

**IROQUOIS GAS TRANSMISSION SYSTEM, L.P.**

**08/09 EXPANSION PROJECT**

**DRAFT  
RESOURCE REPORT 2**

**WATER USE AND QUALITY**

**PUBLIC**

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## RESOURCE REPORT 2 – WATER USE AND QUALITY

### FERC ENVIRONMENTAL CHECKLIST

<b>Part 380 – Minimum Filing Requirements for Environmental Reports</b>	<b>Company Compliance or Inapplicability of Requirement</b>
Identify all perennial surface waterbodies crossed by the Project and their water quality classification. (§ 380.12 (d)(1)).	Section 2.2
Identify all waterbody crossings that may have contaminated sediments. (§ 380.12 (d)(1)).	Section 2.2
Identify watershed areas, designated surface water protection areas, and sensitive waterbodies crossed by the Project. (§ 380.12 (d)(1)).	Sections 2.2.1, 2.2.3
Provide a table (based on National Wetlands Inventory (NWI) maps if delineations have not been done) identifying all wetlands, by milepost and length, crossed by the Project (including abandoned pipeline), and the total acreage and acreage of each wetland type that would be affected by construction. (§ 380.12 (d)(1 and 4)).	Table 2.3-1
Discuss construction and restoration methods proposed for crossing wetlands, and compare them to staff's Wetland and Waterbody Construction and Mitigation Procedures. (§ 380.12 (d)(2)).	Section 2.3.3
Describe the proposed waterbody construction, impact mitigation, and restoration methods used to cross surface waters and compare to staff's Wetland and Waterbody Construction and Mitigation Procedures. (§ 380.12 (d)(2)).	Section 2.2
Provide original NWI maps or the appropriate state wetland maps, if NWI maps are not available, that show all proposed facilities and include milepost locations for proposed pipeline routes (§ 380.12 (d)(4)).	Volume III – Appendix L
Identify all U. S. Environmental Protection Agency (EPA) or state designated aquifers crossed (§ 380.12 (d)(9)).	Section 2.1.1

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## **2.0 WATER USE AND QUALITY**

This resource report provides information on groundwater and surface water resources, including wetlands and waterbodies as well as construction-related water use, in the vicinity of the 08/09 Expansion Project Facilities. Section 2.2 describes surface water availability, quantity, current uses, potential use during construction and construction methodologies to be utilized in the vicinity of surface waters. Section 2.3 describes wetland resource areas in the vicinity of the Project site, anticipated construction and operation impacts, wetland construction procedures and proposed impact mitigation and minimization measures. Section 2.5 provides a list of references utilized during preparation of this resource report.

Iroquois determined the nature and location of wetlands, surface waters, springs, wells, groundwater hazards and point and non-point pollution sources by consulting appropriate agencies and performing thorough field verification and delineation surveys during 2006 and 2007. Iroquois proposes to construct the 08/09 Expansion Project Pipeline and Aboveground Facilities in accordance with the FERC Plan and Procedures (2003), Iroquois' Spill Prevention, Control and Countermeasure ("SPCC") Plan and other applicable permits and approvals (See Volume II, Appendices C and D). The project-related effects on water resources represented in this report were assessed by ENSR environmental scientists and are based on the assumption that these plans and procedures are implemented properly during construction and operation of the Project facilities.

### **2.1 GROUNDWATER RESOURCES**

This section describes groundwater resources underlying the project areas and identifies any potential project-related impacts of these resources.

#### **2.1.1 Aquifers**

##### **2.1.1.1 Pipeline Facilities**

###### **2.1.1.1.1 Boonville Loop Segment**

The proposed Boonville Loop Segment alignment is located over a water table aquifer in shallow, unconsolidated sediments of sand and gravel associated with the Black River Basin. Thickness ranges from one to 10 feet with average yields of 10 to 100 gallons per minute ("gpm") (FERC 1989). A carbonate bedrock aquifer underlies the unconsolidated sediments from approximately 10 to 300 feet below the ground surface and has an average yield of 35 gpm. The Boonville Loop alignment is not located over a primary, principal or sole source aquifer as mapped by the United States Environmental Protection Agency ("USEPA") (USEPA 2007a). Information on aquifers crossed by the Boonville Loop Segment is summarized in Table 2.1-1.

###### **2.1.1.1.2 Wright Loop Segment**

The proposed Wright Loop Segment alignment is located over a carbonate bedrock aquifer ranging from 10 to 300 feet thick with an average yield of 35 gpm. The aquifer underneath the Wright Loop segment alignment is not located over a primary, principal or sole source aquifer as mapped by the U.S. Environmental Protection Agency (USEPA 2007a). Information regarding aquifers crossed by the proposed Wright Loop Segment is contained in Table 2.1-1.

#### **2.1.1.1.3 Newtown Loop Segment**

The project area is underlain by crystalline metamorphic bedrock comprised of schist, granite and gneiss covered by glacial till of varying thickness. The groundwater aquifer along this segment of the alignment is a low yield aquifer averaging approximately 12 gpm (FERC 1989). This aquifer is not designated as a USEPA Sole Source Aquifer (USEPA 2007b), and additional consultation with the USEPA has indicated that the project is not located within a Sole Source Aquifer or area in consideration for designation as a Sole Source Aquifer (Butensky 2007a & 2007b). Table 2.1-1 contains information regarding aquifers crossed by the Newtown Loop Segment.

#### **2.1.1.2 Aboveground Facilities**

##### **2.1.1.2.1 Milford Compressor Station**

The proposed Milford Compressor Station site is not located over a primary, principal or sole source aquifer as mapped by the U.S. Environmental Protection Agency (USEPA 2007a; Butensky 2007a & 2007b). The project area is underlain by glacial till and stratified drift composed of gravel, sand, silt and clay typically capable of yielding small to moderate amounts of water (1 to 100 gallons per minute) to individual wells (Meade 1978). Primary or principal aquifers are more commonly associated with stratified drift deposits, which are the most productive source of ground water (50 to 2000 gallons per minute) for individual wells in Connecticut.

