Application of Iroquois Gas Transmission System, L.P. for a Certificate of Public Convenience and Necessity

FERC Docket No. PF07-7 / CP07-

08/09 EXPANSION PROJECT

Boonville & Wright, New York
Brookfield, Newtown & Milford, Connecticut

DRAFT
APPENDIX E
WETLAND DELINEATION REPORT

July 2007

Prepared for:
Iroquois Gas Transmission System, L.P.
Shelton, Connecticut

Wetland Delineation Report – 2007
08/09 Expansion Project
New York and Connecticut
DRAFT

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Contents

Contents (continued)

Appendices

1.0 Introduction

Iroquois Gas Transmission System L.P, ("Iroquois") is proposing to construct the 08/09 Expansion Project ("Project"), in Oneida and Schoharie Counties, New York and Fairfield and New Haven Counties, Connecticut to deliver up to 200,000 dekatherms per day of firm natural gas transportation service to KeySpan Gas East Corporation d/b/a KeySpan Energy Delivery Long Island ("KeySpan"). Iroquois' proposed 08/09 Expansion Project involves the construction of three sections of new, 36-inch outside diameter ("OD") pipeline looping and associated aboveground facilities along Iroquois' existing main line in New York and Connecticut, a new compressor station in Milford, CT and additional compression and gas cooling at the previously FERC certificated compressor station (CP02-31-002) to be constructed in Brookfield, CT. The Project has been divided into three phases to accommodate facility in-service dates as requested by the customer. The phase breakdown is as follows:

Phase I – In-Service Date of November 1, 2008

- 5.82 miles of 36-inch OD pipeline looping in Boonville, NY
- 1.00 miles of 36-inch OD pipeline looping in Wright, NY
- 1.64 miles of 36-inch OD pipeline looping in Newtown, CT

Phase II – In-Service Date of January 1, 2009

- New Compressor Station in Milford, CT

Phase II – In-Service Date of November 1, 2009

- Additional compression and gas cooling at Brookfield Compressor Station in Brookfield, CT

The proposed location for the additional compression and gas cooling facilities at the Brookfield Compressor Station have already been subject to the Federal Energy Regulatory Commission's (FERC) environmental review processes in two earlier certificate application proceedings under Iroquois' MarketAccess Project (Docket Nos. CP02-31 & CP02-52). Accordingly, substantial information relevant to the proposed MarketAccess Project facilities, including wetland delineation mapping, has already been supplied to the FERC and other federal agencies through these other certificate proceedings. A copy of the United States Army Corps of Engineers ("ACOE") Preliminary Jurisdictional Determination for all wetlands on the Brookfield Compressor Station property has been included in Appendix D.

This report presents the results of the wetland field surveys at the Boonville and Wright, NY, and Newtown, CT pipeline loop segment sites as well as the Milford Compressor Station site in Milford, CT. Section 2.0 identifies the project locations and summarizes the proposed construction activities and land requirements at each site. Section 3.0 describes methodologies ENSR followed to complete the wetland surveys and document wetland boundaries. Section 4.0 provides a brief description of the delineated resource areas, based on the field surveys and review of existing baseline information complied from United States Geologic Survey ("USGS") topographic maps, National Wetlands Inventory ("NWI") maps, and USDA - Natural Resources Conservation Service ("NRCS", formerly the Soil Conservation Service) soil maps. The findings of this report are summarized in Section 5.0. Section 6.0 cites documents used in the preparation of this report.

This report has been prepared for the benefit of federal, state, and local agencies involved in the NEPA review and permitting phase of the 08/09 Expansion Project. Emphasis is placed on identifying and describing United States Army Corps of Engineers ("ACOE") jurisdictional wetlands and ACOE waterbodies. State and local

wetland jurisdictional issues are also reviewed. Preliminary jurisdictional determinations have been summarized in Table 4.0-2, however the preliminary jurisdictional determination is the opinion of ENSR based upon review of available information resources. Actual jurisdictional determinations can only be made by the applicable Federal and State agencies following submittal of a jurisdictional determination request.

2.0 Proposed Activities

The project locations, proposed facilities, and land requirements are discussed below. Accompanying this report are site locus figures in Appendix A and aerial-based wetland plans in Appendix B. The wetland plans show the general layout of the proposed facilities and temporary workspace relative to the delineated wetland and watercourse boundaries. Both figures and plans are Non-Internet Public per FERC's document control requirements.

The proposed pipeline and aboveground facilities associated with the 08/09 Expansion Project are listed in Table 1.1-1. These facilities are conceptual in nature and are subject to final design and FERC approval.

TABLE 1.1-1
PROPOSED PIPELINE AND ABOVEGROUND
FACILITIES OF THE 08/09 EXPANSION PROJECT

Proposed Facility	New/Modified	MP(s)a	Town	County, State	Project Phase
Pipeline Facilities					
36-inch Diameter Loop	New	105.30 – 111.12	Boonville	Oneida, New York	I
	New	190.93 – 191.93	Wright	Schoharie, New York	I
	New	318.34 – 319.98	Newtown	Fairfield, Connecticut	I
Aboveground Facilities					
Compressor Station	New	336.02	Milford	New Haven, Connecticut	II
Compressor Station	Modified	308.83	Brookfield	Fairfield, Connecticut	III

[a] Milepost location is based upon the existing Iroquois Mainline

2.1 Pipeline Facilities

The pipeline loop segments will be located within or directly adjacent to Iroquois' existing Mainline permanent ROW. Additional permanent ROW will be required along with temporary workspace ("TWS") and additional temporary workspace ("ATWS") to facilitate construction of the pipeline. The routing for the pipeline loop was conducted in a manner to avoid significant areas of residential development, minimize the number of affected landowners, and effectively manage environmental impacts. The preferred route and workspace configurations are discussed below, detailed on figures in Appendix A of this report, and depicted on aerial alignment sheets provided in Appendix B.

2.1.1 Boonville Loop Segment – Boonville, NY

The pipeline loop in Boonville, New York consists of approximately 5.82 miles of new 36-inch OD pipeline co-located within Iroquois' existing Mainline right-of-way "ROW" (see Figure 1.1-3a in Appendix A). The loop

segment commences near Iroquois' existing mainline valve ("MLV") 8 at approximate MP 105.30 and extends southward to approximate MP 111.12. The proposed pipeline is designed for a maximum allowable operating pressure of 1,480 pounds per square inch gauge ("psig") and will be constructed of carbon steel.

2.1.2 Wright Loop Segment – Wright, NY

The pipeline loop in Wright, New York consists of approximately one mile of new 36-inch OD pipeline co-located within Iroquois' existing Mainline right-of-way "ROW" (see Figures 1.1-3b in Appendix A). The loop segment commences near Iroquois' existing MLV 14 at approximate MP 190.93 and extends southward to approximate MP 191.93. The proposed pipeline is designed for a maximum allowable operating pressure of 1,480 pounds per square inch gauge ("psig") and will be constructed of carbon steel.

2.1.3 Newtown Loop Segment – Newtown, CT

The pipeline loop in Newtown, Connecticut consists of approximately 1.64 miles of new 36-inch OD pipeline co-located within Iroquois' existing Mainline right-of-way ("ROW") (see Figures 1.1-3c in Appendix A). The loop segment commences at approximate MP 318.34 and extends southward to approximate MP 319.98. The proposed pipeline is designed for a maximum allowable operating pressure of 1,480 pounds per square inch gauge ("psig") and will be constructed of carbon steel.

2.1.4 Temporary Facilities

2.1.4.1 Pipe/Equipment Storage Yards and Contractor Yards

Pipe yards are traditionally selected within one year of proposed construction (Spring/Summer 2007) due to the changing availability of open land and the cost associated with the lease/rental of such properties. Iroquois has investigated several preliminary storage areas / contractor yards for the various loop sections.

2.1.4.2 Access Roads

Access roads are required for construction so the contractor may move personnel, equipment and material to the pipeline ROW. Iroquois anticipates accessing the majority of the construction ROW via existing public roadways and private access roads. Any new access roads proposed for the Project are identified on the Project alignment sheets. Iroquois will install access driveways for the new valve locations where existing access driveways do not exist. Iroquois anticipates that permanent access roads currently in use for operational access to the existing Mainline will also be used to provide access to the loop segments upon completion of construction.

2.2 Aboveground Facilities

Iroquois proposes to design and operate the proposed compressor units using the same or similar techniques that have been applied to successfully design, construct, and operate its existing compressor stations in the towns of Boonville, Dover, Wright, Croghan and Athens, New York. Key elements of the Milford station design would be the installation of gas turbines incorporating Best Available Control Technology ("BACT") and the construction of stations that will be aesthetically compatible with the existing surroundings.

2.2.1 Milford Compressor Station – Milford, CT

The Milford Compressor Station will be installed to increase the natural gas throughput of the existing downstream pipeline by boosting the pressure of the natural gas up to the current MAOP of 1,480 psig (see Figures 1.1-3d in Appendix A). The increase of pipeline gas pressure will be accomplished through the installation of two, 10,310 [nominal] horsepower ("hp") turbine driven centrifugal compressors. The turbo-compressors will be fueled by natural gas and equipped with a "lean pre-mix" dry low nitrogen oxide ("NOx")

combustors to limit NOx, carbon monoxide ("CO") and particulate matter ("PM") emissions to less than BACT levels. The associated facilities include two unit control buildings, station maintenance / control building, emergency electrical power generator, a domestic gas building plus parking and access areas.

2.2.2 Brookfield Compressor Station Modifications – Brookfield, CT

The Brookfield Compressor Station Modifications will be installed to transfer incremental gas volumes from the existing Algonquin Gas Transmission, LLC ("Algonquin") pipeline transmission system to Iroquois (see Figure 1.1-3d – Appendix A). The increase of throughput will be accomplished by the addition of a 10,310 [nominal] horsepower ("hp") turbine driven centrifugal compressor. The turbo-compressors will be fueled by natural gas and equipped with a "lean pre-mix" dry low nitrogen oxide ("NOx") combustors to limit NOx, carbon monoxide ("CO") and particulate matter ("PM") emissions to less than BACT levels. The associated facilities include a unit control building plus natural gas, aerial natural gas coolers, and gas filtration equipment.

2.2.3 Temporary Facilities

2.2.3.1 Equipment Storage Yards and Contractor Yards

During construction of the proposed Milford Compressor Station, Iroquois anticipates the use of the site property for both the contractor yard and storage of materials. For the proposed Brookfield Compressor Station Modifications, Iroquois anticipates using the existing Brookfield Compressor Station property for equipment storage and for the contractor yard.

2.2.3.2 Access Roads

Access roads are required for construction so the contractor may move personnel, equipment and material to the compressor station site. Iroquois anticipates accessing the Milford Compressor Station site via Oronoque Road. Iroquois anticipates accessing the Brookfield Compressor Station site via High Meadow Road and does not foresee the need for any new access roads to facilitate the construction and operation of the proposed compressor station modifications.

3.0 Methodology

3.1 Survey Areas

Iroquois contracted ENSR to delineate wetlands and watercourses at the project locations for the 08/09 Expansion Project. The surveys areas are reviewed below. The Brookfield Compressor Station Modifications Project site has been surveyed previously for wetlands and waterbodies under prior FERC proceedings and subsequent wetland delineation reports have been provided to the Commission and other federal and state regulatory agencies. These areas are not included with this report, however the ACOE Preliminary Jurisdictional Determination for wetlands on the Brookfield Compressor Station property is included in Appendix D.

3.1.1 Boonville, NY

ENSR delineated wetlands and waterbodies on a 300-foot wide corridor centered on Iroquois' existing mainline natural gas pipeline for approximately 5.82 miles commencing near Iroquois' existing main line valve ("MLV") 8 at approximate MP 105.30 and extending southward to approximate MP 111.12 in the town of Boonville, New York. Additionally, three existing, unimproved access roads proposed for use to access the existing Iroquois mainline easement during construction were surveyed for wetland and waterbody resources as well a proposed pipe/contractor yard on Hayes Road, and a pipe staging area off Miller Woods Road.

3.1.2 Wright, NY

ENSR delineated wetlands and waterbodies on a 300-foot wide corridor centered on Iroquois' existing mainline natural gas pipeline for approximately 1.00 miles commencing near Iroquois' existing MLV 14 at approximate MP 190.93 and extending southward to approximate MP 191.93 in the town of Wright, New York. Two existing, unimproved access roads proposed for use to access the existing Iroquois mainline ROW during construction were surveyed for wetland and waterbody resources as well a proposed pipe/contractor yard on adjacent to Iroquois' existing Wright Compressor Station facility off Westfall Road.

3.1.3 Newtown, CT

ENSR delineated wetlands and waterbodies on a 300-foot wide corridor centered on Iroquois' existing mainline natural gas pipeline for approximately 1.64 miles commencing at approximate MP 318.34 and extending southward to approximate MP 319.98 in the town of Newtown, Connecticut. Two existing, unimproved access roads proposed for use to access the existing Iroquois mainline ROW during construction were surveyed for wetland and waterbody resources. At the time of field surveys, a proposed pipe/contractor yard had yet to be identified in the vicinity of the Newtown loop segment.

3.1.4 Milford, CT

ENSR performed field surveys for wetlands and waterbodies on the proposed Milford Compressor Station property consisting of a 4.6-acre parcel owned by Iroquois and currently in use for the Milford Sales Meter Station in the city of Milford, Connecticut. Additionally, two adjacent parcels proposed for lease by Iroquois during construction of the compressor station facility, 0.9-acre and 1.65-acres respectively were also surveyed for the presence of wetlands and waterbodies. Only existing, improved, public roadways are proposed for access to the Project site, so no wetland and waterbody surveys were performed as no improvement to these access roads would be required.

3.2 Federal and State Wetland/Watercourse Jurisdictions

3.2.1 Section 404 – Clean Water Act

Wetlands, springs, and other waters of the U.S. are regulated under Section 404 of the Clean Water Act and through a permit process administrated by the ACOE. Federally jurisdictional wetlands include interstate wetlands, wetlands adjacent to waters of the U.S., and intrastate wetlands whose degradation or destruction could affect interstate or foreign commerce as per the application of 33 CFR 328. According to the 1987 Wetland Delineation Manual (ACOE 1987), areas must exhibit three distinct characteristics to be considered wetlands:

1. The prevalent vegetation must consist of plants adapted to life in hydric soil conditions. These species, due to morphological, physiological, and/or reproductive adaptations, can and do persist in anaerobic soil conditions;

2. Soils in wetlands must be classified as hydric or they must possess characteristics that are associated with reducing soil conditions; and

3. The area must be inundated either permanently or periodically at mean water depths less than 6.6 feet (2 meters) or the soil saturated at the surface for some time during the growing season of the prevalent vegetation.

It is ENSR's understanding that per the U.S. Supreme Court ruling in *Solid Waste Agency of Northern Cook County V. Army Corps of Engineers*, the ACOE can make a determination that a wetland is non-jurisdictional if it founds that the area does not support migratory bird or endangered species habitat and does not connect to an intrastate water. This determination is made through a process initiated by the Applicant. No such determination has been sought by Iroquois for any of the isolated wetlands identified along the Boonville, Wright, or Newtown Loops.

