Appendix 9.6 Wetland Delineation Report

Wetland Delineation Report

Higher Ground Country Club Management Co., LLC Silo Ridge Resort Community State Route 22 Town of Amenia Dutchess County, New York

> December 2006 10454.00



Prepared for:

Higher Ground Country Club Management Co., LLC Mr. Robert Caeners General Manager P.O. Box 86, Route 22 Amenia, NY 12501 Wetland Delineation Report Higher Ground Country Club Management Co., LLC Silo Ridge Resort Community State Route 22 Town of Amenia Dutchess County, New York

December 2006



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TABLE OF CONTENTS

TABI	LE OF CONTENTS I
1.0	INTRODUCTION1
1.1	Applicant Information1
2.0	EXISTING CONDITIONS 1
2.1	Topography4
2.2	Soils4
2.3	Watercourses and Wetland Mapping14
2.3	3.1 Watercourses
2.3	3.2 Wetland Mapping15
2.4	Vegetative Communities19
3.0	METHODOLOGY
3.0 4.0	METHODOLOGY
4.0 4.1	RESULTS AND DISCUSSION
4.0 4.1 W	RESULTS AND DISCUSSION
4.0 4.1 W W	RESULTS AND DISCUSSION 24 Wetlands 25 etland C-1 25
4.0 4.1 W W W	RESULTS AND DISCUSSION 24 Wetlands 25 etland C-1 25 etland C-2 26
4.0 4.1 W W W	RESULTS AND DISCUSSION 24 Wetlands 25 etland C-1 25 etland C-2 26 etland C-3 26
4.0 4.1 W W W W	RESULTS AND DISCUSSION 24 Wetlands 25 etland C-1 25 etland C-2 26 etland C-3 26 etland G-1 26

Wet	and N/O	27
Wet	and S	27
Wet	and U	28
Wet	and W	28
Wet	and X	28
4.3	Regulated Wetlands and Waters On-site	28
4.3.1	US Army Corps of Engineers	28
4.3.2	NYSDEC Regulations	29
5.0 C	ONCLUSION	29

LIST OF TABLES

Table 2.3.1 Stream Characteristics	14
Table 2.3.1.2 Pond Characteristics	15
Table 2.3.2 NWI Definitions	17
Table 4.0.1 Summary of On-site Wetlands	24

LIST OF FIGURES

Figure 1.1-1	Site Location Map	. 3
Figure 2.2-1	Soil Map	13
Figure 2.3-1	NWI and NYSDEC Wetland Mapping	18
Figure 2.4-1	Aerial Photograph	22

APPENDICES

Appendix A:	Data	Sheets
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- Appendix B: Site Photographs
- Appendix C: Vegetative List
- Appendix D: Wetland Survey Map

1.0 INTRODUCTION

This wetland delineation report was prepared by The Chazen Companies (TCC) at the request of Higher Ground Country Club Management Co, LLC, as part of proposed site developments on the Silo Ridge Resort Community. The country club property encompasses approximately 670+ acres of land situated on New York State Route 22, in the Town of Amenia, Dutchess County, New York. Figure 1.1-1, provides an illustration of the property on the 1984, *United States Geological Survey* (USGS) Amenia Topographical Quadrangle.

The wetland delineation for this site was conducted by TCC on May 3, 5, 6 2005 using the three parameter approach as described in the 1987, US Army Corps of Engineers' Wetland Delineation Manual.¹ The following sections of this report provide the results of the delineation including a description of the existing conditions of the site, topography, soils, wetlands and hydrology, vegetative communities, methodology, results, and regulatory jurisdiction. A map of the wetland survey is included for reference in Appendix D.

1.1 Applicant Information

The Applicant for this project is Higher Ground Country Club Management Co, LLC. The country club contact person is Mr. Robert Caeners, General Manager, Silo Ridge Country Club. Mr. Caeners is located at the Silo Ridge Country Club, P.O. Box 86, Amenia, New York 12501, (845) 373-7000 ext. 102.

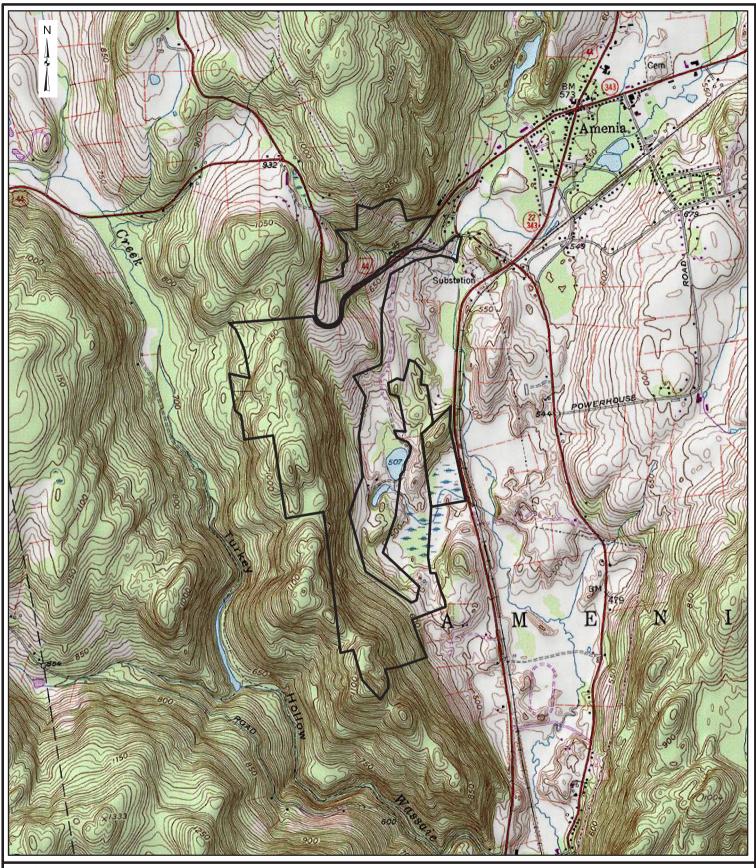
The Applicants' agent on this project is Mr. Dave Tompkins of The Chazen Companies. Mr. Tompkins' contact information is The Chazen Companies, 356 Meadow Avenue, Newburgh, New York, 12550, (845) 567-1133.

2.0 EXISTING CONDITIONS

The Silo Ridge Country Club is comprised of the main clubhouse, several maintenance buildings, and parking areas for faculty and visitors. The golf course is located in the northeast and central portions of the site. The western section of the site contains a ridgeline extending from the northern to southern boundary line. A New York State Department of Environment Conservation (NYSDEC) Wetland AM-15 is located in the southeast portion of the site.

¹ U.S. Army Corps of Engineers. 1987. Wetlands Delineation Manual, Technical Report Y-87-1.

Development to the north of the site consists primarily of residential homes and to the south is a landfill. Development to the east consists of several commercial/industrial properties, an area used to store storage tanks, and a gun club. The property to the west of the site consists of undeveloped land owned by the Tamarack Preserve.



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Figure 1.1-1 Site Location Map Silo Ridge Country Club Route 44 Town of Amenia, Dutchess County, New York

Date:
6/9/05
Scale:
1 inch equals 2,000 feet
Project #:
10454

USGS Topographic Map

2.1 Topography

The site topography is rolling to steep with elevations ranging from approximately 490 feet above mean sea level (msl) in the east-central portion of the site to approximately 1100 feet msl near the west-central boundary line. Figure 1.1-1, provides an illustration of the overall site topography.

2.2 Soils

According to the 2002 *Dutchess County Soil Survey*,² 17 soil types are mapped on the property. The following section provides a description of these soil types including soil properties, typical sequence, depth, and composition of soil groupings, hydric or non-hydric capabilities, and general location of the soils within the project area. Figure 2.2-1, "Soil Map," illustrates the location of the soils for this site.

<u>Copake gravelly silt loam, rolling (CuC)</u> – This Copake soil type is identified in the northeastern and central portions of the property. This mapping unit is comprised of very deep, well drained soils that were formed in glaciofluvial deposits high in limestone fragments. Permeability is moderate or moderately rapid in the surface layer and subsoil, and very rapid in the substratum. Surface runoff is medium and the hazard for erosion is moderate. The available water capacity is moderate. The depth to seasonal water table is more than six feet. Slopes range from five to 16 percent.

<u>Copake gravelly silt loam, hilly (CuD)</u> –This Copake soil type is located in the northeastern portion of the property. This mapping unit consist of very deep, well drained soils that formed in glaciofluvial deposits high in limestone fragments. Slopes are complex and range from 15 to 30 percent. Permeability is moderate or moderately rapid in the surface layer and subsoil and very rapid in the substratum. The available water capacity is moderate and the depth to seasonal high water is more than six feet. Surface runoff is medium and the hazard for erosion is severe.

<u>Copake channery silt loam, fan, 3 to 8 percent slopes (CwB)</u> –This Copake soil type is located in the central portion of the property. This mapping unit consists of very deep, gently sloping and well drained soils that formed in glacial outwash deposits. Slopes are complex and range from three to eight percent. Permeability is moderate or moderately rapid in the surface layer and subsoil and very rapid in the substratum. The available water capacity is moderate and the depth to seasonal high water is three to six feet (April thru May). Surface runoff is slow and the hazard for erosion is slight.

² USDA Natural Resource Conservation Service. Soil map for Dutchess County, New York.

The typical sequence, depth, and composition of the layers of Copake soils are as follows.

<u>0 to 6 inches</u> – dark brown (10YR 3/3) gravelly silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; very friable; many fine and medium roots; 15 percent rock fragments; neutral; abrupt smooth boundary;

<u>6 to 8 inches</u> – dark yellowish brown (10YR 4/6) gravelly loam; weak fine granular structure; very friable many fine and medium roots; 30 percent rock fragments; neutral; abrupt smooth boundary;

<u>8 to 24 inches</u> – olive brown (2.5Y 4/4) and yellowish brown (10YR 5/4) gravelly loam; weak fine subangular blocky structure; friable; common fine and few medium roots; 30 percent rock fragments; neutral; abrupt smooth boundary;

24 to 36 inches – light olive brown (2.5Y 4/4) and yellowish brown (10YR 5/4) gravelly loam; weak fine subangular blocky structure; friable; common fine and few medium roots; 30 percent rock fragments; neutral; abrupt smooth boundary;

 $\underline{36 \text{ to } 42 \text{ inches}}$ – light olive brown (2.5Y 5/4) very gravelly loamy coarse sand; single grain; loose; 50 percent rock fragments; neutral; clear irregular boundary

 $\underline{42 \text{ to } 80 \text{ inches}}$ – light olive brown (2.5Y 5/4) very gravelly loamy coarse sand; single grain; loose; 50 percent rock fragments; moderately alkaline; slightly effervescent.

Dutchess-Cardigan complex, hilly, rocky (DwD) –This soil complex is located on the very northern boundary line of the property. This mapping complex consists of very deep, well drained Dutchess soils and moderately deep, well drained Cardigan soils that formed in glacial till deposits. Slopes are complex and range from 15 to 30 percent. Permeability is moderate. The available water capacity is low to moderate and the depth to seasonal high water is more than six feet. Surface runoff is rapid and the hazard for erosion is severe.

The typical sequence, depth, and composition of the layers of Dutchess soils are as follows.

<u>0 to 8 inches</u> – dark brown (10YR 3/3) silt loam, light grayish brown (10YR 6/2) dry; weak fine granular structure; friable; many fine and few coarse roots; five percent rock fragments; neutral (limed); clear wavy boundary;

<u>8 to 17 inches</u> – yellowish brown (10YR 5/6) silt loam; weak medium platy parting to weak fine subangular blocky structure; friable; common fine and medium and few coarse roots; five percent rock fragments; moderately acid; clear wavy boundary;

<u>17 to 28 inches</u> – dark yellowish brown (10YR 4/4) silt loam; medium moderate subangular blocky structure; friable; few fine roots; ten percent rock fragments; moderately acid; gradual wavy boundary;

 $\underline{28 \text{ to } 46 \text{ inches}}$ – yellowish brown (10YR 5/4) channery silt loam; weak coarse subangular structure; friable; few roots; 20 percent rock fragments; moderately acid; clear wavy boundary;

 $\underline{46 \text{ to } 86 \text{ inches}}$ – light olive brown (2.5Y 5/4) channery silt loam; massive; firm; 20 percent rock fragments; moderately acid.

The typical sequence, depth, and composition of the layers of Cardigan soils are as follows.

<u>0 to 8 inches</u> – dark brown (10YR 3/3) channery silt loam; light brownish gray (10YR 6/2) dry; moderate medium granular structure; very friable; few fine roots; 25 percent rock fragments; slightly acid (limed); smooth boundary;

<u>8 to 12 inches</u> – yellowish brown (10YR 5/6) channery silt loam; weak medium subangular blocky structure; friable; few fine roots; 25 percent rock fragments; moderately acid; clear wavy boundary;

<u>12 to 20 inches</u> – yellowish brown (10YR 5/6) channery loam; weak fine subangular blocky structure; friable; few fine roots; 25 percent rock fragments; strongly acid; clear wavy boundary;

<u>20 to 30 inches</u> – dark yellowish brown (10YR 4/4) channery silt loam; weak fine and medium subangular blocky structure; friable; few fine and medium roots; 30 percent rock fragments; strongly acid; abrupt wavy boundary;

<u>30 inches</u> – very dark gray, folded shale bedrock.

Fluvaquents-Udifluvents complex, frequently flooded (Ff) –This soil complex is located in the central portion of the property. This mapping unit consists of nearly level, very deep, somewhat poorly drained to very poorly drained Fluvaquents and very deep, moderately well drained to somewhat excessively drained Udifluvents. Slopes range from 0 to 3 percent. Permeability is very rapid to slow. The available water capacity is high to low and the depth to seasonal high water is 0.5 to six feet (Oct thru June). Surface runoff is slow to ponded and the hazard for erosion is moderate. There is no pedon for Fluvaquents or Udifluvents.

<u>Galway-Farmington complex, hilly (GfD)</u> –This soil complex is located in the central portion of the property. This mapping unit consists of moderately deep; well drained and moderately well drained Galway soils and shallow well drained and somewhat excessively drained Farmington soils that formed in glacial till deposits. Slopes are complex and range from 15 to 30 percent. Permeability is moderate. The available water capacity is low to very low and the depth to seasonal high water is from 1.5 to 3 feet (March thru April) up to more than six feet. Surface runoff is rapid and the hazard for erosion is severe.