##### **2.1.1.2.2 Brookfield Compressor Station Modifications**

The Brookfield Compressor Station site is underlain by glacial till and stratified drift composed of gravel, sand, silt and clay typically capable of yielding small to moderate amounts of water (1 to 100 gallons per minute) to individual wells (Meade 1978). A record on file with the Town of Brookfield for an existing well on the Brookfield Sales Meter Station property ("Lot 3") shows static groundwater level at 30 feet (McCarthy 2006). This well, which produces at approximately seven gallons per minute, was drilled to a depth of 250 feet.

Groundwater resources underlying the project site are not part of any state-designated primary or principal aquifer (Hust 2001) or U.S. Environmental Protection Agency ("USEPA")-designated sole source aquifer (EPA 2005a; Czapla 2006; Butensky 2007a & 2007b). The Town of Newtown, which is adjacent to Brookfield, contains the Pootatuck Sole Source Aquifer, which is approximately 7.9 square miles in size. It consists of a typical stratified drift deposit with a saturated thickness generally less than 80 feet (USEPA 1990). The project site is approximately 1-1/2 miles to two miles from the EPA-mapped boundary of this aquifer (USEPA 2007a).

**TABLE 2.1-1  
AQUIFERS CROSSED BY THE 08/09 EXPANSION PROJECT FACILITIES**

<b>Facility</b>	<b>Aquifer Type</b>	<b>Milepost</b>	<b>Thickness (Feet)</b>	<b>Average Yield (GPM)</b>	<b>Description</b>
Boonville Loop	Sand & Gravel	0.0 to 6.0	1 – 10	10 – 100	Black River Basin
Boonville Loop	Carbonate	0.0 to 6.0	10 – 300	35	Sulfate can be >300 mg/L
Wright Loop	Carbonate	0.0 to 1.5	10 – 300	35	Hard Water
Newtown Loop	Schist, Granite & Gneiss	0.0 to 2.0	Not Available	12	Low Yield
Milford Compressor Station	Till & Stratified Drift	0.0	N/A	1-100	Low to Moderate Yield
Brookfield Compressor Station	Till & Stratified Drift	0.0	N/A	1-100	Low to Moderate Yield

### **2.1.2 Aquifer Protection Programs**

The USEPA administers the Sole Source Aquifer Program which is implemented across the entire country to protect groundwater aquifers that supply at least 50% of the drinking water consumed in the area overlying the aquifer. EPA guidelines also require that these areas have no alternative drinking water sources which could physically, legally, and economically supply water to all who depend on the aquifer for drinking water (USEPA 2007c).

The New York State Department of Health (“NYSDOH”) implements the Wellhead Protection Program for the State, which was created by the 1986 Amendments to the Safe Drinking Water Act. The New York State Department of Environmental Conservation (“NYSDEC”) developed New York’s Wellhead Protection Program, which was approved by the USEPA in 1990 with the goal of protecting the groundwater sources and wellhead areas that supply public drinking water systems from contamination. New York’s approach to wellhead protection recognizes and includes the existing federal, state and county programs that protect groundwater and complements these programs through a combination of activities and efforts using existing public and private agencies and organizations at all levels (NYSDOH 2007).

The State of Connecticut Department of Environmental Protection (“CTDEP”) has an aquifer protection program that protects major public water supply wells in sand and gravel aquifers to ensure a consistent source of public drinking water. Aquifer Protection Areas (sometimes referred to as “wellhead protection areas”) have been designated around the state’s 122 active well fields in sand and gravel aquifers that serve more than 1,000 people based upon preliminary mapping using simple methods that include the pumping rate of the well field, an estimate of aquifer properties, and topography to approximate the contributing land area (also known as Level B Mapping Standards as defined by the CTDEP). Water companies and municipalities that own these aquifers are required to further refine the Level B mapping of aquifers to eventually generate a final mapping of the land areas contributing water to a public supply well field through collection of extensive site-

specific data that will be utilized to develop a numerical groundwater model of the aquifer system. The model is then used to delineate the Aquifer Protection Area for each well field (Level A Mapping Standards) (CTDEP 2007a).

### **2.1.2.1 PIPELINE FACILITIES**

#### **2.1.2.1.1 Boonville Loop Segment**

The Boonville Loop Pipeline alignment is not located within a USEPA – designated sole source aquifer (USEPA 2007a) or wellhead protection area as administered by the NYSDOH.

#### **2.1.2.1.2 Wright Loop Segment**

The Wright Loop Pipeline alignment is not located within a USEPA – designated sole source aquifer (USEPA 2007a) or wellhead protection area as administered by the NYSDOH.

#### **2.1.2.1.3 Newtown Loop Segment**

The Newtown Loop Pipeline alignment is not located within a USEPA – designated sole source aquifer (USEPA 2007b; Butensky 2007a & 2007b). The Pootatuck Aquifer Sole Source Aquifer, which is approximately 7.9 square miles in size, consisting of a typical stratified drift deposit with a saturated thickness generally less than 80 feet (USEPA 1990), is located near the project area within the Town of Newtown, Connecticut. However the extent of the EPA – mapped boundary of the aquifer is located over three miles away from the Newtown Loop segment alignment (USEPA 2007c).

According to the CTDEP (2007a), a preliminary Aquifer Protection Area (“APA”) has been established in Newtown, Connecticut that generally matches the extent of the USEPA – mapped Pootatuck Sole Source Aquifer boundaries; however the Newtown Loop segment is not located within the APA boundaries and the closest location of the APA is over three miles to the west of the Project area.

### **2.1.2.2 Aboveground Facilities**

#### **2.1.2.2.1 Milford Compressor Station**

The Milford Compressor Station site is not located within a USEPA – designated sole source aquifer (USEPA 2007b; Butensky 2007a & 2007b). The Pootatuck Sole Source Aquifer, which is approximately 7.9 square miles in size, is located within the Town of Newtown, Connecticut. It consists of a typical stratified drift deposit with a saturated thickness generally less than 80 feet (USEPA 1990). The project site is located over ten miles away from the EPA – mapped boundary of this aquifer (USEPA 2007b). According to the CTDEP (2007), no Aquifer Protection Areas have been established in Milford, Connecticut.