3.2.2 New York Freshwater Wetlands Act and Protection of Streams

Pursuant to the Freshwater Wetland Act (Article 24), the New York State Department of Environmental Conservation ("NYSDEC") has prepared maps of all freshwater wetlands that are 12.4 acres or larger in size or, if deemed to be of unusual local importance, wetlands smaller than 12.4 acres. The New York State Freshwater Wetland Maps show the approximate locations of the actual wetland boundaries at a scale of 1:24,000. The predominance of hydrophytic vegetation is used to demarcate the boundary of any mapped marsh, swamp, or bog. In addition, areas within 100 feet of wetlands or further when necessary to protect the wetlands are subject to regulation. Portions of the Boonville, NY Loop Segment are located within and adjacent to mapped NYSDEC Freshwater Wetlands (New York State Article 24 Freshwater Wetlands Map – Oneida County, 8/28/84). The Wright, NY Loop Segment is not located within or adjacent to any mapped NYSDEC Freshwater Wetlands (New York State Article 24 Freshwater Wetlands Map – SchoharieCounty, 12/18/85).

Proposed actions in watercourses having a water quality class or standard of AA, AA(t), A, A(t), B, B(t), or C(t) must receive a permit from the NYSDEC in accordance with 6 NYCRR Part 608. As discussed in Section 4.0, portions of the Boonville, NY Loop Segment and Wright, NY Loop Segment contain watercourses with a C(t) standard; and will require specific permits from NYSDEC for construction that may contain timing and restoration restrictions relative to in-stream construction activities.

3.2.3 Connecticut Inland Wetlands and Watercourses Act

Connecticut's statute is known as the Inland Wetlands and Watercourses Act, section 22a-36 through 45 of the Connecticut General Statutes. These state statutes are implemented by the Inland Wetlands and Watercourses Regulations of the Town of Newtown, Connecticut ("Regulations") (amended July 6, 2004).

Under Section 2 of the Regulations, a wetland is land, including submerged land, which consists of poorly drained, very poorly drained, alluvial, and floodplain as defined by the National Cooperative Soils Survey. Such areas may include filled, graded, or excavated sites which possess an aquatic (saturated) moisture regime as defined by the USDA Cooperative Soil Survey. An "intermittent watercourse" is defined as having a defined permanent channel or bank and the occurrence of two or more of the following characteristics:

a. Evidence of scour or deposits of recent alluvial or detritus;

b. The presence of standing or flowing water for a duration longer than a particular storm incident; or,

c. The presence of hydrophytic vegetation.

For activities under local jurisdiction, the Newtown Regulations cover any geographical area of the Town consisting of wetlands or watercourses or land within that area measured 100 feet horizontally from the wetland or watercourse boundary, as well as other land in the Town situated within a floodplain.

Due to the State classification of wetlands based on soil type, a Soil Scientist must delineate wetlands in the State of Connecticut. Per the Newtown Regulations, a Soil Scientist means an individual duly qualified in accordance with standards set by the federal Office of Personnel Management. The ENSR delineator for the Newtown, CT Loop Segment (Tim O'Sullivan) has membership in the Society of Soil Scientists of Southern New England, which is sufficient for the purposes of these regulations.

3.3 Wetland Delineation Procedures

The wetland delineation methodology outlined in the ACOE Wetlands Delineation Manual (Environmental Laboratory 1987) as well as the Connecticut State Inland Wetlands and Watercourses Act (section 22a-36 through 45 of the Connecticut General Statutes) were used to identify and delineate wetlands at the subject properties identified in Section 3.1. A review of existing mapping was conducted prior to the execution of field surveys.

3.3.1 Resource Information Review

Prior to conducting the field surveys, ENSR reviewed the following background information to determine the potential extent of wetlands in the survey areas:

3.3.1.1 Boonville, NY

1. USGS topographic quadrangles (Boonville, NY and Forestport, NY)

2. National Wetland Inventory Maps (Boonville, NY and Forestport, NY)

3. Natural Resource Conservation Service – Web Soil Survey Data for Oneida County, NY

4. Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Map (Community Panel 360519 0010 B, Effective Date July 3, 1985)

3.3.1.2 Wright, NY

1. USGS topographic quadrangles (Gallupville, NY)

2. National Wetland Inventory Maps (Gallupville, NY)

3. Natural Resource Conservation Service – Web Soil Survey Data for Schoharie County, NY

4. FEMA Flood Insurance Rate Map (Community Panel 36095C 0205 E, Effective Date November 18, 1983)

3.3.1.3 Newtown, CT

1. USGS topographic quadrangles (Southbury, CT)
2. National Inventory Wetland Maps (Southbury, CT)
3. Soil Survey for Fairfield County, CT (Map Sheet 20)
4. FEMA Flood Insurance Rate Map (Community Panels 090011 0040 C and 090011 0039 C, Effective Date April 16, 2003)

3.3.1.4 Milford, CT

1. USGS Topographic Quadrangles (Milford, CT)
2. National Inventory Wetland Maps (Milford, CT)
3. Natural Resource Conservation Service – Web Soil Survey Data for New Haven County, CT
4. FEMA Flood Insurance Rate Map (Community Panel 090082 0004 D, Effective Date July 2, 1987)

3.3.2 Field Survey

ENSR performed field surveys on the Project sites in November of 2006 and January, April, and May of 2007 according to the ACOE Wetlands Delineation Manual (Environmental Laboratory 1987). The federal wetland lines at the Newtown, CT site were also checked for consistency with state/local wetland lines as defined in the State of Connecticut Inland Wetlands and Watercourses Act (§§ 22a-36 through 45 of the Connecticut General Statutes), and the Inland Wetlands and Watercourses Regulations of the Town of Newtown, Connecticut (amended July 6, 2004). Vegetation, soils, and hydrology data was assessed during the field surveys to determine whether the three wetland criteria were satisfied within each suspect wetland area. Wetlands were classified as palustrine forested ("PFO"), palustrine scrub-shrub ("PSS"), or palustrine emergent ("PEM") in accordance with Cowardin et al. (1979). ENSR used to the top of bank to demarcate the limits of a watercourse, when no wetlands were adjacent to the channel.

The specific methods for characterizing and evaluating vegetation, hydrology, and soils for a wetland determination were performed as follows:

Vegetation: Species abundance in both upland and wetland communities were visually estimated. Dominant trees and shrubs/saplings were recorded within a 30-foot and 15-foot radius, respectively, of the documentation plot. Dominant herbaceous vegetation was recorded within a 5-foot radius of the plot. ENSR identified plant species using appropriate botanical reference material for the region. The indicator status of each species was identified using the *National List of Plant Species That Occur in Wetlands, Region1-Northeast* (Resource Management Group 1999). Hydrophytic vegetation was determined to be present where greater than 50 percent of the dominant species were classified as facultative ("FAC+" or "FAC"), facultative wetland ("FACW"), or obligate ("OBL").

Soils: For each documentation plot, ENSR characterized the soil profile to determine the area's hydric soil status. Borings to observe the profile were taken with a hand-held auger and were taken to depths necessary to accurately determine a soil's hydric status (typically 18-24 inches deep). The information collected for each soil profile included each soil horizon's depth, texture, color, and the presence or

absence of redoximorphic features (mottles). Colors of the soil matrix and mottles were identified using the Munsell Soil Color Charts. ENSR based all hydric soil determinations on criteria established in the ACOE Wetlands Delineation Manual (Environmental Laboratory 1987), along with *Field Indicators of Hydric Soils in the United States* (NRCS 2006) and *Field Indicators for Identifying Hydric Soils in New England* (NEIWPCC 2004). Additionally, ENSR also noted the presence of any saturation and/or standing water encountered during the soil profile description.

Hydrology: Site hydrology was evaluated during field surveys by noting whether the soil at the surface was inundated or saturated. If the ground surface was dry, the depth to freestanding groundwater or saturated soil was measured and the presence or absence of other field evidence of wetland hydrology (e.g., drift lines, water-stained leaves, etc.) was noted. The wetland hydrology criterion was met if one or more primary or two or more secondary field indicators were present (Environmental Laboratory 1987).

Wetland and watercourse flag positions and data point locations were located using a Trimble GeoXH global positioning system ("GPS") data collection device. The GPS data points collected were then corrected and geo-referenced. Plotting of the wetland boundaries was reviewed and confirmed by ENSR. The aerial-based wetland plans in Attachment B show the locations of the delineated resources relative to the proposed limits of the 08/09 Expansion Project.

Documentation of the wetland boundaries was taken at certain locations. This information was used to fill out wetland determination field datasheets included in Appendix C.

4.0 Survey Results

The results of the background information review and the field surveys are presented below. Appendix B contains aerial mapping that shows the delineated features in relation to the proposed project areas.

4.1 Boonville, NY Loop Segment

ENSR wetland scientists conducted biological field surveys of the project areas in November of 2006 and January, April and May of 2007, to delineate wetlands, waterbodies, or permanently flooded bodies of water within or immediately adjacent to the project area. A total of three perennial waterbodies were delineated within the proposed Boonville Loop Segment alignment each consisting of perennial streams less than ten feet in width. Nine intermittent drainages were identified along the Project alignment, some of which are naturally occurring intermittent streams, while others consist of man-made drainage swales. Table 4.0-1 details pertinent information on all waterbodies crossed by the proposed Boonville Loop Segment including location by milepost, waterbody type, crossing width, State water quality classification, fishery type, and preliminary jurisdictional determination.

A total of 43 wetlands were identified and delineated within the 300-foot survey corridor. All wetlands were delineated in accordance with the ACOE Wetland Delineation Guidance Manual (Environmental Laboratory 1987). Table 4.0-2 provides a summary of the wetlands along the Boonville Loop segment, including milepost location, wetland classification, crossing length, preliminary jurisdictional determination and comments.

4.2 Wright, NY Loop Segment

Biological field surveys to delineate wetlands, waterbodies, or permanently flooded bodies of water within or immediately adjacent to the Wright Loop Segment alignment were conducted by ENSR wetland scientists in November of 2006 and January of 2007. A total of two perennial and one intermittent waterbodies were delineated within the Project alignment, each consisting of streams less than ten feet wide. Additionally, one intermittent man-made drainage ditch was also identified within the Project alignment. Consultation with the NYSDEC Division of Fish, Wildlife and Marine Resources, Bureau of Fisheries in Region 4 (McBride 2007) indicated that one of the perennial streams delineated within the Project alignment is a non-trout stream with a State water classification of “C” that denotes unprotected streams with no timing restrictions relative to in-stream construction. The other perennial stream is King Creek, which is a coldwater trout stream with a State water classification of “C(ts)” noting waters suitable for trout spawning. Construction within waters with “C(ts)” classification requires a permit from the NYSDEC and must be completed between June 15 and September 30. Table 4.0-1 details pertinent information on all waterbodies crossed by the proposed Wright Loop Segment including location by milepost, waterbody type, crossing width, State water quality classification, fishery type, and preliminary jurisdictional determination.

A total of four wetland complexes were identified and delineated within the Wright Loop survey corridor. All wetlands were delineated in accordance with the ACOE Wetland Delineation Guidance Manual (Environmental Laboratory 1987). Table 4.0-2 provides a summary of the wetlands along the Wright Loop alignment, including approximate milepost location, wetland classification, crossing length, preliminary jurisdictional determination, and comments.

4.3 Newtown, CT Loop Segment

The Newtown Loop Segment alignment was investigated in November of 2006 and May of 2007 to delineate wetlands, waterbodies, or permanently flooded bodies of water within or immediately adjacent to the Project alignment. Two perennial waterbodies were identified during field surveys consisting of Priton Brook, and an unnamed tributary to Ivy Brook. Both waterbodies consisted of small streams approximately five feet in width. Additionally, ENSR identified four intermittent stream drainages within the Project alignment. Consultation with the CTDEP Inland Fisheries Division – Western Headquarters (Mysling 2007) indicates that all streams can be

classified as coldwater streams based on slope, instream and riparian habitat. Additionally, all unconfined instream construction should be scheduled for the time period between June 1 and September 30, and instream and riparian habitat should be restored to pre-construction conditions after construction is complete. Table 4.0-1 summarizes information on the perennial and intermittent waterbodies identified on the Newtown Loop segment by milepost, waterbody type, crossing width, State water quality classification, fishery type, and preliminary jurisdictional determination.

Wetland areas along the Newtown Loop Segment alignment were delineated in October of 2006 and May of 2007, by ENSR wetland and soil scientists registered with the State of Connecticut to determine soil types and perform wetland delineations. All wetlands were delineated in accordance with the ACOE Wetland Delineation Guidance Manual (Environmental Laboratory 1987) and the State of Connecticut Inland Wetlands and Watercourses Act (sections 22a-36 through 22a-45 of the CT General Statutes). A total of nine wetlands were identified and delineated within the survey corridor. Table 4.0-2 provides a summary of the wetlands along the Newtown Loop segment alignment including approximate milepost location, wetland classification, crossing length, preliminary jurisdictional determination, and comments.

4.4 Milford, CT Compressor Station

In January 2007, ENSR wetland scientists conducted a biological field survey of the project area, and found no wetlands, waterbodies, or permanently flooded bodies of water in the project area, or in adjacent properties that were visible from Oronoque Road. Additionally, a comparison of site features to FERC guidelines listing types of sensitive surface waters indicates that no other sensitive surface water resources are in the project vicinity.

TABLE 4.0-1
WATERBODIES CROSSED BY THE 08/09 EXPANSION PROJECT

Approximate Milepost	Waterbody Name and Series No.	Type[a]	Width (ft)	State Water Quality Classification[b]	Fishery Type[c]	Preliminary Jurisdictional Determination[d]
Boonville, NY Loop Segment						
0.0	Drainage ditch (S-1-1)	I	3			None
0.94	Unnamed Stream (S-1-2)	I	5			Federal
1.18-1.19	Unnamed Pond (W-1-7)	P	46			Federal
1.20	Drainage ditch (S-1-3)	I	5			Federal
1.94	Unnamed Stream (S-1-4)	I	3			Federal
2.17	Unnamed Stream (S-1-5)	I	5			Federal
2.50	W. Kent Creek Trib. (S-1-6)	I	5			Federal
2.56	W. Kent Creek (S-1-7)	P	13	C(T)	Cd-T	Federal/State
2.93	Unnamed Stream (S-1-8)	I	5			Federal
3.29	W. Kent Creek Trib. (S-1-9)	P	5	C(T)		Federal/State
3.60	W. Kent Creek Trib. (S-1-10)	P	5	C(T)		Federal/State
4.03	E. Kent Creek Trib. (S-1-11)	I	5			Federal
4.25	E. Kent Creek (S-1-12)	P	15	C(T,S)	Cd-T	Federal/State
5.27	Drainage ditch (S-1-13)	I	6			None/Federal
5.35	Drainage ditch (S-1-14)	I	6			None/Federal
5.72	Unnamed Stream (S-1-15)	I	5			None/Federal
Wright, NY Loop Segment						
0.80	King Creek Trib. (S-2-1)	P	5	C		Federal
0.91	King Creek (S-2-2)	P	13	C(TS)	Cd-T	Federal/State
Newtown, CT Loop Segment						
0.18	Priton Brook (S-3-1)	P	5	A	Cd	Federal/State
1.03	Unnamed Stream (S-3-2)	I	5	A	Cd	Federal/State
1.15	Ivy Brook (S-3-3)	P	5	A(T)	Cd-T	Federal/State

a : P = perennial; I = intermittent

b : State Designations Use Descriptions

- **A Known or presumed to meet water quality criteria that support potential drinking water supply, fish and wildlife habitat, recreational use, agricultural and industrial supply, and other legitimate uses, including navigation (CTDEP 2007c).**
- **C Secondary contact recreation (i.e., fishing, boating) (NYSDEC 2004).**
- **D Secondary contact recreation. Not conducive to fisheries propagation (NYSDEC 2004).**
- **(T)(Suffix) Suitable trout habitat (NYSDEC 2004).**
- **(S)(Suffix) Suitable habitat for trout spawning (NYSDEC 2004).**

c : Cd = coldwater; T = trout

d: Preliminary jurisdictional determination is the opinion of ENSR based upon available information resources. Actual jurisdictional determinations can only be made by the applicable Federal and State agencies following submittal of a jurisdictional determination request.

