff Clubmoss	FAC
<i>Lycopodium clavatum</i>	Running Pine	FAC
<i>Lycopodium dendroideum</i>	Tree-like Clubmoss (Tree Groundpine)	FACU
<i>Lycopodium obscurum</i>	Ground Pine (Princess Pine)	FACU
<i>Lycopodium spp.</i>	Clubmoss species	NI
<i>Maianthemum canadense</i>	Canada Mayflower	FAC-
<i>Malva neglecta</i>	Common Mallow	UPL*
<i>Matricaria chamomilla</i>	Wild Chamomile	UPL*
<i>Medicago sativa</i>	Alfalfa	UPL*
<i>Melilotus alba</i>	White Sweet Clover	UPL*
<i>Melilotus officinalis</i>	Yellow Sweet Clover	FACU-
<i>Mitchella repens</i>	Partridgeberry	FACU
<i>Monotropa uniflora</i>	Ghost Pipe	FACU-
<i>Oenothera biennis</i>	Common Evening-Primrose	FACU-
<i>Osmunda cinnamomea</i>	Cinnamon Fern	FACU
<i>Osmunda claytoniana</i>	Interrupted Fern	FAC
<i>Ostrya virginiana</i>	Hop Hornbeam	FACU-
<i>Oxalis corniculata</i>	Creeping Woodsorrel	FACU
<i>Panax trifolius</i>	Dwarf Ginseng	UPL*
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	FACU
<i>Phalaris arundinacea</i>	Reed Canary Grass	OBL
<i>Phleum pratense</i>	Timothy	FACU
<i>Picea abies</i>	Norway Spruce	UPL*
<i>Picea mariana</i>	Black Spruce	FACU-
<i>Picea rubens</i>	Red Spruce	FACU



**Table 7.11
Plant Species Encountered in Uplands
Marble River Wind Farm
Clinton County, New York**

Scientific Name	Common Name	Regional Indicator Status¹
<i>Pinus rigida</i>	Pitch Pine	FACU
<i>Pinus strobus</i>	Eastern White Pine	FACU
<i>Plantago lanceolata</i>	English Plantain	UPL
<i>Plantago major</i>	Common Plantain	FACU
<i>Polygonatum</i> sp.	Solomon's Seal	FACU
<i>Polygonum scandens</i>	Climbing False Buckwheat	FACU
<i>Polystichum acrostichoides</i>	Christmas Fern	FACU-
<i>Populus grandidentata</i>	Big-Tooth Aspen	FACU-
<i>Populus tremuloides</i>	Quaking Aspen	FACU
<i>Potentilla simplex</i>	Common Cinquefoil	FACU-
<i>Prunella vulgaris</i>	Common Selfheal	FACU+
<i>Prunus pensylvanica</i>	Pin Cherry	FACU-
<i>Prunus serotina</i>	Black Cherry	FACU
<i>Prunus virginiana</i>	Chokecherry	FACU
<i>Pseudotsuga menziessi</i>	Douglas Fir	UPL*
<i>Pteridium aquilinum</i>	Bracken Fern	FACU
<i>Pyrus americana</i>	American Mountain Ash	UPL*
<i>Pyrus malus</i>	Apple	UPL*
<i>Quercus rubra</i>	Red Oak	FACU-
<i>Ranunculus repens</i>	Creeping Buttercup	FAC
<i>Rhus typhina</i>	Staghorn Sumac	UPL*
<i>Ribes glandulosum</i>	Skunk Currant	FACW
<i>Rubus allegheniensis</i>	Allegheny Blackberry	FACU-
<i>Rubus idaeus</i>	Common Red Raspberry	FAC-
<i>Rubus orarius</i>	Blackberry	UPL*
<i>Rumex acetosella</i>	Field Sorrel	UPL*
<i>Rumex crispus</i>	Curly Dock	FACU
<i>Sanicula</i> sp.	Black Snakeroot	NI
<i>Sicyos angulatus</i>	Oneseed Burr Cucumber	FACU
<i>Smilacina racemosa</i>	False Solomon's Seal	FACU
<i>Solanum dulcamara</i>	Climbing Nightshade	FAC-
<i>Solidago altissima</i>	Tall Goldenrod	FACU-
<i>Solidago canadensis</i>	Canada Goldenrod	FACU
<i>Solidago gigantea</i>	Late Goldenrod	FACW
<i>Solidago hispida</i>	Hairy Goldenrod	Not listed



**Table 7.11
Plant Species Encountered in Uplands
Marble River Wind Farm
Clinton County, New York**

Scientific Name	Common Name	Regional Indicator Status ¹
<i>Solidago rugosa</i>	Rough-Stemmed Goldenrod	FAC
<i>Sonchus asper</i>	Spiny-Leaf Sow Thistle	FAC
<i>Sonchus oleraceus</i>	Common Sowthistle	UPL
<i>Sorbus americana</i>	American Mountain Ash	FACU
<i>Spiraea latifolia</i>	Broad-Leaf Meadowsweet	FAC+
<i>Stellaria graminea</i>	Grasslike Starwort	FACU-
<i>Taraxacum officinale</i>	Common Dandelion	FACU-
<i>Thelypteris noveboracensis</i>	New York Fern	FAC
<i>Thlaspi arvense</i>	Field Penny Cress	NI
<i>Tiarella cordifolia</i>	Foamflower	FAC-
<i>Tilia americana</i>	American Basswood / Linden	FACU
<i>Trientalis borealis</i>	Starflower	FAC
<i>Trifolium arvense</i>	Rabbitfoot Clover	UPL
<i>Trifolium dubium</i>	Least Hop Clover	UPL
<i>Trifolium hybridum</i>	Alsike Clover	FACU-
<i>Trifolium pratense</i>	Red Clover	FACU-
<i>Trifolium repens</i>	White Clover	FACU-
<i>Trillium undulatum</i>	Painted Trillium	FACU*
<i>Tsuga canadensis</i>	Hemlock	FACU
<i>Tussilago farfara</i>	Coltsfoot	FACU
<i>Uvularia perfoliatum</i>	Perfoliate Bellwort	FACU
<i>Vaccinium angustifolium</i>	Lowbush Blueberry	FACU-
<i>Verbascum thapsus</i>	Common Mullein	UPL*
<i>Viburnum lentago</i>	Nannyberry	FAC
<i>Viburnum lantanoides</i>	Hobblebush	FAC
<i>Viburnum rhytidophyllum</i>	Leatherleaf	UPL*
<i>Vicia cracca</i>	Cow Vetch	UPL*
<i>Viola canadensis</i>	Canada Violet	UPL*

