Appendix D – Wetland Delineation Report

WETLAND DELINEATION REPORT

For

Duncan Meadows

McChesney Avenue
Town of Brunswick
Rensselaer County, New York

March 2007

Prepared for:

L. Sipperly & Associates
696 Troy-Schenectady Road
Latham, New York 12110

Prepared by:
Copeland Environmental LLC
208 Burke Road, Saratoga Springs, New York 12866-6466
(518) 581-0216

Table of Contents

List of Maps

List of Appendices

This report describes the wetlands and other aquatic resources on an approximately 102.8-acre site, which is part of a 109.3-acre property located at the intersection of McChesney Avenue, and McChesney Avenue Extension in the Town of Brunswick, Rennselaer County, New York. The remaining lands (6.5 acres Duncan –Walmart preservation Area) are not included in the project site limits. The property is located on the Troy South U.S.G.S. Quadrangle, with UTM coordinates in Zone 18, 611745 East and 4733514 North. The site lies within the Sweet Milk Creek watershed, in the Hudson River Drainage Basin. The property is owned by Leonard and Ruth Duncan.

Federal and/or State wetlands occurring on the site were delineated on July 6 & 13, 2006, utilizing the routine wetland determination methods prescribed in the 1987 U.S. Army Corps of Engineers (ACOE) Wetland Delineation Manual. The purpose of the delineation was to identify the boundary of wetlands, streams and other watercourses, which are considered waters of the United States, and therefore subject to the jurisdiction of the U.S. Army Corps of Engineers, pursuant to Section 404 of the Clean Water Act. A review of the New York State Department of Environmental Conservation (DEC) Freshwater wetland maps (Appendix C) indicates that no state regulated wetlands or streams are located on the project site. Two tributaries to Sweet Milk Creek are found on the southwest portion of the site. These tributaries are mapped as "class C" by the DEC.

This report includes a general site description and detailed wetland and stream descriptions. The report is complemented by a wetland survey, photographs, wetland data sheets, and soils information that are presented as appendices and maps.

The project site consists of two parcels of land, totaling approximately 109.3 acres. The site is located at the intersection McChesney Avenue and McChesney Avenue Extension in the Town of Brunswick, Rensselaer County, New York. The surrounding land uses are residential and agricultural. The areas are shown on the attached wetland delineation survey map (Appendix D).

The northernmost section of the property consists of a large agricultural field with a small pocket of woodlands situated north of McChesney Avenue. This area contains no wetlands and is relatively flat, with a gentle slope toward the south.

The southeast portion of the property surrounds the ROUSE at Brunswick senior housing complex, and the Duncan-Walmart environmental mitigation area. This area contains a mix of woodlands, wetlands, a pond, and agricultural fields, along with some farm buildings. The terrain is hilly in the north and relatively flat in the south, with a general slope towards the southeast.

The property in the southwest corner of McChesney Avenue and McChesney Avenue Extension consists of agricultural cropland surrounded by a periphery of woodlands. The site is elevated in the center with slopes to the east and west. This area contains two wetlands and their associated streams.

Vegetation – The project site primarily consists of agricultural fields that are dominated by row crops, field grasses and common roadside plants. Wetland field areas are dominated by Cattail, Loosestrife, and Reed Canary Grass, along with other common wet field species. Woodlands are dominated by Red Oak, White Pine, Maple, Beech, Ash, Elm, Honeysuckle, Dogwood, and Alder. Other common trees and shrubs border the fields and hilltops.

Soils – Soil data for the project site was obtained from the Rensselaer County Soil Survey, which is provided as Map C of this document. The soils on the site consist primarily of Nassau-Manlius complex, undulating (NaB); Nassau-Manlius complex, rolling (NaC); and Nassau-Rock outcrop complex, rolling (NrC), which are all somewhat excessively drained. Other prominent soils include Scriba silt loam (SrB), a somewhat poorly drained soil; and Bernardston gravelly silt loam (BeC), a well drained soil. The soil survey mapping was confirmed by the on-site inspections.

Hydrology – The entire project site, with the exception of one isolated wetland, drains via overland flow and man-made ditches into small, unnamed tributaries to Sweet Milk Creek. No evidence of shallow groundwater table was observed at the site.

The delineation of the wetland boundaries was conducted in accordance with the procedures provided in the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual. The "Routine Wetland Determination" method was used based on the characteristics of the project site.

Prior to visiting the site, various maps and other sources of background information were reviewed. These include the New York State Freshwater Wetlands Map, the Rensselaer County Soil Survey, aerial photographs, and the topographic map (Troy South U.S.G.S. Quadrangle).

Wetland boundaries were determined in the field based on the three-parameter approach, whereby an area is a wetland if it exhibits a dominance of wetland vegetation (FAC, FACW or OBL), hydric soils, and the presence or evidence of water at or near the soil surface during the growing season. The primary indicator for the field wetlands was vegetation and the depth of mottled clay soil below the plow layer. Primary hydrology indicators were not evident in some of the active farm field areas.

Stream boundaries were identified based on field observations, which demonstrate a defined bed and banks. This evidence includes scouring, a lack of vegetation, cobbled streambeds, and channelization, in addition to defined stream flows.

Isolated wetlands were delineated based on the three-parameter approach referenced above. However, the lack evidence of any direct, indirect, or historical connection to the tributary systems is the primary parameter for isolated determinations. All determinations on isolated waters must be confirmed by the ACOE.

Representative photographs of the wetlands, ditches, the stream and upland portions of the site were taken during the field visit and are provided in Appendix A. In addition, wetland data sheets were completed and are provided in Appendix B of this report.

Based on the methodology discussed in Section III of this report, the limits of the federal and/or state jurisdictional wetlands and streams were identified and delineated on the property. A surveyed delineation map of the wetland and stream boundaries is provided in Appendix D of this report. This map outlines six wetland areas, several wetland swales and ditches, a pond, and two stream channels on the 102.8-acre site. All but one of the wetland complexes on the project site appear to be directly connected to the Sweet Milk Creek tributary system. A small wetland pocket in a hilltop depression, "Wetland B", appears to be isolated from the tributary system. All of the wetlands on the site have been delineated and are discussed below.

Wetlands:

Wetland P/C consists of a pond and associated wetlands that drain into an unnamed tributary to Sweet Milk Creek. This wetland complex includes the lands of the Duncan-Walmart Preservation area, which is primarily outside of the jurisdictional determination limits. Approximately 0.34 acres of this wetland is on the project site. The pond edges are dominated by common wetland plants, such as Cattail, sedges, rushes, and Purple Loosestrife, while the swale and ditches are dominated by Reed Canary Grass, Cattail and sedges. Forested wetland with fringes of emergent marsh, shrub-scrub wetland, and wet meadow are located along this wetland's eastern border. These areas are dominated by common field wet species, along with Speckled Alder, Honeysuckles, Dogwood, Willow, American Elm, and Red Maple.

Wetland D consists of a series of man-made swales north of, and connected to the existing farm pond (Wetland P). These swales are dominated by Purple Loosestrife and are well defined buy upland lawn on either side.

Wetland B lies in a hilltop depression and appears to be isolated from the tributary system. No evidence of wetland drainage was evident during the field investigation. The wetland is approximately 0.211 acres and consists of wet meadow areas that collect overland flow. It is dominated by sedges, rushes, Reed Canary Grass, and other common wet meadow species. It appears that the only outlet of water from this wetland is evaporation and plant uptake.

Wetland F consists of a forested and emergent marsh wetland that extends onto the ROUSE at Brunswick senior housing complex property. It is dominated with Green Ash, Red Maple, and Stiff Dogwood. Invasive plants such as Purple Loosestrife and Cattail, among others, also dominate this wetland. Approximately 0.35 acres of this wetland is located on the subject property.

Wetland K is a largest wetland on the site, and consists of forested, emergent marsh, and wet meadow wetlands. The wetland becomes channelized into a stream as it reaches the property boundary. The wetland is approximately 0.86 acres and is dominated by Cattail, sedges, rushes, Purple Loosestrife and other common wetland forbs in the field areas; Dogwood and Willow shrubs in the brushy areas; and Red Maple, American Elm and Green Ash in the wooded

Wetland T is associated with and adjacent to "Stream T," which flows along the western property boundary, as described below. The wetland is dominated by Dogwood shrubs and other common wetland plants. Approximately 0.11 acres of the wetland is on the subject property.

Streams:

Three small stream channels were identified within the delineated wetlands on the project site. These stream reaches are located in Wetland T; at the outlet of Wetland K in the western half of the site; and the reach between wetland C and wetland P in the eastern half of the site. All of these streams have been given a classification of "C" by the DEC. They are typical slow moving streams that are somewhat degraded by ongoing agricultural activities along their borders.