TABLE 4.0-2
WETLANDS CROSSED BY THE 08/09 EXPANSION PROJECT

Approximate Milepost	Wetland Series No.	Wetland Class[a]	Crossing Length (ft)	Preliminary Jurisdictional Determination[b]	Comments
Boonville, NY Loop Segment					
0.00	W-1-1	PFO/PEM	200	Federal	
0.23	W-1-2	POW	N/A	None	Manmade farm pond outside planned workspace
0.23	W-1-3	PSS	N/A	None	Isolated depression outside planned workspace
0.38-0.49	W-1-4	PFO/PE,	572	Federal/State	
0.60-0.61	W-1-5	PEM/PFO	64	None/Federal	Isolated depression
0.74-1.17	W-1-6	PFO/PEM/PSS	2026	Federal/State	Minor waterbody crossing
1.18-1.19	W-1-7	PEM/PSS/POW	96	Federal	Intermediate waterbody crossing – manmade pond
1.21	W-1-8	PFO	N/A	Federal/State	Outside planned workspace
1..26-1.29	W-1-9	PEM/PFO/POW	158	Federal/State	Intermediate waterbody west side of TWS
1.38-1.40	W-1-10	PSS	92	Federal/State	
1.45-1.46	W-1-11	PSS	52	None/Federal	Isolated depression
1.47	W-1-12	PFO	N/A	Federal/State	Outside planned workspace
1.53	W-1-13	PFO	N/A	Federal/State	Outside planned workspace
1.65-1.66	W-1-14	PFO	53	Federal/State	
1.73-1.99	W-1-15	PFO	N/A	Federal/State	Outside planned workspace
1.76	W-1-16	PEM/PSS	N/A	None/Federal	Isolated depression outside planned workspace
1.87-1.90	W-1-17	PFO	170	None/Federal/State	Isolated wetland
1.91-1.95	W-1-18	PFO/PSS/PEM	200	None/Federal/State	Isolated wetland
2.00-2.40	W-1-19	PFO/PEM	998	Federal/State	Minor waterbody crossing
2.05-2.08	W-1-20	PFO	205	Federal/State	
2.39	W-1-21	PFO	N/A	Federal/State	Outside planned workspace
2.44-2.55	W-1-22	PFO/PEM/PSS	166	Federal/State	Minor & intermediate waterbody crossing
2.87-2.97	W-1-23	PFO/PEM/PSS	439	Federal	Minor waterbody crossing
3.28-3.33	W-1-24	PFO/PEM	185	Federal	Minor waterbody crossing
3.29	W-1-25	PFO	N/A	Federal	Outside planned workspace
3.41	W-1-26	PFO	N/A	Federal	Outside planned workspace
3.56-3.64	W-1-27	PEM/PSS	356	Federal	Minor waterbody crossing
3.71-3.77	W-1-28	PFO	N/A	Federal	Outside planned workspace
3.76-3.79	W-1-29	PSS	190	Federal	
3.94-4.30	W-1-30	PEM/PSS/PFO	1907	Federal/State	Minor & intermediate waterbody crossing
4.55-4.63	W-1-31	PEM	66	None	Isolated depression / agricultural drainage ditch
4.65-4.69	W-1-32	PEM	59	None	Isolated depression
4.96-4.98	W-1-33	PEM	33	None	Isolated agricultural drainage dtich
4.99-5.01	W-1-34	PEM	78	None	Isolated depression
5.09-5.23	W-1-35	PEM	184	Federal/State	

TABLE 4.0-2
WETLANDS CROSSED BY THE 08/09 EXPANSION PROJECT

Approximate Milepost	Wetland Series No.	Wetland Class[a]	Crossing Length (ft)	Preliminary Jurisdictional Determination[b]	Comments
5.24-5.42	W-1-36	PEM	438	Federal/State	Two minor waterbody crossings – agricultural drainage ditches
N/A	W-1-37	PEM	N/A	Federal/State	Adjacent to Access Road 1-3
N/A	W-1-38	PEM	N/A	Federal/State	Adjacent to AR-1-3
N/A	W-1-39	PEM	N/A	None/Federal	Adjacent to AR-1-3 & Staging Area
5.72-5.75	W-1-40	PEM	167	None/Federal	
5.71	W-1-41	PEM	20	None/Federal	Minor waterbody crossing
5.76-5.78	W-1-42	PFO	120	Federal/State	
N/A	W-1-43	PFO/PEM	N/A	Federal/State	Outside planned workspace
Wright, NY Loop Segment					
0.62	W-2-1	PEM	N/A	Federal	Outside planned workspace
0.79	W-2-2	PEM	18	Federal	Minor waterbody crossing
0.90	W-2-3	PEM	N/A	Federal	Outside planned workspace
N/A	W-2-4	PEM/PFO	N/A	Federal	Outside planned workspace
N/A	W-2-5	PFO/PEM	N/A	Federal	Outside planned workspace
Newtown, CT Loop Segment					
0.17-0.30	W-3-1	PEM	730	Federal/State	Minor waterbody crossing; organic soils
0.45	W-3-2	PFO	53	State	Isolated depression
0.60	W-3-3	PEM/PSS	N/A	State	Outside planned workspace
0.76-0.81	W-3-4	PFO/PEM	252	Federal/State	
1.02	W-3-5	PFO/PEM	83	Federal/State	Minor waterbody crossing
1.08	W-3-6	PEM	51	State	
1.15	W-3-7	PFO/PEM	21	Federal/State	Minor waterbody crossing
1.24-1.38	W-3-8	PFO/PEM/PSS	738	Federal/State	
N/A	W-3-9	PEM	40	State	

a: Wetland classification according to Cowardin, et. al. (1979)

b: Preliminary jurisdictional determination is the opinion of ENSR based upon available information resources. Actual jurisdictional determinations can only be made by the applicable Federal and State agencies following submittal of a jurisdictional determination request.

5.0 Summary and Conclusion

In October and November of 2006, and January, April, and May of 2007, ENSR delineated wetlands and watercourses along the proposed 08/09 Expansion Project corridor in New York and Connecticut. Iroquois is proposing to construct 5.82 miles of 36-inch OD pipeline looping in Boonville, NY, 1.00 miles of 36-inch OD pipeline looping in Wright, NY, 1.64 miles of 36-inch OD pipeline looping in Newtown, CT, and a new compressor station in Milford, CT. The Project sites consist of existing permanent easement / fee property, new proposed permanent easement, proposed temporary workspace, and proposed additional temporary workspace.

ENSR made wetland determinations in accordance with the 1987 ACOE Wetlands Delineation Manual as well as the Connecticut Inland Wetlands and Watercourses Act (§§ 22a-36 through 22a-45 of the Connecticut General Statutes) where applicable. Temporary impacts to wetlands and watercourses are required for construction of the Project as currently designed and will require permitting under the Federal and State regulatory frameworks, including Section 404 of the federal Clean Water Act administered by the United States Army Corps of Engineers, Section 401 of the federal Clean Water Act administered by the states of New York and Connecticut (Water Quality Certification), the New York Freshwater Wetlands Act (Article 24 of the Environmental Conservation Law of the State of New York), and the Connecticut State Inland Wetlands and Watercourses Act.

As previously stated, the Project will require temporary impacts to wetlands and watercourses in the vicinity of the Project sites, however these temporary impacts should be mitigated through implementation of the Federal Energy Regulatory Commission's Upland Erosion Control, Revegetation, and Maintenance Plan, as well as the Wetland and Waterbody Construction and Mitigation Procedures.

6.0 References

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APPENDIX A

FIGURES

NON-INTERNET PUBLIC

See Volume III – Appendix J

APPENDIX B

AERIAL-BASED WETLAND PLANS

NON-INTERNET PUBLIC

To Be Included within Final Wetland Delineation Report

APPENDIX C

WETLAND DETERMINATION FIELD DATASHEETS

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON001-Wetland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Wet01
County: Oneida	State: New York	Community ID: Wetland
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Wool-grass	*Scirpus cyperinus*			Y	FACW+
	Green Bulrush	*Scirpus atrovirens*			Y	OBL
	Avens Species	*Geum sp.*			Y	
	Sphagnum moss	*Sphagnum sp.*			Y	OBL
	Variegated Horsetail	*Equisetum variegatum*			Y	FACW
	Tall Goldenrod	*Solidago altissima*			Y	FACU-
	Soft Rush	*Juncus effusus*			Y	FACW
	Narrow-leaf Cattail	*Typha angustifolia*			Y	OBL

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 6	Number of dominant non-wetland indicator plants: 1
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 86%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-12	10YR 2/1	Sandy Loam	None	
Bw	12+	10YR 3/1	Fine Sandy Loam	10YR 4/2 & 10YR 4/4	

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☒	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☒	Site inundated:
☒	Depth to free water in observation hole: 0 inches
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON001-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01	
County: Oneida	State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Queen Anne's Lace	*Daucus carota*			Y	UPL
	Timothy	*Phleum pratense*			Y	FACU
	Fescue Species	*Festuca sp.*			Y	
	Crooked Stem Aster	*Aster prenanthoides*			Y	FAC
	Blackberry	*Rubus sp.*			Y	
	Field Thistle	*Cirsium discolor*			Y	
	Tall Goldenrod	*Solidago altissima*			Y	FACU-

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 3
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 25%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-12	7.5YR 2.5/2		None	
Bw	12-16	7.5YR 2.5/3		None	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receives periodic mowing					
Effect on Vegetation: Herbaceous layer is only stratum present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Previous pipeline installation					
Effects on Soils: Frequent mixing of topsoil and subsoil layers					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON002-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Wet01	
County: Oneida	State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Wool-grass	*Scirpus cyperinus*			Y	FACW+
	Blackberry	*Rubus sp.*			Y	FAC
	Broad-leaf Meadow Sweet	*Spirea latifolia*			Y	FAC+
	Rough Goldenrod	*Solidago rugosa*			Y	FAC
	Tall Goldenrod	*Solidago altissima*			Y	FACU-
	Soft Rush	*Juncus effusus*			Y	FACW
	Purple-leaf Willow Herb	*Epilobium coloratum*			Y	OBL

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 6	Number of dominant non-wetland indicator plants: 1
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 86%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-12	10YR 3/2	Sandy Loam	10YR 2/2	
Bw	12-16+	10YR 3/2	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☒	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☒	Depth to free water in observation hole: 12 inches
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON002-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01	
County: Oneida	State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	White Pine	*Pinus strobus*			Y	FACU
	Scotch Pine	*Pinus sylvestris*			Y	UPL
	Unk. Grass	*Poa sp.*			Y	
	Soft Rush	*Juncus effusus*			Y	FACW
	Blackberry	*Rubus sp.*			Y	FAC
	Tall Goldenrod	*Solidago altissima*			Y	FACU-

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0 2	Number of dominant non-wetland indicator plants: 3
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 40%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-16	10YR 3/3		None	

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receive periodic mowing					
Effect on Vegetation: Herbaceous layer is only stratum present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Previous pipeline installation					
Effects on Soils: Frequent mixing of topsoil and subsoil layers					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON003-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Wet01	
County: Oneida	State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Narrow-leaf Cattail	*Typha angustifolia*			Y	OBL
	Unk. Sedge	*Carex sp.*			Y	
	Variegated Horsetail	*Equisetum variegatum*			Y	FACW
	Lance-leaf Goldenrod	*Euthamia graminifolia*			Y	FAC

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-6	10YR 2/2	Sandy Loam		
Bg	6+	Gley 1 3/5G	Silt Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☒	Site inundated:
☒	Depth to free water in observation hole: 2 inches
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON003-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01	
County: Oneida	State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Orchard Grass	*Dactylis glomerata*			Y	FACU
	Fescue species	*Festuca sp.*			Y	
	Knapweed	*Centaurea maculosa*			Y	UPL
	Timothy	*Phleum pratense*			Y	FACU

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0	Number of dominant non-wetland indicator plants: 3
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 0%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-16	10YR 3/2	Sandy Loam	None	Road Shoulder

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receive periodic mowing					
Effect on Vegetation: Herbaceous layer is only stratum present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Road shoulder comprised of sandy loam fill material					
Effects on Soils: Absence of horizon formation					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON004-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Wet01	
County: Oneida	State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	Willow Species	*Salix sp.*				
	Red Osier Dogwood	*Cornus stolonifera*				FACW+
	Slippery Elm	*Ulmus rubra*				FAC
Herbs	Royal Fern	*Osmunda regalis*			Y	OBL
	Unk. Sedge	*Carex sp.*			Y	
	Sensitive Fern	*Onoclea sensibilis*			Y	FACW
	Sphagnum Moss	*Sphagnum sp.*			Y	OBL

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 5	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
O	0-14	10YR 2/1	Muck		
B	14-18	10YR 2/1	Sandy Loam		High Organic Content

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☒	Depth to free water in observation hole: 2 inches
☐	Depth to soil saturation in observation hole:
☒	Water marks:
☒	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON004-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01	
County: Oneida	State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	White Pine	*Pinus strobus*				FACU
Saplings	Quaking Aspen	*Populus tremuloides*				FACU
Vines	None					
Shrubs	American Beech	*Fagus grandifolia*				FACU
Herbs	Quackgrass	*Agropyron repens*			Y	FACU-
	Common St. John's Wort	*Hypericum punctatum*			Y	FAC-

* *Use an asterisk to mark wetland indicator plants: plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0	Number of dominant non-wetland indicator plants: 4
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 0%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-3	10YR 3/2	Sandy Loam		
B_1	3-16	7.5YR 3/3	Sandy Loam		
B_2	16-18	10YR 4/4	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receive periodic mowing					
Effect on Vegetation: Herbaceous layer is only stratum present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Frequent mixing of topsoil and subsoils					
Effects on Soils: Absence of horizon formation					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON005-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Wet01	
County: Oneida	State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	Gray Birch	*Betula populifolia*			Y	FAC
	White Pine	*Pinus strobes*			Y	FACU
	Scotch Pine	*Pinus sylvestris*			Y	UPL
	Willow Species	*Saliz sp.*			Y	
Herbs	Meadow Sweet	*Spirea latifolia*			Y	FAC+
	Reed Canary Grass	*Phalaris arundinacea*			Y	FACW+
	Sedge Species	*Carex sp.*			Y	
	Steeplebush	*Spirea tomentosa*			Y	FACW
	Lance-leaf Goldenrod	*Euthamia graminifolia*			Y	FAC
	Wool-grass	*Scirpus cyperinus*			Y	FACW+
	Sphagnum Moss	*Sphagnum sp.*			Y	OBL

** Use an asterisk to mark wetland indicator plants; plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 7	Number of dominant non-wetland indicator plants: 2
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 78%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-13	10YR 2/2	Sandy Loam		
B_1	13-17	7.5YR 2.5/3	Sandy Loam		
B_2	17-18+	7.5YR 4/4	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☒	Site inundated:
☒	Depth to free water in observation hole: 0 inches
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON005-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01	
County: Oneida	State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees						
Saplings	Scotch Pine	*Pinus sylvestris*			Y	UPL
Vines						
Shrubs	Scotch Pine	*Pinus sylvestris*			Y	UPL
	Blackberry	*Rubus sp.*			Y	
Herbs	Common St. John's Wort	*Hypericum punctatum*			Y	FAC-
	Rough-stem Goldenrod	*Solidago rugosa*			Y	FAC
	Orchard Grass	*Dactylis glomerata*			Y	FACU