¹ Indicator Categories:

FAC = Facultative – Equally likely to occur in wetlands or non wetlands

FACU = Facultative upland – Usually occurs in non-wetlands

UPL = Obligate upland - In natural conditions, occurs almost always in non-wetlands

NI = No indicator status

+ = More frequently found in wetlands

- = Less frequently found in wetlands

UPL* = not listed on Region 1 National List of Plant Species that Occur in Wetlands: Northeast (Region 1)



Table 7.12
Non-tidal Hydrology Regimes
Marble River Wind Farm
Clinton County, New York

	Regime	Description
Driest	Intermittently Flooded	The substrate is usually exposed, but surface water is present for variable periods without detectable seasonal periodicity. Weeks, months, or even years may intervene between periods of inundation. The dominant plant communities under this regime may change as soil moisture conditions change. Some areas exhibiting this regime do not fall within our definition of wetland because they do not have hydric soils or support hydrophytes.
	Temporarily Flooded	Surface water is present for brief periods during the growing season, but the water table usually lies well below the soil surface for most of the season. Plants that grow both in uplands and wetlands are characteristic of the temporarily flooded regime.
↓	Saturated	The substrate is saturated to the surface for extended periods during the growing season, but surface water is seldom present.
	Seasonally Flooded	Surface water is present for extended periods especially early in the growing season, but is absent by the end of the season in most years. When surface water is absent, the water table is often near the land surface.
	Semi-Permanently Flooded	Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.
Wettest	Intermittently Exposed	Surface water is present throughout the year except in years of extreme drought.
	Permanently Flooded	Water covers the land surface throughout the year in all years. Vegetation is composed of obligate hydrophytes.



Table 8.1
Delineated Wetland Polygons within Project Footprint
Marble River Wind Farm
Clinton County, New York

Wetland ID	Isolated	Acres within Project Footprint
AR1-A	No	0.0675
AR3-A	Yes	0.0978
AR3-B	Yes	0.0057
AR4-A	Yes	0.0144
AR5-A	Yes	0.0378
AR6A	Yes	0.0463
AR11-B	Yes	0.0223
AR16-B/C	Yes	0.0582
AR18-A, OH1201-A	No	2.1822
AR22-A	Yes	0.0288
AR23-B	No	0.0005
AR25-A	No	0.0257
AR26-A/B	No	0.2069
AR33-A	Yes	0.0001
AR35-A	No	0.0871
AR36-A	No	0.0104
AR37-A	Yes	0.0079
AR38-A	Yes	0.0615
AR39-A	Yes	0.0241
AR40-A	Yes	0.0112
AR41-A	No	0.3711
AR45-A/B, AR131	Yes	0.1010
AR46-A	Yes	0.0016
AR54-A/B	Yes	0.4894
AR55-A	Yes	0.3981
AR56-A	Yes	0.2944
AR57-A/B	Yes	0.6172
AR58-A	No	0.6117
AR58-B	No	0.5752
AR59-A	No	0.3388
AR60-A	No	0.0515
AR61-A	Yes	0.0048
AR62-A	No	0.5303
AR62-B	No	0.1770



Table 8.1
Delineated Wetland Polygons within Project Footprint
Marble River Wind Farm
Clinton County, New York

Wetland ID	Isolated	Acres within Project Footprint
AR63-A	No	0.0239
AR64-A/B	No	0.1022
AR65-A	Yes	0.0644
AR65-B	Yes	0.0616
AR68-A	No	0.00001
AR70-A	No	0.0450
AR71-A	No	0.0357
AR72-A	No	0.0859
AR79A	No	0.1760
AR79B	No	0.1892
AR79C	No	0.0075
AR80/81-A	No	0.0328
AR81-A	No	0.0426
AR102-A	No	0.0766
AR103-A/B	No	0.2201
AR105-A	No	0.0688
AR111-A/B	No	0.1145
AR114-A/B	No	0.0611
AR115-A/B/C	No	1.1341
AR117-A	No	0.0042
AR118-A	No	0.0524
AR118-B	No	0.0499
AR120-Y	No	0.0133
AR124-A	No	0.0229
AR125-A	No	0.0161
AR200-A	No	0.0265
AR201-A	No	0.2629
AR202-A	No	0.2534
AR203-A/B	No	0.7246
AR204-A	No	0.0280
AR205-A	No	0.0343
AR205-B	No	0.0385
AR206-A	No	0.0610
AR206-B	No	0.0526
AR207-A	No	0.0040



Table 8.1
Delineated Wetland Polygons within Project Footprint
Marble River Wind Farm
Clinton County, New York

Wetland ID	Isolated	Acres within Project Footprint
AR208-A	No	0.1542
AR208-B	No	0.0583
AR210-D	No	0.0011
AR212-A	Yes	0.0018
AR213-A	Yes	0.0117
AR213-B	Yes	0.0084
AR213-C	Yes	0.0194
AR214-A	Yes	0.0230
AR218-B	Yes	0.0193
AR360-A	No	0.1317
AR367-A	Yes	0.0746
AR370-A	Yes	0.3482
AR502-A	No	0.3428
AR506, OH1206	No	2.6727
AR507-A	No	0.3323
AR508-A/B	No	0.0501
AR509-A/B	No	1.3397
AR513-A/B	No	0.2232
AR521-A/B	No	0.0922
AR522-A	No	0.0459
AR523-A	No	0.0221
AR524-A	No	0.0744
AR524-B	No	0.0641
AR524-D	No	0.0295
AR525-A	No	0.0340
AR526-A/B	No	0.0453
AR530-A/B	No	0.0724
AR531-A	No	0.0119
AR534-A	No	0.0047
AR534-B	No	0.0172
AR538-A	Yes	0.0459
AR599-A1	No	0.0027
AR599-A2	No	0.0002
AR599-B2	No	0.0012
AR602-A	No	0.0041