The typical sequence, depth, and composition of the layers of Galway soils are as follows.

<u>0 to 6 inches</u> – dark brown (10YR 3/3) gravelly loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; many fine roots; 15 percent rock fragments; slightly acid; abrupt smooth boundary;

<u>6 to 10 inches</u> – dark yellowish brown (10YR 4/4) gravelly loam; moderate fine subangular blocky structure; friable; many fine roots; 15 percent rock fragments; neutral; clear wavy boundary;

<u>10 to 15 inches</u> – dark brown (10YR 4/3) gravelly loam; moderate fine and medium subangular blocky structure; friable; many fine roots; 20 percent rock fragments; neutral; abrupt smooth boundary;

<u>15 to 30 inches</u> – dark brown (10YR 3/3) gravelly loam; weak medium and course subangular blocky structure; friable; common fine roots; 25 percent rock fragments; neutral; abrupt irregular boundary;

<u>30 to 31 inches</u> – dark brown (10YR 3/3) gravelly loam; massive; friable; many fine roots; 30 percent rock fragments; mildly alkaline; slightly effervescent; abrupt irregular boundary;

31 inches – white (10YR 8/1) limestone bedrock.

The typical sequence, depth, and composition of the layers of Farmington soils are as follows.

0 to 7 inches – dark brown (10YR 3/3) loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; many fine and very fine roots; five percent rock fragments; neutral; abrupt smooth boundary;

7 to 15 inches – light olive brown (2.5Y 5/6) very fine sandy loam; weak medium subangular blocky parting to weak fine granular structure; very friable; common fine and very fine roots; ten percent rock fragments; neutral; abrupt smooth boundary;

 $\underline{15 \text{ inches}}$ – hard gray dolomitic limestone bedrock; some rock fragments at the surface of the bedrock; slight effervescent.

Hollis-Chatfield-Rock outcrop complex, steep (HoE) – This soil complex is located in the eastern portion of the property. This mapping unit consists of shallow, well drained and somewhat excessively drained Hollis soils; moderately deep, well drained and somewhat excessively drained Chatfield soils; and areas of rock outcrop. Slopes are complex and range from 25 to 45 percent. Permeability is moderate to moderately rapid. The available water capacity is very low and the depth to seasonal high water is more than six feet. Surface runoff is very rapid and the hazard for erosion is very severe.

The typical sequence, depth, and composition of the layers of Hollis soils are as follows.

<u>0 to 3 inches</u> – dark grayish brown (10YR 4/2) loam; weak fine granular structure; very friable; many fine roots; five percent rock fragments; strongly acid; abrupt smooth boundary;

3 to 10 inches – dark yellowish brown (10YR 4/4) loam; weak fine subangular blocky structure; very friable; common fine roots; five percent rock fragments; strongly acid; abrupt smooth boundary;

<u>10 to 15 inches</u> – olive brown (2.5Y 4/4) loam; weak medium subangular blocky structure; friable; few fine roots; ten percent rock fragments; strongly acid; abrupt smooth boundary;

<u>15 inches</u> – folded micaceous schist bedrock.

The typical sequence, depth, and composition of the layers of Chatfield soils are as follows.

<u>0 to 9 inches</u> – dark brown (10YR 3/3) fine sandy loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; many fine few medium and coarse roots; five percent rock fragments; very strongly acid; abrupt smooth boundary;

9 to 15 inches – olive brown (10Y 4/4) loam; weak fine and medium subangular blocky structure; very friable; many fine roots; five percent rock fragments; moderately acid; abrupt wavy boundary;

<u>15 to 23 inches</u> – olive brown (2.5Y 4/4) loam; weak medium subangular blocky structure; friable; common fine roots; five percent rock fragments; moderately acid; abrupt wavy boundary;

23 to 27 inches – dark grayish brown (2.5Y 4/2) gravelly fine sandy loam; weak medium and coarse subangular blocky structure; friable; few fine roots; 20 percent rock fragments; strongly acid; abrupt wavy boundary;

<u>27 to 30 inches</u> – dark grayish brown (2.5Y 4/2) gravelly fine sandy loam; massive; firm; 20 percent rock fragments; strongly acid; abrupt wavy boundary;

<u>30 inches</u> – folded; micaceous schist and granitic bedrock.

<u>Nassau-Cardigan complex, rolling, very rocky (NwC)</u> – This soil complex is located in the western portions of the property. This mapping unit consists of shallow, somewhat excessively drained Nassau soils and moderately deep, well drained Cardigan soils that formed in glacial till deposits. Slopes are complex and range from five to 16 percent. Permeability is moderate. The available water capacity is low to very low and the depth to seasonal high water is more than six feet. Surface runoff is medium and the hazard for erosion is moderate.

<u>Nassau-Rock outcrop complex, steep (NxE)</u> – This soil complex is located in the western portion of the property. This mapping unit consists of shallow, somewhat excessively drained Nassau soils and areas of rock outcrop. Slopes are complex and range from 25 to 45 percent. Permeability is moderate. The available water capacity is very low and the depth to seasonal high water is more than six feet. Surface runoff is very rapid and the hazard for erosion is very severe.

<u>Nassau-Rock outcrop complex, very steep (NxF)</u> – This soil complex is located in the western portion of the property. This mapping unit consists of shallow, somewhat excessively drained Nassau soils and areas of rock outcrop. Slopes are complex and range from 45 to 70 percent. Permeability is moderate. The available water capacity is very low and the depth to seasonal high water is more than six feet. Surface runoff is very rapid and the hazard for erosion is very severe.

The typical sequence, depth, and composition of the layers of Nassau soils are as follows.

<u>0 to 5 inches</u> – dark grayish brown (10YR 4/2) channery silt loam; moderate fine granular structure; very friable; many fine and few medium roots; 30 percent rock fragments; very strongly acid; abrupt wavy boundary;

<u>5 to 16 inches</u> – yellowish brown (10YR 5/6) very channery silt loam; weak fine subangular blocky structure; very friable; many fine roots; 55 percent rock fragments; very strongly acid; abrupt smooth boundary;

 $\underline{16 \text{ inches}}$ – dark gray (10 YR 4/1) folded rippable shale bedrock in upper part, hard below, nearly vertical.

Stockbridge silt loam, 8 to 15 percent slopes (SkC) – This soil unit is located in the northern portions of the property. This mapping unit consists of very deep, sloping, and well drained Stockbridge soils that formed in glacial till deposits. Slopes are smooth and range from eight to 15 percent. Permeability is moderate in the surface layer and subsoil, slow to moderately slow in the substratum. The available water capacity is high and the depth to seasonal high water is more than six feet. Surface runoff is rapid and the hazard for erosion is moderate.

Stockbridge silt loam, 15 to 25 percent slopes (SkD) – This soil unit on this site is located in the northern portions of the property. This mapping unit consists of very deep, sloping, and well drained Stockbridge soils that formed in glacial till deposits. Slopes are complex and range from 15 to 25 percent. Permeability is moderate in the surface layer and subsoil, slow to moderately slow in the substratum. The available water capacity is high and the depth to seasonal high water is more than six feet. Surface runoff is rapid and the hazard for erosion is severe.

Stockbridge silt loam, 25 to 45 percent slopes (SkE) – This soil unit is located in the northern portions of the property. This mapping unit consists of very deep, sloping, and well drained Stockbridge soils that formed in glacial till deposits. Slopes are complex and range from 25 to 45 percent. Permeability is moderate in the surface layer and subsoil, slow to moderately slow in the substratum. The available water capacity is high and the depth to seasonal high water is more than six feet. Surface runoff is very rapid and the hazard for erosion is very severe.

<u>Stockbridge-Farmington complex, hilly, rocky (SmD)</u> – This soil complex is located in the south-central portion of the property. This mapping unit consists of very deep, well drained Stockbridge soils and shallow, well drained and somewhat excessively drained Farmington soils that formed in glacial till deposits. Slopes are complex and range from 15 to 30 percent. Permeability is moderate in the surface layer and subsoil, slow to moderately slow in the substratum. The available water capacity is high to very low and the depth to seasonal high water is more than six feet. Surface runoff is rapid and the hazard for erosion is severe.

The typical sequence, depth, and composition of the layers of Stockbridge soils are as follows.

<u>0 to 6 inches</u> – very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; friable; many fine and very fine roots; five percent rock fragments; neutral; clear smooth boundary;

<u>6 to 11 inches</u> – dark brown (10YR 4/3) silt loam; moderate medium subangular blocky structure; friable; many fine and very fine roots; five percent rock fragments; neutral; clear smooth boundary;

<u>11 to 23 inches</u> – yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; common fine and very fine roots; few fine tubular pores; five percent rock fragments; neutral; gradual wavy boundary;

23 to 80 inches – brown (10YR 5/3) silt loam; massive; firm; five percent rock fragments; neutral; very slightly effervescent below 42 inches.

<u>Udorthents, smoothed (Ud)</u> – This soil unit is located in the southeastern portion of the property. This mapping unit consists of very deep, somewhat excessively drained to moderately well drained soils that have been altered by cutting and filling. Slopes are dominantly zero to eight percent but range from eight to 25 percent on the sides of excavations and along highways. There are no soil properties for this soil type.

<u>Udorthents, wet substratum (Ud)</u> – This soil unit is located in the northeastern portion of the property. This mapping unit consists of moderately well drained soils that have been altered by filling. Slopes are dominantly zero to eight percent but range from eight to 25 percent on the sides of excavations and along highways. There are no soil properties for this soil type. Udorthents soils do not have a pedon.

Wayland silt loam (Wy) – This soil unit is located in the near the eastern boundary line near the central portion of the property. This mapping unit consists of very deep, nearly level, and poorly drained and very poorly drained Wayland soils that formed in alluvium deposits. Slopes are smooth and range from zero to three percent. Permeability is moderately slow or moderate in the surface layer, slow in the subsoil and substratum. The available water capacity is high and the depth to seasonal high water is 0.5 to one foot (November-June). Surface runoff is slow and the hazard for erosion is slight. This soil unit is on the New York State Hydric Soils List. The typical sequence, depth, and composition of the layers of Wayland soils are as follows.

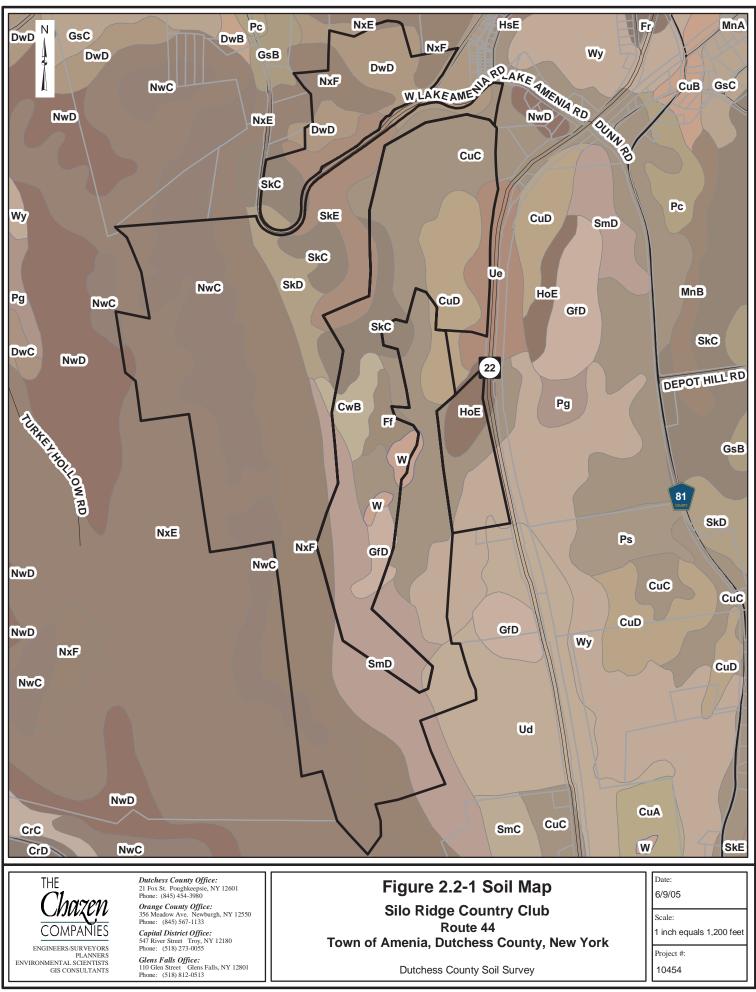
<u>0 to 9 inches</u> – very dark gray (10YR 3/1) silt loam, gray (5YR 5/1) dry; moderate fine and medium granular structure; friable; many fine roots; neutral; abrupt smooth boundary;

<u>9 to 13 inches</u> – gray (10YR 5/1) silt loam; weak coarse prismatic structure; friable; common fine roots; neutral; clear wavy boundary;

<u>13 to 21 inches</u> – gray (5Y 5/1) silty clay loam; many medium prominent yellowish brown (10YR 5/6) and few fine prominent dark brown (10YR 3/3) mottles; weak coarse prismatic structure; firm; few fine roots along faces of peds; neutral; clear wavy boundary;

21 to 31 inches - gray (5Y 5/1) silt loam; many medium and coarse prominent yellowish brown (10YR 5/4) and common medium prominent yellowish brown (10YR 5/6) mottles; weak coarse prismatic structure; firm; slightly sticky and slightly plastic; neutral; clear wavy boundary.

31 to 80 inches - gray (5Y 5/1) silt loam; many medium and coarse prominent yellowish brown (10YR 5/4) and common medium prominent yellowish brown (10YR 5/6) mottles; massive; firm; slightly sticky and slightly plastic; neutral; very slightly effervescent in the lower part.



2.3 Watercourses and Wetland Mapping

2.3.1 Watercourses

The site is located within the drainage basin of Ten Mile River, which then flows southeast into the Housatonic River. There are two perennial streams (Cascade Brook, Stream L), six intermittent streams and eight ponds located within the property. Cascade Brook is a Class C(T) indicating that its trout waters. Cascade Brook is approximately 12 to 15 feet wide with banks three to six feet high. Water depth ranges from six inches to four feet with the stream containing silt to boulders substrate.