#### **2.1.2.2.2 Brookfield Compressor Station Modifications**

The Brookfield Compressor Station site is not located within a USEPA – designated sole source aquifer (USEPA 2007b; Butensky 2007a & 2007b). The Town of Newtown, which is adjacent to Brookfield, contains the Pootatuck Sole Source Aquifer, which is approximately 7.9 square miles in size. It consists of a typical stratified drift deposit with a saturated thickness generally less than 80 feet (USEPA 1990). The project site is approximately 1-1/2 miles to 2 miles from the EPA-mapped boundary of this aquifer (USEPA 2007a). According to the CTDEP, no Aquifer Protection Areas have been established in Brookfield, Connecticut (CTDEP 2007b).



The Brookfield Compressor Station site is located within the locally-designated “Primary Recharge Zone of the Town of Brookfield Aquifer Protection District” (Carroccio-Covill and Associates, Inc. 2000). The Town of Brookfield has established zoning regulations (Chapter 242-502A) for activities and proposed developments within this district. The purpose of these zoning regulations is to protect public health by preventing contamination of the ground and surface water resources providing water supply or potential water supply to the Town of Brookfield.

Brookfield’s Aquifer Protection District regulations focus on land use restrictions and measures that must be designed into the proposed facility to ensure groundwater protection. Aquifer protection performance and design standards covered in these regulations include stormwater management; wastewater discharge; floor drains; storage, generation, use and handling of hazardous materials; bulk material and solid waste storage; hazardous and contamination materials control plan, and pesticide and fertilizer use. For the initial construction of the Brookfield Compressor Station, which encompassed significantly greater land disturbance than the proposed station modification, the Town’s zoning enforcement officer and local sanitarian were contacted to determine whether any special construction-related procedures specific to working in this zoning district are required by the Town. No special construction measures were identified (McCarthy 2005 and Gravius 2005).

### **2.1.3 Public and Private Water Supply Wells**

#### **2.1.3.1 Pipeline Facilities**

##### **2.1.3.1.1 Boonville Loop Segment**

The primary water supply for residents in the vicinity of the Boonville Loop alignment consists of private wells. No public water supply wells within 1.5-miles of the Project alignment were identified in the Draft Environmental Impact Statement (“DEIS”) produced for the mainline Iroquois / Tennessee Pipeline Project completed in 1989 (FERC 1989).

The Safe Drinking Water Information System (“SDWIS”) database is maintained by the USEPA and catalogs information on community water supply systems on file with the USEPA. The Boonville Village area is serviced by public water supply well service (USEPA 2007d); however consultation with the Boonville Water Department revealed the locations of the public wells to be over 1.5-miles to the west of MP 0.0 (MP 105 on Iroquois’ mainline) (Reference).

The NYSDOH, with the cooperation of the county health departments, regulates the operation, design and quality of public water supplies and commercial bottled water suppliers in the State of New York. Consultation with the NYSDOH and Oneida County Health Department did not identify any known public or private water supply wells within 150 feet of the Boonville Loop segment alignment. Consultation with individual landowners along the Project alignment did not identify any known wells within or immediately adjacent to the Project alignment. Iroquois’ existing mainline pipeline facilities and the proposed Boonville Loop pipeline alignment crosses property owned by the Nirvana Spring Water Company, which owns and operates private water supply wells for commercial purposes. Through consultations with the landowner, the location of these private wells is known to be over 500 feet from the proposed Project alignment. As a result, construction of the Boonville Loop pipeline facilities is not anticipated to adversely affect current or future well yield levels.

#### **2.1.3.1.2 Wright Loop Segment**

The Schoharie Village community water supply wells are located approximately 1.5-miles southwest of MP 0.0 (MP 193 as measured along Iroquois' mainline pipeline) (FERC 1989). The USEPA SDWIS database lists this public water supply system as active and servicing a population of approximately 1,030 residents (USEPA 2007d).

Consultation with the NYSDOH and Schoharie County Health Department did not identify any known public or private water supply wells within 150 feet of the Wright Loop Project alignment. Consultations with individual landowners along the Wright Loop pipeline alignment also did not document any well locations within 250 feet of the Project alignment.

#### **2.1.3.1.3 Newtown Loop Segment**

The USEPA SDWIS database did not have any records of community water supply wells within two miles of the Newtown Loop segment alignment (USEPA 2007). The Connecticut Department of Public Health ("CTDPH") Drinking Water Section ("DWS") is the responsible agency in the State of Connecticut for regulation of all public drinking water supplies and enforcement of all State and Federal drinking water regulations (CTDPH DWS 2007). Records maintained by the CTDPH DWS (Mathieu 2007a) do not indicate any known public water supply wells or springs along or within 0.25-miles of the Project alignment. The DEIS for the Iroquois / Tennessee Pipeline Project published in 1989 identified a Lake Zoar water supply well serving a population of 72 residents located approximately 1.5-miles north of MP 0.0 along the Newtown Loop alignment (MP 315 measured along Iroquois' mainline pipeline)(FERC 1989).

In the State of Connecticut, records of private drinking water wells are maintained by the local public health departments (Mathieu 2007a). Consultation with the Town of Newtown Health District and with individual landowners along the Newtown Loop pipeline alignment did not identify any wells within 250 feet of the Project alignment.

#### **2.1.3.2 Aboveground Facilities**

##### **2.1.3.2.1 Milford Compressor Station**

The South Central Connecticut Regional Water Authority ("SCCRWA") supplies the drinking water in the project area (Sternberg 1986) that is generated from a network of nine surface water reservoirs and two groundwater aquifers (SCCRWA 2003). The 2002 Water Quality Report produced by the SCCRWA indicates that the drinking water supply for the City of Milford is obtained from surface water reservoirs located within the municipalities of Woodbridge, East Haven, Branford and North Branford, Connecticut, over nine miles north and east of the Milford Compressor Station project site. The SCCRWA public water supply wells closest to the project site are located in the Towns of Cheshire and Hamden, Connecticut, which are located over eight miles to the north/northeast of the Milford Compressor Station project site (Huntley 2001). Consultation with the CTDPH DWS indicates that the project area is not located within 300 feet of a public or private drinking water supply well, or within an area of contribution to a public supply well (Mathieu 2007b).