**Table 8.1
Delineated Wetland Polygons within Project Footprint
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Isolated	Acres within Project Footprint
AR602-B	No	0.0069
AR603-A	No	0.0218
AR603-B	No	0.0480
AR604-B	No	0.0026
AR605-A	No	0.0041
AR606-A/C	No	0.0256
AR606-B	No	0.0618
AR607-A	No	0.0010
AR608-A	No	0.0086
AR609-A	No	0.0028
AR609-B	No	0.0170
AR610-A	No	0.0165
AR610-B	No	0.0102
AR611-A/B/C/D/E	No	0.7730
AR611-B	No	0.1973
AR615-A	No	0.0913
AR615-B	No	0.2847
AR617-A	Yes	0.0093
AR618-A	No	0.0811
AR618-B	No	0.3293
AR618-C	No	0.0661
AR619-A	No	0.0565
AR619-B	No	0.1143
AR622-A/B/C	Yes	0.1144
AR625-A	No	0.1104
AR625-B	No	0.0701
AR630-A/B	No	0.2271
AR701-A/B	No	0.0957
AR702-A	No	0.0071
AR703-A	No	0.3661
AR709-A/B	No	0.0016
AR710-A	No	0.0150
AR711-B	No	0.0100
AR713-B	No	0.1208
AR719-A/B/C	No	1.2805



Table 8.1
Delineated Wetland Polygons within Project Footprint
Marble River Wind Farm
Clinton County, New York

Wetland ID	Isolated	Acres within Project Footprint
AR724-A	No	0.4891
AR725-A/B/C	Yes	0.1059
AR725-D	Yes	0.0857
AR737-A	Yes	0.0466
AR802-A	No	0.1681
AR803-A/B/C	No	0.4112
AR804-A	No	0.0023
AR805-A/B	No	0.0853
AR807-A	Yes	0.0083
AR808-A	Yes	0.0015
AR809-A	Yes	0.0266
AR816-A	Yes	0.0329
AR825-A/B	No	1.7495
AR828-A	Yes	0.0100
AR852-A/B	No	0.4447
AR904-A	Yes	0.0252
AR906-A	Yes	0.0192
AR907-A	Yes	0.0101
AR909-A	Yes	0.0303
AR917-A	No	0.0270
AR917-C	No	0.0327
AR925-A/B/C, IC	No	0.0391
AR926-A/B	No	9.8764
AR927-A/B	No	0.0035
AR939-A	No	0.0035
AR939-B	No	0.0361
AR939-C	No	0.0055
AR939-D	No	0.0013
AR940-A/B	No	0.1333
AR941,IC942	No	0.7479
AR945-A	Yes	0.0081
AR947-A	Yes	0.0004
AR949-A	No	0.0533
AR950-A	No	0.0142
AR951-A	Yes	0.0226



Table 8.1
Delineated Wetland Polygons within Project Footprint
Marble River Wind Farm
Clinton County, New York

Wetland ID	Isolated	Acres within Project Footprint
AR952-A	Yes	0.0282
AR954-A	No	0.0727
AR958-A,IC962	No	1.1319
AR964-A	No	0.0108
AR967-A/B	No	0.2074
AR967-D	No	0.1159
AR967-E	No	0.1993
AR968-A	No	0.0427
AR986-B	No	0.0707
AR1008-A	Yes	0.0071
AR1009-A	No	0.2901
AR1017-A	No	0.0260
AR/IC1021-A/B	No	0.6684
AR1026-A	No	0.0615
AR1027-A/B	No	0.1727
AR1028-A/B	No	0.3545
AR1029-A/B	No	0.2017
AR1030-A/B	No	0.1413
AR1031-A	No	0.0219
AR1032-A	No	0.1284
AR1033-A/B	No	0.0772
AR1034-A	Yes	0.0001
AR1035-A	Yes	0.0063
AR1036-A	Yes	0.0006
AR1037-A/D/C	No	0.8869
AR1042-A	Yes	0.1368
AR1044-A/B	No	0.4836
AR1105-A	Yes	0.0611
AR1105-B	No	0.0151
AR1105-C	Yes	0.0252
AR1108-A	No	0.2477
AR1307-A	No	0.1453
AR1312-A	No	0.1052
CV1173-A	Yes	0.0199
CV1400-A	No	0.0109



**Table 8.1
Delineated Wetland Polygons within Project Footprint
Marble River Wind Farm
Clinton County, New York**

Wetland ID	Isolated	Acres within Project Footprint
CV1400-C	No	0.0283
CW715-B, IC1022	No	1.0235
CW829-A	No	0.2873
CWIC705-A/B	No	0.1682
CWIC722-A	Yes	0.0055
IC360-A	No	0.2961
IC361-A	No	0.1288
IC363-A	No	0.0109
IC364-A	No	0.2536
IC364-A/B	No	0.1887
IC365-A	No	0.0588
IC366-A	No	0.1179
IC371-C	No	0.0195
IC727-A/B	No	0.5299
IC738-A	Yes	0.4086
IC739-A	Yes	0.0502
IC818	No	0.2390
IC818-A	No	0.1178
IC818-B	No	0.2261
IC820-A	Yes	0.0270
IC827-A/B/C	No	0.3939
IC919-A	No	0.1192
IC963-A	Yes	0.0138
IC963-B	Yes	0.0062
IC969-A/B	No	0.3621
IC970-A	No	0.0645
IC970-B	No	0.0587
IC971-A	No	0.0114
IC972-A	No	0.0204
IC973-A	No	0.0007
IC977-B	No	0.0302
IC977-C	No	0.0217
IC978-A	No	1.2037
IC978-F	No	0.2053
IC978-G	No	0.1099