Stream K is located in the southern portion of the site and flows southward from Wetland K off of the property. This intermittent tributary consists of a slow moving silty-bottomed swale with an average width of 2 feet. Approximately 300 linear feet of this stream is located on the property.

Stream T is a perennial stream located in the western portion of the site. It flows toward the south through Wetland T, and off of the property. The stream is silt bottomed, and approximately 3 feet wide.

Stream C consists of a man made channel, approximately 2 feet wide, which flows along the barnyard areas, through a narrow wetland complex that is dominated by Purple Loosestrife. The channel flows through a culvert that carries an existing farm road over the wetland complex. The stream exits the culvert into a man made farm pond.

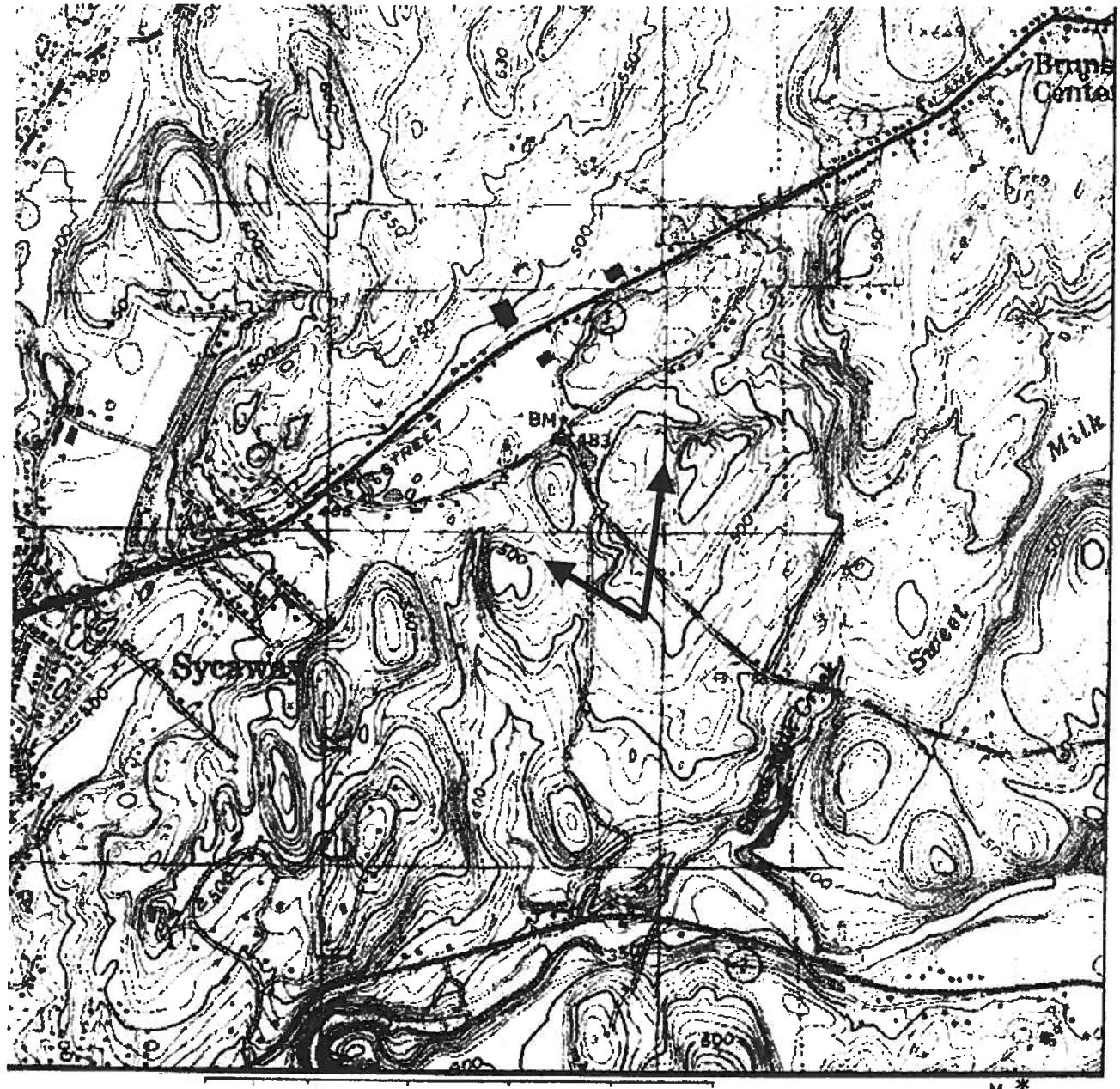
A total of approximately 2.104 acres of wetland habitat was delineated on the 102.8-acre project site. The wetlands on the remaining 6.5 acres of the property are not included in the delineation as part of the site.

Approximately 1.893 acres of the delineated wetlands, including the streams and ditches, drain towards unnamed tributaries of Sweet Milk Creek and would therefore be regulated under the CWA. Approximately 0.211 acres of these wetlands appear to be isolated from the tributary system, and may not be regulated under the Army Corps of Engineers (ACOE) under section 404 of the Clean Water Act (CWA). All determinations regarding isolated waters must be confirmed by the ACOE.

All of the wetlands on the site have been disturbed either directly or indirectly by regular agricultural practices. The ongoing disturbances have resulted in a progression of invasive and opportunistic wetland species, and degradation of water quality. The wetlands do provide environmental functions for stormwater protection, erosion and sediment control, and wildlife habitat, among others. However, these functions have been reduced by the agricultural activities surrounding them and their general position in the landscape.

List of Maps

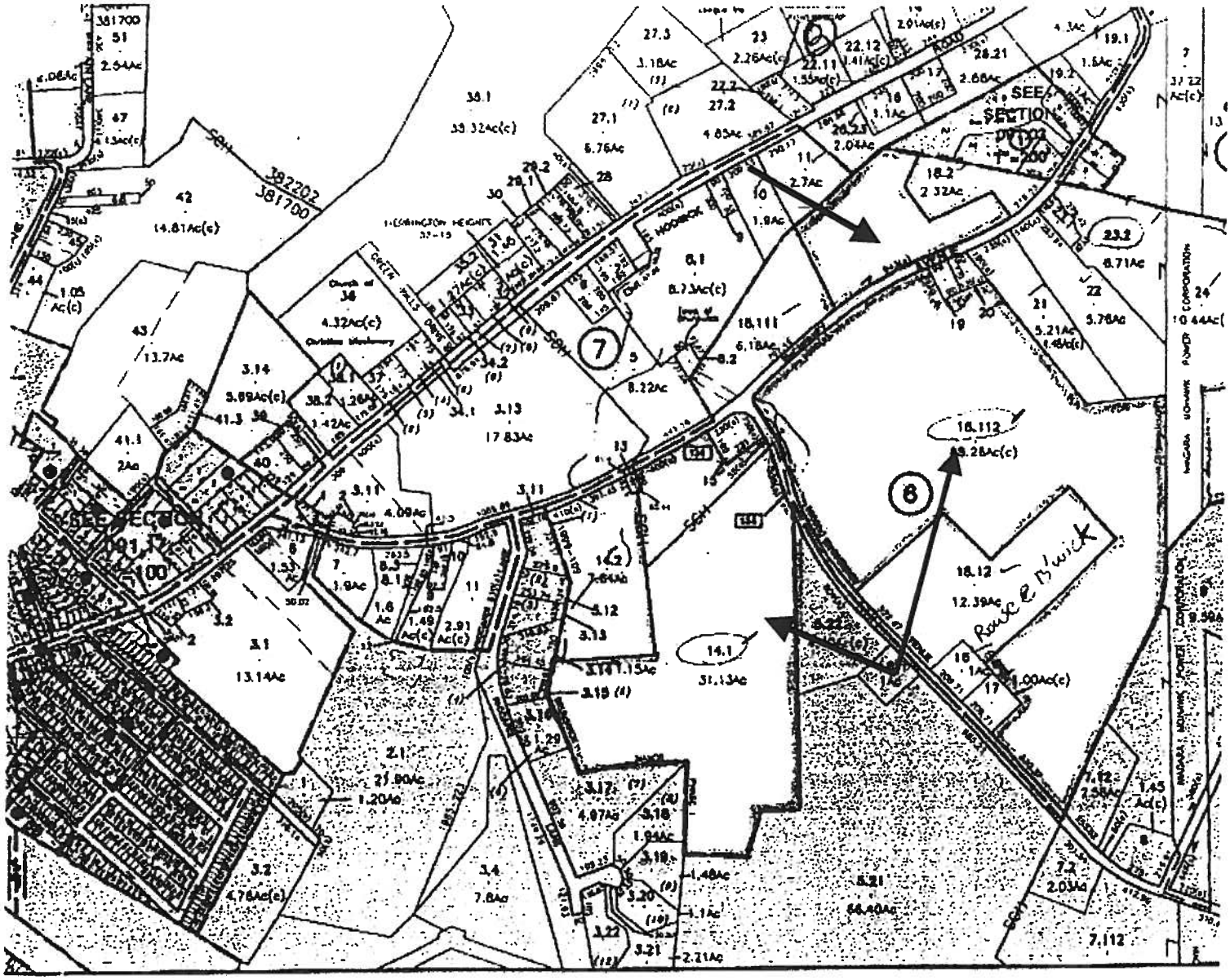
Map A
Duncan Meadows
Site Location Map
Troy South Quadrangle



