Environmental Assessment Cole Hollow Road Realignment Project

Appendix – F

Wetland Delineation and Report

DELINEATION OF WATERS OF THE UNITED STATES

INCLUDING

FRESHWATER WETLANDS

Blenheim Roadway Realignment Project (Cole Hollow Road)

Town of Blenheim, Schoharie County, New York

Prepared For:

Lamont Engineers
548 Main Street
Cobleskill, New York 12043

And

The Town of Blenheim
c/o Mr. Robert H. Mann, Jr., Supervisor
1848 State Highway 30
North Blenheim, N.Y. 12131

Prepared By:

NCES
NORTH COUNTRY ECOLOGICAL SERVICES, INC.

December 20, 2012

Table of Contents

1.0 Introduction	1
2.0 Site Location & Description	3
2.1 DEC Regulated Areas	4
3.0 Delineation Methodology	5
4.0 Existing Conditions	6
4.1 Soils	6
4.2 Vegetation	7
4.3 Hydrology	8
5.0 Wetland Findings	9
6.0 Jurisdictional Determination	10
6.1 ACOE Jurisdictional Wetlands	11
6.2 Potential "Isolated" Non-Jurisdictional Wetlands	11
7.0 Conclusion	11
8.0 References	12

List of Tables

Table 1 – Jurisdictional Wetlands
Table 2 – Non-Jurisdictional Wetlands

List of Figures

Figure 1 – Site Location Map
Figure 2 – NYSDEC Wetlands Map
Figure 3 – Soil Survey Map

Appendices

Appendix A – Site Photographs
Appendix B – Field Data Sheets
Appendix C – Wetland Delineation Map
Appendix D – Jurisdictional Determination Form

1.0 INTRODUCTION

At the request of the Town of Blenheim and the project engineers, Lamont Engineers, c/o Mr. Francois Vedier, located at 548 Main Street, Cobleskill, New York 12043 (the "Engineers"), North Country Ecological Services, Inc. (NCES) completed an on-site delineation of Waters of the United States that included freshwater wetlands on a portion of undeveloped, fallow land (the "Project Area") located at the intersection of Cole Hollow Road and Spur Road, in the Town of Blenheim, Schoharie County, New York (the "Site") (Figure 1). The Project Area consists of 6.0± acres and is a portion of four (4) larger parcels that cumulatively total 130± acres. NCES assessed the existing ecological condition of the property and identify regulated wetlands within the Project Area only.

The Project Area is comprised of four separate parcels that are currently owned by the following entities:

1) Parcel 161.-1-1.1
   103.3 Acres
   John Dolker
   226 Spur Rd
   PO Box 885
   N Blenheim, NY 12131

2) Parcel 149.-1-4.1
   21 Acres
   Eugene Engle
   Cole Hollow Road
   PO Box 62
   Fultonham, NY 12071

3) Parcel 161.-1-1.2
   4 Acres
   Angeliki Kalloudis
   238 Cole Hollow Rd
   246-39 Vanzandt Ave,
   Douglaston, NY 11362

4) Parcel 149 -1-5
   2 Acres
   Eugene Engle
   248 Cole Hollow Rd
   West Fulton, NY 12194

The Engineers are currently working with the Town of Blenheim, c/o Robert H Mann, Jr. – Supervisor, to re-align a section of Cole Hollow Road, which is rapidly deteriorating as a result of severe erosion caused by Hurricane Katrina and other more recent flash-flooding events. The Town of Blenheim wishes to re-align Cole Hollow Road, through the Project Area to relocate the road more upslope and on stable ground. The ravine below Cole Hollow Brook has continued to erode and it poses a safety hazard to motorists utilizing the road. The formal wetland delineation was completed by NCES as part of a feasibility study to determine the environmental constraints of the property and to identify areas of potential state and federal jurisdiction.

After a review of the Schoharie County Soil Survey, the USGS 7.5' topographic map (Breakabeen Quadrangle), aerial photographs, and other technical information for the Site, NCES identified and delineated the limits of wetlands and other waters of the United States that fall under the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA). NCES also reviewed the subject property for wetlands that are regulated by the New York State Department of Environmental Conservation (DEC) pursuant to Article 24 of the Environmental Conservation Law (ECL).