All other streams and ponds on-site are Class "C" waterbodies. The "C" classification³ is for waters supporting fisheries and suitable for non contact activities. Table 2.3.1 below lists brief descriptions of each stream on-site. See Figure 1.1-1, "Site Location Map" for reference.

Stream Name⁴	Class	Width	Bank Height	Substrate
Amenia/Cascade Brook, "C1,C2,C3"	C (Ts)	10 to 12 feet	3 to 6 feet	Silt to boulders
E	С	1 to 3 feet	0.5 to 1 foot	Silt to sand
G	С	2 to 4 feet	0.5 to 2 feet	Silt to cobble
J/OO	С	2 to 6 feet	1 to 6 feet	Silt to boulders
L	С	3 to 6 feet	1 to 3 feet	Silt to cobble
M/P	С	2 to 4 feet	0.5 to 3 feet	Silt to cobble
R/S	С	2 to 5 feet	1 to 6 feet	Silt to bedrock
V	С	3 to 8 feet	2 to 6 feet	Silt to bedrock

 Table 2.3.1 Stream Characteristics

³ 6 NYCRR 682.5

⁴ It should be noted that all streams and ponds labeled herein are referred on the Wetland Survey Map as "wetlands". The labeling on the Wetland Survey Map does not separate the nomenclature of waterbodies, watercourses, and/or wetlands on the property.

Pond Name	Acres	Pond Name	Acres
A*	0.52	J2 (Northwest)	0.15
В	0.87	Н	0.51
D	0.43	К	2.06
J1 (Southeast)	0.42	Z	5.53

Table 2.3.1.2 Pond Characteristics

*Pond A was determined to be isolated by the US Army Corps of Engineers on their site visit of September 18, 2006. The eight ponds or open water areas total approximately 10.5 acres and are scattered throughout the site.

2.3.2 Wetland Mapping

According to the 1990, National Wetland Inventory (NWI) Map.⁵ Amenia Quadrangle, one stream, two ponds, and three wetlands are mapped within the property. The first is Cascade Brook situated in the northeast portion of the site, which is mapped as <u>R3UBH</u> - [R] Riverine, [3] Upper Perennial, [UB] Unconsolidated Bottom, [H] Permanently Flooded. The two ponds located in the center portion of the site are mapped as PUBH - [P] Palustrine, [UB] Unconsolidated Bottom, [H] Permanently Flooded. A wetland on the western portion of the site is mapped as <u>PFO1E</u> – [P] Palustrine, [FO] Forested, [1] Broadleaved Deciduous, [E] Seasonally Flooded/Saturated. A wetland in the northern portion of the site is mapped PUBHx – [P] Palustrine, [UB] Unconsolidated Bottom, [H] Permanently Flooded, [x] Excavated. The large wetland located in the eastcentral portion of the property is mapped with several different codes including <u>PEM1Fh</u> – [P] Palustrine, [EM] Emergent, [1] Persistent, [F] Semi-permanently Flooded, [h] Diked/Impounded; PFO1C - [P] Palustrine, [FO] Forested, [1] Broadleaved Deciduous, [E] Seasonally Flooded; PFO1Eh - [P] Palustrine, [FO] Forested, Deciduous, [E] [1] Broad-leaved Seasonally Flooded/Saturated, [h] Diked/Impounded; and <u>PSS1Eh</u> – [P] Palustrine, [SS] Scrub-shrub, [1] Broad-leaved Deciduous, [E] Seasonally Flooded/Saturated, [h] Diked/Impounded.

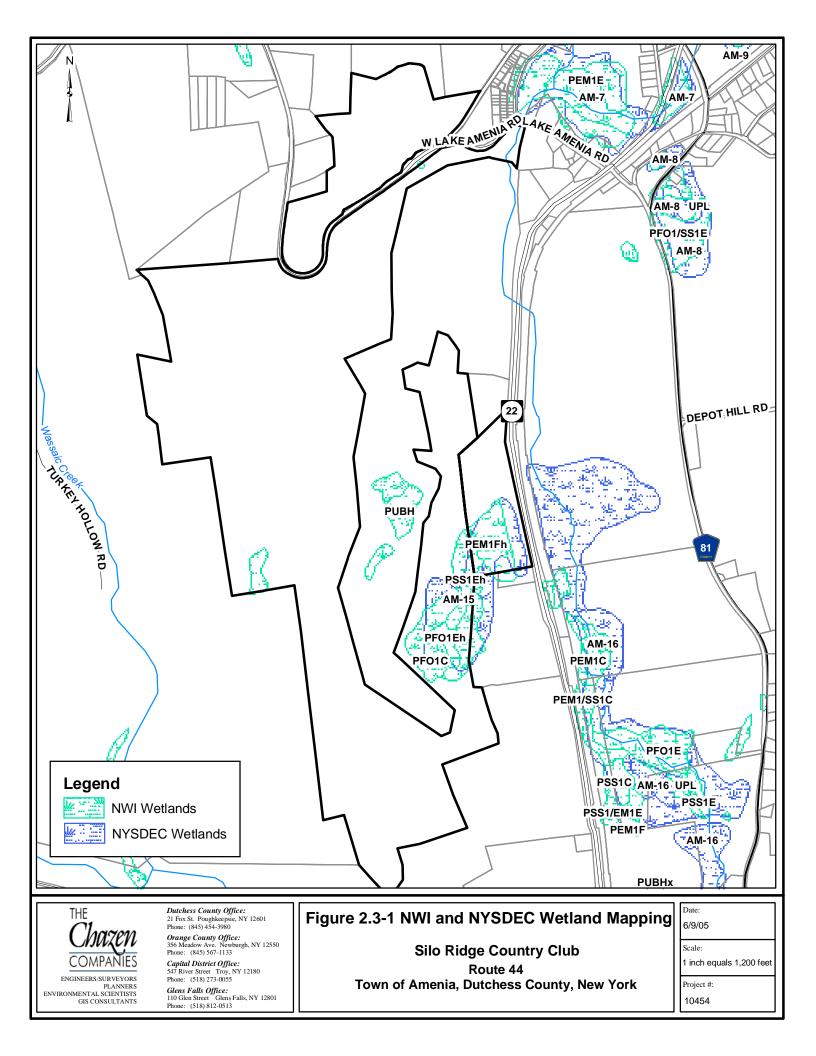
⁵ National Wetland Inventory Mapping is not a "regulatory map," and does not designate the official boundaries of federal wetlands. For the purposes of regulation under Section 404 of the Clean Water Act, federal wetlands are only designed by an on-site wetland delineation conducted in accordance to the 1987 US Army Corps of Engineers Wetland Delineation Manual.

Table 2.3.2 "NWI Definitions" defines the terms used to describe these wetlands identified within the project area. Figure 2.3-1, "NWI and NYSDEC Wetland Mapping" provides an illustration of these wetland resources adjacent to the study area.

According to the 1973, *NYSDEC Wetland Inventory Map*, *Amenia Quadrangle*, the wetland in the southeast portion of the site is NYSDEC Wetland AM-15. NYSDEC Wetland AM-16 is mapped off-site on the east side of NYS Route 22.

Term	Table 2.3.2 NWI Definitions Definition
Term	Wetlands and deepwater habitats contained in natural or artificial
Riverine	channels periodically or continuously containing flowing water or which forms a connecting link between the two bodies of standing water.
Palustrine	Non-tidal wetlands dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.0 ppt.
Upper Perennial	This Subsystem is characterized by a high gradient and fast water velocity. There is no tidal influence, and some water flows throughout the year. This substrate consists of rock, cobbles, or gravel with occasional patches of sand. There is very little floodplain development.
Scrub/shrub	Includes areas dominated by woody vegetation less than 6 m (20 feet) tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.
Emergent	Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants
Broad leaved deciduous	A class of woody vegetation (shrubs and trees) that have leaves not needles that are shed annually as part of the trees natural cycle.
Persistent	Dominated by species that normally remain standing at least until the beginning of the next growing season. This subclass is found only in the Estuarine and Palustrine systems.
Unconsolidated bottom	Includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7 cm), and vegetative cover less than 30%.
Permanently Flooded	Water covers the land surface throughout the year in all years.
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's surface
Seasonally Flooded/Saturated	Surface water is present for extended periods especially early in the growing season and when surface water is absent, substrate remains saturated near the surface for most of the growing season.
Seasonally Flooded	Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.
Diked/Impounded	Created or modified by a man-made barrier or dam which obstructs the inflow or outflow of water.
Excavated	Lies within a basin or channel excavated by man
Source: US Department of the Interio	or Fish and Wildlife Service National Wetland Inventory

Table 2.3.2 NWI Definitions



2.4 Vegetative Communities

Nine plant communities were identified within the Silo Ridge Country Club property as defined in "Ecological Communities of New York State."⁶ These communities are listed below. The following section provides a description of these communities and their approximate locations within the subject site. Table 2.4.1 found in Appendix C provides a list of the vegetation identified on-site. Figure 2.4-1, "Aerial Imagery," illustrates the different vegetation on an ortho photograph.

<u>Successional southern hardwood forest</u> - This community has established in the northern and central portions of the property. As described by Reschke in Edinger, et al.⁷ this community is comprised of a hardwood or mixed forest that occurs on sites that have been cleared for farming, logging or otherwise disturbed. Species found within this community on the property include sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), red oak (*Quercus rubra*), white oak (*Quercus alba*), tartarian honeysuckle (*Lonicera tatarica*), multiflora rose (*Rosa multiflora*), garlic mustard (*Alliaria petiolata*), rue-anemone (*Thalictrum thalictroides*), and false Solomon's seal (*Maianthemum racemosum*).

Beech-maple mesic forest – This community is a hardwood forest with sugar maple and beech codominant. This is a broadly defined community type with several regional and edaphic variants. These forests occur on moist, well-drained, usually acid soils. This forest community dominates the western portion of the property along the east facing slopes. A small patch of this community is located to the north of the existing clubhouse. Vegetation within this community within the property includes sugar maple, paper birch (*Betula papyrifera*), American beech (*Fagus grandifolia*), red oak, red trillium (*Trillium erectum*), Dutchman's breeches (*Dicentra cucullaria*), wild columbine (*Aquilegia canadensis*), and northern maidenhair (*Adiantum pedutum*).

<u>Shallow emergent marsh</u> – This community consists of a marsh meadow that occurs on mineral soils or deep muck soils that generally are permanently saturated and seasonally flooded. This marsh is better drained than a deep emergent marsh; water depths may range from approximately six inches to three feet during flood stages, but the water level usually drops by mid to late summer and the substrate becomes exposed during an average year.

⁶ Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2002. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. (Draft for review). New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.136 pgs.

This community is located in several small areas within the golf course in the southcentral portion of the property and within parts of large NYSDEC wetland on the eastern portion of the property. Vegetation found within these wetlands includes broadleaf cattail (*Tyha latifolia*), purple loosestrife (*Lythrum salicaria*), skunk cabbage (*Symplocarpus foetidus*) and common duckweed (*Lemna minor*).

Red maple swamp – This community is a hardwood swamp that occurs in poorly drained depressions, usually on inorganic soils. This community is located in several areas within the property including along Cascade Brook, and in the northern and central portions of the property associated with several intermittent streams. Vegetation found within this community on the property includes red maple, eastern cottonwood (*Populus deltoides*), red osier dogwood (*Cornus sericea*), silky dogwood (*Cornus amomum*), skunk cabbage, and marsh fern (*Thelypteris palustris*).

<u>Shrub swamp</u> – This community is an inland wetland dominated by tall shrubs that occurs along the shores of a lake or river, in a wet depression or valley not associated with lakes, or as a transitional zone between a marsh, fen, or bog and a swamp or upland community. This community is located along the western edge of the NYSDEC wetland on the eastern portion of the site. Vegetation within this community includes tartarian honeysuckle, silky dogwood, red osier dogwood, marsh fern, and skunk cabbage.

Highbush blueberry bog thicket – This community is an ombrotrophic or weakly minerotrophic peatland dominated by tall, deciduous, ericaceous shrubs and peat mosses; the water is usually nutrient-poor and acidic. The community is located near the top of the ridge in the west-central portion of the property. Vegetation within this community includes highbush blueberry (*Vaccinium corymbosum*), mountain laurel (*Kalmia latifolia*), cinnamon fern (*Osmunda cinnamomea*), and sphagnum moss (*Sphagnum* spp.).

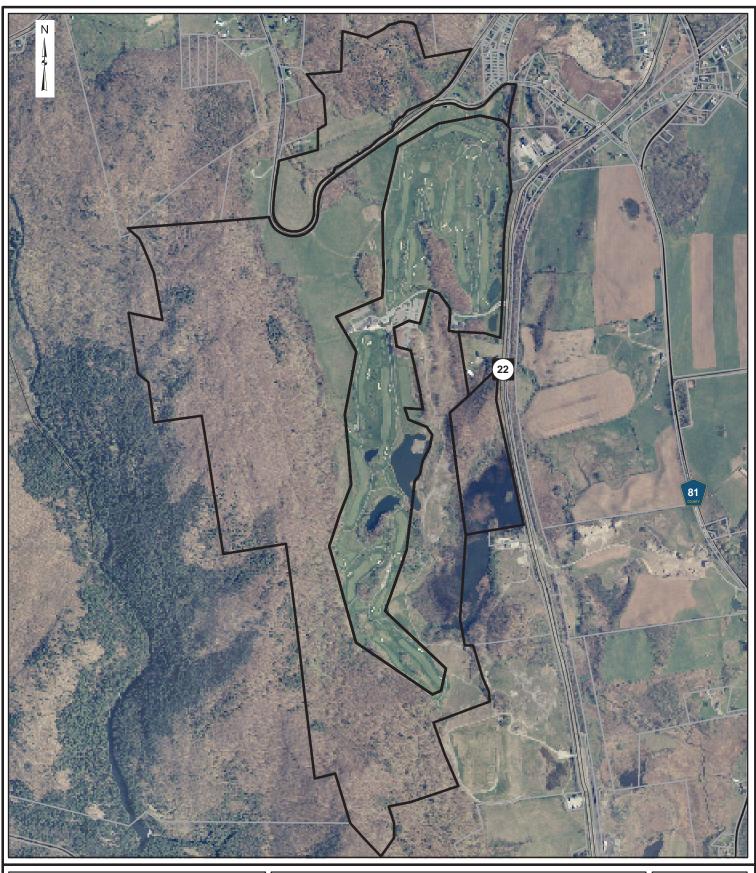
<u>Common reed/purple loosestrife marsh</u> – This community occupies much of the NYSDEC wetland as well as a wetland swale located in the northeastern portion of the property. This community type is a marsh that usually has been disturbed by draining, filling, etc. which reed grass and purple loosestrife have become dominant⁸. Vegetation within these wetlands on-site includes common reed (*Phragmites australis*), purple loosestrife, and cattail.