In the State of Connecticut, records of private drinking water wells are maintained by the local public health departments (Mathieu 2007b). Consultation with the City of Milford Department of Health (XXX

2007) and with individual landowners adjacent to the Milford Compressor Station property did not identify any wells within or immediately adjacent to the Project alignment.

#### **2.1.3.2.2 Brookfield Compressor Station Modifications**

Groundwater is the primary source of drinking water for residences located in the vicinity of the project site. The location of the proposed modifications to the Brookfield Compressor Station are located over 400 feet from public drinking water supply wells and are not located within wellhead protection areas (Mathieu 2007c; Czapla 2006; and Miller 2005).

The closest private water supply well to the proposed Brookfield Compressor Station site exists on-site at Iroquois' Brookfield Sales Meter Station. This well is in the process of being abandoned and replaced as part of the development of the Brookfield Compressor Station. The only other existing private well within 250 feet of this project site is located at 67 High Meadow Road across the street from the meter station (McCarthy 2006). The record on file at the Town of Brookfield identifies the well at 67 High Meadow Road as a cable percussion well drilled to a depth of 147 feet and yields 10 gallons per minute. This off-site well is located approximately 100 feet from the existing meter station property. There is a residence under construction east of 67 High Meadow Road, which could theoretically have a well installed within 200 feet of the project site; however, Iroquois is not aware of any information on file with the Brookfield Health Department regarding a well on this property. Any well developed within that property would likely be of similar depth and yield as the existing well located within the 67 High Meadow Road property.

### **2.1.4 Springs**

#### **2.1.4.1 Pipeline Facilities**

No springs were identified during field surveys of the individual Project areas. Springs are known to occur in the general vicinity of the Project locations, however in the State of New York springs are not regulated as drinking water supplies and therefore, the NYSDOH does not maintain databases on spring location. Consultation with the CTDPH DWS did not identify any springs within 300 feet of the Newtown Loop Segment alignment (Mathieu 2007a).

#### **2.1.4.2 Aboveground Facilities**

No springs were identified during field surveys on either compressor station site. Consultation with the CTDPH DWS did not identify any springs within 300 feet of the compressor station sites (Mathieu 2007b and 2007c).

### **2.1.5 Potential Groundwater Contamination**

No groundwater sampling has been conducted along the proposed Boonville, Wright, and Newtown Loop Project alignments or at the Milford Compressor Station property, therefore information on potential groundwater contamination for this report is based on review of available information. The USEPA maintains online databases of hazardous waste site locations, associated contaminants and any corrective actions taken to remediate the sites (USEPA 2007a). Additionally, the NYSDEC and CTDEP also maintain databases relative to contaminated, potentially contaminated or environmental remediation sites (NYSDEC 2007, CTDEP 2007).

Groundwater well testing has been conducted at the Brookfield Compressor Station property as part of a soil remediation project conducted under a Connecticut voluntary remediation program pursuant to CGS

22a-133x where groundwater monitoring was being completed in accordance with the Connecticut Remediation Standard Regulation (“RSR”). Please see below for further discussion on groundwater monitoring results on the Brookfield Compressor Station property.

### **2.1.5.1 Pipeline Facilities**

#### **2.1.5.1.1 Boonville Loop Segment**

Review of the USEPA listings of hazardous waste sites indicates that there are no active National Priority List sites located in the town of Boonville (USEPA 2007f). The USEPA also maintains the Comprehensive Environmental Response, Compensation and Liability Information System (“CERCLIS”) database that contains information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation. The database includes sites that are on the National Priorities List (“NPL”) or being considered for the NPL. A search of the CERCLIS database did not result in any listed CERCLIS sites within one mile of the Boonville Loop Project alignment (USEPA 2007h).

The NYSDEC Environmental Site Remediation Database does not document any sites within the Town of Boonville currently under NYSDEC supervision for hazardous waste remedial activities (NYSDEC 2007). As there are no large-scale contaminated sites or sites under review for remedial activities by either the NYSDEC or USEPA, it is highly unlikely that contaminated groundwater exists along the proposed Boonville Loop segment alignment.

#### **2.1.5.1.2 Wright Loop Segment**

The USEPA Superfund Program National Priority List of hazardous wastes sites does not list any known hazardous waste sites within one mile of the Wright Loop Project alignment (USEPA 2007f). A search of the CERCLIS database maintained by the USEPA for hazardous waste sites in Schoharie County doesn’t reveal any sites within one mile of the project area (USEPA 2007h). NYSDEC Database records of sites with ongoing environmental remediation activities do not document the presence of any remediation sites along or within one mile of the proposed Wright Loop alignment (NYSDEC 2007). Due to absence of any NPL, CERCLIS or remediation sites in close proximity to the project area, contaminated groundwater is not anticipated to be encountered during construction of the proposed Wright Loop segment.

#### **2.1.5.1.3 Newtown Loop Segment**

A review of USEPA hazardous waste site listings indicates that there are no NPL sites within the Town of Newtown (USEPA 2007g) and no CERCLIS sites located within one mile of the project area (USEPA 2007h). The CTDEP record of contaminated or potentially contaminated sites in Connecticut does not list any sites within one mile of the Newtown Loop segment alignment with significant contamination or where extensive remediation activities have taken place. The record does contain sites within one mile of the Project area; however these sites consist of residential home sites where insignificant or small amounts of contamination were present associated with leaking underground storage tanks (CTDEP 2007b). As a result, contaminated groundwater is not expected to occur within the vicinity of the Project area.