The formal field delineation was completed by NCES on November 14, 2012. Subsequent to the field delineation, the firm of Lamont Engineers field surveyed and mapped the wetland boundaries. As a result of the delineation completed by NCES, a cumulative total of 0.60± acres of vegetated wetland was identified within the Project Area. During the delineation no defined stream channels were identified within the project Area or within the wetland complex.

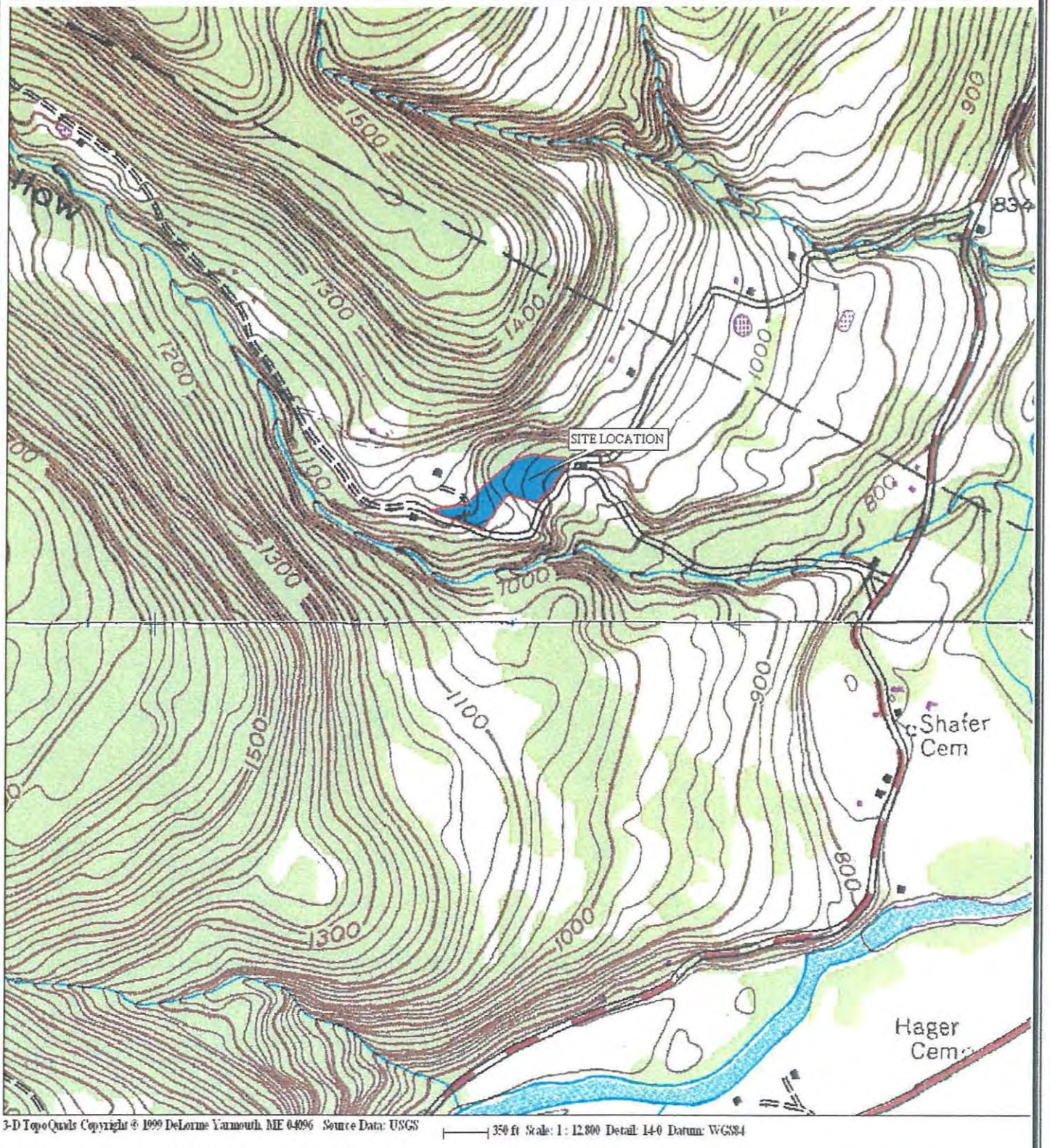
2.0 SITE LOCATION & DESCRIPTION

The Project Area is located along the northwestern side of Cole Hollow Road at the intersection of Cole Hollow Road and Spur Road in the Town of Blenheim, Schoharie County, New York. The centralized Site coordinates are 42° 30' 12.3" N Latitude and 74° 26' 18.6" W Longitude. Elevations within the Site boundaries range from 530± feet above Mean Sea Level (MSL), located along an upland ridge found in the westernmost portion of the Site, to 391± feet above MSL found at the invert of the culvert that extends under Cole Hollow Road in the easternmost portion of the Site resulting in an elevation difference of approximately 139± feet.