Table 8.1
Delineated Wetland Polygons within Project Footprint
Marble River Wind Farm
Clinton County, New York

Wetland ID	Isolated	Acres within Project Footprint
IC980-A	No	0.1174
IC980-A/B	No	0.0932
IC981-A	No	0.0555
IC983-A/B	No	0.1029
IC1005-A	Yes	0.0484
IC1006-A	No	0.2402
IC1010-A	Yes	0.0262
IC1014-A/B	No	0.2374
IC1015-A	Yes	0.0239
IC1015-B	Yes	0.0076
IC1016-A	No	0.0169
IC1016-A/B	No	0.5312
IC1024-A	No	0.0034
IC1038-B	No	0.0785
IC1047-A	No	0.1779
IC1048-A	Yes	0.0267
IC1049-A	Yes	0.1634
IC1050-A	No	0.1027
IC1052-A	No	0.0031
IC1054-A	No	0.0047
IC1154-A	No	0.0037
IC1156-A/B	No	0.0901
IC1300-B	No	0.0707
IC1311-A	No	0.0002
MET1003-A/B/C	No	0.0047
MET1544-A	No	0.0087
MET1544-B	No	0.0045
MET1548-A	No	0.0249
MET1548-B	No	0.0019
MET1549-A	Yes	0.0235
MET1551-A	No	0.0692
MIT1560-A	Yes	0.0419
OH1110-A,IC1123	No	0.0807
OH1110-B	No	0.0163
OH1111-A/B	No	0.8066



Table 8.1
Delineated Wetland Polygons within Project Footprint
Marble River Wind Farm
Clinton County, New York

Wetland ID	Isolated	Acres within Project Footprint
OH1113-A/B	No	0.1216
OH1114-A	Yes	0.0271
OH1115-A	Yes	0.1039
OH1116-A	Yes	0.2546
OH1117-A	No	0.0658
OH1117-B	No	0.1855
OH1118-A/B	No	0.5421
OH1119-A	No	0.2441
OH1120-A/B/C/D	No	8.6732
OH1200-A	Yes	0.8895
OH1204-A	No	0.0295
OH1326-A	No	0.0087
OH1327-A	No	0.0086
OH1328-A/B/C	No	0.2683
OH1329-A/B/C/D	No	0.0003
OH1330-A/B	Yes	0.3722
OH1350-A/B	No	0.4297
OH1352-A	Yes	0.0420
OH1353-A	No	0.7311
OH1354-A	Yes	0.0311
OH1355-A	No	0.0001
OH1357-A	Yes	0.0291
SA821-A	No	0.5020
WET AG. FIELD	Yes	0.0448
WTG1A, AR905	No	0.0454
WTG2A-A	Yes	0.0012
WTG5A-A	No	0.0824
WTG5A-C/D	No	0.0864
WTG15-1A	Yes	0.1569
WTG15A-ALT-A	No	0.1315
WTG15-ALT-B	No	0.0153
WTG28A-B	No	0.0936
WTG31-R-B-A	No	1.0541
WTG44-A/B/C	Yes	0.0561
WTG48B	Yes	0.0018



Table 8.1
Delineated Wetland Polygons within Project Footprint
Marble River Wind Farm
Clinton County, New York

Wetland ID	Isolated	Acres within Project Footprint
WTG51-A	No	0.0160
WTG57-A/B	No	0.2671
WTG58-A	No	0.0005
WTG67, SUB1058	No	1.0904
WTG70R-A,IC1012	No	0.2178
WTG87-A/C	No	0.0614
WTG90-A	Yes	0.0356
WTG91-A	Yes	0.2715
WTG115-A	Yes	0.1037
WTG116-A	Yes	0.0150
WTG119-B/C	No	0.2457
WTG120-A	No	0.0960
WTG120-B	No	0.1380
WTG134S-B	No	0.0878
WTG137-A	No	0.0499
WTG138-A	No	0.1948
WTG140-A/D	No	0.1353
WTG155-A/B	No	0.0134
WTG175-A	Yes	0.4858
WTG175-B	Yes	0.0581
WTG202A-A	No	0.0047
WTG208-R-A/B	No	0.9411
WTG1051-A/B	No	0.7747
Total		74.4569



Table 8.2
Delineated Surface Waterbodies within Project Footprint
Marble River Wind Farm
Clinton County, New York

Stream ID	Waters of the U.S.	Total Length within Project Footprint (linear feet)
AR1-A/B/ST	Yes	132.8
AR52-A/B/C-ST	Yes	75.2
AR58-A-ST	Yes	196.6
AR58-B-ST	Yes	69.2
AR60-A-ST	Yes	60.9
AR62-B-ST	Yes	70.6
AR64-A/B-ST	Yes	138.7
AR69-A-ST	Yes	65.0
AR79-A/B-ST1	Yes	20.7
AR79-A/B-ST2	Yes	60.3
AR113-A-ST	Yes	39.2
AR114-A/B-ST	Yes	94.6
AR115A/B/C-ST	Yes	83.0
AR118A/B-ST	Yes	54.5
AR118-A/B-ST	No	80.5
AR118-A/B-ST	No	34.8
AR205-A/B-StA	Yes	142.7
AR205-A/B-StB	Yes	107.4
AR205-A/B-StC	Yes	50.4
AR206-A/B-StA	Yes	109.4
AR206-A/B-StB	Yes	109.5
AR208-ST	Yes	34.8
AR210-A/B/C/D-StA	Yes	81.1
AR210-StC	Yes	71.9
AR212-StA	Yes	103.5
AR213-A-StA	Yes	234.3
AR215-A-ST	Yes	138.3
AR217-A-ST	Yes	144.7
AR217-B-ST	Yes	88.1
AR217-C-ST	Yes	4.3
AR218-A/B-ST	Yes	70.3
AR351-A-ST	Yes	76.9
AR506A/B-ST	Yes	21.2