### **2.1.5.2 ABOVEGROUND FACILITIES**

#### **2.1.5.2.1 Milford Compressor Station**

Iroquois has owned the 4.6-acre property since the early 1980’s and is not aware of any spills or releases at the site. A review of USEPA hazardous site listings indicates that there are no National Priority Sites in

the City of Milford (USEPA 2001d) and only one Comprehensive Environmental Response, Compensation, and Liability Information System (“CERCLIS”) site which is located within one mile of the project area (USEPA 2001e). This CERCLIS site is owned by the Northeast Electronics Corporation located approximately 4,000 feet south of the project area at 25 Caswell Street in Milford, Connecticut. This site has received a Resource Conservation and Recovery Act (“RCRA”) Clean Closure Certification following the cleanup of on-site contaminated materials (Leggette, Brashears & Graham 2001) and, therefore, is not expected to be a potential source of groundwater contamination at the Iroquois property.

The Milford Compressor Station project area is located within 0.5 miles of two solid waste facilities: the Milford Transfer Station and the D’Addario Landfill. The Milford Transfer Station is located west and down gradient of Iroquois’ property. Any potential groundwater contamination originating at the transfer site is not expected to affect the Iroquois property because groundwater movement at the transfer station site should flow in a western direction towards the Housatonic River. The D’Addario Landfill site is located east and upgradient of Iroquois’ property. The CTDEP is currently in the process of closing the D’Addario landfill due to an alleged violation of a State contract (State of Connecticut General Assembly 2001). While the D’Addario site is permitted to accept construction and demolition materials, there is a concern that previous activities at this location may have introduced contaminants into local groundwater supplies. Further consultation with the CTDEP will be necessary to determine if local groundwater supplies have been impacted and, if so, what implications that may have with respect to the proposed project. Construction of the compressor station facilities is not anticipated to require excavation deeper than approximately eight feet below surface grade, so it is unlikely that construction and operation of the facility will interface with groundwater. Therefore no impacts to groundwater are anticipated as a result of construction and operation of the Milford Compressor Station facility.

#### **2.1.5.2.2 Brookfield Compressor Station Modifications**

Significant groundwater contamination is not known to be present at the site of the Brookfield Compressor Station. The CTDEP classifies the use and standard of groundwater in the general project location as GA (Czapla 2006), which identifies existing private and potential public or private supplies of water suitable for drinking without treatment (CTDEP 2007c).

Recent monitoring results of groundwater wells within Iroquois’ 65-acre property indicate that groundwater is meeting State water quality standards. The former site owner of Iroquois’ 65-acre property in Brookfield, Connecticut undertook remediation of the property as a voluntary clean-up under Connecticut General Statute (“CGS”) 22a-133x. Since the site is located in an area where private residences utilize groundwater for potable supply and given the public’s interest in the site, the CTDEP elected to retain oversight of the clean-up process. This site has undergone soil remediation conducted under a Connecticut voluntary remediation program pursuant to CGS 22a-133x and groundwater monitoring is being completed in accordance with the Connecticut Remediation Standard Regulation (“RSR”) in one area of concern (AOC) where three underground storage tanks (USTs) and 15 cubic yards of associated impacted soil had been removed in 2000. As of December 2005, all known debris areas had been removed from the site and groundwater monitoring is to be conducted in the balance of the AOCs where debris and associated impacted soil had been removed. Based on four consecutive quarterly sampling rounds where no contaminants of concern were detected above GA groundwater protection criteria for the former UST AOC, the former site owner’s consultant requested that the CTDEP determine that no further monitoring is needed. However, the CTDEP denied the request on the basis that two of five wells were dry in two of four consecutive quarterly groundwater monitoring events. The former UST AOC is located in the same portion



of the site where the Brookfield Compressor Station is to be constructed. Any additional groundwater monitoring required for the former UST AOC will be conducted in conjunction with the groundwater monitoring to be completed in association with other AOCs where soil removal was conducted. In addition, CTDEP has requested that additional discrete soil samples be collected in areas where composite soil samples had been collected following soil removal. The additional sampling is anticipated to be conducted in the summer of 2007. In May of 2007, following a meeting at which Iroquois presented proposed construction plans as they relate to site remedial activities, CTDEP issued a letter indicating that they concurred that the construction activities at the site will not interfere with site remedial activities or groundwater monitoring efforts.

### **2.1.6 Groundwater Impact Mitigation**

#### **2.1.6.1 Aquifers**

##### **2.1.6.1.1 Pipeline Facilities**

Construction and operation of the proposed Boonville, Wright and Newtown Loop Segments is not expected to have an impact on groundwater quantity or quality. Where groundwater is encountered, Iroquois will adhere to the FERC 2003 Plan and Procedures for all dewatering activities. Following construction of the pipeline facilities, restoration of the project area in accordance with the FERC Plan and Procedures should restore all pre-construction ground contours and mitigate for near-surface soil compaction that can result from the movement of heavy construction vehicles.

The construction phase of the project would involve the refueling of vehicles and storage of fuel, oil and other fluids. Spills or leaks of hazardous liquids could potentially create a contamination hazard to local aquifer systems and ultimately affect its users. The potential for this impact will be avoided or minimized by the proper implementation of the Project's SPCC Plan (See Volume II, Appendix D). Iroquois is mandated through the FERC Procedures to prepare a site-specific SPCC Plan for the proposed project that details preventative measures that shall be followed to avoid a hazardous waste spill as well as mitigation measures that would be followed to immediately contain and clean up a spill, should one occur.

##### **2.1.6.1.2 Aboveground Facilities**

Construction and operation of the proposed Milford Compressor Station project is not expected to have an impact on groundwater quantity or quality. Due to the depth of groundwater in the vicinity of the project site, Iroquois does not anticipate the interception of groundwater during construction of the facility. If groundwater is encountered, Iroquois will adhere to the FERC 2003 Plan and Procedures guidelines for all dewatering activities. Following construction of the compressor station, restoration of the project area in accordance with the FERC Plan and Procedures should restore all pre-project ground contours and mitigate for near-surface soil compaction that can result from the movement of heavy construction vehicles.