Troy South quadrangle
Projection is UTM Zone 18 NAD83 Datum

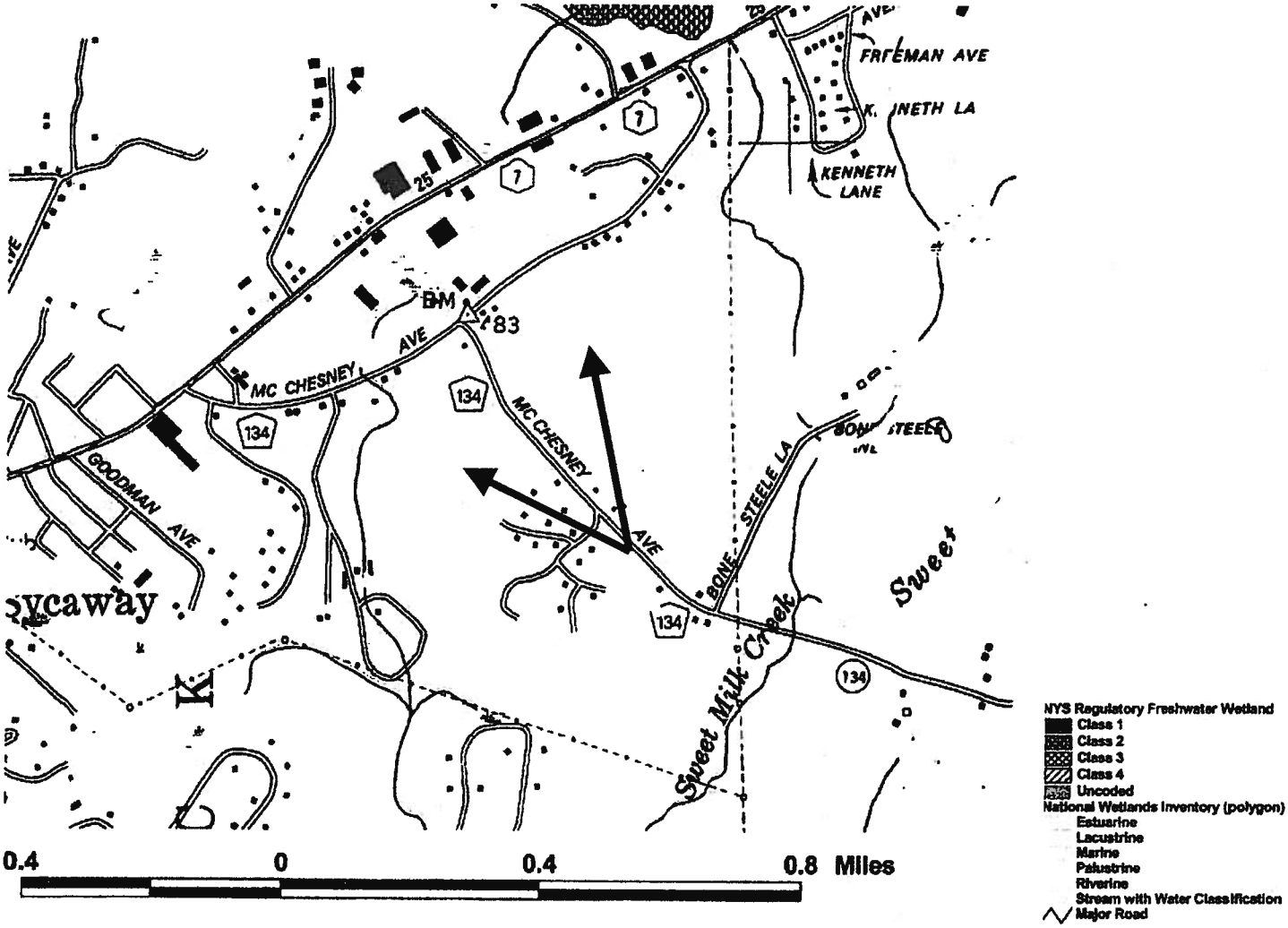
M=-14.347
G=0.927

Map B
Duncan Meadows
Property Tax Map

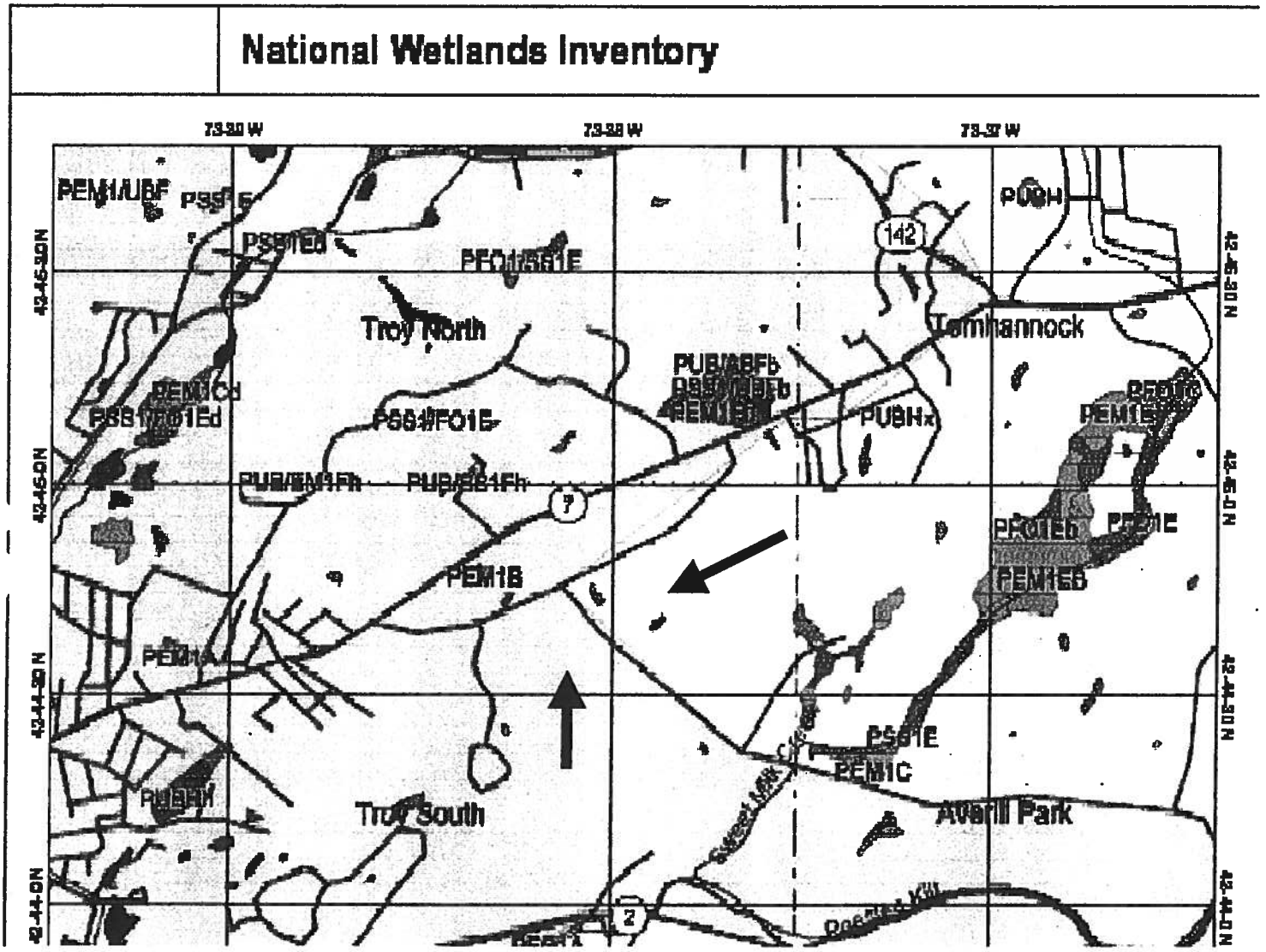


Map C
Duncan Meadows
Rensselaer County Soil Survey Map

Map D
Duncan Meadows
NYSDEC Wetland Map



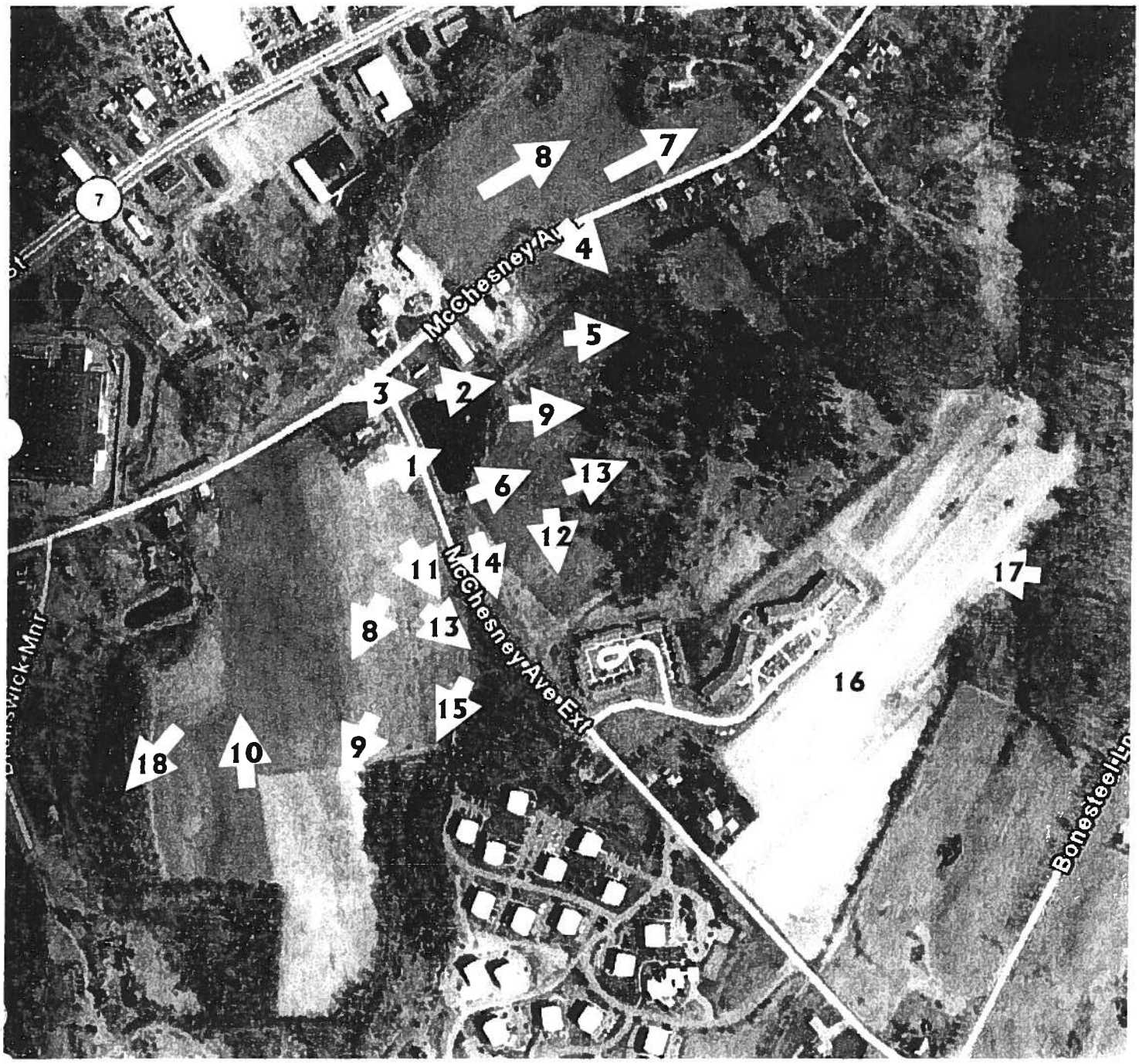
Map E
Duncan Meadows
NWI Map



Map F
Duncan Meadows
Aerial Photo

List of Appendices

Duncan Meadows
Photo Legend
McChesney Ave. and McChesney Ave. Ext., Brunswick, NY