Table 8.2
Delineated Surface Waterbodies within Project Footprint
Marble River Wind Farm
Clinton County, New York

Stream ID	Waters of the U.S.	Total Length within Project Footprint (linear feet)
AR506-A/B-ST	Yes	63.5
AR534-A/B-ST	Yes	67.4
AR541-ST	No	15.3
AR599-A/B-ST	Yes	52.6
AR606-A-ST	Yes	13.4
AR606-B-ST	Yes	15.3
AR619-A/B-ST	Yes	81.4
AR724-A-ST	Yes	167.8
AR803-A/B-ST	Yes	101.8
AR811-B-ST	No	452.8
AR814-A-ST	Yes	81.9
AR944-A-ST	Yes	81.8
AR946-A-ST	Yes	110.7
AR953-B/C-ST	Yes	124.5
AR967-A-ST	Yes	51.9
AR1037-ST/IC364-A/B-ST	Yes	69.1
AR1308-A-ST	No	78.8
AR1317-A-ST	No	52.2
AR1543-A-STA	No	154.0
CV1168-A,RW1164-A-ST	No	62.6
CV1172-A-ST	Yes	49.7
CV1173-A-ST	No	34.2
CV1173-B-ST	No	32.4
CV1220-A-ST2	Yes	9.2
CV1227-A-ST	Yes	35.0
CV1228-A-ST	Yes	34.3
CV1229-A-ST	Yes	48.0
CV1232-A/B-ST	Yes	11.1
CV1251-A/B-ST	Yes	10.6
CV1400-A/B,CV1223-A-ST	Yes	89.4
IC371-B-ST	Yes	25.2
IC714-A/B-STA	Yes	50.2
IC714-A/B-STB	Yes	82.9



Table 8.2
Delineated Surface Waterbodies within Project Footprint
Marble River Wind Farm
Clinton County, New York

Stream ID	Waters of the U.S.	Total Length within Project Footprint (linear feet)
IC726-A-ST	Yes	37.8
IC959-A-ST	Yes	187.0
IC960-A-ST	Yes	159.0
IC961-A-ST	Yes	954.0
IC966-A-ST	Yes	43.8
IC969-A/B-ST	Yes	95.4
IC1006-A-ST	Yes	94.1
IC1014-A/B-ST	Yes	38.5
IC1300-A/B-ST	Yes	36.0
IC972-A-ST	Yes	14.1
IC977-A-ST	No	185.3
IC977-C-ST	No	354.2
MET1548-A/B-ST	Yes	39.9
MET1551A/B-STA	Yes	13.5
OH1110-A/B-ST	Yes	144.8
OH1120-STA	Yes	194.6
OH1120-STB	Yes	140.4
OH1332-A-ST	Yes	236.0
OH1401-A-ST	No	145.1
OH1503A-ST	Yes	180.6
OH1503B-ST	Yes	167.8
RD-3A	Yes	134.0
RD-3B	Yes	85.2
RD-4	No	51.2
RD-5	No	51.0
WTG5-A/B-ST	Yes	49.4
WTG206-ST	No	567.7
WTG206-ST-A	No	8.9
Total		9,685.6



ATTACHMENT 1
WETLAND DATA FORMS AND SKETCH SHEETS

ATTACHMENT 2
STREAM POLYGON DATA SHEETS

ATTACHMENT 3
SELECT SITE PHOTOGRAPHS

ATTACHMENT 4
USDA NRCS HYDRIC SOIL UNIT DESCRIPTIONS

**USDA NRCS descriptions of the 23 wetland soil units
(hydric soils and soils with hydric inclusions)
That occur within the proposed Marble River Wind Farm
Clinton County, New York**

Adirondack loam, 3 to 8 percent slopes (AgB) - This very deep, somewhat poorly drained, loamy soil formed in low lime, upland glacial till. It is underlain by a dense substratum. The available water capacity is moderate. Permeability is moderate in the surface and subsoil, and slow in the substratum. Capability unit is 3w. This unit of Adirondack soils is designated as farmland of state-wide importance. Adirondack has possible inclusions of Lyonmounten, Sabattis and other soils considered as hydric in the Clinton County area.

Adirondack loam, gently sloping, very bouldery (AhB) - This unit consists of very deep, somewhat poorly drained, low lime, loamy soil. It is on upland till plains underlain by a dense substratum. Slopes range from 0 to 8 percent. Boulders cover up to 3 percent of the ground surface. The available water capacity is moderate. Permeability is moderate in the surface and subsoil, and slow in the substratum. Capability unit is 6s. Adirondack has possible inclusions of Lyonmounten, Sabattis, and other soils considered as hydric in the Clinton County area.

Bucksport mucky peat (Bx) - This very deep, very poorly drained soil formed in low to medium lime, organic materials greater than 51 inches thick. It occurs in depressions on lake plains and till plains. The available water capacity is high. Permeability is moderately slow to moderately rapid. Capability unit is 7w. Bucksport is recognized as a hydric soil in Clinton County.

Churubusco muck (Ck) - This unit consists of nearly level, very poorly drained, organic deposits underlain by sandstone bedrock. Depth to bedrock ranges from 16 to 50 inches. Available water capacity is high. Permeability is moderate or moderately rapid. Capability unit is 7w. Churubusco is recognized as a hydric soil in Clinton County.

Cook mucky loamy fine sand (Crk) - This unit is very deep, very poorly drained, sandy soil overlying loamy material. It formed in medium lime, water-worked deposits over glacial till. Slope ranges from 0 to 3 percent. The available water capacity is low to moderate. Permeability is moderately rapid in the surface, rapid in the upper substratum, and moderately slow in the loamy substratum. Capability unit is 4w. Cook is recognized as a hydric soil in the Clinton County area.