The construction phase of the project would involve the refueling of vehicles and storage of fuel, oil and other fluids. Spills or leaks of hazardous liquids could potentially create a hazard to the groundwater system and ultimately affect its users. The potential for this impact is expected to be avoided or minimized by the proper implementation of the Project's SPCC Plan (See Volume II, Appendix D). Iroquois is mandated through the FERC Procedures to prepare a site-specific SPCC Plan for the proposed project that details preventative measures that shall be followed to avoid a hazardous waste spill as well as mitigation measures that would be followed to immediately contain and clean up a spill, should one occur.

The proposed construction at the Brookfield, CT site is not expected to affect the functioning of the aquifer recharge area. The potential for this impact is expected to be avoided or minimized by the proper implementation of the 2003 FERC Plan and the project's SPCC Plan. Iroquois is mandated through the FERC Procedures to prepare a site-specific SPCC Plan for the proposed project that details preventative measures that shall be followed to avoid a hazardous waste spill as well as mitigation measures that would be followed to immediately contain and clean up a spill, should one occur.

As previously discussed, the Brookfield Compressor Station site is located within a locally-designated aquifer protection district. Although not subject to local zoning regulations, the construction and operation of the proposed Brookfield Compressor Station modification is not anticipated to involve any uses prohibited by Chapter 242-502C in the primary recharge zone including the manufacture, storage, warehousing or transportation of toxic, hazardous or contaminated materials as a primary activity. No underground storage tanks are proposed.

#### **2.1.6.2 Public and Private Wells**

Iroquois' SPCC Plan places a restriction on refueling and storing hazardous materials within 200 feet of private drinking water supply wells and within 400 feet of public drinking water supply wells which is consistent with FERC guidelines. This restriction should be adhered to for construction of the Project as there are no private or public drinking water supply wells located within 200 feet and 400 feet of the proposed workspace areas, respectively.

#### **2.1.6.3 Groundwater Contamination**

The construction and operation of the compressor station facilities should not impact groundwater quality. Similar to the existing Iroquois Mainline pipeline facilities, the construction and operation of the loop segments does not involve a land use that would threaten the quality of groundwater. Any inadvertent release of hazardous materials, during construction activities would be immediately contained and cleaned-up in accordance with Iroquois' SPCC Plan.

## **2.2 SURFACE WATER RESOURCES**

### **2.2.1 Drainage Basins**

#### **2.2.1.1 Pipeline Facilities**

##### **2.2.1.1.1 Boonville Loop Segment**

The proposed Boonville Loop Segment is located within the Black River drainage basin that covers approximately 1,945 square miles in Oneida, Herkimer, Hamilton, Lewis and Jefferson Counties in New York (NYSDEC 1998). The project area is located approximately one to 1.5-miles west of the Black River, which is a listed river on the Nationwide Rivers Inventory, but is not part of the National Wild and Scenic River System (National Park Service 2006a and 2006b).

##### **2.2.1.1.2 Wright Loop Segment**

The Wright Loop Segment is located within the Schoharie drainage basin in central New York State, which covers approximately 930 square miles primarily in Schoharie, Greene, Montgomery and Albany Counties with minor drainage areas in Delaware, Oswego and Schenectady Counties (NYSDEC 1998). The project

area is not located in close proximity to any listed waters on the Nationwide Rivers Inventory or National Wild and Scenic Rivers System (National Park Service 2006a and 2006b).

#### **2.2.1.1.3 Newtown Loop Segment**

The proposed Newtown Loop Segment is located within the Housatonic River Main Stem drainage basin in southwestern Connecticut, encompassing approximately 933 square miles in Connecticut, Massachusetts and New York (UCONN CLEAR 2007). The Project area is located approximately 0.8-miles west of the Housatonic River, which is not a designated Wild and Scenic River. Stretches of the Housatonic River in Massachusetts are listed on the National Rivers Inventory; however the section of the river nearest to the Project site in Connecticut is not a listed section on the National Rivers Inventory (National Park Service 2006a and 2006b).

#### **2.2.1.2 Aboveground Facilities**

##### **2.2.1.2.1 Milford Compressor Station**

The proposed Milford Compressor Station site is located within the Housatonic River Drainage Basin, which covers approximately 1,970 square miles in Connecticut, Massachusetts and New York (USEPA 2007b). The project area is located approximately 500 feet east of the Housatonic River, separated by industrial properties (Milford Transfer Station), forested land and Oronoque Road. The Housatonic River is not a part of the federal Wild and Scenic River system. Stretches of the Housatonic River in Massachusetts are listed on the National Rivers Inventory; however the section of the river nearest to the Project site in Connecticut is not a listed section on the National Rivers Inventory (National Park Service 2006a and 2006b).

##### **2.2.1.2.2 Brookfield Compressor Station Modifications**

The site of the proposed Brookfield Compressor Station Modifications is located within the Housatonic River drainage basin, which makes up approximately 1,970 square miles in western Connecticut and smaller parts of New York and Massachusetts (USEPA 2007b). On the local level, this site occurs within the sub-regional drainage basin of Pond Brook, which is a tributary to the Housatonic River (Housatonic Valley Council of Elected Officials 2007). As noted previously, the Housatonic River is not a part of the federal Wild and Scenic River system and the section of the river nearest to the Project site in Connecticut is not a listed river on the Nationwide Rivers Inventory (National Park Service 2006a and 2006b).

#### **2.2.2 Surface Waterbodies**

##### **2.2.2.1 PIPELINE FACILITIES**

###### **2.2.2.1.1 Boonville Loop Segment**

ENSR wetland scientists conducted biological field surveys of the project area in November and December of 2006 and January of 2007, to delineate wetlands, waterbodies, or permanently flooded bodies of water within or immediately adjacent to the project area. A total of five perennial waterbodies were delineated within the proposed Boonville Loop Segment alignment consisting of four perennial streams and one pond. Eleven intermittent drainages were identified along the Project alignment, some of which are naturally occurring intermittent streams, while others consist of man-made drainage swales. Consultation with the NYSDEC (Wiggins 2007) indicated State water classification of streams in the vicinity of the Project alignment. The West Kent Creek (Project Waterbody Number S-1-7) crossing is the only stream with a classification of “C(t)” noting coldwater trout streams. Construction within waters with



“C(t)” classification requires a permit from the NYSDEC and must be completed between June 15 and September 30. Table 2.2-1 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 and fishery type.