The Site can be generally characterized as undeveloped, fallow, agricultural land. The Site was historically part of an agricultural farmstead and primarily utilized as pasture. Nearly the entire Site has been historically cleared and now contains early successional vegetation. Mature forested uplands border the Site to the north where steep upland slopes are found. A portion of the Site is comprised of mowed lawn that is found at a single-family residence along Cole Hollow Road. In addition, a gravel driveway, leading to a single-family residence (that is located to the northwest) is also found within the Site's boundaries. A natural wetland depression exists within the easternmost portion of the project Area, immediately adjacent to the existing intersection of Cole Hollow Road and Spur Road.

Based upon the definitions presented in the *Ecological Communities of New York State* (Edinger, 2002) and *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, 1979), the following ecological communities exist on the Site:

- Beech-Maple mesic forest (Edinger)
- Mowed lawn with trees (Edinger)
- Successional old field (Edinger)
- Unpaved road (Edinger)
- Palustrine scrub-shrub wetland (Cowardin)
- Palustrine emergent Wetland (Cowardin)



Base Map: USGS Breakabeen 7.5' Quadrangle, Schoharie County, N.Y.

Scale: 1" = 1000'

NCES
North Country Ecological Services, Inc.

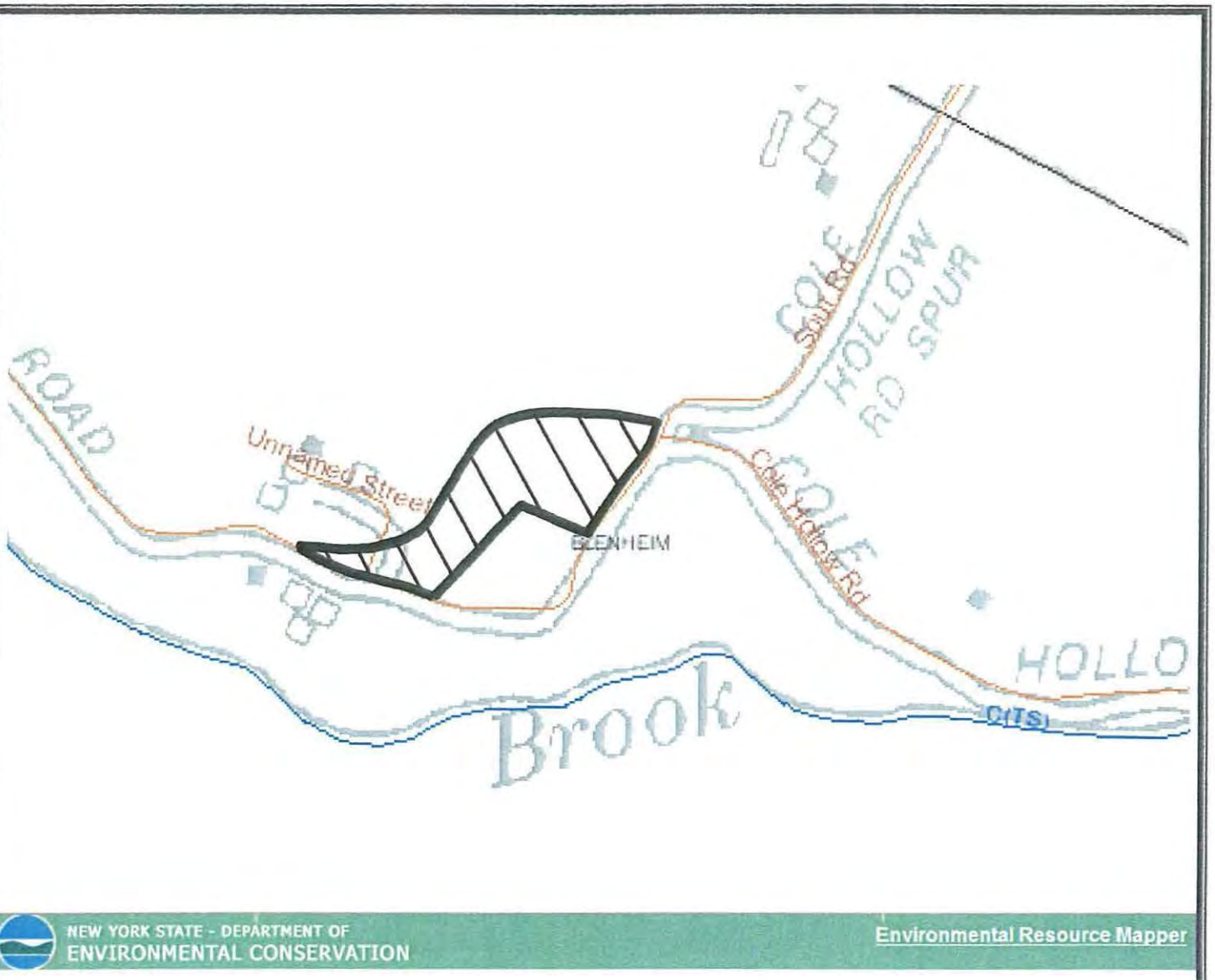
FIGURE 1- SITE LOCATION MAP

Land use surrounding the subject properties consists of undeveloped forested land, active agricultural land and single-family residences. Photographs of the Project Area that were taken during the delineation are contained in Appendix A.

2.1 DEC Regulated Wetlands

The DEC was consulted by NCES to obtain information regarding the potential for presence of Article 24 regulated wetlands and Article 15 regulated streams on, or within 100 feet of the Site. Based on the review of the Article 24 Freshwater Wetland mapping that was obtained from the DEC's Environmental Resource Mapper, it has been determined by NCES that no portions of any currently mapped Article 24 regulated wetlands are found within the boundaries of the Project Area (Figure 2). Therefore, it has been determined that no separate Article 24 Freshwater Wetlands permits will be required for any future development of the subject property.