Deinache fine sand (Df) - This is a very deep, poorly drained, sandy soil formed in medium lime, glacial outwash material. The available water capacity is low to moderate. Permeability is rapid in the mineral surface, subsoil, and upper substratum, and moderate or moderately rapid in the lower substratum. Capability unit is 4w un-drained (3w drained). Deinache is designated as farmland of state-wide importance. Deinache is recognized as a hydric soil in Clinton County.

Hailesboro silt loam (Ha) - This very deep, somewhat poorly drained, silty soil formed in medium to high lime material on lake plains. The available water capacity is high. Permeability is moderate in the mineral surface layer and moderately slow in the subsoil and substratum. Capability unit is 3w. Only drained areas of Hailesboro soil are designated as prime farmland.

Hailesboro has possible inclusions of Adjidaumo and other soils considered as hydric soils in the Clinton County area.

Lyonmounten loam (Lv) - This is a very deep, poorly drained, loamy soil formed in low lime, glacial till on uplands. Slope ranges from 0 to 3 percent. The available water capacity is high. Permeability is moderate in the mineral surface, and moderate or moderately slow in the subsoil and substratum. Capability unit is 4w un-drained (3w drained). This unit is on the New York listing for farmland of state-wide importance. Lyonmounten is listed as a hydric soil in Clinton County.

Lyonmounten loam, very stony (Ly) - This is a very deep, poorly drained, loamy soil. It formed in low lime, glacial till in depressional areas on Uplands. Slope ranges from 0 to 8 percent, but is dominantly 0 to 3 percent. Large stones cover up to 3 percent of the ground surface. The available water capacity is high. Permeability is moderate in the mineral surface, and moderate or moderately slow in the subsoil and substratum. Capability unit is 6s. Lyonmounten is recognized as a hydric soil in Clinton County.

Malone gravelly loam, 0 to 3 percent slopes (MeA) - This is a very deep, somewhat poorly drained, loamy soil formed in high lime, glacial till. The available water capacity is moderate. Permeability is moderate in the mineral surface, and moderately slow or slow in the subsoil and substratum. Capability unit is 3w. Only drained areas of this unit qualify as prime farmland in the Clinton County area. Malone has possible inclusions of Runeberg, Cook, and other soils considered as hydric in the Clinton County area.

Malone gravelly loam, 3 to 8 percent slopes (MeB) - This is a very deep, somewhat poorly drained, loamy soil formed in high lime, glacial till. The available water capacity is moderate. Permeability is moderate in the mineral surface, and moderately slow or slow in the subsoil or substratum. Capability unit is 3w. Only drained areas of this soil qualify as prime farmland in the Clinton County area. Malone has possible inclusions of Runeberg, Cook and other soils considered as hydric soils in the Clinton County area.

Malone gravelly loam, gently sloping, very stony (MfB) - This is a very deep, somewhat poorly drained, loamy soil formed in high lime, glacial till. Slope ranges from 0 to 8 percent. Large stones cover up to 3 percent of the ground surface. The available water capacity is moderate. Permeability is moderate in the mineral surface, and moderately slow or slow in the subsoil and substratum. Capability unit is 6s. Malone has possible inclusions of Runeberg, Cook and other soils considered as hydric in the Clinton County area.

Muskellunge silty clay loam, 3 to 8 percent slopes (MwB) - This very deep, somewhat poorly drained, clayey soil formed in high lime sediments on lake plains. The available water capacity is high. Permeability is moderately slow in the mineral surface and slow in the subsoil and substratum. Capability unit is 3w. Only drained areas of this unit are recognized as prime farmland. Muskellunge has possible inclusions of Adjidaumo and other soils considered as hydric soils in Clinton County.

Peasleeville loam, 0 to 3 percent slopes (PeA) - This very deep, somewhat poorly drained, loamy soil formed in medium lime, glacial till uplands. The available water capacity is high. Permeability is moderate. Capability unit is 3w. Only drained areas of this unit are recognized as prime farmland in Clinton County. Peasleeville has possible inclusions of Lyonmounten, Sabattis and other soils considered as hydric in the Clinton County area.

Peasleeville loam, 3 to 8 percent slopes (PeB) - This very deep, somewhat poorly drained, loamy soil formed in medium lime, glacial till uplands. The available water capacity is high. Permeability is moderate. Capability unit is 3w. Only drained areas of this unit are recognized as prime farmland in Clinton County. Peasleeville has possible inclusions of Lyonmounten, Sabattis and other soils considered as hydric in the Clinton County area.

Peasleeville loam, gently sloping, very stony (PfB) - This is a very deep, somewhat poorly drained, loamy soil formed in medium lime, glacial till uplands. Slope ranges from 0 to 8 percent. Large stones cover up to 3 percent of the ground surface. The available water capacity is high. Permeability is moderate. Capability unit is 6s. Peasleeville has possible inclusions of Lyonmounten, Sabattis and other soils considered as hydric in the Clinton County area.

Pits, gravel (Pn) - Gravel pits are generally very deep. Series consists of excessively drained to well drained material on glacial outwash plains, terraces, kames, and eskers. Available water capacity is very low. Permeability is rapid. This unit is not assigned to a capability unit. This unit may have hydric soil inclusions; on-site investigation is recommended.

Runeberg mucky loam (Ry) - This very deep, very poorly drained, loamy soil formed in medium to high lime, glacial till. The available water capacity is moderate to high. Permeability is moderate in the mineral surface, moderately slow in the subsoil, and moderately slow or slow in the substratum. Capability unit is 5w undrained (4w drained). Runeberg is recognized as a hydric soil in the Clinton County area.

Sabattis mucky fine sandy loam, very bouldery (Sb) - This very deep, very poorly drained soil formed in low lime, glacial till. It has a thin organic surface overlying loamy till. The available water capacity is high. Permeability is moderately slow to moderately rapid in the organic surface, moderate or moderately rapid in the subsoil, and moderately slow in the substratum. Capability unit is 5w. Sabattis is recognized as a hydric soil in Clinton County.