#### **2.2.2.1.2 Wright 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 waterbodies were delineated within the Project alignment, each consisting of perennial stream crossings of five and thirteen feet in width, respectively. 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 2.2-1 details pertinent information on the waterbodies crossed by the proposed Wright Loop Segment.

#### **2.2.2.1.3 Newtown Loop Segment**

The Newtown Loop Segment alignment was investigated in November of 2006 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 one intermittent stream drainage 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 2.2-1 summarizes information on the perennial and intermittent waterbodies identified on the Newtown Loop segment alignment.

### **2.2.2.2 Aboveground Facilities**

#### **2.2.2.2.1 Milford 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.

#### **2.2.2.2.2 Brookfield Compressor Station Modifications**

Although surface water features are present on the subject property in Brookfield, no surface waters are expected to be impacted or affected by the proposed Project. In November 2005, ENSR environmental scientists re-delineated wetland and watercourse boundaries within the project site. The wetland locations are also depicted on the plan drawings provided in Volume III – Appendix N. No sensitive water resources, as defined in the *Guidance Manual for Environmental Report Preparation* (FERC August 2003), will be impacted by the proposed compressor station modifications.

**TABLE 2.2-1  
WATERBODIES CROSSED BY THE 08/09 EXPANSION PROJECT  
PIPELINE LOOP SEGMENTS**

<b>Approx. Milepost</b>	<b>Project Waterbody Number</b>	<b>Waterbody Name</b>	<b>Type<sup>a</sup></b>	<b>Crossing Width (ft)</b>	<b>State Water Quality Classification <sup>b</sup></b>	<b>Fishery Type<sup>c</sup></b>
<b>Boonville, NY Loop Segment</b>						
0.0	S-1-1	Drainage ditch	I	3		
0.94	S-1-2	Unnamed Stream	I	5		
1.18-1.19	W-1-7	Unnamed Pond	P	46		
1.20	S-1-3	Drainage ditch	I	5		
1.94	S-1-4	Unnamed Stream	I	3		
2.17	S-1-5	Unnamed Stream	I	5		
2.50	S-1-6	W. Kent Creek Trib.	I	5		
2.56	S-1-7	W. Kent Creek	P	13	C(T)	Cd-T
2.93	S-1-8	Unnamed Stream	I	5		
3.29	S-1-9	W. Kent Creek Trib.	P	5		
3.60	S-1-10	W. Kent Creek Trib.	P	5		
4.03	S-1-11	E. Kent Creek Trib.	I	5		
4.25	S-1-12	E. Kent Creek	P	15		
5.27	S-1-13	Drainage ditch	I	6		
5.35	S-1-14	Drainage ditch	I	6		
5.72	S-1-15	Unnamed Stream	I	5		

**TABLE 2.2-1  
WATERBODIES CROSSED BY THE 08/09 EXPANSION PROJECT  
PIPELINE LOOP SEGMENTS**

Approx. Milepost	Project Waterbody Number	Waterbody	Type <sup>a</sup>	Crossing Width (ft)	State Water Quality Classification <sup>b</sup>	Fishery Type <sup>c</sup>
<b>Wright, NY Loop Segment</b>						
0.80	S-2-1	King Creek Trib.	P	5	C	
0.91	S-2-2	King Creek	P	13	C(TS)	Cd-T
<b>Newtown, CT Loop Segment</b>						
0.18	S-3-1	Priton Brook	P	5	A	Cd
1.03	S-3-2	Unnamed Stream	I	5	A	Cd
1.15	S-3-3	Ivy Brook	P	5	A(T)	Cd-T

**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**

## **2.2.3    Public Watershed Areas**

### **2.2.3.1    Pipeline Facilities**

None of the proposed loop segments are located in watershed areas contributing to any municipal or public water supplies (Mathieu 2007a). As a result, there are no potable water intakes located within three miles downstream of the proposed waterbody crossing locations for any of the loop segments. Drinking water supplies in the project areas are derived from groundwater supplies, not public reservoirs or other surface waterbodies.

### **2.2.3.2 Aboveground Facilities**

The Milford Compressor Station site is not located in the watershed of a public drinking water supply (Mathieu 2007b; Sternberg 1986). Drinking water supplies in the project area are derived from groundwater supplies, not public reservoirs or other surface waterbodies.

The site of the Brookfield Compressor Station Modifications is not located within a public water supply watershed (Mathieu 2007c). The closest public watershed to the Brookfield, CT site is located to the northeast of Route 25 (Sternberg 1984).

## **2.2.4 Construction and Operation Impacts and Mitigation**

### **2.2.4.1 Pipeline Facilities**

The construction and operation of the Boonville, Wright and Newtown Loop Segments will not impact any municipal or public water supplies as the projects do not cross any public water supply waterbodies or watersheds. Additionally, none of the waterbodies crossed by the proposed projects contain potable water intakes within three miles downstream of the crossing locations.

Construction and operation of the proposed Boonville, Wright and Newtown Loop segments may include temporary impacts to the waterbodies located along the applicable alignments. The majority of the waterbody crossings are minor crossings (20 of 22), as classified by the FERC, with only seven perennial stream crossings. The two intermediate waterbody crossings consist of smaller perennial streams (13 and 15 feet wide). Iroquois anticipates providing mitigation for possible impacts resulting from construction through adherence to the 2003 FERC Procedures, Iroquois' SPCC, and requirements of the New York State Pollution Discharge Elimination System ("SPDES") General Permit Associated with Discharged Stormwater from Construction Activities as well as the Connecticut SPDES General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities during construction of the pipeline facilities. In addition, construction within streams capable of supporting coldwater fisheries will be conducted within the time frames specified by the NYSDEC and CTDEP.

### **2.2.4.2 Aboveground Facilities**

The construction and operation of the Milford Compressor Station and Brookfield Compressor Station Modifications will not impact any municipal or public water supplies as the projects are not located within any public water supply watersheds and do not directly impact any surface waterbodies. As a result, no impacts to surface water resources associated with construction or operation of the proposed aboveground facilities are anticipated.