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 4
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 20%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-16	10YR 2/2	Sandy Loam		
B	16-18+	10YR 2/2	Sandy Loam	7.5YR 4/6	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receive periodic mowing					
Effect on Vegetation: Herbaceous layer is only stratum present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Frequent mixing of topsoil and subsoils					
Effects on Soils: Absence of horizon formation					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON006-Wetland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Wet01
County: Oneida	State: New York	Community ID: Wetland
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	White Pine	*Pinus strobes*	FACU
Saplings	Shad Bush	*Amelanchier sp.*	
Vines	Dewberry	*Rubus wheeleri*	FACW
Shrubs	Viburnum	*Viburnum sp.*	
	Balsam Fir	*Abies balsamea*	FAC
Herbs	Shining Clubmoss	*Lycopodium lucidulum*	FACW-
	Meadow Sweet	*Spirea latifolia*	FAC+
	Bracken Fern	*Pteridium aquilinum*	FACU
	Haircap Moss	*Polytrichum sp.*	
	Spagnum Moss	*Sphagnum sp.*	OBL

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 5 Number of dominant non-wetland indicator plants: 2

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 71%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Oe	1-0				
A	0-2	10YR 2/1	Sandy Loam		
E	2-6	10YR 3/2	Sandy Loam		
B	6-18+	5YR 2/2	Sandy Loam	10YR 3/2	Organic Streaking

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☒ Depth to free water in observation hole: 6 inches
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receive periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON006-Upland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01
County: Oneida	State: New York	Community ID: Upland
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/1/06
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	Black Cherry	*Prunus serotina*	FACU
Saplings	Scotch Pine	*Pinus sylvestris*	UPL
	Black Cherry	*Prunus serotina*	FACU
	Gray Birch	*Betula populifolia*	FAC
Vines	Blackberry	*Rubus sp.*	
Shrubs	Hawthorn Species	*Crataegus sp.*	
Herbs	Brackenfern	*Pteridium aquilinum*	FACU
	White Pine	*Pinus strobus*	FACU
	Haircap Moss	*Polytrichum sp.*	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1 Number of dominant non-wetland indicator plants: 5

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 17%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-5	10YR 2/2	Sandy Loam		Evidence of
B_1	5-14	7.5YR 2.5/3	Sandy Loam		Historic disturb.
B_2	14-18+	5YR 3/3 & 3/4	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receive periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON007-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01	
County: Oneida State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees			
Saplings			
Vines	Blackberry	*Rubus sp.*	
Shrubs	Viburnum	*Viburnum sp.*	
	Meadow Sweet	*Spirea latifolia*	FAC
	Gray Birch	*Betula populifolia*	FAC
Herbs	Rough-stem Goldenrod	*Solidago rugosa*	FAC
	Common Boneset	*Eupatorium perfoliatum*	FACW-
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
	Wool-grass	*Scirpus cyperinus*	FACW+
	Soft Rush	*Juncus effusus*	FACW+
Moss	Haircap	*Polytrichum sp.*	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 7 Number of dominant non-wetland indicator plants: 0

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 100%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-10	10YR 2/2	Sandy Loam		
B_1	10-15	10YR 4/1 & 4/2			
A_b	15-16	10YR 2/2			
B_2	16-18+	10YR 3/3			

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☒ Depth to free water in observation hole: 10 inches
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receive periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON007-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01	
County: Oneida State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	Sugar Maple	*Acer saccharum*	FACU-
	Black Cherry	*Prunus serotina*	FACU
Saplings	Gray Birch	*Betula populifolia*	FAC
Shrubs	Blackberry	*Rubus sp.*	
	Red Maple	*Acer rubrum*	FAC
Vines			
Herbs	Brackenfern	*Pteridium aquilinum*	FACU
	Poverty Grass	*Danthonia sp.*	
	Pennsylvania Sedge	*Carex pensylvanica*	UPL
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
	Tall Goldenrod	*Solidago altissima*	FACU-
	Sedge species	*Carex sp.*	
	Dewberry	*Rubus Wheeleri*	FACW

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 5

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 37.5%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-9	10YR 3/2	Sandy Loam		
B	9-16+	7.5YR 3/3	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receive periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON008-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01	
County: Oneida State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/2/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees			
Saplings	Gray Birch	*Betula populifolia*	FAC
Vines	Dewberry	*Rubus wheeleri*	FACW
Shrubs	Gray Birch	*Betula populifolia*	FAC
	American Larch	*Larex laricina*	FACW
Herbs	Wool-grass	*Scirpus cyperinus*	FACW+
	Narrow-leaf Cattail	*Typha angustifolia*	OBL
	Sensitive Fern	*Onoclea sensibilis*	FACW
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 8 Number of dominant non-wetland indicator plants: 0

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 100%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-4	10YR 3/2	Sandy Loam	5YR 3/2	
B	4-16+	10YR 5/1	Silt Loam	10YR 4/6 & 10YR 3/1	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☒ Depth to free water in observation hole: 10 inches
- ☐ Depth to soil saturation in observation hole: <10 inches
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☒ Drainage patterns in Wetland:
- ☒ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receive periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON008-Upland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01
County: Oneida State: New York	Community ID: Upland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/2/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	Scotch Pine	*Pinus sylvestris*	UPL
	Gray Birch	*Betula populifolia*	FAC
Vines	None		
Herbs	Bracken Fern	*Pteridium aquilinum*	FACU
	Deer Tongue Grass	*Dichanthelium clandestinum*	FAC+
	Common St. John's Wort	*Hypericum punctatum*	FAC-
	Pennsylvania Sedge	*Carex pensylvanica*	UPL
	Blackberry	*Rubus sp.*	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2 Number of dominant non-wetland indicator plants: 4

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 33.3%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-18	10YR 2/2	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receive periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON009-Wetland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01
County: Oneida State: New York	Community ID: Wetland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/2/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	Balsam Fir	*Abies balsamea*	FAC
	American Larch	*Larix laricina*	FACW
Saplings	Red Maple	*Acer rubrum*	FAC
Shrubs	None		
Herbs	None		
Moss	Haircap Moss	*Polytrichum sp.*	
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 0

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 100%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-2	10YR 2/1	Sandy Loam		
B	2-12	7.5YR 2.5/2	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☒ Depth to free water in observation hole: 8 inches
- ☐ Depth to soil saturation in observation hole: <10 inches
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON009-Upland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01
County: Oneida State: New York	Community ID: Upland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/2/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	Black Huckleberry	*Gaylussacia baccata*	FACU
	Gray Birch	*Betula populifolia*	FAC
	Meadowsweet	Spirea latifolia	FAC+
Vines	Dewberry	Rubus wheeleri	FACW
Herbs	Bracken Fern	*Pteridium aquilinum*	FACU

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 2

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 60%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-16	5YR 3/4	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology
Indicators of Hydrology: check all that apply and describe
☐ Site inundated:
☐ Depth to free water in observation hole:
☐ Depth to soil saturation in observation hole:
☐ Water marks:
☐ Drift lines:
☐ Sediment deposits:
☐ Drainage patterns in Wetland:
☐ Oxidized rhizospheres:
☐ Water-stained leaves:
☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐ Other:

Wetland Determinatino				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON010-Wetland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01
County: Oneida State: New York	Community ID: Wetland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/2/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	Meadow Sweet	*Spirea latifolia*	FAC+
Herbs	Wool-grass	*Scirpus cyperinus*	FACW+
	Soft Rush	*Juncus effusus*	FACW+
	Rough-stem Goldenrod	*Solidago rugosa*	FAC
	Path Rush	*Juncus tenuis*	FAC-
Moss	Sphagnum Moss	*Sphagnum sp.*	OBL
Vines	Dewberry	*Rubus wheeleri*	FACW

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 6 Number of dominant non-wetland indicator plants: 1

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 86%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-16	10YR 2/2	Sandy Loam		
B	16-18+	10YR 2/1	Sandy Loam	10YR 4/1	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☒ Depth to free water in observation hole: 12 inches
- ☒ Depth to soil saturation in observation hole: <12 inches
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON010-Upland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01
County: Oneida State: New York	Community ID: Upland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/2/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	Balsam Fir	*Abies balsamea*	FAC
	American Larch	*Larix laricina*	FACW
Herbs	Bracken Fern	*Pteridium aquilinum*	FACU
Vines	Dewberry	Rubus wheeleri	FACW

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 1

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 75%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-12	10YR 3/3	Sandy Loam		
B1	12-14	10YR 4/4	Loamy Sand		
Ab	14-16	10YR 2/1	Sandy Loam		
B2	16-18+	7.5YR 3/4	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology
Indicators of Hydrology: check all that apply and describe
☐ Site inundated:
☐ Depth to free water in observation hole:
☐ Depth to soil saturation in observation hole:
☐ Water marks:
☐ Drift lines:
☐ Sediment deposits:
☐ Drainage patterns in Wetland:
☐ Oxidized rhizospheres:
☐ Water-stained leaves:
☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐ Other:

Wetland Determinatino				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON011-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01	
County: Oneida State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/2/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	American Larch	*Larix laricina*	FACW
	Gray Birch	*Betula populifolia*	FAC
Herbs	Balsam Fir	*Abies balsamea*	FAC
	Wool-grass	*Scirpus cyperinus*	FACW+
	Marsh Fern	*Thelypteris thelypteroides*	FACW+
	Wild Strawberry	*Fragaria virginiana*	FACU
Moss	Sphagnum Moss	*Sphagnum sp.*	OBL
Vines	Dewberry	*Rubus wheeleri*	FACW

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 7 Number of dominant non-wetland indicator plants: 1

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 87.5%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-14	10YR 2/2	Sandy Loam	10YR 4/4	
B	14-16+	10YR 3/1	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☒ Depth to soil saturation in observation hole: 1 inch
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON011-Upland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01
County: Oneida State: New York	Community ID: Upland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/2/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	Scotch Pine	*Pinus sylvestris*	UPL
	Gray Birch	*Betula populifolia*	FAC
Herbs	Common Vetch	*Vicia sativa*	FACU-
	Bracken Fern	*Pteridium aquilinum*	FACU
	Crooked-stem Aster	*Aster prenanthoides*	FAC
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
	Wild Strawberry	*Fragaria virginiana*	FACU
	Meadow Sweet	*Spirea latifolia*	FAC+
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 4 Number of dominant non-wetland indicator plants: 4

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 50%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-10	10YR 2/2	Sandy Loam		
B	10-16+	10YR 3/2	Loamy Sand	7.5YR 2.5/3	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology
Indicators of Hydrology: check all that apply and describe
☐ Site inundated:
☐ Depth to free water in observation hole:
☐ Depth to soil saturation in observation hole:
☐ Water marks:
☐ Drift lines:
☐ Sediment deposits:
☐ Drainage patterns in Wetland:
☐ Oxidized rhizospheres:
☐ Water-stained leaves:
☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐ Other:

Wetland Determinatino				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON012-Wetland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01
County: Oneida State: New York	Community ID: Wetland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/2/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	Speckled Alder	*Alnus rugosa*	FACW+
	Red-osier Dogwood	*Cornus stolonifera*	FACW+
Herbs	Tall Goldenrod	*Solidago altissima*	FACU-
	Sensitive Fern	*Onoclea sensibilis*	FACW
	Sedge species	*Carex sp.*	
	Tall Meadow-rue	*Thalictrum pubescens*	FACW+
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 4 Number of dominant non-wetland indicator plants: 1

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 80%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-16+	10YR 2/1	Sandy Loam	7.5YR 3/4	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☒ Depth to free water in observation hole: 6 inches
- ☒ Depth to soil saturation in observation hole: 0 inches
- ☐ Water marks:
- ☒ Drift lines:
- ☒ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☒ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON012-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01	
County: Oneida State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/2/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	White Spruce	*Picea glauca*	FACU
	Big-tooth Aspen	*Populus grandidentata*	FACU-
	Black Cherry	*Prunus serotina*	FACU
	Red Maple	*Acer rubrum*	FAC
Saplings	None		
Shrub	American Beech	*Fagus grandifolia*	FACU
	Balsam Fir	*Abies balsamea*	FAC
Herbs	Blackberry	*Rubus sp.*	
	Panic Grass	*Panicum sp.*	
	Unk. Grass	*Poa sp.*	
	Poverty Grass	*Danthonia spicata*	UPL
	Rough-stem Goldenrod	*Solidago rugosa*	FAC
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 5

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 37.5%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-2	10YR 2/2	Sandy Loam		
Bw	2-10	10YR 3/4	Loamy Sand		
B	10-18+	10YR 4/6	Loamy Sand		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON013-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01	
County: Oneida State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	American Larch	*Larix laricina*	FACW
	Speckled Alder	*Alnus rugosa*	FACW+
	Viburnum species	*Viburnum sp.*	
	Bebb Willow	*Salix bebbiana*	FACW
Herbs	Tall Goldenrod	*Solidago altissima*	FACU-
	Soft Rush	*Juncus effusus*	FACW+
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
	Bentgrass species	*Agrostis sp.*	
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 5 Number of dominant non-wetland indicator plants: 1

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 83.3%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-12	10YR 3/2			
B	12-16+	10YR 4/2		10YR 4/4	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole: 6 inches
- ☒ Depth to soil saturation in observation hole: 12 inches
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON013-Upland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01
County: Oneida	State: New York	Community ID: Upland
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 11/3/06
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	Red Cedar	*Juniperus virginiana*	FACU
	American Larch	*Larix laricina*	FACW
Saplings	Black Cherry	*Prunus serotina*	FACU
Shrub	Virburnum species	*Vibirnum sp.*	
Herbs	Bracken Fern	*Pteridium aquilinum*	FACU
	Tall Goldenrod	*Solidago altissima*	FACU-
	Rough-stem Goldenrod	*Solidago rugosa*	FAC
Vines	Blackberry	*Rubus sp.*	
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2 Number of dominant non-wetland indicator plants: 4

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 33.3%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-16	10YR 3/2	Sandy Loam		
B	16-18+	10YR 3/4	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON014-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01	
County: Oneida State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs			
Herbs	Reed Canary Grass	*Phalaris arundinacea*	FACW+
	Spotted Joe-Pye-Weed	*Eupatoriadelphus maculates*	FACW
	Goldenrod species	*Solidago sp.*	
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2 Number of dominant non-wetland indicator plants: 0

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 100%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-12	10YR 2/2	Gravelly Sandy Loam		Refusal @ 12”

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☒ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☒ Drift lines:
- ☐ Sediment deposits:
- ☒ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON014-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01	
County: Oneida State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrub	None		
Herbs	Orchard Grass	*Dactylis glomerata*	FACU
	Queen Anne's Lace	*Daucus carota*	UPL
	Tall Goldenrod	*Solidago altissima*	FACU-
	Milkweed	*Asclepias syriaca*	UPL
	Wild Madder	*Galium mollugo*	UPL
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0 Number of dominant non-wetland indicator plants: 5

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 0%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-16	10YR 2/2	Sandy Loam		Refusal @ 16”

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON015-Wetland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01
County: Oneida State: New York	Community ID: Wetland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/1/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs			
Herbs			
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2 Number of dominant non-wetland indicator plants: 0

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 100%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-12	10YR 2/2	Gravelly Sandy Loam		Refusal @ 12”

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☒ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☒ Drift lines:
- ☐ Sediment deposits:
- ☒ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON015-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01	
County: Oneida State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrub	None		
Herbs	Orchard Grass	*Dactylis glomerata*	FACU
	Red Clover	*Trifolium pretense*	FACU-
	Wild Madder	*Galium mollugo*	UPL
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0 Number of dominant non-wetland indicator plants: 3