Photographs for Duncan Meadows
Brunswick, New York
Taken July 2006

Picture 1

Picture 2

Photographs for Duncan Meadows
Brunswick, New York
Taken July 2006

Picture 3

Picture 4

Photographs for Duncan Meadows
Brunswick, New York
Taken July 2006

Picture 5

Picture 6

Photographs for Duncan Meadows
Brunswick, New York
Taken July 2006

Picture 7

Picture 8

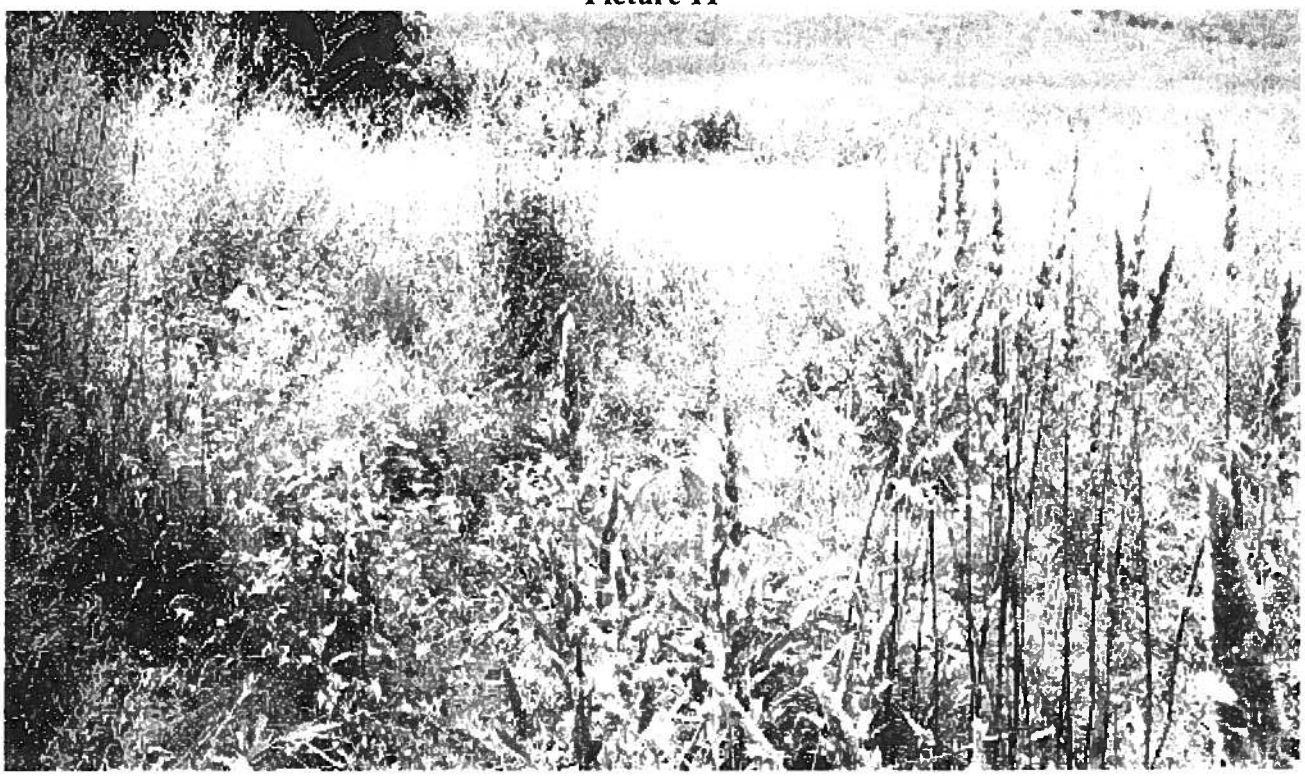
Photographs for Duncan Meadows
Brunswick, New York
Taken July 2006