Saprists and Aquents, ponded (Se) - This unit consists of very deep, very poorly drained, organic and mineral soil formed in depressions on lake plains and uplands. The common name for this unit is fresh water marsh. Available water capacity is high. Permeability is moderately slow to moderately rapid in the surface, and ranges from very slow to rapid below. Capability unit is 8. Saprists and Aquents are recognized as a hydric soil type in Clinton County.

Sciota fine sand (Sn) - This is a very deep and somewhat poorly drained soil that is formed in sandy, medium to high lime, outwash material. Slopes range from 0 to 3 percent. The available water capacity ranges from low to moderate and permeability is rapid. Capability unit is 3w. This unit has possible inclusions of Deinache, Pinconning or other soils considered as hydric in the Clinton County area.

Topknot-Chazy complex, gently sloping, rocky (TcB) - This unit is shallow and moderately deep, somewhat poorly drained, loamy soil. It formed in a thin mantle of low lime, glacial till overlying sandstone bedrock on upland. Bedrock exposures occur on less than 2 percent of the ground surface. Slope ranges from 0 to 8 percent. The available water capacity ranges from very low to moderate. Permeability is moderate. Capability unit is 6s. This unit has possible inclusions of Sabattis, Wonsqueak and other soils considered as hydric in the Clinton County area.

Wonsqueak muck (Wu) - This is a very deep, very poorly drained soil formed in 16 to 51 inches of low to medium lime, organic material overlying loamy deposits. It occurs in depressions on lake and till plains. The available water capacity is high. Permeability is moderately slow to moderately rapid in the organic part, and moderately slow or moderate in the substratum. Capability unit is 7w. Wonsqueak is recognized as a hydric soil in Clinton County.

ATTACHMENT 5
EDINGER ECOLOGICAL COMMUNITIES

**Edinger Ecological Communities
at the
Proposed Marble River Wind Farm Site**

Red Maple Hardwood Swamp

Red Maple Hardwood Swamp is the most dominant forested covertype and one of the most common wetland community types occurring within the Survey area. These areas may consist of a monoculture canopy of red maple (*Acer rubrum*) or a co-dominance of red maple and gray birch (*Betula populifolia*). American elm (*Ulmus americana*), yellow birch (*B. alleghaniensis*) and balsam fir (*Abies balsamea*) occasionally occur as sub-dominants. These swamps often have gaps in the canopy allowing for a dense understory with many saplings and a thick shrub layer containing species such as speckled alder (*Alnus rugosa*), beak willow (*Salix bebbiana*), silky willow (*S. sericea*) and meadowsweet (*Spirea latifolia*). The herbaceous layer may be quite diverse with ferns including sensitive fern (*Onoclea sensibilis*) and cinnamon fern (*Osmunda cinnamomea*). Characteristic herbs include soft rush (*Juncus effusus*), Northern bugleweed (*Lycopus uniflorus*), rough-stemmed golden rod (*Solidago rugosa*), flat-topped aster (*Aster umbellatus*), sphagnum moss (*Sphagnum* sp.) and sedge species including bladder sedge (*Carex intumescens*), shallow sedge (*C. lurida*) and pointed broom sedge (*C. scoparia*).

Shrub Swamp

Shrub swamps are dominated by tall shrubs that occur along the shore of lakes or rivers, in a wet depression not associated with lakes, or in a transitional zone between a marsh, swamp, or bog and an upland community. This is a broadly defined, highly variable covertype that includes several distinct communities and many intermediates. Shrub swamps may have a single dominant shrub species or be co-dominated by a mixture of species. Speckled alder, beak willow and silky willow are the most frequently dominating shrubs of this community within the survey area. Various other shrub species with occasional occurrence include highbush cranberry (*Viburnum trilobum*), steeplebush (*Spirea tomentosa*), meadowsweet and red osier dogwood (*Cornus stolonifera*). These wetland communities are frequently associated with stream complexes and may contain emergent wetland sedges and grasses.

Shallow Emergent Marsh

Shallow emergent marshes are permanently saturated and seasonally flooded wetlands that can be dominated by a variety of herbaceous vegetation. Common dominant herbaceous plants within the Survey area include soft rush, green bulrush (*Scirpus atrovirens*), wool-grass (*S. cyperinus*), bladder sedge, shallow sedge, pointed broom sedge, fox sedge (*Carex vulpinoidea*), rush aster (*Aster junciformis*), flat-topped aster, New York aster (*A. novi-belgii*), arrow-leaf tearthumb (*Polygonum sagittatum*), marshpepper smartweed (*P. hydropiper*), eastern Joe-pye-weed (*Eupatoriadelphus dubium*), lance-leaf goldenrod (*Euthamia graminifolia*), rough-stemmed goldenrod, jewelweed (*Impatiens capensis*), rattle snake grass (*Glyceria canadensis*), fowl meadow grass (*Poa palustris*), broad-leaved cattail (*Typha latifolia*) and reed canary grass (*Phalaris arundinacea*). Marshes must have less than 50 percent cover of peat and tussock-forming sedges such as tussock sedge (*Carex stricta*); otherwise it may be classified as a sedge meadow. Other plants characteristic of shallow emergent marshes include blue flag iris (*Iris versicolor*), sensitive fern, cinnamon fern, and rushes (*Juncus* spp.). Shallow emergent marshes

commonly have scattered shrub species including speckled alder, dogwoods (*Cornus* spp.), willows (*Salix* spp.) and spireas (*Spirea* spp.).

Northern White Cedar Swamp

Northern white cedar (*Thuja occidentalis*) swamps are conifer or mixed conifer swamps that occur on organic soils in cool, poorly drained depressions, and along lakes and streams. Co-dominants at the 11 delineated wetlands classified as northern white cedar swamp include gray birch, yellow birch (*Betula alleghaniensis*), balsam fir, and red maple. Understories of these wetlands include tree saplings and species such as speckled alder, Canadian serviceberry (*Amelanchier canadensis*), and meadowsweet in the shrub strata, and sedge species (*Carex* spp.), sensitive fern, cinnamon fern, and sphagnum moss in the herbaceous layer.