<u>Successional old field</u> – a meadow dominated by forbs and grasses that occurs on sites that have been cleared and plowed and then abandoned. This community is located in the north and northwestern sections of the property and in the very

⁸ Ibid

southern portion of the site. Vegetation within this community includes bluegrass (*Poa* spp.), panicgrass (*Panicum* spp.), red and white clover (*Trifolium pratance, T. repens*), and Queen Anne's lace (*Daucus carota*).

<u>Mowed lawn</u> – This community generally occurs as residential, recreational, or commercial land in which the groundcover is dominated by clipped grasses and less than 30 percent cover by trees. Ornamental and/or native shrubs may be present but usually less than 50 percent cover. For this site, the mowed community is the golf course lawns located in the central and northeastern portions of the property.





Dutchess County Office: 21 Fox St. Poughkeepsie, NY 12601 Phone: (845) 454-3980 Orange County Office:

Orange County Office: 356 Meadow Ave. Newburgh, NY 12550 Phone: (845) 567-1133

Phone: (845) 567-1133 *Capital District Office:* 547 River Street Troy, NY 12180 Phone: (518) 273-0055

Phone: (518) 273-0055 *Glens Falls Office:* 110 Glen Street Glens Falls, NY 12801 Phone: (518) 812-0513 Figure 2.4-1 Aerial Imagery Silo Ridge Country Club Route 44 Town of Amenia, Dutchess County, New York

Date:
6/9/05
Scale:
1 inch equals 1,200 feet
Project #:
10454

Dutchess County Real Property Services - 2000 Orthophoto

3.0 METHODOLOGY

The wetland delineation for the subject site was conducted on May 3, 5, 6, 2005 and on November 3, 2005 by Mr. Steven A. Finch, Mr. Auggie Ruggerio, and Mr. Jason Tourscher of the Chazen Companies. The delineation was established in the field using the three-parameter approach as described in the 1987, US Army Corps of Engineers' Wetland Delineation Manual.⁹ The boundary was established using flagging marked with consecutively numbered wetland flags along the wetland boundary.

At representative points along the wetland boundary, data were collected in the wetlands and uplands to document the existing vegetation, soils and hydrology. This information was later transferred onto the data sheets contained in Appendix A, "Wetland Data Sheets."

Using a Dutch auger, soil samples were taken to approximately 16 to 18 inches deep at representative points along the boundary to characterize the on-site soil conditions. Soil colors were documented using a Munsell Soil Color Chart. Hydrology was assessed by evaluating each area for inundation, saturation, water marks, drainage channels, or other field indicators (or lack thereof) of wetland hydrology.

Vegetation identified at each of the sampling locations was described in terms of the dominant species in the overstory, understory/shrub, vine, and herbaceous layers. Overstory vegetation represents the canopy tree species greater than six inches in diameter. Understory/shrub vegetation is comprised of woody tree species between two and six inches in diameter, and saplings and shrubs less than two inches in diameter and three to 12 feet in height. Ground layer vegetation consists of both woody and herbaceous vegetation less than three feet in height. The indicator status of each dominant plant species was determined using the "National List of Plant Species that Occur in Wetlands – Northeast (Region 1)."¹⁰

Photographs were taken of the site at the wetland and upland data points, and at other representative locations throughout the project area. These photographs are presented in Appendix B, "Site Photographs."

Following the establishment of the wetland boundary in the field, the wetland boundary was surveyed using GPS technology and plotted on the site map. The

⁹ U.S. Army Corps of Engineers. 1987. Wetlands Delineation Manual, Technical Report Y-87-1.

¹⁰ Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands: Northeast (Region 1), USFWS Biological Report 88 (26.1).

wetland survey is located in Appendix D. The US Army Corps of Engineers made a site visit inspection on September 18, 2006 and identified isolated wetlands as discussed below. The NYSDEC also made a site inspection on May 31, 2006 and has subsequently validated the wetland boundary map.

4.0 **RESULTS AND DISCUSSION**

This section discusses each wetland or wetland group identified on the site, its location on the site, the soils, hydrological, and vegetative characteristics of the wetland, and the number of flags in the wetland line. In addition, this section briefly addresses whether the on-site wetlands are isolated under SWANCC v. ACOE and provides a brief overview of the wetland regulations (Federal, and State) as they relate to the site and the proposed Silo Ridge Country Club expansions. Table 4.0.1 below provides a summary of the on-site wetlands that were delineated on the Silo Ridge property. Each wetland is discussed in greater detail below. A list of plant species found on the property is listed in Appendix C. A copy of the wetland survey map for this property is included in Appendix D.

Name	Acreage	Flag Numbers	Regulating Authority
Wetland C-1	1.12	C3-C62	ACOE
Wetland C-2	1.31	C1-C3, C62-C145, CC1-CC94	ACOE
Wetland C-3	0.02		ACOE
Wetland G-1	0.33	G27-G62, GG1- GG45	ACOE
Wetland I	0.06	I1-I14	Isolated
Wetland J/JJ	2.46	J30-J136, JJ48- JJ231	ACOE
Wetland L/LL	26.03	L1-L135, LL1- LL116	ACOE, NYSDEC (AM-15) NYSDEC Wetland AM-15 is located south at the cartpath and ends at flags L-40/LL-33
Wetland N/O	0.15, 0.04	N1-N11, NN1- NN12	ACOE

 Table 4.0.1 Summary of On-site Wetlands

Page 25

Wetland S	0.34	S1-S26, SS1-SS39	Isolated
Wetland U	2.78	U1-U15, UU1- UU67	Isolated
Wetland W	1.30	W1-W55 WW1-WW101	ACOE
Wetland X	0.25	X1-X18	ACOE
Total Area	36.19		

Isolated indicates that based on the ACOE's site inspections, the Wetland is hydrologically isolated from waters of the United States and is not regulated under The Clean Water Act pursuant to The US Supreme Court in SWANCC v. ACOE.

4.1 Wetlands

Wetland C-1

Wetland C-1 is an approximately 1.12 acre wetland/stream complex established in the northeastern portion of the site. The wetland is very linear (through alterations with the surrounding land when the golf course was created) with hydrology coming from a pond located several feet north of the wetland and connected with a culvert pipe. Water slowly moves south through the wetland and discharging into Cascade Brook. The wetland is an emergent swamp community dominated by vegetation including reed canary grass (Phalaris arundinacea), cattail, purple loosestrife, and sedges (Carex spp.). Hydrologic indicators include inundation, saturation, and oxidized root channels. Soils were a low chroma dark gray (2.5Y 3/1) sandy clay loam with mottles at four inches and deeper of a chroma of olive (2.5Y 3/4).

Wetland C-2

This wetland/stream complex has established in the northeastern portion of the site associated with Cascade Brook. This wetland is approximately 1.31 acre in size. Wetland C-2 is a red maple swamp dominated by red maple, multiflora rose, jewelweed (Impatiens capensis), tussock sedge (Carex stricta), sensitive fern (Onoclea sensibilis), and common reed. Hydrologic indicators include inundation; saturation, drainage patterns, and water stained leaves in the wetlands. Soils are a low chroma dark gray (2.5Y 3/1) silt loam. Hydric soil indicators include reducing soil conditions, and gleyed or low chroma colors.

Wetland C-3

This is a small wetland area, 0.02 acre in size, added to the wetland delineation by the ACOE during the September 18, 2006 site inspection.

Wetland G-1

Wetland G-1 is red maple swamp community associated with Stream G located within the northeastern portion of the property. The wetland is approximately 0.33 acres in size. Dominant vegetation within this wetland includes red maple, ironwood (*Carpinus caroliniana*), spicebush (*Lindera benzoin*), skunk cabbage, sensitive fern, and marsh marigold (*Caltha palustris*). Hydrologic indicators include inundation saturation, and drainage patterns. Soils are a low chroma dark gray (10YR 2/1) and olive gray (2.5Y 5/1) sandy gravelly loam.

<u>Wetland I</u>

Wetland I is an isolated wetland located in the north central portion of the property and is approximately 0.06 in size. This wetland is a common reed marsh community dominated by vegetation including common reed, purple loosestrife, cattail, soft rush (*Juncus effusus*), and arrowleaf tear-thumb (*Polygonum sagittatum*). Hydrologic indicators include inundation, saturation, and oxidation. Soils are a low chroma dark gray (2.5Y 3/2) with abundant olive gray (2.5Y 5/1) mottles with a gravelly clay loam texture.

<u>Wetland J</u>

Wetland J is a series of small red maple forested wetlands associated with Stream J located in the west-central portion of the property. These wetlands are 2.46 in size.

Dominant vegetation within these wetlands includes red maple, multiflora rose, spicebush, skunk cabbage, and jewelweed. Hydrologic indicators include inundation, saturation, drainage patterns, and water-stained leaves. Soils are a low chroma dark gray $(2.5Y\ 3/1)$ and dark gray $(2.5Y\ 4/1)$ with brown $(10YR\ 4/6)$ mottles with a clay loam texture.

Wetland L/LL

Wetland L is a complex wetland system that contains several wetland communities including a shallow emergent, scrub-shrub, common reed/purple loosestrife, and open water communities. This wetland is NYSDEC Wetland AM-15. The NYSDEC Wetland limits extend southward from flags L-40/LL-33. The wetland is approximately 26.03 acres and is located in the southeast portion of the site west of SR 22. Dominant vegetation within this wetland includes red maple, tartarian honeysuckle, silky dogwood, common reed, sensitive fern, and skunk cabbage. Hydrologic indictors include inundation, saturation, drainage patterns, water stained leaves, and oxidized root channels. Soils are a low chroma dark gray (10YR 3/2) with dark olive gray (2.5Y 4/1) abundant mottles at one location in the northern boundary line and dark olive gray (2.5Y 3/1) with brown (7.5YR 4/6) mottles in the western portion of the wetland.

Wetland N/O

These are two wetlands that were originally created on the golf course as water hazards, but through time have become shallow emergent wetland communities. These two wetlands are approximately 0.15 acres (Wetland N) and 0.04 acres (Wetland O) in size located in the south-central portion of the property. Dominant vegetation within these wetlands includes cattail, purple loosestrife, and duckweed (*Lemna* spp.). Hydrologic indicators found include inundation. Soils are a low chroma color.

<u>Wetland S</u>

Wetland is a small red maple forested wetland community associated with Stream S. The wetland is located in the northwest corner of the property and is approximately 0.34 acres in size. Dominant vegetation within the wetland includes red maple, multiflora rose, skunk cabbage, and sensitive fern. Hydrologic indicators include saturated soils, drainage patterns, and water-stained leaves. Soils consist of low chroma.

Wetland U

Wetland U is an isolated highbush blueberry bog thicket community approximately 2.78 acres in size located in the west-central portion of the property approximately three-quarters up the ridge. Dominant vegetation includes mountain laurel, highbush blueberry, fringed sedge (*Carex crinita*), cinnamon fern, and sphagnum moss. Hydrologic indicators include inundation, water-stained leaves, and drainage patterns. Soils consist of low chroma.

Wetland W

Wetland W is a red maple forested wetland that is approximately 1.30 acres in size located near the west-central boundary line on top of the ridge. Dominant vegetation within the wetland include red maple, green ash (*Fraxinus pennsylvanica*), highbush blueberry, silky dogwood, royal fern (*Osmunda regalis*), and tussock sedge (*Carex stricta*). Hydrologic indicators include inundation, saturation, water-stained leaves, and drainage patterns. Soils were dark brown (10YR 2/2) organic loam from zero to six inches transitioning to a gray (2.5Y 5/1) clay loam up to 13 inches.

Wetland X

Wetland X is a red maple forested wetland that is approximately 0.25 acres in size located just south of Wetland W. Dominant vegetation consists of red maple, American elm, ironwood, royal fern, cinnamon fern, and soft rush. Hydrologic indicators include inundation, saturation, and water-stained leaves. Soils were dark brown (10YR 2/1) clay loam from zero to six inches transitioning to an olive brown (2.5Y 4/2) with brown (2.5Y 4/6) clay loam up to 16 inches.

4.3 Regulated Wetlands and Waters On-site

4.3.1 US Army Corps of Engineers

Pond A and Wetlands I, S and U are not subject to regulation under The Clean Water Act because during the field inspection no hydrological connection was found connecting these wetlands to waters of the US. Wetland I is surrounded by an open field in all directions followed by the golf course to the east. There was no indication of any hydrologic connection from the wetland to any other regulated waters of the US. Wetland U is located on a flat section on the ridge. A hydrologic flow is observed leaving the wetland but quickly dissipates leaving no hydrologic indicators down the ridge toward the golf course. During the field inspection, the

ACOE also found that Wetlands S and Pond A were also isolated. Hence, per the review of the ACOE, these wetlands are not jurisdictional and are not regulated by the ACOE because they are considered to meet the criteria of isolated wetlands identified in the 2001 court ruling SWANCC v $ACOE^{11}$.

Under Section 404 of the Clean Water Act, the ACOE regulates the discharge of dredged or fill material into waters of the United States. The ACOE has field verified the wetland boundaries on the site. ¹² A written jurisdictional determination will confirm the extent of the wetlands and waters on-site, which will be included with a permit application if the proposed design imposes impact to these waters. Accordingly, any activity that proposes to discharge dredged or fill material into the wetlands or watercourses on-site would require a permit from the ACOE.

4.3.2 NYSDEC Regulations

As mentioned in Section 2.3 "Hydrology and Wetland Mapping," there is one NYSDEC wetland (AM-15) identified within the subject property as Wetland L/LL under NYSDEC jurisdiction.

The NYSDEC wetland (Wetland L/LL) will require a 100-foot wetland buffer around the perimeter of the wetland. Any work within the buffer of the wetland will require a NYSDEC Buffer Disturbance Permit. Also, a NYSDEC 401 Water Quality Certification will be required with any federal wetland permits. Further, as stated above, if the project proposes any stream impacts (i.e., culvert maintenance, repair, rehabilitation, outfall structures, etc.) to the on-site tributary, a stream disturbance permit will be required from the NYSDEC.