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 0%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-18	10YR 2/2	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON016-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01	
County: Oneida State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	American Larch	*Larix laricina*	FACW
	Speckled Alder	*Alnus rugosa*	FACW+
Herbs	Orchard Grass	*Dactylis glomerata*	FACU
	Tall Goldenrod	*Solidago altissima*	FACU-
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2 Number of dominant non-wetland indicator plants: 2

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 50%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-11	10YR 3/2	Sandy Loam		Highly disturbed
B	11+	10YR 4/3	Sandy Loam	10YR 3/4	Soil profile

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☒ Depth to free water in observation hole: 8 inches
- ☒ Depth to soil saturation in observation hole: 6 inches
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☒ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON016-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01	
County: Oneida State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/1/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrub	None		
Herbs	Orchard Grass	*Dactylis glomerata*	FACU
	Tall Goldenrod	*Solidago altissima*	FACU-
	Wild Madder	*Galium mollugo*	UPL
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
	Fescue species	*Festuca sp.*	
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1 Number of dominant non-wetland indicator plants: 3

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 25%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-5	10YR 3/2			Highly disturbed
B1	5-9	10YR 3/3			Soil profile
Ab	9-12	10YR 2/1			
B2	12-14			10YR 5/1	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☐
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON017-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01	
County: Oneida State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	None		
Herbs	Green Bulrush	*Scirpus atrovirens*	OBL
	Soft Rush	*Juncus effusus*	FACW+
	Path Rush	*Juncus tenuis*	FAC-
	Variegated Horsetail	*Equisetum variegatum*	FACW
	Blue Vervain	*Verbena hastate*	FACW+
	Common Boneset	*Eupatorium perfoliatum*	FACW+
	Blue-joint Reedgrass	*Calamagrostis canadensis*	FACW+
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 6 Number of dominant non-wetland indicator plants: 1

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 86%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-6	10YR 2/2	Silt loam		
B	6-16+	10YR 3/1	Gravelly Silt Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☒ Site inundated:
- ☐ Depth to free water in observation hole: 8 inches
- ☒ Depth to soil saturation in observation hole: 6 inches
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☒ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON017-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01	
County: Oneida State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrub	None		
Herbs	Orchard Grass	*Dactylis glomerata*	FACU
	Tall Goldenrod	*Solidago altissima*	FACU-
	Timothy	*Phluem pretense*	FACU
	Fescue species	*Festuca sp.*	
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0 Number of dominant non-wetland indicator plants: 3

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 0%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-9	10YR 2/2	Sandy Loam		
B	9-16+	10YR 3/3	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology
Indicators of Hydrology: check all that apply and describe
☐ Site inundated:
☐ Depth to free water in observation hole:
☐ Depth to soil saturation in observation hole:
☐ Water marks:
☐ Drift lines:
☐ Sediment deposits:
☐ Drainage patterns in Wetland:
☐ Oxidized rhizospheres:
☐ Water-stained leaves:
☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐ Other:

Wetland Determinatino				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON018-Wetland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01
County: Oneida State: New York	Community ID: Wetland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	None		
Herbs	Narrow-leaf Cattail	*Typha angustifolia*	OBL
	Crooked-stem Aster	*Aster prenanthoides*	FAC
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
	Variegated Horsetail	*Equisetum variegatum*	FACW
	Scouring Rush	*Equisetum hyemale*	FACW
	Unk. Colt's Foot		
	Orchard Grass	*Dactylis glomerata*	FACU
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 5 Number of dominant non-wetland indicator plants: 1

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 83.3%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-14	10YR 2/1	Silt loam	10YR 3/4	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☒ Depth to free water in observation hole: 4 inches
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☒ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON018-Upland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01
County: Oneida State: New York	Community ID: Upland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrub	None		
Herbs	Orchard Grass	*Dactylis glomerata*	FACU
	Tall Goldenrod	*Solidago altissima*	FACU-
	Field Thistle	*Cirsium discolor*	UPL
	Common Vetch	*Vicia sativa*	FACU-
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
	Wild Parsnip	*Pastinaca sativa*	UPL
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1 Number of dominant non-wetland indicator plants: 5

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 16.7%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-14	10YR 2/2	Sandy Loam		
B	14-18	10YR 3/2	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology
Indicators of Hydrology: check all that apply and describe
☐ Site inundated:
☐ Depth to free water in observation hole:
☐ Depth to soil saturation in observation hole:
☐ Water marks:
☐ Drift lines:
☐ Sediment deposits:
☐ Drainage patterns in Wetland:
☐ Oxidized rhizospheres:
☐ Water-stained leaves:
☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐ Other:

Wetland Determinatino				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON019-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01	
County: Oneida State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	Peach-leaf Willow	*Saliz amygdaloides*	FACW
Herbs	Bentgrass	*Agrostis sp.*	
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
	Orchard Grass	*Dactylis glomerata*	FACU
	Timothy	*Phluem pratense*	FACU
	Wool-grass	*Scirpus cyperinus*	FACW+
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 2

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 60%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-14	10YR 2/1	Sandy Loam		
B	14+	10YR 4/2	Loamy Sand		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole: 4 inches
- ☒ Depth to soil saturation in observation hole: 0 inches
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☒ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON019-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01	
County: Oneida State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrub	None		
Herbs	Orchard Grass	*Dactylis glomerata*	FACU
	Common Milkweed	*Asclepias syriaca*	UPL
	Red Clover	*Trifolium pretense*	FACU-
	Fescue species	*Festuca sp.*	
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0 Number of dominant non-wetland indicator plants: 3

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 0%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-16	10YR 2/2	Gravelly Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determination

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON020-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01	
County: Oneida State: New York	Community ID: Wetland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	Peach-leaf Willow	*Saliz amygdaloides*	FACW
Herbs	Green Bulrush	*Scirpus atrovirens*	OBL
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
	Orchard Grass	*Dactylis glomerata*	FACU
	Timothy	*Phluem pratense*	FACU
	Rough-stem Goldenrod	*Solidago rugosa*	FAC
	Shallow Sedge	*Carex lurida*	OBL
	Sensitive Fern	*Onoclea sensibilis*	FACW
	Unk. Grass	*Poa sp.*	
	Madder Species	*Galium sp.*	
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 7 Number of dominant non-wetland indicator plants: 2

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 78%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-16	10YR 2/1	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☒ Depth to free water in observation hole: 2 inches
- ☒ Depth to soil saturation in observation hole: 0 inches
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON020-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01	
County: Oneida State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrub	None		
Herbs	Orchard Grass	*Dactylis glomerata*	FACU
	English Plantain	*Plantago lanceolata*	UPL
	Tall Goldenrod	*Solidago altissima*	FACU-
	Crooked-stem Aster	*Aster prenanthoides*	FAC
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1 Number of dominant non-wetland indicator plants: 3

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 25%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-16	10YR 2/2	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determination

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON021-Wetland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01
County: Oneida State: New York	Community ID: Wetland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	Willow species	*Saliz sp.*	
	Meadow Sweet	*Spirea latifolia*	FAC+
Herbs	Narrow-leaf Cattail	*Typha angustifolia*	OBL
	Sensitive Fern	*Onoclea sensibilis*	FACW
	Blue-joint Reedgrass	*Calamagrostis canadesis*	FACW+
	Goldenrod species	*Solidago sp.*	
	Spotted Joe-Pye-Weed	*Eupatoriadelphus maculates*	FACW
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 5 Number of dominant non-wetland indicator plants: 0

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 100%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-14	10YR 2/1	Sandy Loam	10YR 3/1	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☒ Depth to soil saturation in observation hole: 10 inches
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres: Upper 12 inches
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON021-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01	
County: Oneida State: New York	Community ID: Upland	
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06	
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrub	None		
Herbs	Orchard Grass	*Dactylis glomerata*	FACU
	Common Vetch	*Vicia sativa*	FACU-
	Common Milkweed	*Asclepias syriaca*	UPL
	Wild Madder	*Galium mollugo*	UPL
	Red Clover	*Trifolium pretense*	FACU-
	Unk. Goldenrod	*Solidago Sp.*	
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0 Number of dominant non-wetland indicator plants: 5

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 0%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-12	10YR 2/1	Sandy Loam		Refusal @ 12”

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determination

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON022-Wetland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Wet01
County: Oneida State: New York	Community ID: Wetland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	None		
Saplings	None		
Shrubs	None		
Herbs	Tall Goldenrod	*Solidago altissima*	FACU-
	Sensitive Fern	*Onoclea sensibilis*	FACW
	Variegated Horsetail	*Equisetum variegatum*	FACW
	Soft Rush	*Juncus effusus*	FACW+
	Grass-leaf Goldenrod	*Euthamia graminifolia*	FAC
	Timothy	*Phleum pratense*	FACU
Moss	None		
Vines	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 4 Number of dominant non-wetland indicator plants: 2

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes

Percent of dominant wetland plants vs. non-wetland plants: 67%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-12	10YR 2/1	Silt Loam		
B	12-16+	10YR 2/2	Silt Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☒ Depth to soil saturation in observation hole: 6 inches
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determinatino

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.	Plot ID: W01ON022-Upland Plot
Project / Site: Iroquois 08/09 Project, Boonville, NY	Transect ID: Transect Up01
County: Oneida State: New York	Community ID: Upland
Investigator: Don Schall, Chris Newhall (ENSR)	Date of Delineation: 11/3/06
Do normal circumstances exist onsite?	Yes ☐ No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒ No ☐
Is the site a potential problem area?	Yes ☐ No ☒

Section I. Vegetation

Strata	Dominant Plant Species	Scientific Name	Wetland Indictor Category*
Trees	Sugar Maple	*Acer saccharum*	FACU-
Saplings	None		
Shrub	Bush Honeysuckle	*Lonicera tatarica*	FACU
Herbs	Orchard Grass	*Dactylis glomerata*	FACU
	Tall Goldenrod	*Solidago altissima*	FACU-
	Common Milkweed	*Asclepias syriaca*	UPL
Vines	None		
Moss	None		

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0 Number of dominant non-wetland indicator plants: 5

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No

Percent of dominant wetland plants vs. non-wetland plants: 0%

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes Sketch:

Title/date: Soil Survey of Oneida County/ Month, Year

Map number: XX

Soil type mapped:

Hydric soil inclusions:

Are field observations consistent with soil survey?

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Ap	0-14	10YR 2/2	Sandy Loam		
B	14-16	10YR 3/3	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in Wetland:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake or tidal gauge; aerial photo; other):
- ☐ Other:

Wetland Determination

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation

Type of Alteration: Area receives periodic mowing

Effect on Vegetation: Herbaceous layer is only stratum present

Previous Vegetation: Unknown

Soils

Type of Alteration: Frequent mixing of topsoil and subsoils

Effects on Soils: Absence of natural horizon formation

Previous Soils: Unknown

Hydrology

Type of Alteration:

Effects on Hydrology:

Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON041-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Wet01	
County: Oneida	State: New York	Community ID: Wetland	
Investigator: Steve Chmiel, Chris Newhall (ENSR)		Date of Delineation: 04/24/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Tamarack	*Larix laricina*	5	5	N	FACW
	Balsam Fir	*Abies balsamea*	90	95	Y	FAC
Saplings	Red Maple	*Acer rubrum*	10	40	N	FAC
	Balsam Fir	*Abies balsamea*	15	60	Y	FAC
Herbs	Hair Caped Moss	*Polytrichum commune*	15	27	N	NI
	Threeleaf Goldthread	*Coptis trifolia*	15	27	N	FACW
	Sphagnum Moss	*Sphagnum Fimbriatum*	25	45	Y	OBL

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Oi	3-0				
A	0-6	10YR 2/2	Silty Loam		
E	6-10	10YR 4/2	Sandy Loam		
B	10-18	7.5YR 2.5/3	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

Section III. Hydrology

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

Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☒	Depth to free water in observation hole: 6 inches
☒	Depth to soil saturation in observation hole: 3 inches
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☒	Water-stained leaves: surface
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration:
Effect on Vegetation:
Previous Vegetation:
Soils
Type of Alteration:
Effects on Soils:
Previous Soils:
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON041-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01	
County: Oneida	State: New York	Community ID: Upland	
Investigator: Steve Chmiel, Chris Newhall (ENSR)		Date of Delineation: 04/24/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Black Cherry	*Prunus serotina*	25	31	Y	FACU
	Red Maple	*Acer rubrum*	10	13	N	FAC
	Balsam Fir	*Abies balsamea*	45	56	Y	FAC
Saplings	Red Maple	*Acer rubrum*	15	13	N	FAC
	Balsam Fir	*Abies balsamea*	60	52	Y	FAC
	Black Cherry	*Prunus serotina*	40	35	Y	FACU
Herbs	Hair Caped Moss	*Polytrichum commune*	15	9	N	NI
	Bracken Fern	*Pteridium aquilinum*	20	13	Y	FACU
	Balsam Fir	*Sphagnum Fimbriatum*	10	6	N	FAC

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2	Number of dominant non-wetland indicator plants: 3
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 40%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
O	2-0				
A	0-8	10YR 2/1	Silty Loam		
E	8-13	10YR 5/2	Sandy Loam		
B	13-18	7.5YR 3/4	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

Section III. Hydrology

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

Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations
Vegetation
Type of Alteration:
Effect on Vegetation:
Previous Vegetation:
Soils
Type of Alteration:
Effects on Soils:
Previous Soils:
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON043-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Wet01	
County: Oneida	State: New York	Community ID: Wetland	
Investigator: Steve Chmiel, Chris Newhall (ENSR)		Date of Delineation: 04/24/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Balsam Fir	*Abies balsamea*	50	59	Y	FAC
	Red Maple	*Acer rubrum*	30	35	Y	FAC
	Eastern Hemlock	*Tsuga canadensis*	5	6	N	FACU
Shrubs	Red Maple	*Acer rubrum*	5	11	N	FAC
	Speckled Alder	*Alnus incana*	5	11	N	FACW+
	Unknown Shrub		10	22	N	
	Balsam Fir	*Abies balsamea*	25	56	Y	FAC
Herbs	Cinnamon Fern	*Osmunda cinnamomea*	35	28	Y	FACW
	Sphagnum Moss	*Sphagnum Fimbriatum*	90	72	Y	OBL

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 5	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
O	13-0				
Bw	13+	10YR 5/2	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Hydric soil

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☒	Depth to free water in observation hole: 1 inch
☒	Depth to soil saturation in observation hole: Surface
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration:
Effect on Vegetation:
Previous Vegetation:
Soils
Type of Alteration:
Effects on Soils:
Previous Soils:
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON043-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01	
County: Oneida	State: New York	Community ID: Upland	
Investigator: Steve Chmiel, Chris Newhall (ENSR)		Date of Delineation: 04/24/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Balsam Fir	*Abies balsamea*	35	100	Y	FAC
Saplings	Gray Birch	*Betula populifolia*	15	33	N	FAC
	Red Maple	*Acer rubrum*	5	11	N	FAC
	Black Cherry	*Prunus serotina*	25	55	Y	FACU
Herbs	Multiflora Rose	*Rosa multiflora*	45	60	Y	FACU
	Bracken Fern	*Pteridium aquilinum*	25	33	Y	FACU
	Unknown Blackberry	*Rubus sp.*	5	6	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2	Number of dominant non-wetland indicator plants: 3
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 40%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-5	10YR 3/4	Sandy Loam		
B1	5-7	5YR 3/4	Sandy Loam		
B2	7-18	10YR 4/6	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