Picture 9

Picture 10

Photographs for Duncan Meadows
Brunswick, New York
Taken July 2006

Picture 11

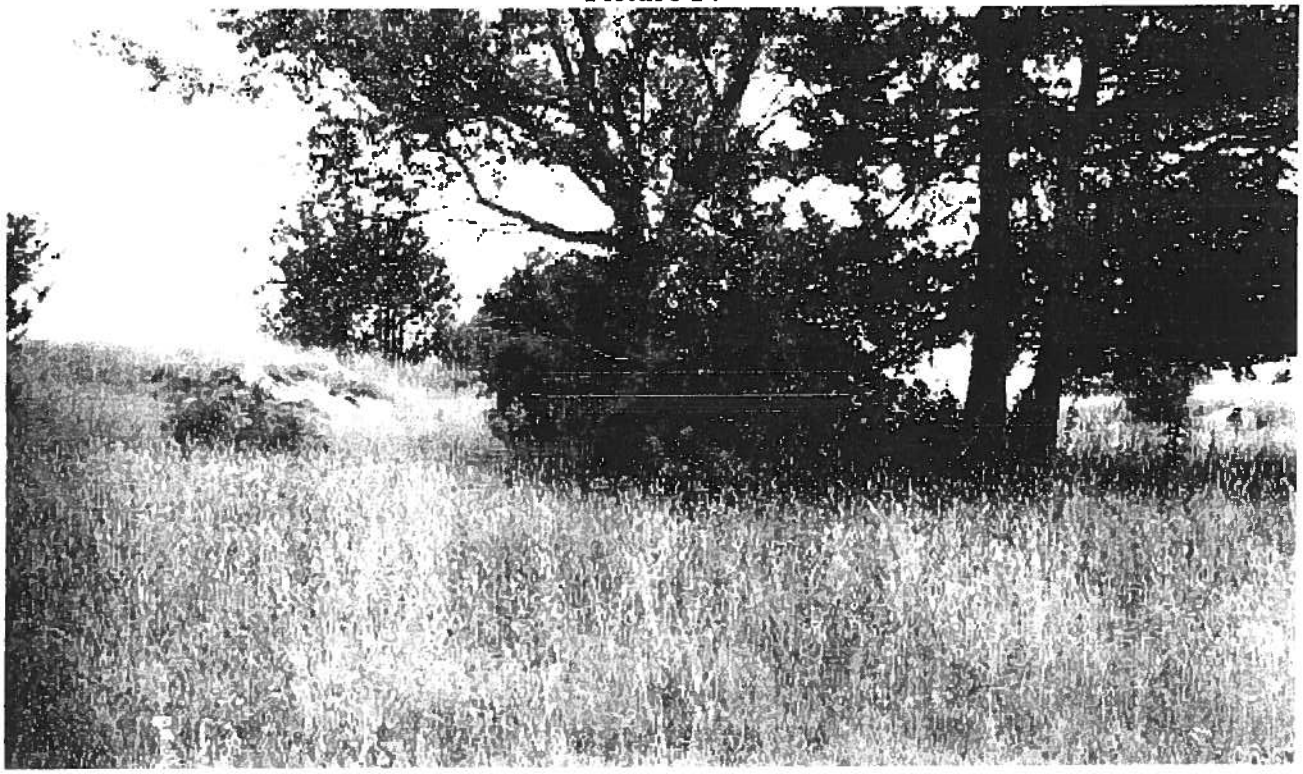


Picture 12

Photographs for Duncan Meadows
Brunswick, New York
Taken July 2006

Picture 13

Picture 14



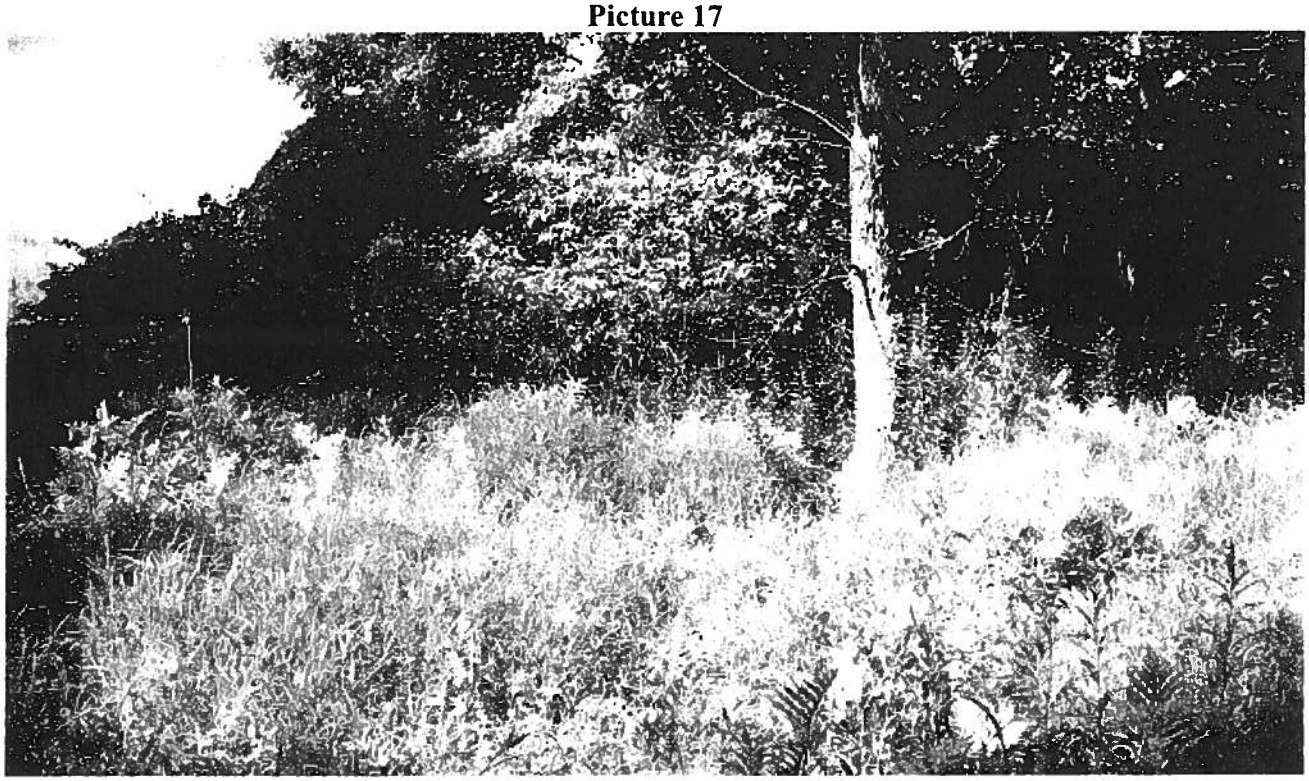
Photographs for Duncan Meadows
Brunswick, New York
Taken July 2006

Picture 15

Picture 16

Photographs for Duncan Meadows
Brunswick, New York
Taken July 2006

Picture 17



Picture 18

Appendix B

Wetland Data Forms

ROUTINE WETLAND DETERMINATION DATA FORM
(1987 COE Wetlands Delineation Manual)

Appendix B

Prepared By: COPELAND ENVIRONMENTAL LLC
208 BURKE ROAD, SARATOGA SPRINGS, NEW YORK 12866
phone/fax: 518-581-0216 www.CopelandEnvironmental.com
Project / Site: Duncan Meadows, McChesney Avenue, Town of Brunswick, New York
Applicant/Owner: L. Sipperly & Associates
Investigator: Kim Copenhaver, Peter Olmstead - Copeland Environmental LLC

Date: July 6, 2006
County: Rensselaer
State: New York
Community ID: Sedge Meadow
Transect ID:
Plot ID: Wetland B

Do normal circumstances exist on the site?	No ___	Yes x
Is the site significantly disturbed (atypical situation)?	No x	Yes ___
Is the area a potential problem area?	No x	Yes ___ (*explain on reverse*)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1) Lurid Sedge (Carex lurida)	H	FACW
2) Soft Rush (Juncus effusus)	H	FACW+
3) Reed Canary Grass (Phalaris arundinacea)	H	FACW+
4) Fox Sedge (Carex vulpinoidea)	H	OBL
5) Green Bulrush (Scirpus atrovirens)	H	OBL
6) Twig Rush (Cladium mariscoides)	H	OBL
7) Cattail (Typha angustifolia)	H	OBL
8)		
9)		

100% Percent of dominant species that are OBL, FACW or FAC (excluding FAC)

Remarks:

HYDROLOGY

Primary Wetland Hydrology Indicators:
- ___ Inundated
- x Saturated in upper 12 inches
- ___ Water marks
- ___ Drift lines
- ___ Sediment deposits
- x Drainage patterns in wetlands

Secondary Wetland Indicators (2 or more required):
- ___ Oxidized root channels in upper 12 inches
- ___ Water stained leaves
- ___ Local soil survey data
- ___ FAC neutral test
- ___ Other (*explain in remarks*)

Recorded Data (*describe in remarks*):
- ___ State or National Wetland maps
- ___ Aerial photographs
- ___ USGS Topo Map
- x No recorded data available