5.0 CONCLUSION

The wetland delineation for this site identified nine wetland systems totaling 36.19 acres. Pond A Wetlands I, S and U are judged to be isolated under the SWANCC ruling as they do not have a surface hydrological connection to waters of the US. All other wetlands and streams on-site are regulated by the ACOE. Also, Wetland L/LL is regulated by the NYSDEC as this wetland is NYSDEC wetland AM-15.

¹¹ Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers, 531 US 159 (2001) (SWANCC).

¹² Waters of the United States as defined in Section 8, Nationwide Permits Complete Vol. 1, 2002 edition. Wetland Training Institute. Page 214.

Appendix A: Data Sheets

Project/Site: Silo Ridge	Community ID:	woodland	Date:	3-May-05
Applicant/Owner:	Transect ID:		County:	Dutchess
Investigator A. Ruggiero	Plot ID: CC46	6 out	State:	NY
A. Do normal circumstances exist on this site?			✓ Yes	🗌 No
B. Is this site significantly disturbed (Atypical Site	uation)		 Yes	✓ No
C. Is the area a potential Problem Area?				✓ No
(If needed, explain on reverse)	••••••			
VEGETATION				
DOMINANT PLANT SPECIES:			STRATUM	INDICATOR
1. Fraxinus pennsylva	anica		Tree	FACW
2. Impatiens capen			Herb	FACW
3. Rosa multiflora			Shrub	FACU
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11				
12				
13				
14				
15				
16.		<u> </u>		070/
Percent of Dominant Species that are OBL	., FACW or FAC	(excluding F	AC -):	67%
Remarks:				
HYDROLOGY				
Recorded Data (Describe in Remarks Sec	tion) Wetla	and Hydrology	/ Indicators:	
Stream, Lake or Tide Guage		imary Indicat		
Aerial Photographs		Inundated		
Other		-	Upper 12 Inches	
X No Recorded Data Available		Water Marks	5	
Field Observations		Drift Lines Sediment D	oposito	
Depth of Surface Water	(in,)	-	atterns in Wetlands	
Depth to Free Water in pit:			cators (2 or more re	
	15 (in,)	•	ot Channels in Up	• •
· · · · · · · · · · · · · · · · · · ·		Water Stain		
		Local Soil S	urvey Data	
	<u></u> X	FAC-Neutra		
	_	Other (expla	ain in Remarks Sec	tion)
Remarks:	•			

Project/Site: <u>Sile</u> Applicant/Owner			nunity ID: ect ID:	woodland	_Date: _County:	3-May-05 Dutchess
Investigator A.	Ruggiero	Plot II	D: CC46	S out	State:	NY
SOILS						
Map Unit Name:				ainage Class:		
(Series and Phas	se):		Fi	eld Observations:		
Taxonomy (Subg	group):			Confirm Mapped	Туре: 🗌 Үе	es 🗌 No
Profile Description	on:					
Depth		Matrix Colors		lottle		oncentrations,
(inches)	Horizon	(Munsell Moist)	Abundar	nce/Contrast		ture, etc.
0-15		2.5Y 3/2			L	oam
·						
·						
·						
·	·					
·						
<u> </u>						
Hydric Soils India	cators:			Concretions		
Histosol Histic Epi	nedon			Concretions High Organic Cor	otont	
Sulfidic O				Organic Streaking		ils
	isture Regime			Listed on Local H		
	Conditions			Listed on Nationa		
Gleyed or	r Low-Chroma C	olors		Other (Explain in	Remarks Sec	tion)
Remarks:						
WETLAND DET	ERMINATION					

Hydrophytic Vegetation Present?	✓ Yes	🗌 No	le this Compling Deint within		
Wetland Hydrology Present?	Yes	🗹 No	Is this Sampling Point within a Wetland?	🗌 Yes	🗹 No
Hydric Soils Present?	Yes	⊡ No			
Remarks:					

Project/Site: Silo Ridge Community	ID: woodland	Date:	6-May-05
Applicant/Owner: Transect ID	:	County:	Dutchess
Investigator A. Ruggiero Plot ID:	JJ78out	State:	NY
A. Do normal circumstances exist on this site?		✓ Yes	🗌 No
B. Is this site significantly disturbed (Atypical Situation)		Yes	🗹 No
C. Is the area a potential Problem Area?		Yes	🗹 No
(If needed, explain on reverse)			
VEGETATION			
DOMINANT PLANT SPECIES:		STRATUM	INDICATOR
1. Allium petiolata		Herb	FACU-
2. Impatiens capensis		Herb	FACW
3. Rosa multiflora		Shrub	FACU
4. Solidago sp.		Herb	NI
5. Symplocarpus foetidus		Herb	OBL
6.			
7.			
8			
9			
10			
11			
12			
13.			
14.			
15.			
16			50%
Percent of Dominant Species that are OBL, FACW or I	FAC (excluding F	AC -):	50 %
Remarks:			
HYDROLOGY			
	Vetland Hydrology	Indicators:	
Stream, Lake or Tide Guage	Primary Indicate		
Aerial Photographs	Inundated		
Other		Upper 12 Inches	
X No Recorded Data Available	Water Marks	3	
Field Observations	Drift Lines		
Field Observations Depth of Surface Water (in,)	Sediment De	eposits	
Depth to Free Water in pit: (in,)		cators (2 or more r	
Depth to Saturated Soil >15 (in,)		ot Channels in Up	
	Water Staine		
	Local Soil S	urvey Data	
	FAC-Neutral		
	Other (expla	in in Remarks Sec	ction)
Remarks:			

(1987 ACOE Wetlands Delineation Manual)

Project/Site: Sile Applicant/Owner			munity ID: sect ID:	woodland	Date: County:	6-May-05 Dutchess
Investigator A.		Plot I			County State:	NY
<u> </u>	Ruggiero	FIOU	D. <u>3370</u>	out		
SOILS						
Map Unit Name:				rainage Class:		
(Series and Pha	se):		FI	eld Observations:		
Taxonomy (Subo	group):			Confirm Mapped	Туре: 🗌 Ү	es 🗌 No
Profile Description	on:					
Depth		Matrix Colors		lottle		oncentrations,
(inches)	Horizon	(Munsell Moist)	Abundar	nce/Contrast		ture, etc.
0-9		2.5Y 2.5/1			L	oam
9-18		2.5Y 3/3			L	oam
· · · · · ·						
· ·						
·						
· ·	<u> </u>			<u> </u>		
·						
Hydric Soils Indi	cators:					
Histosol				Concretions		
Histic Epi				High Organic Co		
Sulfidic C				Organic Streaking		
	isture Regime			Listed on Local H		
	Conditions			Listed on Nationa		
	r Low-Chroma C	olors		Other (Explain in	Remarks Sec	ction)
Remarks:						
WETLAND DET	ERMINATION					

Hydrophytic Vegetation Present? Yes ✓ No Wetland Hydrology Present? Yes ✓ No Hydric Soils Present? Yes ✓ No Remarks: Yes ✓ No

Project/Site: Silo Ridge	Community ID:	woodland/wet	Date:	6-May-05
Applicant/Owner:	Transect ID:		County:	Dutchess
Investigator A. Ruggiero	Plot ID: JJ94	in	State:	NY
A. Do normal circumstances exist on this site?		<u>_</u>	Yes	🗌 No
B. Is this site significantly disturbed (Atypical Si			Yes	✓ No
C. Is the area a potential Problem Area?			Yes	✓ No
(If needed, explain on reverse)				
VEGETATION				
DOMINANT PLANT SPECIES:			STRATUM	INDICATOR
1. Acer rubrum	1		Tree	FAC
2. Impatiens cape	nsis		Herb	FACW
3. Lindera benzo	oin		Shrub	FACW-
4. Rosa multiflor	ra		Shrub	FACU
5. Symplocarpus for	etidus		Herb	OBL
6.				
7				
8				
9				
10				
11		<u></u>		
12				
13				
14				
15.				
16.		<u> </u>		000/
Percent of Dominant Species that are OB	L, FACW or FAC	(excluding FAC	; -):	80%
Remarks:				
HYDROLOGY				
Recorded Data (Describe in Remarks Se	ction) Wetla	and Hydrology In	dicators:	
Stream, Lake or Tide Guage		rimary Indicators		
Aerial Photographs		Inundated		
Other	<u>×</u>	Saturated in Up	oper 12 Inches	
X No Recorded Data Available	<u> </u>	Water Marks		
Field Observations	-	Drift Lines Sediment Depo	oito	
	<=2 (in,) X	Drainage Patte		s
Depth to Free Water in pit:		econdary Indicat		
· · · · · · · · · · · · · · · · · · ·	<=1 (in,)	Oxidized Root	•	
	X	Water Stained	Leaves	
		Local Soil Surv	•	
	<u>×</u>	FAC-Neutral Te		
		Other (explain	IN Remarks Se	ction)
Remarks:				

Project/Site: Silo Ridge Applicant/Owner:		mmunity ID: insect ID:	woodland/wet	Date: County:	6-May-05 Dutchess
Investigator A. Ruggiero	Plo	t ID: JJ94i	n	State:	NY
SOILS					
Map Unit Name:		D	rainage Class:		
(Series and Phase):		Fi	eld Observations:		
Taxonomy (Subgroup):			Confirm Mapped	Туре: 🗌 ١	′es 🗌 No
Profile Description: Depth (inches) Horizon 0-5 5-18	Matrix Colors (Munsell Moist) 2.5Y 3/1 2.5Y 4/1	Abundar	fottle nce/Contrast YR 4/6	Strue Cla	Concentrations, cture, etc. ay loam ay loam
			·		
Hydric Soils Indicators: Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma C Remarks:		Concretions High Organic Co Organic Streakin Listed on Local H Listed on Nation Other (Explain in	ng in Sandy S Hydric Soils L al Hydric Soils	ist s List	
WETLAND DETERMINATION					

Hydrophytic Vegetation Present?	✓ Yes	🗌 No			
Wetland Hydrology Present?	✓ Yes	🗌 No	Is this Sampling Point within		🗌 No
Hydric Soils Present?	✓ Yes	🗌 No			
Remarks:					

Pro	ject/Site: Silo Ridge	Community ID:	woodland/wet	Date:	7-May-05
Арр	licant/Owner:	Transect ID:		County:	Dutchess
Inve	estigator A. Ruggiero	Plot ID: LL8	7in	State:	NY
Α.	Do normal circumstances exist on this sit	e?	✓] Yes	🗌 No
В.	Is this site significantly disturbed (Atypica	I Situation)		Yes	✓ No
C.	Is the area a potential Problem Area?	· · · · ·		Yes	✓ No
•	(If needed, explain on reverse)		······································		
VF	GETATION				
	MINANT PLANT SPECIES:			STRATUM	INDICATOR
1.	Acer rubr	nim		Tree	FAC
2.	Carex str			Herb	OBL
3.	Impatiens ca			Herb	FACW
4.	Onoclea ser			Herb	FACW
5.	Phragmites a			Herb	FACW
6.	Rosa multi			Shrub	FACU
o. 7.	Solidago cana			Herb	FACU-
8.	Symplocarpus			Herb	OBL
9.	Sympiocalpus	10611003		TICID	
3. 10.					
11.					
12.					
13.					
14.					
15.					
16.					
_	cent of Dominant Species that are			<u> </u>	75%
	narks:			5 - J.	1070
rei	liai k5.				
HY	DROLOGY				
Ē	Recorded Data (Describe in Remarks	Section) Wet	land Hydrology Ir	ndicators:	
	Stream, Lake or Tide Guage		Primary Indicators		
	Aerial Photographs		X Inundated		
	Other		X Saturated in U	pper 12 Inches	
	X No Recorded Data Available		Water Marks		
			Drift Lines		
	Field Observations	_	Sediment Dep		
	Depth of Surface Water		C Drainage Patte		
	Depth to Free Water in pit:		Secondary Indicat		
	Depth to Saturated Soil	<=1 (in,)		Channels in Up	oper 12"
		-	<u>Vater Stained</u>		
		-	Local Soil Surv K FAC-Neutral T	•	
		-		in Remarks Se	ction)
	-				
Rer	narks:				

Project/Site: Silo Ridge Applicant/Owner:		munity ID: <u>woodland/wet</u> sect ID:	Date: County:	7-May-05 Dutchess
Investigator A. Ruggiero	Plot I		State:	NY
SOILS				
Map Unit Name:		Drainage Class:		
(Series and Phase):		Field Observations	s:	
Taxonomy (Subgroup):		Confirm Mappe	ed Type: 🗌 Y	es 🗌 No
Profile Description:				
Depth	Matrix Colors	Mottle		oncentrations,
(inches) Horizon 0-18	(Munsell Moist) 2.5Y 3/1	Abundance/Contrast 7.5YR 4/6		ture, etc. t loam
	2.01 0/1	7.511(+/0		lioan
	_			
Hydric Soils Indicators:		Ormanations		
Histosol Histic Epipedon		Concretions <u>High Organic C</u>		
Sulfidic Odor			ing in Sandy Sc	ils
Aquic Moisture Regir	ne		Hydric Soils Lis	
Reducing Conditions			nal Hydric Soils	
X Gleyed or Low-Chror	na Colors	Other (Explain	in Remarks Sec	tion)
Remarks:				
WETLAND DETERMINATIO	ON			

Hydrophytic Vegetation Present?	✓ Yes	🗌 No			
Wetland Hydrology Present?	✓ Yes	🗌 No	Is this Sampling Point within a Wetland?	🗹 Yes	🗌 No
Hydric Soils Present?	✓ Yes	🗌 No			
Remarks:					