Balsam Flats

Balsam flats are generally an upland conifer forest community that occurs on well drained soils of low flats adjoining swamps, gentle low ridges, and knolls within swamps. At the Site, balsam flats occur in 28 delineated wetlands. Co-dominants in these wetlands include red maple, and gray birch. The herbaceous layers include species such as nannyberry, sheep laurel (*Kalmia angustifolia*), speckled alder, meadowsweet, sensitive fern, and sphagnum moss.

Rich Shrub Fen

Rich shrub fens are open peatlands with greater than 8 inches (20 cm) of woody peat. At the Site, rich shrub fen communities are present at two delineated wetlands: the AR80A portion of wetland AR80/81A and AR606B. Wetland AR80A occurs between Robare Pond Road and Turbine 10A and wetland AR606B occurs along Bootleg Road. At wetland AR80A, the sparse tree, moderate shrub and dense herbaceous layers are dominated by northern white cedar, speckled alder and sphagnum moss, respectively. At wetland AR606B, gray birch, speckled alder, and nannyberry dominate the shrub layer, and sedge and moss species dominate the dense herbaceous layer.

Successional Northern Hardwoods

Successional northern hardwoods are hardwood or mixed forests that occur on sites that have been cleared or otherwise disturbed. This broadly-defined community occurs at 17 wetlands at the Site. Characteristic trees and saplings in these wetlands include gray birch, red maple, American elm (*Ulmus Americana*), yellow birch, and aspen (*Populus* spp.). Communities are often dominated by species well adapted to establishment following disturbance. Common understory vegetation at the Site includes sensitive fern, jewelweed, Canada mayflower, and sedge and moss species.

Hemlock-Hardwood Swamp

Hemlock-hardwood swamps are mixed swamps with a fairly closed canopy, sparse shrub layer, and low species diversity. At the Site, this community occurs at one wetland (AR941A) in conjunction with a balsam flats community. Hemlock (*Tsuga canadensis*) is typically co-dominated by yellow birch and red maple. The herbaceous layer includes sensitive fern, New York fern (*Thelypteris noveboracensis*), and Northern bugleweed.

Black Spruce-Tamarack Bog

Black spruce-tamarack bogs are conifer forests that occur on acidic peatlands in cool, poorly drained depressions. At the Site, this community occurs at one wetland (IC1038A) and would not be affected by the project. Tamarack (*Larix laricina*) is the dominant tree species at this wetland; black spruce was not observed at the sample station but may occur elsewhere. The shrub and herb layers consist of low-growing evergreen, ericaceous shrubs and sphagnum mosses and include leatherleaf (*Viburnum rhytidophyllum*), bog labrador tea (*Ledum groenlandicum*), bog rosemary (*Andromeda glaucophylla*), sheep laurel, and sphagnum moss.

Red Maple-Tamarack Peat Swamp

Red maple-tamarack peat swamps are mixed swamps that occur on organic soils in poorly drained depressions. At the Site, this community occurs at one wetland (IC1038B). Dominant trees are red maple and tamarack while the understory is dominated by highbush blueberry (*Vaccinium corymbosum*), mountain holly (*Nemopanthus mucronatus*), and sphagnum moss.

Spruce-fir Swamp

Spruce-fir swamps are conifer swamps that typically occur in drainage basins, but can also occur at the edge of a lake or pond. In the Adirondacks, these swamps are often found in drainage basins occasionally flooded by beaver. At the Site, spruce-fir swamp communities were found at four delineated wetlands. The dominant tree is usually red spruce (*Picea rubens*). Co-dominant trees include balsam fir and red maple, but gray birch was also found in the wetlands. Shrub layers include serviceberry and meadowsweet; herb layers include peat and club mosses, sheep laurel, soft rush, and sedge species.

Cropland/Row Crops

Cropland/row crops are agricultural fields planted in row crops (*e.g.* corn). This community occurs in two wetlands (AR16A and AR16BC). Because these field wetlands had been plowed at the time of the Site visit, most of the vegetation was unidentifiable, presenting an Atypical Situation. Wetland plant species observed at these two sites included reed canary grass and *Scirpus* species. Upland species included common plantain (*Plantago major*), fall dandelion (*Leontodon autumnalis*), and clover (*Trifolium* spp.).

Cropland/Field Crops

Cropland/field crops are agricultural fields planted in field crops (*e.g.* timothy) and includes hayfields that are rotated to pasture. This community occurs in 18 wetlands. Dense herbaceous layers are dominated by vegetative species such as reed canary grass (*Phalaris arundinacea*), timothy (*Phleum pretense*), sedge species, and fowl meadow grass.

Pastureland

Pastureland is defined as agricultural land permanently maintained (or recently abandoned) as a pasture area for livestock. This community occurs in 25 wetlands. Herbaceous species dominating these wetlands include various grass species, sedge species, green bulrush (*Scirpus atrovirens*), soft rush (*Juncus effuses*), goldenrod species (*Solidago* spp.), aster species (*Aster* spp.), and buttercup species (*Ranunculus* spp.).

Successional Old Field

Successional old fields are meadows dominated by forbs and grasses that occur on sites that have been cleared and plowed (*e.g.* for farming) and then abandoned. This community occurs in eight wetlands. Vegetative species dominating these wetlands include fowl mannagrass (*Glyceria striata*); sedge species including fringed, shallow and bladder sedges; aster species; purple-leaf willow-herb (*Epilobium coloratum*); bulrush species, Northern bugleweed; and goldenrod species.

Mowed Lawn

Mowed lawn is a terrestrial community type in which ground cover is dominated by clipped grasses which are maintained by mowing. This community occurs in a portion of one wetland (AR719-A/B/C) in the vicinity of a residential structure and included various sedge (*Carex* spp.) and spikerush (*Eleocharis* spp.) species, not able to be identified to the species level in the field due to regular lawn maintenance.

ATTACHMENT 6
JURISDICTIONAL DETERMINATION FORMS

ATTACHMENT 7
DUPLICATE OVERSIZED FIGURE