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

☐	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☒
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation
Type of Alteration:
Effect on Vegetation:
Previous Vegetation:
Soils
Type of Alteration:
Effects on Soils:
Previous Soils:
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON044-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Wet01	
County: Oneida	State: New York	Community ID: Wetland	
Investigator: Steve Chmiel, Chris Newhall (ENSR)		Date of Delineation: 04/24/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Balsam Fir	*Abies balsamea*	40	47	Y	FACW
	Red Maple	*Acer rubrum*	30	35	Y	FAC
	Sugar Maple	*Acer saccharum*	15	18	N	FACU-
Saplings	Red Maple	*Acer rubrum*	15	27	N	FAC
	Unknown Sapling		30	55	Y	FACW+
	Balsam Fir	*Abies balsamea*	5	9	N	FAC
	American Beech	*Fagus grandifolia*	5	9	N	FACU
Herbs	Hair Caped Moss	*Polytrichum commune*	5	25	N	NI
	Pennsylvania Sedge	*Carex pensylvanica*	12	60	N	NI
	Unknown Black Berry	*Rubus Sp.*	3	15	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Hydric soils Site inundated no soil profiles recorded

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☒	Site inundated:
☒	Depth to free water in observation hole: Surface
☒	Depth to soil saturation in observation hole: Surface
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration:
Effect on Vegetation:
Previous Vegetation:
Soils
Type of Alteration:
Effects on Soils:
Previous Soils:
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON044-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01	
County: Oneida	State: New York	Community ID: Upland	
Investigator: Steve Chmiel, Chris Newhall (ENSR)		Date of Delineation: 04/24/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Balsam Fir	*Abies balsamea*	35	33	Y	FAC
	Black Cherry	*Prunus serotina*	35	33	Y	FACU
	Red Maple	*Acer rubrum*	25	24	N	FAC
	Sugar Maple	*Acer saccharum*	10	10	N	FACU-
Saplings	Balsam Fir	*Abies balsamea*	15	50	N	FAC
	American Beech	*Fagus grandifolia*	5	16	N	FACU
	Sugar Maple	*Acer saccharum*	5	16	N	FACU-
	Black Cherry	*Prunus serotina*	5	16	N	FACU
Herbs	Balsam Fir	*Abies balsamea*	10	18	N	FACU
	Bracken Fern	*Pteridium aquilinum*	45	81	Y	FAC

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 2
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 33%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
O	0-1				
A	0-4	10YR 3/1	Silty Sandy Loam		
E	4-10	10YR 5/2	Sandy Loam		
B1	10-20	7.5YR 2.5/3	Sandy Loam		
B2	20-28	7.5YR 3/4	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration:					
Effect on Vegetation:					
Previous Vegetation:					
Soils					
Type of Alteration:					
Effects on Soils:					
Previous Soils:					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON045-Wetland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Wet01	
County: Oneida	State: New York	Community ID: Wetland	
Investigator: Steve Chmiel, Chris Newhall (ENSR)		Date of Delineation: 04/24/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Balsam Fir	*Abies balsamea*	35	37	Y	FAC
	Eastern Hemlock	*Tsuga canadensis*	45	47	Y	FAC
	Black Cherry	*Acer saccharum*	15	16	N	FACU-
Saplings	Red Maple	*Acer rubrum*	10	100	Y	FAC
Herbs	Cinnamon Fern	*Osmunda cinnamomea*	5	5	N	FACW
	Sphagnum Moss	*Sphagnum Fimbriatum*	80	80	Y	OBL
	Threeleaf Goldthread	*Coptis trifolia*	15	15	N	FACW

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 4	Number of dominant non-wetland indicator plants: 4
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Oi	6-0				
A	0-3	10YR 2/1	Sandy Loam		
B1	3-18	10YR 5/3	Sandy Loam	10YR 5/8	
B2	18-25	7.5YR 4/6	Sandy Loam	10YR 5/8	

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Hydric soils

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☒	Depth to free water in observation hole: 6 inches
☒	Depth to soil saturation in observation hole: 2 inches
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration:
Effect on Vegetation:
Previous Vegetation:
Soils
Type of Alteration:
Effects on Soils:
Previous Soils:
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01ON045-Upland Plot	
Project / Site: Iroquois 08/09 Project, Boonville, NY		Transect ID: Transect Up01	
County: Oneida	State: New York	Community ID: Upland	
Investigator: Steve Chmiel, Chris Newhall (ENSR)		Date of Delineation: 04/24/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Balsam Fir	*Abies balsamea*	55	73	Y	FAC
	Black Cherry	*Prunus serotina*	10	13	N	FACU
	Eastern Hemlock	*Tsuga canadensis*	10	13	N	FACU
Saplings	Balsam Fir	*Abies balsamea*	15	100	Y	FAC
Herbs	Balsam Fir	*Abies balsamea*	15	16	N	FAC
	Black Huckleberry	*Gaylussacia baccata*	30	32	Y	FACU
	Princess Pine	*Lycopodium obscurum*	5	5	N	FACU
	Bracken Fern	*Pteridium aquilinum*	45	47	Y	FACU

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2	Number of dominant non-wetland indicator plants: 2
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 50%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Oneida County/ Month, Year	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-2	10YR 2/1	Silty Sandy Loam		
E	2-6	10YR 5/2 10YR 4/2	Sandy Loam		
B1	6-8	10YR 2/1	Sandy Loam		
B2	8-19	7.5YR 3/3	Sandy Loam		Refusal at 19"

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☒	Depth to free water in observation hole: 18 inches
☒	Depth to soil saturation in observation hole: 14 inches
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations
Vegetation
Type of Alteration:
Effect on Vegetation:
Previous Vegetation:
Soils
Type of Alteration:
Effects on Soils:
Previous Soils:
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01SC001-Wetland Plot (W-2-2)
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect 01
County: Schoharie	State: New York	Community ID: Wetland
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 10/26/06
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Reed Canary Grass	*Phalaris arundinacea*	37.5	56	Y	FACW+*
	Broad-leaf Cattail	*Typha latifolia*	10	15	N	
	Common Boneset	*Eupatorium perfoliatum*	10	15	N	
	Sedge sp.	*Carex sp.*	3	5	N	
	Rough-stem Goldenrod	*Solidago rugosa*	3	5	N	
	Aster sp.	*Aster sp.*	3	5	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Schoharie County/ 1969	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-4	10YR 2/1	Very Gravelly Sand	None	Refusal @ 4″
					Disturbed ROW profile

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☒	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Very gravelly to cobbley sand; possible old fill from previous pipeline installation.

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☒	Depth to free water in observation hole: 0 inches
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Early successional plant community present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01SC001-Upland Plot (W-2-2)
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect 01
County: Schoharie	State: New York	Community ID: Upland
Investigator: Don Schall, Chris Newhall (ENSR)		Date of Delineation: 10/26/06
Do normal circumstances exist onsite?	Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?	Yes ☒	No ☐
Is the site a potential problem area?	Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	White Milkweed	*Asclepias variegate*	20	15	N	
	Queen Anne's Lace	*Daucus carota*	3	2	N	
	Unk. Agri. grasses		88	67	Y	UPL
	Wild Madder	*Gallium mollugo*	10	8	N	
	Common Vetch	*Vicia sativa*	10	8	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0	Number of dominant non-wetland indicator plants: 1
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 0%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Schoharie County/ 1969	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-2	10YR 3/2	Gravelly Silt Loam	None	
Bw	2-16	10YR 3/3	Gravelly Silt Loam	Faint @ 16″	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Gravelly silt loam with faint mottles beginning at 16″.

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole: 0 inches				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receive periodic mowing					
Effect on Vegetation: Early successional plant community present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Previous pipeline installation					
Effects on Soils: Frequent mixing of topsoil and subsoil layers					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA003-Wetland Plot (W-3-1)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Wetland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Sphagnum Moss	*Sphagnum sp.*	5	4	N	
	Soft Rush	*Juncus effusus*	10	8.7	N	
	Broadleaf cattail	*Typha latifolia*	5	4	N	
	Burreed Species	*Sparganium sp.*	20	17	Y	OBL*
	Tussock Sedge	*Carex stricta*	20	17	Y	OBL*
	Common Reed	*Phragmites australis*	50	44	Y	FACW*
	Three-way Sedge	*Dulichium arundinaceum*	5	4	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Oa	0-16+		Muck		

Hydric Soil Indicators: check all that apply and describe

☒	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Over 16″ organic muck

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☒	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA003-Upland Plot (W-3-1)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Upland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	American Beech	*Fagus grandifolia*	25	100	Y	FACU
Saplings	Sweet Birch	*Betula lenta*	15	37.5	Y	FACU
	Red Oak	*Quercus rubra*	15	37.5	Y	FACU-
	Tulip Tree	*Leriodendron tulipifera*	5	12.5	N	
	Gray Birch	*Betula populifolia*	5	12.5	N	
Vines	Common Greenbrier	*Smilax rotundifolia*	5	50	Y	FAC*
	American Bittersweet	*Celastrus scandens*	5	50	Y	FACU-
Shrubs	Multiflora Rose	*Rosa multiflora*	10	29	Y	FACU
	Japanese Barberry	*Berberis thunbergii*	5	14	N	
	Sweet Birch	*Betula lenta*	20	57	Y	FACU
Herbs	Sweet Pepperbush	*Clethra alnifolia*	10	100	Y	FAC+*

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2	Number of dominant non-wetland indicator plants: 6
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 25%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Oi	2-1				
Oe	1-0				
A	0-2	10YR 2/1	Fine Sandy Loam		
Bw	2-18	10YR 4/6	Fine Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

None

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receive periodic mowing					
Effect on Vegetation: Herbaceous layer is only stratum present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Previous pipeline installation					
Effects on Soils: Frequent mixing of topsoil and subsoil layers					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA011-Wetland Plot (W-3-2)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet11	
County: Fairfield	State: Connecticut	Community ID: Wetland	
Investigator: Don Schall, Steve Chmiel (ENSR)		Date of Delineation: 05/07/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Red Maple	*Acer rubrum*	30	43	Y	FAC
	Yellow Birch	*Betula alleghaniensis*	15	21	N	FAC
	Eastern Hemlock	*Tsuga canadensis*	25	36	Y	FACU
Saplings	Yellow Birch	*Betula alleghaniensis*	20	40	Y	FAC
	Red Maple	*Acer rubrum*	30	60	Y	FAC
Shrubs	Northern Spicebush	*Lindera benzoin*	15	33	Y	FACW-
	Common Winterberry	*Ilex verticillata*	20	44	Y	FACW+
	Sweet Pepperbush	*Clethra alnifolia*	10	22	N	FAC+
Herbs	Cinnamon Fern	*Osmunda cinnamomea*	25	55	Y	FACW
	Sphagnum Moss	*Sphagnum Fimbriatum*	10	22	N	OBL
	Starflower	*Trientalis borealis*	10	22	N	FAC

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 6	Number of dominant non-wetland indicator plants: 1
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 86%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
O	6-0				
A	0-7	10YR 3/3	Silty Loam		
Bw	7-16	2.5YR 3/2	Slity Loam	10YR 4/4	

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☒	Depth to free water in observation hole: 6 inches
☒	Depth to soil saturation in observation hole: Surface
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☒	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration:
Effect on Vegetation:
Previous Vegetation:
Soils
Type of Alteration:
Effects on Soils:
Previous Soils:
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA011-Upland Plot	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet11	
County: Fairfield	State: Connecticut	Community ID: Upland	
Investigator: Don Schall, Steve Chmiel (ENSR)		Date of Delineation: 05/07/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Chestnut Oak	*Quercus prinus*	25	45	Y	UPL
	Black Birch	*Betula lenta*	10	18	N	FACU
	American Beech	*Fagus grandifolia*	20	36	Y	FACU
Saplings	American Beech	*Fagus grandifolia*	15	75	Y	FACU
	Red Maple	*Acer rubrum*	5	25	Y	FAC
Shrubs	Sweet Pepperbush	*Clethra alnifolia*	10	22	N	FAC+
	Mapleleaf Viburnum	*Viburnum acerifolium*	20	44	Y	FACU+
	American Beech	*Fagus grandifolia*	15	33	N	FACU
Herbs	Pennsylvania Shedge	*Carex pensylvanica*	25	45	Y	NI
	Canada Mayflower	*Maianthemum canadense*	20	36	Y	FAC-
	Princess Pine	*Lycopodium obscurum*	10	18	N	FACU

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 5
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 16%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: XX	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-6	10YR 3/4	Sandy Loam		
B1	6-15	7.5YR 3/4	Sandy Loam		
B2	15-22	2.5YR 3/4	Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration:					
Effect on Vegetation:					
Previous Vegetation:					
Soils					
Type of Alteration:					
Effects on Soils:					
Previous Soils:					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA012-Wetland Plot (W-3-3)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet12	
County: Fairfield	State: Connecticut	Community ID: Wetland	
Investigator: Don Schall, Steve Chmiel (ENSR)		Date of Delineation: 05/07/07	
Do normal circumstances exist onsite?		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)?		Yes ☐	No ☒
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Red Maple	*Acer rubrum*	30	33	Y	FAC
	Blackgum	*Nyssa sylvatica*	20	22	Y	FAC
	American Beech	*Fagus grandifolia*	15	17	N	FACU
	Eastern Hemlock	*Tsuga canadensis*	25	28	Y	FACU
Saplings	Red Maple	*Acer rubrum*	27	36	N	FAC
	Blackgum	*Nyssa sylvatica*	15	64	Y	FAC
Shrubs	Sweet Pepperbush	*Clethra alnifolia*	12	55	N	FAC+
	Swamp Azalea	*Rhododendron viscosum*	10	45	N	OBL
Herbs	Princess Pine	*Lycopodium obscurum*	25	36	Y	FACU
	Cinnamon Fern	*Osmunda cinnamomea*	15	21	N	FACW
	Canada Mayflower	*Maianthemum canadense*	30	43	Y	FAC-

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3	Number of dominant non-wetland indicator plants: 3
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 50%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-14	10YR 2/1	Silt Loam		
B	14-19	10YR 2/2	Silt Loam	10YR 3/4	

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☒	Depth to free water in observation hole: 12 inches
☒	Depth to soil saturation in observation hole: Surface
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☒	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration:
Effect on Vegetation:
Previous Vegetation:
Soils
Type of Alteration:
Effects on Soils:
Previous Soils:
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA012-Upland Plot (W-3-3)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet12	
County: Fairfield	State: Connecticut	Community ID: Upland	
Investigator: Don Schall, Steve Chmiel (ENSR)		Date of Delineation: 05/07/07	
Do normal circumstances exist onsite? Yes		Yes ☒	No ☐
Is the site significantly disturbed (Atypical situation)? No		Yes ☐	No ☒
Is the site a potential problem area? No		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Yellow Birch	*Betula alleghaniensis*	26	48	Y	FAC
	Red Maple	*Acer rubrum*	10	19	N	FAC
	Chestnut Oak	*Quercus prinus*	18	33	N	UPL
Saplings	American Beech	*Fagus grandifolia*	15	40	N	FACU
	Chestnut Oak	*Quercus prinus*	23	60	Y	UPL
Herbs	Bracken Fern	*Pteridium aquilinum*	8	20	N	FACU
	Canada Mayflower	*Maianthemum canadense*	20	50	Y	FAC-
	Princess Pine	*Lycopodium obscurum*	10	25	N	FACU

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 2
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 33%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-5	10YR 2/2	Loam		
Bw1	5-16	10YR 3/6	Loamy Sand		
Bw2	16-20	10YR 3/4	Loamy Sand		