Project/Site: Silo Ridge	Community ID:	Herbaceous	Date:	7-May-05
Applicant/Owner:	Transect ID:		County:	Dutchess
Investigator A. Ruggiero	Plot ID: LL77	out	State:	NY
A. Do normal circumstances exist on this site?		\checkmark	Yes	🗌 No
B. Is this site significantly disturbed (Atypical Site	tuation)		Yes	✓ No
C. Is the area a potential Problem Area?	,		Yes	⊡ No
(If needed, explain on reverse)		······	1.00	
VEGETATION				
DOMINANT PLANT SPECIES:			STRATUM	INDICATOR
1. Gallium sp.			Herb	NI
2. Onoclea sensib	oilis		Herb	FACW
3. Rosa multiflor	a		Shrub	FACU
4.				
5.				
6.				
7.				
8.				
9.				
10				
11				
12				
13				
14				
15.				
16.		<u> </u>		500/
Percent of Dominant Species that are OB	L, FACW or FAC	(excluding FAC	; -):	50%
Remarks:				
HYDROLOGY				
Recorded Data (Describe in Remarks Se	ction) Wetla	and Hydrology In	dicators:	
Stream, Lake or Tide Guage		imary Indicators		
Aerial Photographs		Inundated		
Other		_Saturated in Up	oper 12 Inches	
X No Recorded Data Available		Water Marks		
Field Observations		_Drift Lines	acita	
Depth of Surface Water	(in,)	Sediment Depo	erns in Wetlands	
Depth to Free Water in pit:		condary Indicat		
	>18 (in,)	•	Channels in Up	,
· · · · · · · · · · · · · · · · · · ·		Water Stained	•	
		Local Soil Surv	•	
		FAC-Neutral Te		
	_	Other (explain	in Remarks Sec	ction)
Remarks:	•			

(1987 ACOE Wetlands Delineation Manual)

Project/Site: Silo Ridge Applicant/Owner: Investigator A. Ruggiero		munity ID: sect ID: ID: LL77	Herbaceous	Date: County: State:	7-May-05 Dutchess NY
SOILS Map Unit Name:			rainage Class:		
(Series and Phase):			eld Observations	:	
Taxonomy (Subgroup):			Confirm Mappe	d Type: 🗌 Y	′es 🗌 No
Profile Description: Depth (inches) Horizon 0-18	Matrix Colors (Munsell Moist) 2.5Y 3/2		Nottle nce/Contrast	Struc	Concentrations, cture, etc. ay loam
Hydric Soils Indicators: Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma C Remarks:	Colors		Concretions High Organic Co Organic Streaki Listed on Local Listed on Natior Other (Explain i	ng in Sandy So Hydric Soils Li nal Hydric Soils	st s List

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	☐ Yes☐ Yes☐ Yes	✓ No✓ No✓ No	Is this Sampling Point within a Wetland?	🗌 Yes	⊡ No
Remarks:					

Project/Site: Silo Ridge Community ID: WET	Date:	3-May-05
Applicant/Owner: Higher Ground Transect ID:	County:	Dutchess
Investigator S. Finch Plot ID: C47	State:	NY
A. Do normal circumstances exist on this site?	✓ Yes	🗌 No
B. Is this site significantly disturbed (Atypical Situation)		🗹 No
C. Is the area a potential Problem Area?		🗹 No
(If needed, explain on reverse)		
VEGETATION		
DOMINANT PLANT SPECIES:	STRATUM	INDICATOR
1. Typha latifolia	HERB	OBL
2. Lythrum salicaria	HERB	FACW+
3. Phalaris arundinacea	HERB	FACW+
4. Carex spp.	HERB	
5.		
6.		
7.		
8		
9		
10		
11		
12		
13		
14		
15		
		4000/
Percent of Dominant Species that are OBL, FACW or FAC (exclude	ding FAC -):	100%
Remarks:		
HYDROLOGY		
	Irology Indicators:	
Stream, Lake or Tide Guage Primary Ir		
Aerial Photographs <u>x</u> Inunda		
	ated in Upper 12 Inches	
No Recorded Data AvailableWater		
Field Observations Drift Li	ines ient Deposits	
	age Patterns in Wetlands	
	y Indicators (2 or more r	
	ed Root Channels in Up	,
	Stained Leaves	
	Soil Survey Data	
	leutral Test	tion)
	(explain in Remarks Sec	cuon)
Remarks:		
none		

Project/Site: S	-		nmunity ID:	WET	Date:	3-May-05
Applicant/Own		und Tran	sect ID:		County:	Dutchess
Investigator S	5. Finch	Plot	ID: C47		State:	NY
SOILS						
Map Unit Name	e:		D	rainage Class:		
(Series and Ph	ase):		F	ield Observation	s:	
Taxonomy (Su	bgroup):			Confirm Mappe	ed Type: 🗌 Y	′es 🗌 No
Profile Descrip	tion:					
Depth		Matrix Colors		/lottle		Concentrations,
(inches)	Horizon	(Munsell Moist)	Abunda	nce/Contrast		cture, etc.
0-4	A/B	2.5Y 3/1			Sandy	/ clay loam
4+	В	2.5Y 3/1			Gravel	ly clay loam
				<u> </u>		
				<u> </u>		
Hydric Soils Ind	dicators:					
Histoso				Concretions		
	pipedon			High Organic C	Content	
Sulfidic					king in Sandy Se	oils
	loisture Regime			Listed on Loca		
	ng Conditions				onal Hydric Soils	
	or Low-Chroma	Colors			in Remarks Se	
Remarks:						

Hydrophytic Vegetation Present?	✓ Yes	🗌 No			
Wetland Hydrology Present?	✓ Yes	🗌 No	Is this Sampling Point within v Y a Wetland?		🗌 No
Hydric Soils Present?	✓ Yes	🗌 No			
Remarks:					