Field Observations:
- ___ Depth of surface water (inches)
- 6 Depth to free water in pit (inches)
- 3 Depth to saturated soil (inches)

Remarks:

SOILS

Map Unit Name (series & phase): Scriba silt loam
Taxonomy (subgroup): ___
Drainage Class: Somewhat poorly drained

Field observations confirm mapped type? No ___ Yes x

Profile Description:

Depth in Inches	Horizon	Matrix Color	Mottle Colors	Mottle Abundance Contrast	Texture, Concretions, Structure, Etc.
4	A	10YR 3/2	none		silt loam
9	A	10YR 3/1	none		silt loam

Hydric Soil Indicators:
- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- x Reducing Conditions
- x Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in sandy soil surface layer
- ___ Organic Streaking in sandy soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (*explain in remarks*)

Remarks:

WETLAND DETERMINATION

Hydrophytic vegetation present?	No ___	Yes x	Hydric soils present?	No ___	Yes x
Wetland hydrology present?	No ___	Yes x	Is this sampling point within a wetland?	No ___	Yes x

Remarks

ROUTINE WETLAND DETERMINATION DATA FORM
(1987 COE Wetlands Delineation Manual)

Appendix B

Prepared By: COPELAND ENVIRONMENTAL LLC
208 BURKE ROAD, SARATOGA SPRINGS, NEW YORK 12866
phone/fax: 518-581-0216 www.CopelandEnvironmental.com
Project / Site: Duncan Meadows, McChesney Avenue, Town of Brunswick, New York
Applicant/Owner: L. Sipperly & Associates
Investigator: Kim Copenhaver, Peter Olmstead - Copeland Environmental LLC

Date: July 6, 2006
County: Rensselaer
State: New York
Community ID: Forested Wetland
Transect ID:
Plot ID: Wetland C

Do normal circumstances exist on the site?	No ___	Yes x
Is the site significantly disturbed (atypical situation)?	No x	Yes ___
Is the area a potential problem area?	No x	Yes ___ (*explain on reverse*)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1) Skunk Cabbage (Symplocarpus foetidus)	H	OBL
2) Jewelweed (Impatiens capensis)	H	FACW+
3) American Elm (Ulmus americana)	T	FACW+
4) Red Maple (Acer rubrum)	T	FAC
5) Green Ash (Fraxinus penssylvanica)	T	FACW
6) Carex spp.	H	OBL
7) Purple Loosestrife (Lythrum salicaria)	H	FACW
8) Virginia Creeper (Parthenocissus quinquefolia)	V	FACU
9)		

88% **Percent of dominant species that are OBL, FACW or FAC (excluding FAC)**

Remarks:

HYDROLOGY

Primary Wetland Hydrology Indicators:
___ Inundated
x Saturated in upper 12 inches
___ Water marks
___ Drift lines
___ Sediment deposits
x Drainage patterns in wetlands

Secondary Wetland Indicators (2 or more required):
___ Oxidized root channels in upper 12 inches
___ Water stained leaves
___ Local soil survey data
___ FAC neutral test
___ Other (*explain in remarks*)

Recorded Data (*describe in remarks*):
___ State or National Wetland maps
___ Aerial photographs
___ USGS Topo Map
x No recorded data available

Field Observations:
___ Depth of surface water (inches)
6 Depth to free water in pit (inches)
3 Depth to saturated soil (inches)

Remarks:

SOILS

Map Unit Name (series & phase): Alden silt loam
Taxonomy (subgroup):
Drainage Class: very poorly drained

Field observations confirm mapped type? No ___ Yes x

Profile Description:

Depth in Inches	Horizon	Matrix Color	Mottle Colors	Mottle Abundance Contrast	Texture, Concretions, Structure, Etc.
5	A	10yr 4/2	none		silt loam
10		10YR 4/1	10 YR 4/4	20%	silt loam

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
x Reducing Conditions
x Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in sandy soil surface layer
___ Organic Streaking in sandy soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (*explain in remarks*)

Remarks:

WETLAND DETERMINATION

Hydrophytic vegetation present?	No ___	Yes X	**Hydric soils present?**	No ___	Yes X
Wetland hydrology present?	No ___	Yes X	**Is this sampling point within a wetland?**	No ___	Yes X

Remarks:

ROUTINE WETLAND DETERMINATION DATA FORM
(1987 COE Wetlands Delineation Manual)

Appendix B

Prepared By: COPELAND ENVIRONMENTAL LLC
208 BURKE ROAD, SARATOGA SPRINGS, NEW YORK 12866
phone/fax: 518-581-0216 www.CopelandEnvironmental.com
Project / Site: Duncan Meadows, McChesney Avenue, Town of Brunswick, New York
Applicant/Owner: L. Sipperly & Associates
Investigator: Kim Copenhaver, Peter Olmstead - Copeland Environmental LLC

Date: July 6, 2006
County: Rensselaer
State: New York
Community ID: Forested wetland
Transect ID:
Plot ID: Wetland F

Do normal circumstances exist on the site?	No ___	Yes x
Is the site significantly disturbed (atypical situation)?	No x	Yes ___
Is the area a potential problem area?	No x	Yes ___ (*explain on reverse*)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1) Skunk Cabbage (Symplocarpus foetidus)	H	OBL
2) Jewelweed (Impatiens capensis)	H	FACW+
3) Red Maple (Acer rubrum)	T	FAC
4) Sensative Fern (Onoclea sensabilis)	H	FACW+
5) Carex spp.	H	
6)		
7)		
8)		
9)		

100% Percent of dominant species that are OBL, FACW or FAC (excluding FAC)

Remarks:

HYDROLOGY

Primary Wetland Hydrology Indicators:
___ Inundated
x Saturated in upper 12 inches
___ Water marks
___ Drift lines
___ Sediment deposits
x Drainage patterns in wetlands

Secondary Wetland Indicators (2 or more required):
___ Oxidized root channels in upper 12 inches
___ Water stained leaves
___ Local soil survey data
___ FAC neutral test
___ Other (*explain in remarks*)

Recorded Data (*describe in remarks*):
___ State or National Wetland maps
___ Aerial photographs
___ USGS Topo Map
x No recorded data available

Field Observations:
___ Depth of surface water (inches)
___ Depth to free water in pit (inches)
___ Depth to saturated soil (inches)

Remarks:

SOILS

Map Unit Name (series & phase): Nassau - Rock Outcrp complex
Taxonomy (subgroup): ___
Drainage Class: Somewhat excessivey drained

Field observations confirm mapped type? No ___ Yes x

Profile Description:

Depth in Inches	Horizon	Matrix Color	Mottle Colors	Mottle Abundance Contrast	Texture, Concretions, Structure, Etc.
5	A	10 YR 3/2	10YR 4/4	20%	Shaly silt loam
10		10YR 3/1	10YR 4/4	20%	

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
x Reducing Conditions
x Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in sandy soil surface layer
___ Organic Streaking in sandy soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (*explain in remarks*)

Remarks:

WETLAND DETERMINATION

Hydrophytic vegetation present?	No ___	Yes x	Hydric soils present?	No ___	Yes x
Wetland hydrology present?	No ___	Yes x	Is this sampling point within a wetland?	No ___	Yes x

ROUTINE WETLAND DETERMINATION DATA FORM
(1987 COE Wetlands Delineation Manual)

Appendix B

Prepared By: COPELAND ENVIRONMENTAL LLC
208 BURKE ROAD, SARATOGA SPRINGS, NEW YORK 12866
phone/fax: 518-581-0216 www.CopelandEnvironmental.com
Project / Site: Duncan Meadows, McChesney Avenue, Town of Brunswick, New York
Applicant/Owner: L. Sipperly & Associates
Investigator: Kim Copenhaver, Peter Olmstead - Copeland Environmental LLC

Date: July 6, 2006
County: Rensselaer
State: New York
Community ID: Emergent marsh
Transect ID:
Plot ID: Wetland H

Do normal circumstances exist on the site?	No ___	Yes x	
Is the site significantly disturbed (atypical situation)?	No x	Yes ___	
Is the area a potential problem area?	No x	Yes ___	(*explain on reverse*)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1) Cattail (Typha angustifolia)	H	OBL
2) Jewelweed (Impatiens capensis)	H	FACW+
3) Skunk Cabbage (Symplocarpus foetidus)	H	OBL
4) Reed Canary Grass (Phalaris arundinacea)	H	FACW
5) Sensative Fern (Onoclea sensabilis)	H	FACW+
6)		
7)		
8)		
9)		

100% Percent of dominant species that are OBL, FACW or FAC (excluding FAC)

Remarks:

HYDROLOGY

Primary Wetland Hydrology Indicators:
___ Inundated
x Saturated in upper 12 inches
___ Water marks
___ Drift lines
___ Sediment deposits
x Drainage patterns in wetlands