Based on the review of the Article 15 Protected Stream information that was obtained from the DEC's Environmental Resource Mapper, it has been determined by NCES that no Article 15 regulated streams exist within the Project Area. While Cole Hollow Brook is positioned adjacent to the Project Area and it is classified by the DEC as Class C(ts) stream, no portion of Cole Hollow Brook is found within the Project Area. According to Article 15 regulations, only those streams classified as Class C(t) or higher are subject to permit requirements and regulation under Article 15. Therefore, given the fact that no regulated streams exist on-site, no separate Article 15 Protection of Waters Permit will be required for the proposed roadway re-alignment.



Base Map: DEC Environmental Resource Mapper - Schoharie County, NY.

Scale: None

North Country Ecological Services, Inc.
25 West Fulton Street
Gloversville, New York 12078

FIGURE 2 - DEC REGULATED AREAS

3.0 DELINEATION METHODOLOGY

Wetlands were delineated using the three-parameter methodology as outlined in the *Corps of Engineers Wetland Delineation Manual*, 1987 (1987 manual). The 1987 manual was used in accordance with the Corps of Engineers Appropriation Bill and the Johnson Amendment of August 17, 1991, which states that until revisions to the January 1989 *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (1989 manual) are finalized, the Corps of Engineers will apply the 1987 manual to identify and delineate wetlands potentially subject to regulation under Section 404 of the CWA.

NCES also employed additional information presented within the *Interim Regional supplement to the Corps of Engineers Wetland Delineation Manual – Northcentral and Northeast Region* ("Interim Regional Supplement", October 2009) as further guidance for assessing and defining wetland boundaries. According to the 1987 Manual and Interim Regional Supplement, in order for an area to be classified as a wetland, it must exhibit the following characteristics: hydrophytic vegetation; hydric soils; and proper wetland hydrology.

The routine on-site determination method was used to determine the wetland boundaries on the Site. Vegetative, soils, and hydrologic data were examined and collected along the upland/wetland transitions. Vegetation was sampled using the quadrant sampling procedure. Transects were established perpendicular to the wetland boundaries in order to document the vegetation, soils, and hydrology of the on-site wetlands and uplands.