Project/Site: Silo Ridge	Community	ID: WET	Date:	3-May-05
Applicant/Owner: Higher Ground	Transect ID	:	County:	Dutchess
Investigator S. Finch	Plot ID:	GG	State:	NY
A. Do normal circumstances exist on this site?	?		✓ Yes	🗌 No
B. Is this site significantly disturbed (Atypical S	Situation)		Yes	✓ No
C. Is the area a potential Problem Area?			 ∏ Yes	✓ No
(If needed, explain on reverse)				
VEGETATION				
DOMINANT PLANT SPECIES:			STRATUM	INDICATOR
1. Acer rubru	ım		TREE	FAC
2. Carpinus carol	liniana		TREE	FAC
3. Lindera ben.			SHRUB	FACW-
4. Symplocarpus f	oetidus		HERB	OBL
5. Onoclea sens			HERB	FACW
6. Alliaria petic			HERB	FACU-
7. Caltha palus			HERB	OBL
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16				
Percent of Dominant Species that are O	BL, FACW or F	FAC (excluding F	AC -):	86%
Remarks:				
HYDROLOGY Recorded Data (Describe in Remarks S	Section)	Wetland Hydrolog	undicatora:	
Stream, Lake or Tide Guage	Section)	Primary Indicat		
Aerial Photographs		x Inundated	010.	
Other			Upper 12 Inches	
No Recorded Data Available		Water Mark	••	
		Drift Lines		
Field Observations		Sediment D		
Depth of Surface Water	(in,)		atterns in Wetlands	
Depth to Free Water in pit: Depth to Saturated Soil	(in,)	•	cators (2 or more oot Channels in Up	. ,
	(in,)	Water Stain		iper 12
		Local Soil S		
		FAC-Neutra	•	
			ain in Remarks Se	ction)
Remarks:				
none				

	```				,		
Project/Site:		Com	munity ID:	Upland	Date:		
Applicant/Owner:		Tran	sect ID:		County:		
0		Plot	ID: GG		State: NY		
SOILS							
Map Unit Name:				rainage Class:			
(Series and Phase)	:		F	ield Observations	S:		
Taxonomy (Subgro	up):			Confirm Mappe	ed Type: 🗌 Yes 🗌 No		
Profile Description:							
Depth		Matrix Colors	-	Mottle	Texture, Concentrations,		
	Horizon	(Munsell Moist)	Abunda	nce/Contrast	Structure, etc.		
0-4	<u>A</u>	10YR 2/1			sandy gravelly loam		
4+	В	2.5Y 2.5/1			sandy gravelly loam		
Hydric Soils Indicat Histosol Sulfidic Odo Aquic Moistu Reducing Co Gleyed or Lo <b>Remarks:</b>	don r ure Regime onditions	Colors		Listed on Local	content ing in Sandy Soils Hydric Soils List nal Hydric Soils List in Remarks Section)		

#### WETLAND DETERMINATION

Hydrophytic Vegetation Present?	✓ Yes	🗌 No			
Wetland Hydrology Present?	🗹 Yes	🗌 No	Is this Sampling Point within a Wetland?	✓ Yes	🗌 No
Hydric Soils Present?	✓ Yes	🗌 No			
Remarks:					

Project/Site: Silo Ridge	Community	D:	WET	Date:	5-May-05
Applicant/Owner: Higher Ground	Transect ID	): -		County:	Dutchess
Investigator S. Finch	Plot ID: I			State:	NY
<b>A.</b> Do normal circumstances exist on this site?				✓ Yes	🗌 No
B. Is this site significantly disturbed (Atypical Site				☐ Yes	✓ No
<b>C.</b> Is the area a potential Problem Area?				Yes	✓ No
(If needed, explain on reverse)					
VEGETATION					
DOMINANT PLANT SPECIES:				STRATUM	INDICATOR
Typha latifolia         Lythrum salicar         Juncus effusur         Polygonum saggit         Lemna minor         Lemna minor         8.         9.         10.	9			HERB	OBL
2. Lythrum salicar				HERB	FACW+
3. Juncus effusu				HERB	FACW+
4. Polygonum saggit				HERB	OBL
5. Lemna minor	•			HERB	OBL
6					
/					
o					
5 10					
11.					
12.					
13.					
14.					
15.					
16.					
Percent of Dominant Species that are OBI	_, FACW or F	FAC (e	excluding	FAC - ):	100%
Remarks:					
HYDROLOGY					
Recorded Data (Describe in Remarks Sec	tion)	Wetlar	nd Hydrolog	gy Indicators:	
Stream, Lake or Tide Guage			mary Indica		
Aerial Photographs			Inundated		
Other		Х	Saturated i	n Upper 12 Inches	
No Recorded Data Available			Water Mar	ks	
			Drift Lines	<b>-</b>	
Field Observations	(1-1)		Sediment I	-	
Depth of Surface Water	(in,)		-	Patterns in Wetlands	
Depth to Free Water in pit: Depth to Saturated Soil	(in,)			dicators (2 or more i oot Channels in Up	
	(in,)			ned Leaves	per 12
				Survey Data	
			FAC-Neutr		
				lain in Remarks Sec	ction)
Remarks:			· ·		
none					
····-					

Project/Site: Silo Ridge (			Community ID: WET				Date:	5-May-05
Applicant/Owner:	Higher Grour	nd	Transect ID:				County:	Dutchess
Investigator S. Fir	nch		Plot ID	):			State:	NY
SOILS								
Map Unit Name:				Dr	ainage Class	s:		
(Series and Phase)	):			Fi	eld Observat	ions:		
Taxonomy (Subgro	oup):				Confirm Ma	pped T	уре: 🗌	Yes 🗌 No
Profile Description:	:			_				_
Depth (inches)	Horizon	Matrix Colo (Munsell Mois			lottle ice/Contrast			Concentrations, cture, etc.
0-16	A/B	2.5Y 3/2			1 abundant			lly clay loam
	<u> </u>		·					
	<u> </u>		·					
	·		·					
	·		·					
Hydric Soils Indicators: Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors Remarks:					Concretions High Organ Organic Stru- Listed on Lo Listed on Na Other (Expla	ic Cont eaking ocal Hy ational	in Sandy S dric Soils L Hydric Soi	.ist Is List

#### WETLAND DETERMINATION

Hydrophytic Vegetation Present?	✓ Yes	🗌 No			
Wetland Hydrology Present?	✓ Yes	🗌 No	Is this Sampling Point within a Wetland?	✓ Yes	🗌 No
Hydric Soils Present?	✓ Yes	🗌 No			
Remarks:					

Project/Site: Silo Ridge	Community	ID: WET	Date:	6-Mar-05
Applicant/Owner: Higher Ground	Transect ID	:	County:	Dutchess
Investigator S. Finch	Plot ID: L	_	State:	NY
A. Do normal circumstances exist on this site?	_		✓ Yes	🗌 No
<b>B.</b> Is this site significantly disturbed (Atypical Site				🗹 No
<b>C.</b> Is the area a potential Problem Area?	-		 ∏ Yes	☑ No
(If needed, explain on reverse)				
VEGETATION				
DOMINANT PLANT SPECIES:			STRATUM	INDICATOR
	a		Shrub	FACW+
2. Lonicera tatari	са		Shrub	FACU
Cornus serice           Lonicera tatari           Onoclea sensib           Symplocarpus foe           Solidago spp           Solidago spp           Secondaria           Onoclea           Solidago spp           Secondaria           Solidago           Secondaria           Solidago           Secondaria           Secondaria <t< td=""><td>oilis</td><td></td><td>Herb</td><td>FACW</td></t<>	oilis		Herb	FACW
4. Symplocarpus foe	etidus		Herb	OBL
5. Solidago spp			Herb	
6.				
7.				
8.				
9.				
10.				
11				
12.				
13				
14.				
15				
16				
Percent of Dominant Species that are OB	L, FACW or F	FAC (excluding F	FAC - ):	75%
Remarks:				
HYDROLOGY				
Recorded Data (Describe in Remarks Sec	ction)	Wetland Hydrolog	v Indicators:	1
Stream, Lake or Tide Guage		Primary Indicat	•	
Aerial Photographs		Inundated		
Other			Upper 12 Inches	
No Recorded Data Available		Water Mark	S	
		Drift Lines		
Field Observations		Sediment D		
Depth of Surface Water	(in,)		atterns in Wetlands	
Depth to Free Water in pit: Depth to Saturated Soil	(in,)		icators (2 or more i oot Channels in Up	
	(in,)	x Water Stain	•	per 12
		Local Soil S		
		FAC-Neutra	•	
		Other (expla	ain in Remarks Sec	ction)
Remarks:		-		

(1987 ACOE Wetlands Delineation Manual)

Project/Site: Silo Ridge	Cor	nmunity ID:	Wet	Date:	6-May-05
· · · · · · · · · · · · · · · · · · ·		nsect ID:		County:	Dutchess
Investigator S. Finch	<b>3</b>			State:	NY
SOILS					
Map Unit Name:		Dr	ainage Class:		
(Series and Phase):		Fie	eld Observatio	ons:	
Taxonomy (Subgroup):			Confirm Map	ped Type: 🛛 ר	′es 🗌 No
Profile Description:					
Depth (inches) Horizon	Matrix Colors (Munsell Moist)		lottle ice/Contrast		Concentrations, cture, etc.
0-16+ A/B	10YR 3/2	2.5Y 4/1	1 abundant	Sandy	/ clay loam
Hydric Soils Indicators: Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma C Remarks:	olors		Listed on Loc Listed on Na	c Content aking in Sandy So cal Hydric Soils Li tional Hydric Soils in in Remarks Se	st s List

#### WETLAND DETERMINATION

√ Yes	🗌 No	Is this Sampling Point within	✓ Yes	🗌 No
√ Yes	🗌 No	a wetland?		
	_		a Wetland?	a Wetland?

Appendix B: Site Photographs



Photo #1 Pond A.



Photo #2
Pond B.



Photo #3 Perennial stream(C,CC-line) exiting the eastern boundary line.



Photo #4 Perennial stream (C,CC-line) located along eastern boundary line



Photo #5 Wetland C.



Photo #6 Intermittent stream (E-line).



Photo #7 Wetland GG.



Photo #8	
Isolated Wetland I.	



Photo #9 One of several wetlands along the J,JJ-wetland/stream line.



Photo #10 Eastern view of Wetland L along the wetland line LL.



Photo #11 Southeastern view of Wetland L from the L-line.



Photo #12 Eastern view of Wetland L.



Photo #13 Southwestern view of Wetland L with transition to uplands.



Photo #14 Southern view of Wetland L along New York State Route 23.



Photo #15 Springhead of a ditched intermittent stream (QQ-line).



Photo #16 Facing south along the ditched intermittent stream (QQ-line).



Photo #17 An intermittent stream located near the north central portion of the property (R,RR-line).



Photo #18 The end of an intermittent stream located near the north central portion of the property (R,RR-line).



Photo #19

An intermittent stream located near the north central portion of the property (R,RR-line) at a culvert at New York State Route 44.

Appendix C: Vegetation List

Scientific Name	Common Name	Indicator Status		
Trees				
Acer negundo	Boxelder	FAC+		
Acer pensylvanicum	Striped maple	FACU		
Acer rubrum	Red maple	FAC		
Acer saccharum	Sugar maple	FACU-		
Aesculus hippocastanum	Horse chestnut	UPL		
Betula papyrifera	Paper birch	FACU		
Betula pendula	European birch	UPL		
Betula populifolia	Gray birch	FAC		
Carya ovata	Shagbark hickory	FACU-		
Castanea dentata	American chestnut	UPL		
Crataegus spp.	Hawthorn	UPL		
Fagus grandifolia	American beech	FACU		
Fraxinus americana	White ash	FACU		
Fraxinus pennsylvanica	Green ash	FACW		
Malus spp.	Apple	NI		
Picea glauca	White spruce	FACU		
Pinus strobus	White pine	FACU		
Platanus occidentalis	Sycamore	FACU-		
Populus deltoides	Eastern cottonwood	FAC		
Populus grandidentata	Bigtooth aspen	FACU-		
Populus tremuloides	Quaking aspen	FACU		
Prunus serotina	Black cherry	FACU		
Quercus alba	White oak	FACU-		
Quercus arba Quercus prinus	Chestnut oak	UPL		
	Red oak	FACU-		
Quercus rubra Rhus hirta		UPL		
	Staghorn sumac	FACW-		
Salix babylonica	Weeping willow			
Ulmus americana	American elm	FACW-		
Tsuga canadensis	Eastern hemlock	FACU		
A 7 7 .	Shrubs			
Amelanchier spp.	Serviceberry	NI		
Berberis thunbergii	Japanese barberry	FACU		
Betula lenta	Sweet birch	FACU		
Carpinus caroliniana	American hornbeam	FAC		
Cornus amomum	Silky dogwood	FACW		
Cornus sericea	Red-osier dogwood	FACW+		
Euonymus atropurpureus	Burning bush	FACU		
Hamamelis virginiana	Witch-hazel	FAC-		
Scientific and common names and wetland indicator categories are from Reed (1988) and Tiner et al. (1995). Newcomb, Lawrence. 1977. <u>Newcomb's Wildflower Guide</u> . Little, Brown and Company. Boston. Reschke, Carol. 2002. <u>Ecological Communities of New York State</u> . 2 nd ed. New York Natural Heritage Program. New York State Department of Environmental Conservation. Albany, NY.				
FAC: Facultative	FACU: Facultative upland	FACW: Facultative wetland		
NI: Non-indicator	OBL: Obligate	UPL: Upland		
+: more frequent in wetlands	-: less frequent in wetlands	*: tentative agreement		

List of Flora of Silo Ridge and Indicator Status

Scientific Name	Common Name	Indicator Status		
Shrubs (cont.)				
Kalmia latifolia	Mountain Laurel	FACU		
Lindera benzoin	Spicebush	FACW-		
Rosa multiflora	Multiflora rose	FACU		
Rubus occidentalis	Black raspberry	UPL		
Rubus spp.	Blackberry	NI		
Salix discolor	Pussy willow	FACW		
Vaccinium corymbosum	Highbush blueberry	FACW-		
Viburnum dentatum	Northern arrow-wood	FAC		
	Herbs	1110		
Aquilegia canadensis	Red columbine	FAC		
Alliaria petiolata	Garlic mustard	FACU-		
Anemone quinquefolia	Wood anemone	FACU		
Apocynum androsaemifolium	Spreading dogbane	FACU		
Arctium minus	Common burdock	UPL		
Arisaema triphyllum	Jack-in-the-pulpit	FACW-		
Arisaema iriphytium Asarum canadense	Canadian wildginger	NI		
	Black mustard	UPL		
Brassica nigra				
Caltha palustris	Yellow marsh marigold	OBL		
Cichorium intybus	Chicory	FACU		
Coptis groenlandica	Goldthread	FACW		
Coronilla varia	Purple crownvetch	UPL		
Daucus carota	Queen Anne's lace	UPL		
Dicentra cucullaria	Dutchman's breeches	UPL		
Echinocystis lobata	Wild cucumber	FAC		
Equisetum palustre	Marsh horsetail	FACW		
Euphorbia cyparissias	Cypress spurge	FACU		
Fragaria spp.	Strawberry	NI		
Galium aparine	Cleavers	FACU		
Hepatica americana	Round-lobed Hepatica	UPL		
Hypericum spp.	St. John's wart	NI		
Impatiens capensis	Jewelweed	FACW		
Lemna spp.	Duckweed	NI		
Lycopodium spp.	Clubmoss	NI		
Lythrum salicaria	Purple loosestrife	FACW+		
Phytolacca americana	American pokeweed	FACU+		
Plantago major	Common plantain	FACU		
Polygonum sagittatum	Arrowleaf tearthumb	OBL		
Potentilla spp.	Cinquefoil	NI		
Scientific and common names and wetland indicator categories are from Reed (1988) and Tiner et al. (1995). Newcomb, Lawrence. 1977. <u>Newcomb's Wildflower Guide</u> . Little, Brown and Company. Boston. Reschke, Carol. 2002. <u>Ecological Communities of New York State</u> . 2 nd ed. New York Natural Heritage Program. New York State Department of Environmental Conservation. Albany, NY.				