Secondary Wetland Indicators (2 or more required):
___ Oxidized root channels in upper 12 inches
___ Water stained leaves
___ Local soil survey data
___ FAC neutral test
___ Other (*explain in remarks*)

Recorded Data (*describe in remarks*):
___ State or National Wetland maps
___ Aerial photographs
___ USGS Topo Map
x No recorded data available

Field Observations:
___ Depth of surface water (inches)
6 Depth to free water in pit (inches)
3 Depth to saturated soil (inches)

Remarks:

SOILS

Map Unit Name (series & phase): Nassua - Manlius Complex
Taxonomy (subgroup):
Drainage Class: Somewhat excessivey drained

Field observations confirm mapped type? No ___ Yes x

Profile Description:

Depth in Inches	Horizon	Matrix Color	Mottle Colors	Mottle Abundance Contrast	Texture, Concretions, Structure, Etc.
5	A	10 YR 3/1	none		silt loam
10		10 YR 3/1	10 YR 3/4	20%	silt loam

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
x Reducing Conditions
x Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in sandy soil surface layer
___ Organic Streaking in sandy soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (*explain in remarks*)

Remarks:

WETLAND DETERMINATION

Hydrophytic vegetation present?	No ___	Yes X	Hydric soils present?	No ___	Yes X
Wetland hydrology present?	No ___	Yes X	Is this sampling point within a wetland?	No ___	Yes X

ROUTINE WETLAND DETERMINATION DATA FORM
(1987 COE Wetlands Delineation Manual)

Appendix B

Prepared By: COPELAND ENVIRONMENTAL LLC
208 BURKE ROAD, SARATOGA SPRINGS, NEW YORK 12866
phone/fax: 518-581-0216 www.CopelandEnvironmental.com
Project / Site: Duncan Meadows, McChesney Avenue, Town of Brunswick, New York
Applicant/Owner: L. Sipperly & Associates
Investigator: Kim Copenhaver, Peter Olmstead - Copeland Environmental LLC

Date: July 6, 2006
County: Rensselaer
State: New York
Community ID: Forested wetland
Transect ID:
Plot ID: Wetland K

Do normal circumstances exist on the site?	No ___	Yes x
Is the site significantly disturbed (atypical situation)?	No x	Yes ___
Is the area a potential problem area?	No x	Yes ___ (*explain on reverse*)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1) Skunk Cabbage (Symplocarpus foetidus)	H	OBL
2) Jewelweed (Impatiens capensis)	H	FACW+
3) Red Maple (Acer rubrum)	T	FACW+
4) Sensative Fern (Onoclea sensabilis)	H	FACW+
5) Carex spp.	H	OBL
6) Common Reed (Phragmites australis)	H	FACW
7)		
8)		
9)		

100% Percent of dominant species that are OBL, FACW or FAC (excluding FAC)

Remarks:

HYDROLOGY

Primary Wetland Hydrology Indicators:
- ___ Inundated
- x Saturated in upper 12 inches
- ___ Water marks
- ___ Drift lines
- ___ Sediment deposits
- x Drainage patterns in wetlands

Secondary Wetland Indicators (2 or more required):
- ___ Oxidized root channels in upper 12 inches
- ___ Water stained leaves
- ___ Local soil survey data
- ___ FAC neutral test
- ___ Other (*explain in remarks*)

Recorded Data (*describe in remarks*):
- ___ State or National Wetland maps
- ___ Aerial photographs
- ___ USGS Topo Map
- x No recorded data available

Field Observations:
- ___ Depth of surface water (inches)
- ___ Depth to free water in pit (inches)
- ___ Depth to saturated soil (inches)

Remarks:

SOILS

Map Unit Name (series & phase): Scriba Silt Loam
Taxonomy (subgroup): ___
Drainage Class: somewhat poorly drained

Field observations confirm mapped type? No ___ Yes x

Profile Description:

Depth in Inches	Horizon	Matrix Color	Mottle Colors	Mottle Abundance Contrast	Texture, Concretions, Structure, Etc.
4	A	10 YR 3/2	none		Sand silt loam
9		10 YR3/1	none		

Hydric Soil Indicators:
- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- x Reducing Conditions
- x Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in sandy soil surface layer
- ___ Organic Streaking in sandy soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (*explain in remarks*)

Remarks:

WETLAND DETERMINATION

Hydrophytic vegetation present?	No ___	Yes X	Hydric soils present?	No ___	Yes X
Wetland hydrology present?	No ___	Yes X	Is this sampling point within a wetland?	No ___	Yes X

Remarks:

ROUTINE WETLAND DETERMINATION DATA FORM
(1987 COE Wetlands Delineation Manual)

Appendix B

Prepared By: COPELAND ENVIRONMENTAL LLC
208 BURKE ROAD, SARATOGA SPRINGS, NEW YORK 12866
phone/fax: 518-581-0216 www.CopelandEnvironmental.com
Project / Site: Duncan Meadows, McChesney Avenue, Town of Brunswick, New York
Applicant/Owner: L. Sipperly & Associates
Investigator: Kim Copenhaver, Peter Olmstead - Copeland Environmental LLC

Date: July 6, 2006
County: Rensselaer
State: New York
Community ID: Pond
Transect ID:
Plot ID: Wetland P

Do normal circumstances exist on the site?	No ___	Yes x
Is the site significantly disturbed (atypical situation)?	No x	Yes ___
Is the area a potential problem area?	No x	Yes ___ (*explain on reverse*)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1) Black Willow (Slalx nigra)	S	FACW+
2) Jewelweed (Impatiens capensis)	H	FACW+
3) Red Osier Dogwood (Cornus stolonifera)	S	FACW+
4) Duckweed (Lemna minor)	H	OBL
5) Arrow Arum (Peltandra virginica)	H	OBL
6) Boxelder (Acer negundo)	T	FAC+
7)		
8)		
9)		

100% **Percent of dominant species that are OBL, FACW or FAC (excluding FAC)**

Remarks:

HYDROLOGY

Primary Wetland Hydrology Indicators:
___ Inundated
x Saturated in upper 12 inches
___ Water marks
___ Drift lines
___ Sediment deposits
x Drainage patterns in wetlands

Secondary Wetland Indicators (2 or more required):
___ Oxidized root channels in upper 12 inches
___ Water stained leaves
___ Local soil survey data
___ FAC neutral test
___ Other (*explain in remarks*)

Recorded Data (*describe in remarks*):
___ State or National Wetland maps
___ Aerial photographs
___ USGS Topo Map
x No recorded data available

Field Observations:
___ Depth of surface water (inches)
6 Depth to free water in pit (inches)
3 Depth to saturated soil (inches)

Remarks:

SOILS

Map Unit Name (series & phase): Scriba silt loam
Taxonomy (subgroup):
Drainage Class: Somewhat poorly drained

Field observations confirm mapped type? No ___ Yes x

Profile Description:

Depth in Inches	Horizon	Matrix Color	Mottle Colors	Mottle Abundance Contrast	Texture, Concretions, Structure, Etc.
5	A	10 YR3/1	none		Sand silt loam

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
x Reducing Conditions
x Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in sandy soil surface layer
___ Organic Streaking in sandy soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (*explain in remarks*)

Remarks:

WETLAND DETERMINATION

Hydrophytic vegetation present?	No ___	Yes X	**Hydric soils present?**	No ___	Yes X
Wetland hydrology present?	No ___	Yes X	**Is this sampling point within a wetland?**	No ___	Yes X

Remarks:

ROUTINE WETLAND DETERMINATION DATA FORM
(1987 COE Wetlands Delineation Manual)

Appendix B

Prepared By: COPELAND ENVIRONMENTAL LLC
208 BURKE ROAD, SARATOGA SPRINGS, NEW YORK 12866
phone/fax: 518-581-0216 www.CopelandEnvironmental.com
Project / Site: Duncan Meadows, McChesney Avenue, Town of Brunswick, New York
Applicant/Owner: L. Sipperly & Associates
Investigator: Kim Copenhaver, Peter Olmstead - Copeland Environmental LLC

Date: July 6, 2006
County: Rensselaer
State: New York
Community ID: Emergent marsh with stream
Transect ID:
Plot ID: Wetland T

Do normal circumstances exist on the site?	No ___	Yes x
Is the site significantly disturbed (atypical situation)?	No x	Yes ___
Is the area a potential problem area?	No x	Yes ___ (*explain on reverse*)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1) Skunk Cabbage (Symplocarpus foetidus)	H	OBL
2) Jewelweed (Impatiens capensis)	H	FACW+
3) Sensative Fern (Onoclea sensabilis	H	FACW+
4) Boneset (Eupatorium perfoliatum)	H	FACW+
5)		
6)		
7)		
8)		
9)		