The Fish and Wildlife Service issued the *National List of Plant Species That Occur in Wetlands*, which lists species of vascular plants that are likely to occur in a wetland. The list separates the plants into five categories that determine the "wetland indicator status." A species indicator status is based upon its frequency of occurrence in wetlands: *Obligate wetland* plants (OBL) occur almost always (estimated probability >99%) in wetlands under natural conditions; *facultative wetland* plants (FACW) usually occur in wetlands (estimated probability 67-99%), but are occasionally found in upland; *facultative* plants

(FAC) are equally likely to occur in wetlands or uplands (estimated probability 34-66%); *facultative upland* plants (FACU) are those species that normally occur in uplands but occasionally occur in wetlands (estimated probability 67-99%); and, *upland* (UPL) species occur almost always in uplands (estimated probability >99%) under natural conditions (Federal Interagency Committee for Wetland Delineation, 1989).

Dominant plant species were determined for each vegetative stratum by estimating aerial cover. Dominant plant species are defined as those species in each stratum that, when ranked in decreasing order of abundance and when cumulatively totaled, exceed 50% of the total dominance measure for each stratum, plus any additional species that comprise 20% or more of the total dominance measure.

Soils were analyzed to depths of 10-12 inches or below the A-horizon. Samples were taken with a combination type hand held soil auger. Soil samples were checked to determine their Munsell Soil Color Chart designation and hydric soils were identified by color. Indicators of wetland hydrology were noted on the field data sheets. Vegetation, soils, and hydrology were analyzed concurrently to determine the wetland boundary.

Perennial and Intermittent streams were identified by the formation of banks, apparent streambeds, and high water marks where extended hydrologic input has formed deep channels in the soils and formed hydric soils. Copies of the field data sheets used to document the vegetation, soils, and hydrology are contained in Appendix B.

4.0 EXISTING CONDITIONS

4.1 Soils

According to the Schoharie County soils information as detailed on the USDA Natural Resources Conservation Service Web Soil Survey 2.3 (the "Soil Survey"), there are three (3) separate soil series that are found on the Site. The soils are: Chippewa and Norwich stony silt loam, with 0 to 3 percent slopes (ChA), Lordstown, Oquaga and Nassau soils,

with 35-70 percent slopes (LrF); and Mardin channery silt loam, with 2 to 35 percent slopes (McB, McD and McE, respectively) (Figure 3). Each of these soil types were confirmed in the field by NCES during delineation.

4.2 Vegetation

During the delineation, a total of five (5) different ecological communities were identified on the Site. The ecological communities identified are as follows: Beech-Maple mesic forest; Mowed lawn with trees; Successional old field; Unpaved road; Palustrine scrub-shrub wetland; and Palustrine emergent wetland. Each of these ecological communities, with the exception of the unpaved road possesses different vegetative cover types that are associated with them. The un-paved road exists as a gravel driveway that extends from Cole Hollow Road to a single family residence that is found to the northwest of the Site. The dominant species of vegetation observed within the ecological communities are identified below:

Some of the dominant species observed within the Beech-Maple mesic forest included, but are not limited to; sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*); white ash (*Fraxinus americana*), northern red oak (*Quercus rubra*), black cherry (*Prunus serotina*), quaking aspen (*Populus tremuloides*), common buckthorn (*Rhamnus cathartica*), tatarian honeysuckle (*Lonicera tatarica*), multiflora rose (*Rosa multiflora*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Rhus radicans*), common blue violet (*Viola sororia*) and garlic mustard (*Alliaria officinalis*).

Some of the dominant species of vegetation observed within the Mowed lawn with trees ecological community included, but are not limited to: white pine (*Pinus strobus*), Norway spruce (*Picea abies*), sugar maple, red oak, various ornamental shrubs and flowers and grasses (graminae).

Some of the dominant species of vegetation observed within the Successional old field ecological community included, but are not limited to: common buckthorn, gray dogwood (*Cornus racemosa*), multiflora rose, tatarian honeysuckle, Canada goldenrod

USDA Natural Resources Conservation Service
Web Soil Survey
National Cooperative Soil Survey

Meters: 0 20 40 80 120
Feet: 0 50 100 200 300

Soils Legend

ChA – Chippewa and Norwich stony silt loam, 0-3% slopes
LrF – Lordstown, Oquaga and Nassau soils, 35-70% slopes
McB – Mardin channery silt loam, 2-8% slopes
McD – Mardin channery silt loam, 15-25% slopes
McE – Mardin channery silt loam, 25-35% slopes

Base Map: Web Soil Survey 2.3 – Schoharie County Soil Survey, N.Y.