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List of Flora of Silo Ridge and Indicator Status (cont.)

Scientific Name	Common Name	Indicator Status
	Herbs (cont.)	
Ranunculus spp.	Buttercup	NI
Rudbeckia hirta	Blackeyed susan	FACU-
Sanguinaria canadensis	Bloodroot	NI
Sisymbrium officinale	Hedge mustard	FACU
Smilacina racemosa	False solomon's seal	FACU-
Solidago canadensis	Canada goldenrod	FACU
Sphagnum spp.	Sphagnum	NI
Symplocarpus foetidus	Skunk cabbage	OBL
Taraxacum officinale	Common dandelion	FACU-
Thalictrum spp.	Meadow-rue	NI
Thalictrum thalictroides	Rue anemone	UPL
Trifolium campestre	Field clover	FACU
Trifolium pratense	Red clover	FACU-
Trifolium repens	White clover	FACU-
Tussilago farfara	Coltsfoot	FACU
Trillium erectum	Red trillium	FACU-
Viola macloskeyi	Small white violet	FACW+
Viola spp.	Violet	NI
Veratrum viride	False hellebore	FACW+
	Ferns	
Adiantum pedatum	Northern maidenhair fern	FAC-
Athyrium filix-femina	Common ladyfern	FAC
Dryopteris marginalis	Marginal woodfern	FACU-
Matteucchia struthiopteris	Ostrich fern	FACW
Onoclea sensibilis	Sensitive fern	FACW
Osmunda cinnamomea	Cinnamon fern	FACW
Polypodium vulgare	Common polypody	NI
Polystichum acrostichoides	Christmas fern	FACU-
Pteridium aquilnum	Brackenfern	FACU
Thelypteris noveboracensis	New York fern	FAC
Thelypteris palustris	Marsh fern	FACW+
	Vines	
Toxicodendron radicans	Poison ivy	FAC
Vitis spp.	Grapevine	NI
·	Grasses and Sedges	
Andropogon spp.	Broomsedge	NI
Carex pensylvanica	Pennsylvania sedge	UPL
Carex stricta	Upright sedge	OBL
	Sedge	NI
Carex spp. Eleocharis spp.	Spikerush	NI
Scientific and common names and we		
Newcomb, Lawrence. 1977. <u>Newcomb</u> Reschke, Carol. 2002. <u>Ecological Cor</u> New York State Department of Envir	<u>o's Wildflower Guide</u> . Little, Brown a <u>nmunities of New York State</u> . 2 nd ec conmental Conservation. Albany, NY	and Company. Boston. d. New York Natural Heritage Program. Z.
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List of Flora of Silo Ridge and Indicator Status (cont.)

Scientific Name	Common Name	Indicator Status			
Gi	Grasses and Sedges (Cont.)				
Juncus effusus	Soft rush	FACW+			
Phalaris arundinacea	Reed canarygrass	FACW+			
Phragmites australis	Common reed	FACW			
Poa spp.	Bluegrass	NI			
Scirpus cyperinus	Woolgrass	FACW+			
Typha latifolia	Broad leaved cattail	OBL			
Scientific and common names and wetland indicator categories are from Reed (1988) and Tiner et al. (1995). Newcomb, Lawrence. 1977. <u>Newcomb's Wildflower Guide</u> . Little, Brown and Company. Boston. Reschke, Carol. 2002. Ecological Communities of New York State. 2 nd ed. New York Natural Heritage Program.					
New York State Department of Environmental Conservation. Albany, NY.					
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NI: Non-indicator	OBL: Obligate	UPL: Upland			
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# List of Flora of Silo Ridge and Indicator Status (cont.)

Appendix D: Wetland Map SP4

SP7

Wetland	Acreage
A (Isolated)	0.52
В	0.87
C-1	1.12
C-2	1.31
C-3	0.02
D	0.43
E-1	0.05
E-2	0.04
G-1	0.33
G-2	0.01
Н	0.51
I (Isolated)	0.06
J	2.46
К	2.06
L	
NYSDEC Wetland AM-15	26.03
Ν	0.15
0	0.03
00	0.01
Р	0.06
QQ	0.02
R (Isolated)	0.10
S (Isolated)	0.34
V	0.35
Z	5.53
Total Jurisdictional Acreage	
(Excludes acreage of Isolated	
Wetlands A, I, R & S)	41.39

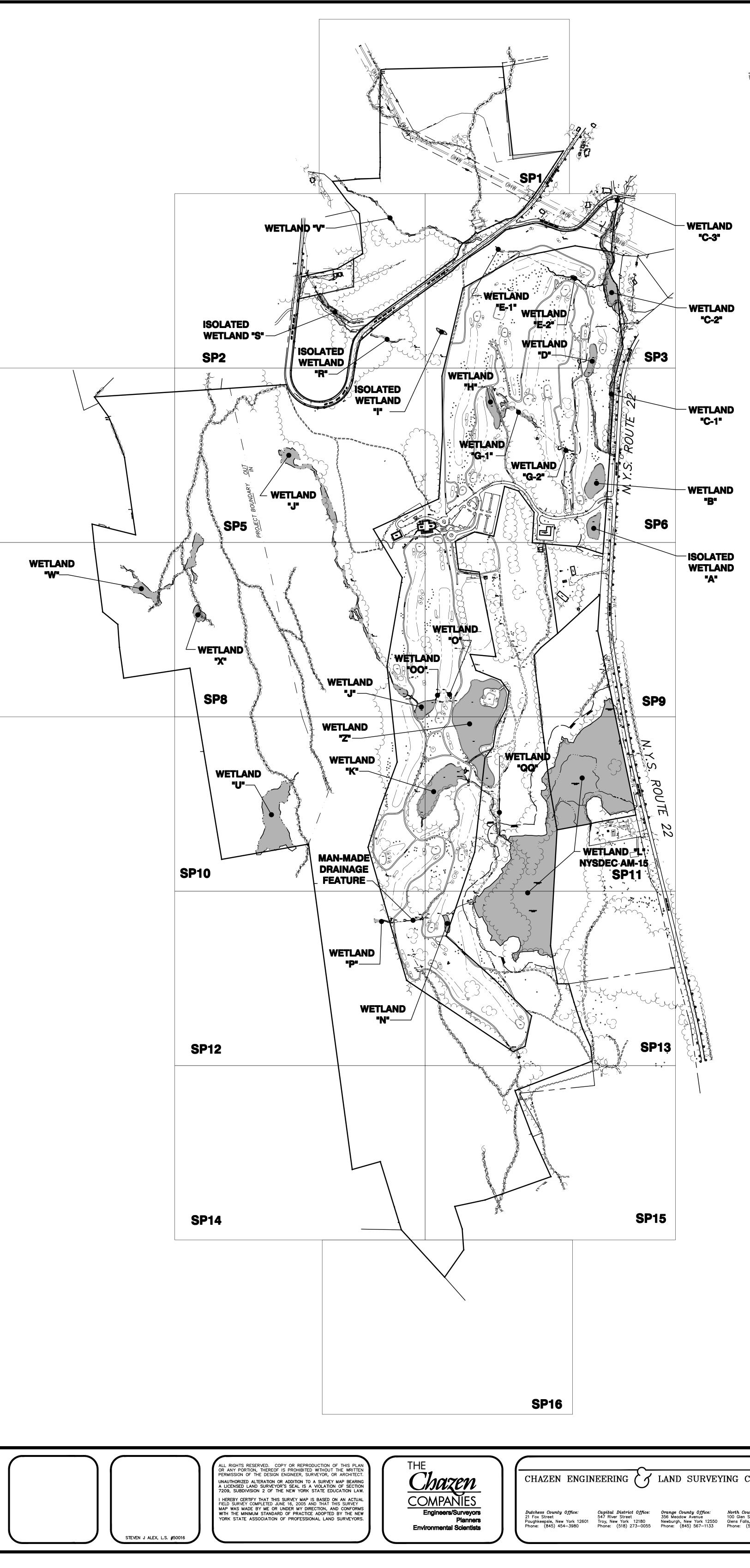
SCALE IN FEET 1"=400'

# Silo Ridge Country Club Resort Community

Drawing Name: X:\1\10400-10500\10454\Survey\dwg\ARCHIVE\ARCHIVE_WETLANDS_REV-5_20070530\T1-0VERALL-WETLANDS-10454.dwg

Xret's Attached: XTB-WETLANDS-10454; 10454bm Date Printed: May 31, 2007, 7:59am

tblk-image-1.jpg



**NOTES** 

0'30'37"

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S INKED SEAL OR HIS EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES

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SUBJECT TO EASEMENTS GRANTED TO NEW YORK STATE ELECTRIC & GAS CORP. INCLUDING LIBER 877 PAGE 441, LIBER 1904 PAGE 279, LIBER 1904 PAGE 280, & LIBER 1904 PAGE 281. SUBJECT TO RIGHTS OF THE PUBLIC IN AND TO N.Y.S. ROUTE 44, N.Y.S. ROUTE 22 AND WEST AMENIA ROAD.

THE LOCATION OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS ARE NOT ALWAYS KNOWN AND OFTEN MUST BE ESTIMATED. SUBSURFACE STRUCTURES NOT VISIBLE OR READILY APPARENT ARE NOT SHOWN AND THEIR LOCATION AND EXTENT ARE NOT CERTIFIED.

SURVEY COMPLETED WITH SNOW CONDITIONS OF 12 INCHES OF COVER. GRID NORTH, NYS PLANE COORDINATE SYSTEM, EAST ZONE, NAD 1983 BASED ON DUAL FREQUENCY GPS OBSERVATION.

TOPOGRAPHY SHOWN HEREON WAS COMPILED FROM AERIAL PHOTOGRAMMETRIC METHODS BY GOLDEN AERIAL SURVEYS, INC., PHOTO DATE APRIL 29, 2004; AND PARTIAL FIELD SURVEY COMPLETED BY CELS ON JUNE 16, 2005. VERTICAL DATUM NGVD 29 PER BM ALBANY 537. CONTOUR INTERVAL = 2 FOOT. PLANIMETRIC FEATURES (BUILDINGS, ROADS, TREELINES) SHOWN HEREON LOCATED BY AERIAL PHOTOGRAMMETRIC METHODS UNLESS OTHERWISE INDICATED.

# WETLAND NOTES

WETLANDS SHOWN HEREON AS PER FIELD DELINEATION MAY 26, 2005 BY CELS AND SURVEY LOCATION COMPLETED BY THIS OFFICE ON JUNE 7, 2005 AND NOVEMBER 3, 2005. ADDITIONAL WETLANDS DELINEATED BY THIS OFFICE ON NOVEMBER 3, 2005 WITH SURVEY LOCATION COMPLETED BY THIS OFFICE DECEMBER 29, 2005. WETLANDS SHOWN WITHIN THE PROJECT BOUNDARY WERE REVIEWED BY BRIAN ORZEL OF THE U.S. ARMY CORPS OF ENGINEERS ON SEPTEMBER 12, 2006.

# FILED MAP REFERENCE

REFER TO MAP ENTITLED "FINAL SUBDIVISION OF LANDS OF JOHN SEGALLA", RECORDED IN THE DUTCHESS COUNTY CLERK'S OFFICE ON APRIL 15, 1992, AS FILED MAP NO. 9458.

# FLOOD ZONE NOTE

A PORTION OF TAX PARCEL 132000-7066-00-670717 AND TAX PARCEL 132000-7066-00-732810 AS SHOWN HEREON LIE WITHIN FLOOD ZONE "AE" AND ZONE "X" AS SHOWN ON FLOOD INSURANCE RATE MAP FOR THE TOWN OF AMENIA, NY, COMMUNITY PANEL #361332-0006D REVISED NOVEMBER 15, 1989.

# DEED REFERENCES

132000-7066-00-732810 COUNTRY CLUB FUNDING, LLC TO HIGHER GROUND COUNTRY CLUB, LLC DEED DOCUMENT 02-2000-10224, RECORDED NOV. 14, 200
132000-7066-00-670717 COUNTRY CLUB FUNDING, LLC TO HIGHER GROUND COUNTRY CLUB, LLC DEED DOCUMENT 02-2000-10224, RECORDED NOV. 14, 200 & BOUNDARY AGREEMENT: HARLEM VALLEY LANDFILL CORP. TO JOHN SEGALA DEED LIBER 1998, PAGE 700 RECORDED SEPT. 8, 1997.
132000-7067-00-709177 COUNTRY CLUB FUNDING, LLC TO HIGHER GROUND COUNTRY CLUB, LLC DEED DOCUMENT 02-2000-10224, RECORDED NOV. 14, 200
132000-7067-00-742300 COUNTRY CLUB FUNDING, LLC TO HIGHER GROUND COUNTRY CLUB, LLC DEED DOCUMENT 02-2000-10224, RECORDED NOV. 14, 200
132000-7066-00-860725 WALTER & ELEANOR CULVER TO HIGHER GROUND COUNTRY CLUB, LLC DEED DOCUMENT 02-2004-9417, RECORDED SEPT. 13, 200
132000-7067-00-628131 RAYMOND F. POWERS, AS EXECUTOR OF THE ESTATE OF PAULINE M. MILLER A/K/A

THE ESTATE OF PAULINE M. MILLER A/K/A PAULINE L. MILLER TO HIGHER GROUND COUNTRY CLUB, LLC DEED DOCUMENT 02-2007-1968, RECORDED MARCH 19, 2007.

# **TAX PARCEL NUMBERS**

TOWN OF AMENIA, DUTCHESS COUNTY, NEW YORK 132000-7066-00-732810 132000-7066-00-670717 132000-7066-00-860725 132000-7067-00-709177 132000-7067-00-742300

# TABLE OF AREAS

132000-7067-00-628131

TAX PARCELS:	170.00 40055	
132000-7066-00-732810 -670717	170.00 ACRES 402.20 ACRES	
-860725	27.52 ACRES	
132000-7067-00-709177 & -742300	68.71 ACRES	
-628131	2.24 ACRES	
TOTAL SITE ACREAGE =	670.67 ACRES	

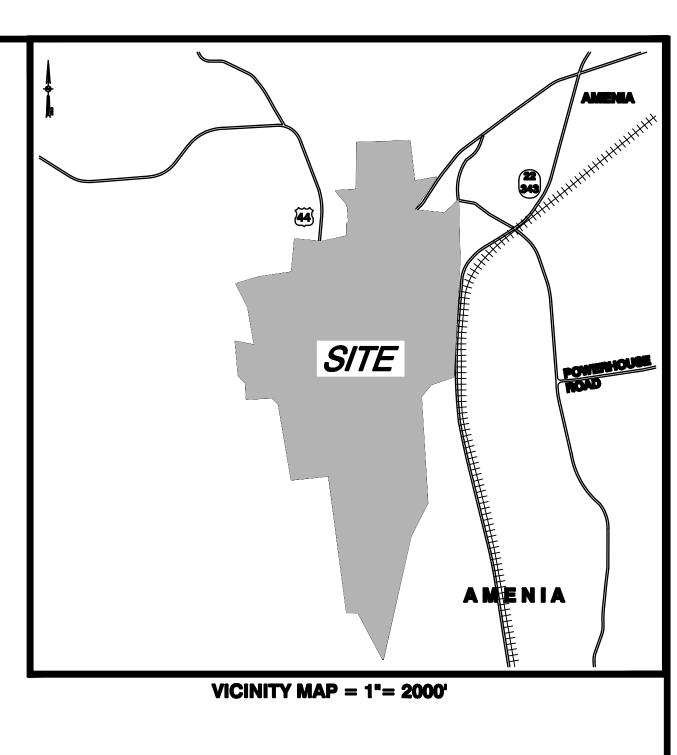
NYSDEC FRESHWA	TER WETLAND BOUN	NDARY VALIDATIC	<u>DN</u>
THE FRESHWATER WETLAND BOUNDARY AS OF FRESHWATER WETLAND AM-15 (WETLAN ON MAY 26, 2005 AND NOVEMBER 3, 2005 APRIL 13, 2006.	D L) AS DELINEATED BY	STEVE FINCH OF THE	CHAZEN CO
DEC STAFF:	SURVEYOR: _	STEVEN J ALEX, L.S	. <u>#050</u> 016
DATE:	SEAL		
WETLAND BOUNDARY DELINEATIONS AS	S VALIDATED BY THE NEW	VYORK STATE DEPAR	TMENT OF
ENVIRONMENTAL CONSERVATION REMAIN VA			

STING EXEMPT ACTIVITIES, AREA HYDROLOGY, OR LAND USE PRACTICES CHANGE (e.g., AGRICULTURAL TO RESIDENTIAL). AFTER 10 YEARS THE BOUNDARY MUST BE REVALIDATED BY DEC STAFF. REVALIDATION MAY INCLUDE A NEW DELINEATION AND SURVEY OF THE WETLAND BOUNDARY. ANY PROPOSED CONSTRUCTION, GRADING, FILLING, EXCAVATING, CLEARING OR OTHER REGULATED ACTIVITY IN THE FRESHWATER WETLAND OR WITHIN 100 FEET OF THE WETLAND BOUNDARY AS DEPICTED ON THIS PLAN REQUIRES A PERMIT FROM THE NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION UNDER ARTICLE 24 OF THE ENVIRONMENTAL CONSERVATION LAW (FRESHWATER WETLANDS ACT) PRIOR TO COMMENCEMENT OF WORK.

				NG CO., P.C.	LAND SURVEY		N ENGIN
	TAX LOT 7067-00-628131 (SP2)	5/30/07	5				
	REVISIONS PER ACOE	10/12/06	4				
HIGH	REVISIONS PER NYSDEC	4/20/06	3	<i>North Country Office:</i> 100 Glen Street	<i>Orange County Office:</i> 356 Meadow Avenue	<i>Capital District Office:</i> 547 River Street	rty Office:
1	GENERAL REVISIONS	4/11/06	2	Glens Falls, New York 12801 Phone: (518) 812-0513	Newburgh, New York 12550 Phone: (845) 567–1133	Troy, New York 12180 Phone: (518) 273–0055	New York 12601 454–3980
7 (	GENERAL REVISIONS	2/8/06	1				
	description	date	rev.				

**VALIDATION** ACCURATELY DEPICTS THE LIMITS FINCH OF THE CHAZEN COMPANIES HER GIERLOFF OF THE NYSDEC ON

STATE DEPARTMENT OF



# LEGEND:

	NO PHYS	ICAL BOUNDS
	ADJACEN	T PROPERTY LINE
		TLANDS LINE
· · ·	NYSDEC FLOOD Z	100' WETLAND BUFF
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OHW	EXISTING	OVERHEAD WIRES
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G	EXISTING	GAS LINE
UE	EXISTING	UNDERGROUND ELE
8" SAN	EXISTING	UNDERGROUND SEV
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∟	EXISTING	CULVERT W/ END
SIZE & TYPE		CULVERT W/ PLAIN
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ROAD	EXISTING	
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		CURB/GUTTER
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BENCHMARK HYD-NHOA		BENCHMARK
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		CAPPED IRON ROD CABLE TV PEDESTA
		CONIFEROUS TREE
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ETLAND BUFFER LINE CONTOUR CONTOUR RADE WALL IEAD WIRES INE GROUND ELECTRIC LINE GROUND SEWER LINE GROUND STORM LINE IG FOUNDATION T W/ END SECTION T W/ PLAIN END DWALL ALK T DRIVEWAY GUTTER DRIVEWAY MARK BASIN IRON ROD TV PEDESTAL ROUS TREE AGE MANHOLE OUS TREE с вох C MANHOLE CTION TRUCTURE TRUCTURE RKER TZZ TOR MARKER DRING RY MANHOLE KLER HEAD HONE MANHOLE HONE PEDESTAL C TRANSFORMER SIGNAL CONTROL BOX SIGNAL HEAD SIGNAL POLE / WIRE OWN MANHOLE Y POLE Y POLE W/ LIGHT ID BOUNDARY FLAG SHUT OFF VALVE

**SILO RIDGE** drawn M.C. MM date 1/13/06 1" = 400' **MAP OF WETLAND SURVEY** PREPARED FOR project no. HER GROUND COUNTRY CLUB MANAGEMENT CO., LLC 10454 sheet no. **T1** TOWN OF AMENIA, DUTCHESS COUNTY, NEW YORK 1 OF 17

Wetland Delineation Addendum 1

The Chazen Companies

# MEMORANDUM

To: File Record

From: Steve Finch

cc: Dave Tompkins, Barbara Beall

Date: June 15, 2007

Re: Condition of delineated wetlands on 2.2 acre parcel

Job #: 10454.02

On May 14, 2007, I conducted a site visit of the 2.2 acre parcel, located to the northeast of the existing property for the purposes of conducting a wetland assessment and delineation.

This property abuts Wetland S located to the south on the main parcel. As part of the site assessment and delineation, it was noted that two flags previously placed for Wetland S extended onto this 2.2 acre property and thus were not shown on the original delineation. I noted a need for the revised wetland survey to include these two flags previously located.

Also, six additional flags were identified on the north side of the existing driveway. This area was also labeled as Wetland S1A through S1-3 OE and SS1A through SS3A OE. There was an ephemeral connection observed between this additional delineated wetland area and the existing Wetland S.

Previously during the ACOE site visit on September 12, 2006, the ACOE determined that Wetland I and Stream R/S on the main parcel were isolated because there was no defined flow exiting these two wetlands and flowing downstream into a tributary to an interstate waterbody. Since Wetland S on the 2.2 acre parcel is located upstream of the isolated wetland system, the additional wetland areas identified on the 2.2 acre parcel would be considered isolated as well.

TCC discussed this assumption with the ACOE by e-mail dated 5-17-2007. The ACOE staff requested that the survey of the wetlands on the 2.2 acre parcel be provided to the office, along with data sheets and photographs. The ACOE indicated that they may or may not need to visit the site, given the fact that they previously identified wetlands downstream of this location isolated.