100% Percent of dominant species that are OBL, FACW or FAC (excluding FAC)

Remarks:

HYDROLOGY

Primary Wetland Hydrology Indicators:
___ Inundated
x Saturated in upper 12 inches
___ Water marks
___ Drift lines
___ Sediment deposits
x Drainage patterns in wetlands

Secondary Wetland Indicators (2 or more required):
___ Oxidized root channels in upper 12 inches
___ Water stained leaves
___ Local soil survey data
___ FAC neutral test
___ Other (*explain in remarks*)

Recorded Data (*describe in remarks*):
___ State or National Wetland maps
___ Aerial photographs
___ USGS Topo Map
x No recorded data available

Field Observations:
___ Depth of surface water (inches)
___ Depth to free water in pit (inches)
___ Depth to saturated soil (inches)

Remarks:

SOILS

Map Unit Name (series & phase): Bernerdston gravelly silt loam
Taxonomy (subgroup):
Drainage Class: well drained

Field observations confirm mapped type? No ___ Yes x

Profile Description:

Depth in Inches	Horizon	Matrix Color	Mottle Colors	Mottle Abundance Contrast	Texture, Concretions, Structure, Etc.
5	A	10 YR 3/1	none		Sand silt loam

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
x Reducing Conditions
x Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in sandy soil surface layer
___ Organic Streaking in sandy soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (*explain in remarks*)

Remarks:

WETLAND DETERMINATION

Hydrophytic vegetation present?	No ___	Yes X	Hydric soils present?	No ___	Yes X
Wetland hydrology present?	No ___	Yes X	Is this sampling point within a wetland?	No ___	Yes X

Remarks:

ROUTINE WETLAND DETERMINATION DATA FORM
(1987 COE Wetlands Delineation Manual)

Appendix B

Prepared By: COPELAND ENVIRONMENTAL LLC
208 BURKE ROAD, SARATOGA SPRINGS, NEW YORK 12866
phone/fax: 518-581-0216 www.CopelandEnvironmental.com
Project / Site: Duncan Meadows, McChesney Avenue, Town of Brunswick, New York
Applicant/Owner: L. Sipperly & Associates
Investigator: Kim Copenhaver, Peter Olmstead - Copeland Environmental LLC

Date: July 6, 2006
County: Rensselaer
State: New York
Community ID: Forested Upland
Transect ID:
Plot ID:

Do normal circumstances exist on the site?	No ___	Yes x
Is the site significantly disturbed (atypical situation)?	No x	Yes ___
Is the area a potential problem area?	No x	Yes ___ (*explain on reverse*)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1) Virginia Creeper (Parthenocissus quinquefolia)	V	FACU
2) Eastern White Pine (Pinus strobus)	T	FACU
3) Mayapple (Podophyllum peltatum)	H	FACU
4) Red Maple (Acer rubrum)	T	FAC
5)		
6)		
7)		
8)		
9)		

25% Percent of dominant species that are OBL, FACW or FAC (excluding FAC)

Remarks:

HYDROLOGY

Primary Wetland Hydrology Indicators:
___ Inundated
___ Saturated in upper 12 inches
___ Water marks
___ Drift lines
___ Sediment deposits
___ Drainage patterns in wetlands

Secondary Wetland Indicators (2 or more required):
___ Oxidized root channels in upper 12 inches
___ Water stained leaves
___ Local soil survey data
___ FAC neutral test
___ Other (*explain in remarks*)

Recorded Data (*describe in remarks*):
___ State or National Wetland maps
___ Aerial photographs
___ USGS Topo Map
x No recorded data available

Field Observations:
___ Depth of surface water (inches)
___ Depth to free water in pit (inches)
___ Depth to saturated soil (inches)

Remarks:

SOILS

Map Unit Name (series & phase): Nassau - Rock Outcrp complex
Taxonomy (subgroup):
Drainage Class: poorly drained

Field observations confirm mapped type? No ___ Yes x

Profile Description:

Depth in Inches	Horizon	Matrix Color	Mottle Colors	Mottle Abundance Contrast	Texture, Concretions, Structure, Etc.
5	A	10YR 4/4	none		Shaly silt loam
11		10YR 4/3	none		shaly silt loam

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in sandy soil surface layer
___ Organic Streaking in sandy soils
x Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (*explain in remarks*)

Remarks:

WETLAND DETERMINATION

Hydrophytic vegetation present?	No x	Yes ___	Hydric soils present?	No x	Yes ___
Wetland hydrology present?	No x	Yes ___	Is this sampling point within a wetland?	No x	Yes ___

Remarks:

ROUTINE WETLAND DETERMINATION DATA FORM
(1987 COE Wetlands Delineation Manual)

Appendix B

Prepared By: COPELAND ENVIRONMENTAL LLC
208 BURKE ROAD, SARATOGA SPRINGS, NEW YORK 12866
phone/fax: 518-581-0216 www.CopelandEnvironmental.com
Project / Site: Duncan Meadows, McChesney Avenue, Town of Brunswick, New York
Applicant/Owner: L. Sipperly & Associates
Investigator: Kim Copenhaver, Peter Olmstead - Copeland Environmental LLC

Date: July 6, 2006
County: Rensselaer
State: New York
Community ID: Upland Meadow
Transect ID:
Plot ID:

	No	Yes	
Do normal circumstances exist on the site?	___	x	
Is the site significantly disturbed (atypical situation)?	x	___	
Is the area a potential problem area?	x	___	(*explain on reverse*)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1) Clover (Trifolium repens)	H	FACU-
2) Timothy grass (Phleum pratense)	H	FACU
3) Queen Anne's Lace (Daucus carota)	H	NL
4) Teasel (Dipsacus sylvestris)	H	NL
5)		
6)		
7)		
8)		
9)		

0% Percent of dominant species that are OBL, FACW or FAC (excluding FAC)

Remarks:

HYDROLOGY

Primary Wetland Hydrology Indicators:
___ Inundated
___ Saturated in upper 12 inches
___ Water marks
___ Drift lines
___ Sediment deposits
___ Drainage patterns in wetlands

Secondary Wetland Indicators (2 or more required):
___ Oxidized root channels in upper 12 inches
___ Water stained leaves
___ Local soil survey data
___ FAC neutral test
___ Other (*explain in remarks*)

Recorded Data (*describe in remarks*):
___ State or National Wetland maps
___ Aerial photographs
___ USGS Topo Map
x No recorded data available

Field Observations:
___ Depth of surface water (inches)
___ Depth to free water in pit (inches)
___ Depth to saturated soil (inches)

Remarks:

SOILS

Map Unit Name (series & phase): Nassau - Rock Outcrp complex
Taxonomy (subgroup):
Drainage Class: poorly drained

Field observations confirm mapped type? No ___ Yes x

Profile Description:

Depth in Inches	Horizon	Matrix Color	Mottle Colors	Mottle Abundance Contrast	Texture, Concretions, Structure, Etc.
5	A	10YR 3/4	none		Shaly silt loam
11		10YR 3/2	none		Shaly silt loam

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in sandy soil surface layer
___ Organic Streaking in sandy soils
x Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (*explain in remarks*)

Remarks:

WETLAND DETERMINATION

	No	Yes		No	Yes
Hydrophytic vegetation present?	x	___	Hydric soils present?	x	___
Wetland hydrology present?	x	___	Is this sampling point within a wetland?	x	___

Remarks:
Representative Upland meadow for entire property

Appendix C

Agency Correspondence

New York State Department of Environmental Conservation
Division of Environmental Permits, Region 4
1150 North Westcott Road, Schenectady, New York 12306-2014
Phone: (518) 357-2069 • **FAX:** (518) 357-2460
Website: www.dec.state.ny.us

Denise M. Sheehan
Commissioner

June 30, 2006

Kim Copenhaver
Copeland Environmental
208 Burke Road
Saratoga Springs, NY 12866

Re: Duncan Meadows
Town of Brunswick, Rensselaer County

Dear Ms. Copenhaver:

In response to your request, attached is a map printout of the area of McChesney Avenue in Brunswick for the subject parcel. There are no State-regulated freshwater wetlands in the subject area, or protected streams. The two tributaries noted are both class C.

The database shows the potential for federally regulated wetlands, and therefore, you are encouraged to contact the US Army Corps of Engineers in Troy to determine their jurisdiction in this project. Depending on the scope of the project and resulting impacts, a Water Quality Certification may be required from our Department.

If you have any questions or concerns, please contact me at (518) 357-2452.

Sincerely,

Nancy M. Adams
Environmental Analyst 2
Region 4

cc: File

Duncan Meadows