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration:					
Effect on Vegetation:					
Previous Vegetation:					
Soils					
Type of Alteration:					
Effects on Soils:					
Previous Soils:					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA004-Wetland Plot (W-3-4)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Wetland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	Willow (Bebb or Pussy)	*Salix sp.*	20	100	Y	FACW*
Herbs	Common Reed	*Phragmites australis*	35	23	Y	FACW*
	Rough-stem Goldenrod	*Solidago rugosa*	10	7	N	
	Wool-grass	*Scirpus cyperinus*	20	13	N	
	Northern Bugleweed	*Lycopus uniflorus*	5	3	N	
	Reed Canary Grass	*Phalaris arundinacea*	60	40	Y	FACW+*
	Purple Loosestrife	*Lythrum salicaria*	20	13	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
B	0-12	10YR 5/1	Sandy Loam	7.5YR 4/6	Refusal @ 12″

Hydric Soil Indicators: check all that apply and describe

☒	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Disturbed hydric soil profile; refusal @ 12″

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☒	no	☐
Hydric soil present?		yes	☒	no	☐
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☒	no	☐
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receive periodic mowing					
Effect on Vegetation: Herbaceous layer is only stratum present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Previous pipeline installation					
Effects on Soils: Frequent mixing of topsoil and subsoil layers					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA004-Upland Plot (W-3-4)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Upland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	Gray Birch	*Betula populifolia*	15	60	Y	FAC*
	Red Oak	*Quercus rubra*	10	40	Y	FACU-
Herbs	Tulip Tree	*Leriodendron tulipifera*	15	20	Y	FACU
	Sweet Fern	*Comptonia peregrine*	5	7	N	
	Rough-stem Goldenrod	*Solidago rugosa*	5	7	N	
	Common Raspberry	*Rubus idaeus*	5	7	N	
	Princess Pine	*Lycopodium obscurum*	40	53	Y	FACU
	Sheep Laurel	*Kalmia angustifolia*	5	7	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 3
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 25%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
B	0-16	10YR 3/4 & 10YR 4/6	Fine Sandy Loam		Disturbed upland profile

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Disturbed upland profile

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receive periodic mowing					
Effect on Vegetation: Herbaceous layer is only stratum present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Previous pipeline installation					
Effects on Soils: Frequent mixing of topsoil and subsoil layers					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA005-Wetland Plot (W-3-5)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Wetland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	Willow (Bebb or Pussy)	*Salix sp.*	15	100	Y	FACW*
Vines	None					
Shrubs	Red Oak	*Quercus rubra*	5	100	Y	FACU-
Herbs	Sensitive Fern	*Onoclea sensibilis*	45	33	Y	FACW*
	Cinnamon Fern	*Osmunda cinnamomea*	10	7	N	
	Lance-leaf Goldenrod	*Euthamia graminifolia*	15	11	N	
	Common Reed	*Phragmites australis*	5	4	N	
	Tussock Sedge	*Carex stricta*	5	4	N	
	Swamp Dewberry	*Rubus hispidus*	45	33	Y	FACW*
	Late Goldenrod	*Solidago gigantean*	10	7	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3	Number of dominant non-wetland indicator plants: 1
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 75%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-3	10YR 3/3	Mucky Fine Sandy Loam		
Bg	3-12+	Gley4 4/10	Very Fine Sandy Loam	7.5YR 4/6	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA005-Upland Plot (W-3-5)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Upland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Rough-stem Goldenrod	*Solidago rugosa*	65	68	Y	FAC*
	Blackberry	*Rubus sp.*	20	21	Y	-
	Jewelweed	*Impatiens capensis*	10	11	N	FACW

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-12	10YR 3/2	Fine Sandy Loam		
Bw	12-16	10YR 4/4	Fine Sandy Loam	7.5YR 4/6 CM	Refusal @ 16″

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA006-Wetland Plot (W-3-6)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Wetland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	Willow (Bebb or Pussy)	*Saliz sp.*	5	100	Y	FACW*
Herbs	Monkey flower	*Mimulus sp.*	25	16	N	
	Wool-grass	*Scirpus cyperinus*	85	53	Y	FACW+*
	Arrow-leaf Tearthumb	*Polygonum sagittatum*	5	3	N	
	Lurid Sedge	*Carex lurida*	35	22	Y	OBL*
	Bushy Aster	*Asterdumosus*	10	6	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 3	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 0%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-12	10YR 2/1			
Bg	12+	2.5Y 5/2	Sandy Loam	7.5YR 4/6	

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☒	no	☐
Hydric soil present?		yes	☒	no	☐
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☒	no	☐
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receive periodic mowing					
Effect on Vegetation: Herbaceous layer is only stratum present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Previous pipeline installation					
Effects on Soils: Frequent mixing of topsoil and subsoil layers					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA006-Upland Plot (W-3-6)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Upland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Rough-stem Goldenrod	*Solidago rugosa*	25	16	N	
	Blackberry	*Rubus sp.*	15	10	N	
	Common Mullen	*Verbascum thapsus*	10	7	N	
	Orchard Grass	*Dactylis glomerata*	85	55	Y	FACU
	Lance-leaf Goldenrod	*Euthamia graminifolia*	5	3	N	
	Nodding Smartweed	*Polygonum lapathifolium*	10	7	N	
	Bushy Aster	*Aster dumosus*	5	3	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0	Number of dominant non-wetland indicator plants: 1
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 0%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-5	10YR 2/1	Sandy Loam		
B1	5-13	10YR 3/6	Fine Sandy Loam		
B2	13-26	10YR 3/2	Fine Sandy Loam		

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

Section III. Hydrology

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

Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☐	no	☐
Hydric soil present?	yes	☐	no	☐
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA007-Wetland Plot (W-3-7)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Wetland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	Sweet Birch	*Betula lenta*	15	100	Y	FACU
Vines	American Bittersweet	*Celastrus scandens*	30	100	Y	FACU-
Shrubs	Bebb Willow	*Salix bebbiana*	45	100	Y	FACW*
Herbs	Tussock Sedge	*Carex stricta*	65	93	Y	OBL*
	Jewelweed	*Impatiens capensis*	5	7	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2	Number of dominant non-wetland indicator plants: 2
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 50%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-6	10YR 2/1	Mucky Fine Sandy Loam		
Bg	6-14+	2.5Y 4/1		7.5YR 4/6 MMD	

Hydric Soil Indicators: check all that apply and describe

☐	Histosol:
☐	Histic Epipedon:
☐	Sulfidic Odor:
☐	Aquic Moisture Regime:
☐	Reducing Conditions:
☐	Concretions:
☐	High Organic Content in Surface Layer of Sandy Soils:
☐	Listed on Local Hydric Soils List:
☐	Listed on National Hydric soils List :
☐	Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☒	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA007-Upland Plot (W-3-7)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Upland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	Sweet Birch	*Betula lenta*	20	40	Y	FACU
	Bebb Willow	*Salix bebbiana*	30	60	Y	FACW*
Vines	American Bittersweet	*Celastrus scandens*	30	100	Y	FACU-
Shrubs	Common Elderberry	*Sambucus Canadensis*	20	100	Y	FACW-*
Herbs	Blackberry	*Rubus sp.*	50	83	Y	-
	Christmas Fern	*Polystichum acrostichoides*	10	17	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2	Number of dominant non-wetland indicator plants: 2
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 50%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-10	10YR 3/6	Fine Sandy Loam		
Bw	10-18+	10YR 4/6			

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

Section III. Hydrology

Indicators of Hydrology: check all that apply and describe

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

☐	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations

Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA008-Wetland Plot (W-3-8)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Wetland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings						
Vines						
Shrubs						
Herbs	Tussock Sedge	*Carex stricta*	65	50	Y	OBL*
	Soft Rush	*Juncus effusus*	10	8	N	
	Rough-stem Goldenrod	*Solidago rugosa*	35	27	Y	FAC*
	Lance-leaf Goldenrod	*Euthamia graminifolia*	5	4	N	
	Seedbox	*Ludwigia palustris*	15	12	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 2	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
B	0-16+	2.5Y 5/1 & 2.5Y 5/3 & 2.5Y 4/2	Fine Sandy Loam	7.5YR 4/6 MCP	Disturbed hydric soil profile

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Disturbed hydric soil profile

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☒	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA008-Upland Plot (W-3-8)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Upland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	Tulip Tree	*Liriodendron tulipifera*	10	15	N	
	American Beech	*Fagus grandifolia*	20	31	Y	FACU
	Yellow Birch	*Betula alleghaniensis*	10	15	N	
	Eastern Hemlock	*Tsuga canadensis*	25	38	Y	FACU
Saplings	Red Oak	*Quercus rubra*	10	50	Y	FACU-
	Tulip Tree	*Liriodendron tulipifera*	10	50	Y	FACU
Vines	Multiflora Rose	*Rosa multiflora*	5	100	Y	FACU
Shrubs	Unidentified Birch	*Betula sp.*	20	50	Y	-
	Witch Hazel	*Hamemelis virginia*	20	50	Y	FAC-
Herbs	Unidentified Hickory	*Carya sp.*	5	50	Y	-
	Hay-scented Fern	*Dennstaedtia punctilobula*	5	50	Y	UPL

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 0	Number of dominant non-wetland indicator plants: 7
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? No	
Percent of dominant wetland plants vs. non-wetland plants: 0%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
Oi	2-1				
Oe	1-0				
A	0-2	10YR 2/1	Fine Sandy Loam		
Ab	2-8	10YR 3/2	Fine Sandy Loam		
Bw	8-18	10YR 4/6	Fine Sandy Loam		Refusal @ 18″

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology					
Indicators of Hydrology: check all that apply and describe					
☐	Site inundated:				
☐	Depth to free water in observation hole:				
☐	Depth to soil saturation in observation hole:				
☐	Water marks:				
☐	Drift lines:				
☐	Sediment deposits:				
☐	Drainage patterns in Wetland:				
☐	Oxidized rhizospheres:				
☐	Water-stained leaves:				
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):				
☐	Other:				
Vegetation and Hydrology Conclusion					
Number of wetland indicator plants ≥ number of non-wetland indicator plants?		yes	☐	no	☒
Hydric soil present?		yes	☐	no	☒
Other indicators of hydrology present?		yes	☐	no	☒
Sample location is in a Wetland?		yes	☐	no	☒
Section IV. Atypical Situations					
Vegetation					
Type of Alteration: Area receive periodic mowing					
Effect on Vegetation: Herbaceous layer is only stratum present					
Previous Vegetation: Unknown					
Soils					
Type of Alteration: Previous pipeline installation					
Effects on Soils: Frequent mixing of topsoil and subsoil layers					
Previous Soils: Unknown					
Hydrology					
Type of Alteration:					
Effects on Hydrology:					
Previous Hydrology:					

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA009-Wetland Plot (W-3-9)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Wetland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Lurid Sedge	*Carex lurida*	85	65	Y	OBL*
	Rough-stem Goldenrod	*Solidago rugosa*	10	8	N	
	Jewelweed	*Impatiens capensis*	5	4	N	
	Arrow-leaf Tearthumb	*Polygonum sagittatum*	15	12	N	
	Monkeyflower	*Mimulus sp.*	5	4	N	
	Unk. Goldenrod	*Solidago sp.*	10	8	N	

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 100%	

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

Section II. Soil Information

Soil Survey

Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A					
B1					
B2					

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

Section III. Hydrology

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

Indicators of Hydrology: check all that apply and describe	
☒	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a Wetland?	yes	☒	no	☐

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

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

Applicant / Owner: Iroquois Gas Transmission System, L.P.		Plot ID: W01FA009-Upland Plot (W-3-9)	
Project / Site: Iroquois 08/09 Project, Newtown, CT		Transect ID: Transect Wet01	
County: Fairfield	State: Connecticut	Community ID: Upland	
Investigator: Tim O'Sullivan, Chris Newhall (ENSR)		Date of Delineation: 10/19/06	
Do normal circumstances exist onsite?		Yes ☐	No ☒
Is the site significantly disturbed (Atypical situation)?		Yes ☒	No ☐
Is the site a potential problem area?		Yes ☐	No ☒

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate Wetland boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Trees	None					
Saplings	None					
Vines	None					
Shrubs	None					
Herbs	Orchard Grass	*Dactylis glomerata*	85	52	Y	FACU
	Rough-stem Goldenrod	*Solidago rugosa*	20	12	N	
	Slender-leaf Goldenrod	*Euthamia tenuifolia*	15	9	N	
	Late Goldenrod	*Solidago gigantean*	45	27	Y	FACW*

* *Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.*

Vegetation Conclusion

Number of dominant wetland indicator plants: 1	Number of dominant non-wetland indicator plants: 1
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes	
Percent of dominant wetland plants vs. non-wetland plants: 50%	

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

Section II. Soil Information	
Soil Survey	
Is there a published soil survey for this site? Yes	Sketch:
Title/date: Soil Survey of Fairfield County/ 1981	
Map number: 20	
Soil type mapped:	
Hydric soil inclusions:	
Are field observations consistent with soil survey?	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A/B	0-18	10YR 3/2 & 10YR ¾			Disturbed upland soil profile

Hydric Soil Indicators: check all that apply and describe

- ☐ Histosol:
- ☐ Histic Epipedon:
- ☐ Sulfidic Odor:
- ☐ Aquic Moisture Regime:
- ☐ Reducing Conditions:
- ☐ Concretions:
- ☐ High Organic Content in Surface Layer of Sandy Soils:
- ☐ Listed on Local Hydric Soils List:
- ☐ Listed on National Hydric soils List :
- ☐ Other:

Remarks:

Mottles: c = common, ma= many, m = medium, co = coarse, d = distinct, p = prominent

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

Section III. Hydrology	
Indicators of Hydrology: check all that apply and describe	
☐	Site inundated:
☐	Depth to free water in observation hole:
☐	Depth to soil saturation in observation hole:
☐	Water marks:
☐	Drift lines:
☐	Sediment deposits:
☐	Drainage patterns in Wetland:
☐	Oxidized rhizospheres:
☐	Water-stained leaves:
☐	Recorded data (stream, lake or tidal gauge; aerial photo; other):
☐	Other:

Vegetation and Hydrology Conclusion				
Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a Wetland?	yes	☐	no	☒

Section IV. Atypical Situations
Vegetation
Type of Alteration: Area receive periodic mowing
Effect on Vegetation: Herbaceous layer is only stratum present
Previous Vegetation: Unknown
Soils
Type of Alteration: Previous pipeline installation
Effects on Soils: Frequent mixing of topsoil and subsoil layers
Previous Soils: Unknown
Hydrology
Type of Alteration:
Effects on Hydrology:
Previous Hydrology:

APPENDIX D

ACOE PRELIMINARY JURISDICTIONAL DETERMINATION
BROOKFIELD COMPRESSOR STATION

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO:
ATTENTION OF:

May 30, 2006

REC'D JUN - 5 2006

Regulatory Division
CENAE-R-PEB
File No. NAE-2006-850

John Zimmer
ENSR
95 State Road
Sagamore Beach, Massachusetts 02562

Dear Mr. Zimmer:

This letter responds to your request for a determination of jurisdiction for wetlands areas located on two parcels totaling 68.3 acres at, or in the vicinity of, 60 High Meadow Road in Brookfield, Connecticut, in association with the Iroquois Gas Transmission System MarketAccess Project identified under FERC Docket Nos. CP02-31/CP02-52. *This determination of jurisdiction refers only to the portion of the MarketAccess project located in the boundary of the State of Connecticut.*

Ms. Cori M. Rose of our Regulatory Division conducted an office review of the site on April 4, 2006. During this review, all of the wetland areas labeled on the enclosed plans as Wetlands 1 through 10 and the intermittent channel were reviewed for potential jurisdiction. In accordance with your request in Section 3.2.1 of the Wetland Delineation Report to forgo a detailed determination of jurisdiction for hydrologically separate wetland areas on the property, we are providing a preliminary jurisdictional determination for all of the wetland areas at the subject site.