Scale: As Noted

NCES
North Country Ecological Services, Inc.

FIGURE 3- SOIL SURVEY

(*Solidago canadensis*), spotted knapweed (*Centaurea maculosa*), wild carrot (*Daucus carota*), timothy (*Phleum pratense*), orchard grass (*Dactylis glomerata*), birdsfoot trefoil (*Lotus corniculatus*), white clover (*Trifolium repens*) and red clover (*Trifolium pratense*). In addition, white pine, sugar maple, red oak and quaking aspen saplings are also found within this community type.

Some of the dominant species of vegetation observed within the Palustrine Scrub-shrub and Emergent wetlands included, but are not limited to, silky dogwood (*Cornus amomum*), gray dogwood, nannyberry (*Viburnum lentago*), arrowwood (*Viburnum recognitum*), witch hazel (*Hamamelis virginiana*), jewelweed (*Impatiens capensis*), sensitive fern (*Onoclea sensibilis*), fowl manna grass (*Glyceria striata*), tussock sedge (*Carex stricta*), purple loosestrife (*Lythrum salicaria*), cattail (*Typha latifolia*), joe-pye weed (*Eupatorium maculatum*), meadow sweet (*Spirea latifolia*), dark green bulrush (*Scirpus atrovirens*), wool grass (*Scirpus cyperinus*), fox sedge (*Carex vulpinoidea*), soft rush (*Juncus effusus*), skunk cabbage, late goldenrod (*Solidago gigantea)* and slender goldenrod (*Solidago tenuifolia*).

4.3 Hydrology

The main sources of hydrology that influence the wetland systems on the Site appear to originate from direct precipitation and groundwater seepage. Groundwater weeps was evident within two separate locations in the wetland. Each of the weeps is located at the toe-of-slope of the adjacent hillside and they are located at opposite ends (east and west sides) of the wetland complex. Inundated and/or saturated conditions were present in the wetland at the time of the delineation. Scour patterns in leaf debris along upland side slopes indicated previous overland surface water flow, where surface water was non-existent. The semi-impervious, clay-laden soils found within the wetland complex also increases water retention, thus adding to the hydrological character of the wetlands.

The wetland is positioned in a "valley" positioned between two upland ridges. The wetland drains eastward towards Cole Hollow Road. A culvert under the road directs water to lands found to the south and east of Cole Hollow Road. The off-site drainage continues via a vegetated wetland swale to Cole Hollow Brook, which is located approximately 500 feet southeast of the Site.

Cole Hollow Brook is a second order perennial tributary of Schoharie Creek. Cole Hollow Brook flows east and dispenses directly into Schoharie Creek, approximately 1 mile east of the Site. Schoharie Creek is a fourth order, perennial tributary (Relatively Permanent Waterway - RPW). Schoharie Creek flows to the north and directly into the Mohawk River. The Mohawk River is classified as a Traditional Navigable Waterway (TNW) by the USACE. Therefore, it has been determined that the on-site wetlands are hydrologically contiguous with a tributary system of a navigable waterway.

5.0 WETLAND FINDINGS

During the field delineation, one individual (1) wetland was identified and delineated on the Site. The total acreage of the wetlands identified is 0.60± acres. No defined stream channels were identified within the Project Area. The location and configuration of the wetland delineated is shown on the "Wetland Delineation Plan – Cole Hollow Road Realignment", dated November 13, 2012 (Appendix C).

6.0 JURISDICTIONAL DETERMINATION

In light of the Supreme Court rulings regarding the potential restriction of authority of the USACE to assert jurisdiction over isolated, non-adjacent, non-navigable waters of the United States based on the Solid Waste Agency of Northern Cook County vs. United States (SWANCC) and Rapanos vs. USACE (Rapanos), it is required that environmental consultants identify, describe, and segregate each wetland area into jurisdictional and

non-jurisdictional categories. This is required by the USACE as a pre-requisite to assist them in determining which wetlands are jurisdictional. In addition, consultants must also complete "Approved Jurisdictional Determination Forms" (JDF) and provide project specific information relative to "post Rapanos" guidelines. A copy of the completed JDF is contained in Appendix D.