Wetland 1, delineated as B, C, E, F, R and S series flags, consists of a large wetland feature consisting of open water, emergent, scrub-shrub and forested wetland cover types with direct hydrological connection to Pond Brook. We interpret all of the Wetland 1 delineation series wetlands to be contiguous with the unnamed intermittent tributary that bisects the site. This feature is considered a tributary and we conclude that it is a jurisdictional Water of the United States (WOUS). Work within this wetland would require a permit from the Corps.

Wetland 2 is a small permanently ponded and seasonally saturated scrub-shrub wetland located at the southeast corner of the development parcel adjacent to High Meadow Road. This wetland is roughly 125 feet distant from the unnamed tributary and could reasonably be used by a variety of riparian and wetland animals that frequent the watercourse. Wetland 2 is also close enough in proximity to this watercourse to influence the biological integrity of the tributary system as a neighboring wetland and is considered a jurisdictional WOUS. Work within this wetland would require a permit from the Corps.

Documentation submitted with your request for jurisdiction that pertains to the remaining wetland areas on site (Wetlands 3 through 10) also suggests that these wetlands could reasonably be used by a variety of riparian and wetland animals that frequent the watercourse and may be close enough in proximity to the watercourse to influence the biological integrity of the tributary system. In order to make a more positive determination regarding the status of these specific wetland areas, detailed site specific investigation would be required. Consequently, our preliminary determination is that these wetlands are neighboring and would likely be jurisdictional Waters of the United States.

The Corps of Engineers has implemented an administrative appeals process for jurisdictional determinations, permit denials and proffered permits whose terms and conditions you object to. Please note that only an approved jurisdictional determination can be appealed.

Enclosed to this letter is a form explaining the basis for our jurisdictional determination.

Finally, we have determined that a Department of the Army permit is not required for the specific portion of the Iroquois Gas MarketAccess activity identified above. Our determination is based on the information described in the 2005 Wetland Delineation Report and on the enclosed plan. The work involves the construction of a 7,700 HP compressor station and appurtenant buildings, paved parking, access areas, and upgrade of an existing roadbed at 60 High Meadow Road, Brookfield, Connecticut.

Our regulatory jurisdiction encompasses all work in or affecting navigable waters of the United States under Section 10 of the Rivers and Harbors Act of 1899 and the discharge of dredged or fill material into all waters of the United States, including adjacent wetlands, as well as the excavation and grading within those waters, under Section 404 of the Clean Water Act. Since your proposal does not include any of the aforementioned activities, a Department of the Army permit is not required.

Our Corps of Engineers permit process does not supersede any other agency's jurisdiction. Therefore, if other Federal, State, and/or local agencies have jurisdiction over your proposed activity, you must receive all other applicable permits before you can begin work. Please note that performing work within our jurisdiction without a Corps of Engineers permit can result in prosecution by the U.S. Government.

If you have any questions please contact Ms. Cori M. Rose, of my staff, at (978)-318-8306.

Sincerely,

Christine Godfrey
Chief, Regulatory Division

Enclosures

Copies Furnished:

USACE Buffalo District
Attn: Maggie Crawford
7413 County House Road
Auburn, NY 13021

USACE New York District
Attn: Heidi Firstencel
1 Bond Street
Troy, NY 12180

Iroquois Gas
Attn: Kimberly Draghi
One Corporate Drive
Suite 600
Shelton, CT 06484-6211

JURISDICTIONAL DETERMINATION Revised 8/13/04
U.S. Army Corps of Engineers

DISTRICT OFFICE: NAE PM: Cori M. Rose
FILE NUMBER & APPLICANT: NAE-2006-850 Iroquois Gas

PROJECT LOCATION INFORMATION:
State: Connecticut
County: Fairfield
Center coordinates of site (latitude/longitude): 41.4322 -73.3718
Approximate size of area (parcel) reviewed, including uplands: 68.3 acres.
Name of nearest waterway: Pond Brook
Name of watershed: Housatonic

JURISDICTIONAL DETERMINATION
Completed: Desktop determination ☒ Date: April 4, 2006
Site visit(s) ☐ Date(s):

Jurisdictional Determination (JD):

☒ Preliminary JD - Based on available information, ☒ *there appear to be* (or) ☐ *there appear to be no* "waters of the United States" and/or "navigable waters of the United States" on the project site. A preliminary JD is not appealable (Reference 33 CFR part 331). **Wetlands 1 through 10**

☐ Approved JD – An approved JD is an appealable action (Reference 33 CFR part 331).
Check all that apply:

☐ *There are* "navigable waters of the United States" (as defined by 33 CFR part 329 and associated guidance) within the reviewed area. Approximate size of jurisdictional area:

☐ *There are* "waters of the United States" (as defined by 33 CFR part 328 and associated guidance) within the reviewed area. Approximate size of jurisdictional area: 30 acres.

☐ *There are "isolated, non-navigable, intra-state* waters or wetlands" within the reviewed area.
☐ Decision supported by SWANCC/Migratory Bird Rule Information Sheet for Determination of No Jurisdiction.

BASIS OF JURISDICTIONAL DETERMINATION:

A. Waters defined under 33 CFR part 329 as "navigable waters of the United States":
☐ The presence of waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

B. Waters defined under 33 CFR part 328.3(a) as "waters of the United States":
☐ (1) The presence of waters, which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
☐ (2) The presence of interstate waters including interstate wetlands[1].
☐ (3) The presence of other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce including any such waters (check all that apply):
☐ (i) which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ (iii) which are or could be used for industrial purposes by industries in interstate commerce.
☐ (4) Impoundments of waters otherwise defined as waters of the US.
☒ (5) The presence of a tributary to a water identified in (1) – (4) above.
☐ (6) The presence of territorial seas.
☒ (7) The presence of wetlands adjacent[2] to other waters of the US, except for those wetlands adjacent to other wetlands.

Rationale for the Basis of Jurisdictional Determination (applies to any boxes checked above). *If the jurisdictional water or wetland is not itself a navigable water of the United States, describe connection(s) to the downstream navigable waters. If B(1) or B(3) is used as the Basis of Jurisdiction, document navigability and/or interstate commerce connection (i.e., discuss site conditions, including why the waterbody is navigable and/or how the destruction of the waterbody could affect interstate or foreign commerce). If B(2, 4, 5 or 6) is used as the Basis of Jurisdiction, document the rationale used to make the determination. If B(7) is used as the Basis of Jurisdiction, document the rationale used to make adjacency determination:* B5) Wetland 1 is contiguous with the unnamed tributary to Pond Brook that drains south into Taunton Pond B7) Wetland B is within 125 feet of the unnamed tributary identified above and is considered neighboring to that watercourse.

Lateral Extent of Jurisdiction: (Reference: 33 CFR parts 328 and 329)

☒ Ordinary High Water Mark indicated by:
- ☒ clear, natural line impressed on the bank
- ☐ the presence of litter and debris
- ☒ changes in the character of soil
- ☐ destruction of terrestrial vegetation
- ☐ shelving
- ☐ other:

☐ High Tide Line indicated by:
- ☐ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gages
- ☐ other:

☐ Mean High Water Mark indicated by:
☐ survey to available datum; ☐ physical markings; ☐ vegetation lines/changes in vegetation types.

☒ Wetland boundaries, as shown on the attached wetland delineation map and/or in a delineation report prepared by: ENSR February 2006

Basis For Not Asserting Jurisdiction:

☐ The reviewed area consists entirely of uplands.
☐ Unable to confirm the presence of waters in 33 CFR part 328(a)(1, 2, or 4-7).
☐ Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(3).
☐ The Corps has made a case-specific determination that the following waters present on the site are not Waters of the United States:
- ☐ Waste treatment systems, including treatment ponds or lagoons, pursuant to 33 CFR part 328.3.
- ☐ Artificially irrigated areas, which would revert to upland if the irrigation ceased.
- ☐ Artificial lakes and ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
- ☐ Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.
- ☐ Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States found at 33 CFR 328.3(a).
- ☐ Isolated, intrastate wetland with no nexus to interstate commerce.
- ☐ Prior converted cropland, as determined by the Natural Resources Conservation Service. Explain rationale:
- ☐ Non-tidal drainage or irrigation ditches excavated on dry land. Explain rationale:
- ☐ Other (explain):

DATA REVIEWED FOR JURSIDICTIONAL DETERMINATION (mark all that apply):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant.
☒ Data sheets prepared/submitted by or on behalf of the applicant.
☒ This office concurs with the delineation report, dated February 2006, datasheets dated January 2006, prepared by (company): ENSR
☐ This office does not concur with the delineation report, dated , prepared by (company):
☐ Data sheets prepared by the Corps.
☐ Corps' navigable waters' studies:
☐ U.S. Geological Survey Hydrologic Atlas:
☒ U.S. Geological Survey 7.5 Minute Topographic maps: Newtown 1984/Danbury 1973
☐ U.S. Geological Survey 7.5 Minute Historic quadrangles:
☐ U.S. Geological Survey 15 Minute Historic quadrangles:
☒ USDA Natural Resources Conservation Service Soil Survey: Fairfield County
☐ National wetlands inventory maps:
☐ State/Local wetland inventory maps:
☐ FEMA/FIRM maps (Map Name & Date):
☐ 100-year Floodplain Elevation is: (NGVD)
☐ Aerial Photographs (Name & Date):
☒ Other photographs (Date): Included with wetland report identified above
☐ Advanced Identification Wetland maps:
☐ Site visit/determination conducted on:
☐ Applicable/supporting case law:
☒ Other information (please specify): May 16, 1991 Revised Staff Guidance regarding Adjacent Wetlands in New England.

[1]Wetlands are identified and delineated using the methods and criteria established in the Corps Wetland Delineation Manual (87 Manual) (i.e., occurrence of hydrophytic vegetation, hydric soils and wetland hydrology).

[2]The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Iroquois Gas – MarketAccess Project		File Number: NAE-2006-850	Date:5/30/06
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
	APPROVED JURISDICTIONAL DETERMINATION		D
X	PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization in care of "Regulatory Division." If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the District Engineer, in care of the Chief, Regulatory Division, as specified in the last paragraph of the coverletter. Your objections must be received within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization in care of "Regulatory Division." If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer in care of: James W. Haggerty, Regulatory Appeals Review Officer, US Army Engineer Division, North Atlantic Fort Hamilton Military Community, Bldg. 301, General Lee Avenue, Brooklyn, NY 11252-6700 Telephone: (718) 765-7150, E-mail: James.W.Haggerty@nad02.usace.army.mil. The Division Engineer must receive this form within 60 days of the date of this notice.

- C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer in care of: James W. Haggerty, Regulatory Appeals Review Officer, US Army Engineer Division, North Atlantic Fort Hamilton Military Community, Bldg. 301, General Lee Avenue, Brooklyn, NY 11252-6700. Telephone: (718) 765-7150, E-mail: James.W.Haggerty@nad02.usace.army.mil. The Division Engineer must receive this form within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer in care of: James W. Haggerty, Regulatory Appeals Review Officer, US Army Engineer Division, North Atlantic Fort Hamilton Military Community, Bldg. 301, General Lee Avenue, Brooklyn, NY 11252-6700. Phone: (718) 765-7150, E-mail: James.W.Haggerty@nad02.usace.army.mil. The Division Engineer must receive this form within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district at the address below for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

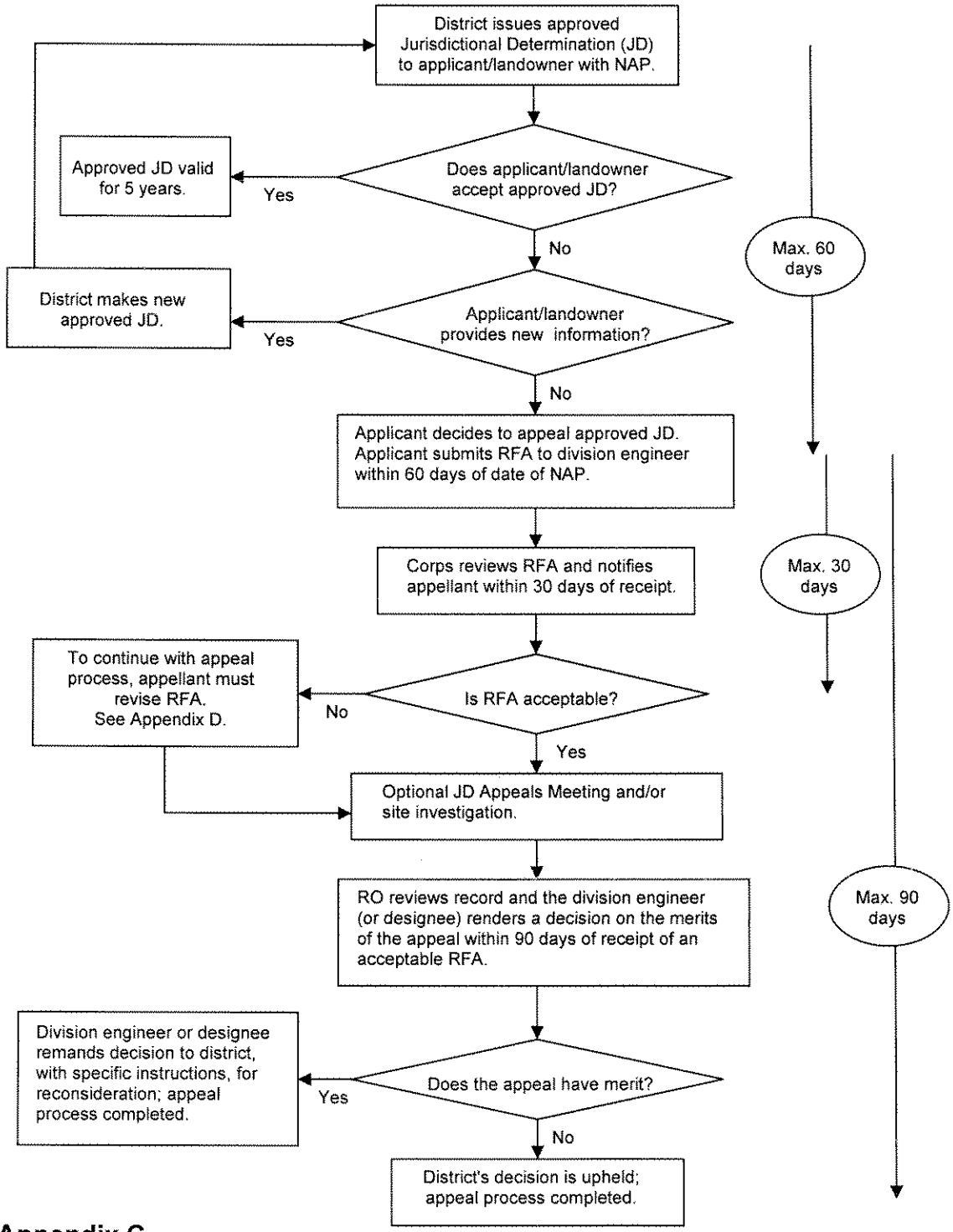
If you have questions regarding this decision and/or the appeal process you may contact Ms. Ruth Ladd at:

Acting Chief, Policy Analysis/Technical Support Branch
Corps of Engineers
696 Virginia Road
Concord, MA 01742 or by calling (978) 318-8818

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

Administrative Appeal Process for Approved Jurisdictional Determination



Appendix C