According to the Supreme Court, if a wetland can be deemed "isolated," "non-adjacent," and/or "non-navigable" and it is not hydrologically connected with a tributary system of a Traditional Navigable Waterway (TNW), the USACE does not have authority to assert jurisdiction over these wetland areas without completing a "Significant Nexus" review to determine the significance of the wetland in relation to adjacent known jurisdictional waters. If it is subsequently determined during a joint review between the USACE and the Environmental Protection Agency (EPA) that no significant nexus exists, and if the wetlands are not regulated by any other governmental agency, such as the DEC or the United States Fish and Wildlife Service (USFWS), then these wetlands are not regulated.

On November 29, 2012, NCES met with Mr. Brad Sherwood of the USACE and completed the jurisdictional confirmation visit. The purpose of the confirmation visit was to allow the representative from the USACE to review the wetland boundaries and make a formal determination of federal jurisdiction over the wetlands identified. The wetland delineation map contained in Appendix C reflects the determinations made by Mr. Sherwood pursuant to his field review. Based upon the determinations made at the conclusion of the confirmation visit, NCES offers the following jurisdictional information:

6.1 Army Corps of Engineers Jurisdictional Wetlands

Based on the statements regarding isolation made in Section 6.0 of this report, and the direct observations made by Mr. Sherwood during the confirmation visit, a hydrological connection with a tributary system of a navigable waterway was identified between the on-site wetlands and off-site waters of the United States. The wetland identified in Table 1 fall under the regulatory jurisdiction of the USACE:

TABLE 1

Jurisdictional Wetlands

Wetland	Size	Stream Length	Vegetative Cover Types
1	0.60± Acres	0.00± Linear Feet	Palustrine scrub-shrub and Emergent

6.2 Non - Jurisdictional Wetlands

Based on the statements regarding isolation made in Section 6.0 of this report, and the direct observations made by Mr. Sherwood during the confirmation visit, none of the wetland areas identified have the potential to be deemed "isolated" or "non-adjacent" to a tributary system of a navigable waterway. Therefore, the wetland area identified on the property falls under the regulatory jurisdiction of the USACE:

7.0 CONCLUSION

As a result of the delineation it has been determined that there are 0.60± acres of wetlands that possess a direct physical and hydrological connection with a tributary system of a TNW. Therefore, the USACE has the authority to assert regulatory jurisdiction over the wetland pursuant to Section 404 of the CWA. Impacts to the confirmed regulated wetland will require formal authorization in the form of an Individual or Nationwide Permit from the USACE.

8.0 REFERENCES

- Cowardin, L.M., V. Carter, F.C. Gocet and E.T. Laroe. December 1979.Classification of Wetlands and Deepwater Habitats of the United States. USFWS Office of Biological Service, FWS/IOBL-79/31.

- Edinger, Gregory. 2002. Ecological Communities of New York State. New York Natural Heritage Program. 96 pgs.

- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, US Army Engineer Waterway Experiment Station, Vicksburg, Mississippi.

- New York State Department of Environmental Conservation. Environmental Resource Mapper. On-line Resource Guide. www.state.ny.us

- U. S. Department of Agriculture, Natural Resource Conservation Service. Web Soil Survey 2.3. Soil Survey of Schoharie County, New York.

Appendix A

Site Photographs

Photograph 1) View the existing driveway at the upper portion of the roadway alignment.

Photograph 2) View of the residence at the upper portion of the Project Area. Cole Hollow Road is visible to the right.

Photograph 3) View of a hedgerow of trees between the field and residence within the proposed roadway alignment.

Photograph 4) View of the wooded area that is found on the property but upslope of the Project Area and roadway alignment.

Photograph 5) View of the proposed roadway alignment along the toe-of-slope of the bordering hillside. Spur Road is visible in the background.

Photograph 6) View looking east at the fallow field from the same location as photograph #5.

Photograph 7) View of the proposed roadway alignment through the open field.

Photograph 8) View of the wetland along the toe-of-slope of the hillside.

Photograph 9) View of the edge of the emergent wetland.

Photograph 10) View of the edge of the wetland near the intersection of Spur Road and Cole Hollow Road.

Photograph 11) View looking southwest at Cole Hollow Road from the intersection with Spur Road.

Photograph 12) View of where the proposed roadway will enter the Project Area off of Cole Hollow Road.

Appendix B

Field Data Sheets