## **2.3 WETLANDS**

Jurisdictional wetlands and waters of the United States are regulated by the United States Army Corps of Engineers ("USACE") pursuant to Section 404 of the Clean Water Act. Wetlands are the collective term for swamps, marshes, bogs, wet meadows, and similar areas that are often located between open water and dry land. Wetlands are often a valuable natural resource that, depending upon the specific characteristics, can improve water quality, reduce flood and storm damage, provide fish and wildlife habitat, and support outdoor recreational activities. Wetland investigations were performed in accordance with the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and classified according to Cowardin et al. (1979).

Prior to initiating field surveys, ENSR conducted desktop analysis of the project area using the National Wetland Inventory (“NWI”) database, the CTDEP freshwater wetlands mapping and NYSDEC Freshwater Wetlands mapping. The NWI maps depict all wetland types and sizes as interpreted from aerial photography and USGS quadrangle maps. Figures 2.5-1a through e in Volume III – Appendix J of this resource report depict the NWI and respective state wetland mapping in the vicinity of the proposed pipeline alignment. Full-size NWI maps are provided in Volume III – Appendix L.

### **2.3.1 Existing Resources**

In October and November of 2006 and Spring 2007, ENSR wetland scientists conducted a biological field survey of the project area to delineate wetlands, waterbodies, or permanently flooded bodies of water within or immediately adjacent to the project area. During field investigations, ENSR personnel investigated a 300-foot wide survey corridor centered along the existing Iroquois Mainline pipeline alignment to delineate wetlands within and immediately adjacent to the proposed loop segment alignments. All wetlands were delineated in accordance with the USACE Wetland Delineation Guidance Manual (Environmental Laboratory 1987). Summaries of all wetlands delineated along the Project alignments are detailed below. For a detailed wetland delineation report for the pipeline loop segments, please see Volume II – Appendix E.

#### **2.3.1.1 Pipeline Facilities**

##### **2.3.1.1.1 Boonville Loop Segment**

A total of 30 wetlands were identified and delineated within the 300-foot survey corridor. Table 2.3-1 provides a summary of the wetlands along the Boonville Loop segment, including milepost location, wetland classification, crossing length and proposed crossing methodology.

##### **2.3.1.1.2 Wright Loop Segment**

A total of four wetland complexes were identified and delineated within the Wright Loop survey corridor. Table 2.3-1 provides a summary of the wetlands along the Wright Loop alignment, including approximate milepost location, wetland classification, crossing length, and proposed crossing methodology.

##### **2.3.1.1.3 Newtown Loop Segment**

Wetland areas along the Newtown Loop Segment alignment were delineated in October of 2006, by ENSR wetland scientists registered with the State of Connecticut to determine soil types and perform wetland delineations. All wetlands were delineated in accordance with the USACE 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 2.3-1 provides a summary of the wetlands along the Newtown Loop segment alignment including approximate milepost location, wetland classification, crossing length, and proposed crossing methodology.

#### **2.3.1.2 Aboveground Facilities**

##### **2.3.1.2.1 Milford 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.

#### **2.3.1.2.2 Brookfield Compressor Station Modifications**

In November 2005, ENSR environmental scientists re-delineated wetland and watercourse boundaries at the project site. ENSR delineated 10 separate wetlands on the 65-acre site. No wetlands were identified within the 3.3-acre property containing the existing meter station. The project site is located within 100 feet of two wetlands. Wetland 1 is a large wetland complex consisting of palustrine emergent, scrub-shrub, and open water (“PEM/PSS/POW”) components in the lower portions of the property associated with Pond Brook and bordering portions of the intermittent channel previously described in Section 2.2.2. Wetland 2 is an isolated PEM wetland located west of the existing site access drive near High Meadow Road.

As part of the MarketAccess Project (CP02-31), ENSR sent the ACOE – New England District the wetland delineation report on February 20, 2006 and a request to verify the wetland boundaries and provide written confirmation that Section 404/401 permitting will not be required for the construction of the proposed Brookfield Compressor Station. A copy of this letter is provided in Volume II – Appendix E.

On March 16, 2006, ENSR sent a written request to the CTDEP – Inland Wetlands Resources Division requesting written concurrence that no inland wetlands, stream channel encroachment, or diversion permits will be needed from the CTDEP to construct the compressor station. A copy of this letter is provided in Volume II – Appendix E. As part of CP02-31, the CTDEP determined that none of these permits were required (Smith 2001). Since there is no wetland alteration proposed for the construction or operation of the compressor station modifications, this determination remains applicable.

### **2.3.2 Construction and Operation Impacts and Mitigation**

#### **2.3.2.1 Pipeline Facilities**

Construction and operation of the proposed Boonville, Wright and Newtown Loop segments will include temporary impacts to wetland resources. Iroquois anticipates providing mitigation for possible impacts resulting from construction through adherence to the 2003 FERC Plan and Procedures and requirements of the National Pollution Discharge Elimination System (“NPDES”) General Permit Associated with Discharged Stormwater from Construction Activities during construction of the pipeline facilities within and adjacent to wetland resource areas in both New York and Connecticut.

#### **2.3.2.2 Aboveground Facilities**

Construction and operation of the proposed Milford Compressor Station project will not impact any wetlands or waterbodies as none of these environmental resource areas are located in the vicinity of the project location. Iroquois will provide mitigation for any possible land impacts resulting from construction through adherence to the 2003 FERC Plan and Procedures and requirements of the CTDEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities during construction of the compressor station.

The preliminary design of the Brookfield compressor station modifications shows that portions of the designated workspace and facilities are located within 100 feet of federal and State jurisdictional wetlands. Iroquois has sited all proposed workspace areas outside of wetland areas. Iroquois would construct the proposed project in accordance with the FERC (2003) Plan and Procedures and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control to protect on and off-site wetlands from exposed soils during construction, and stabilize and restore the work areas.



**TABLE 2.3-1**  
**WETLANDS CROSSED BY THE 08/09 EXPANSION PROJECT**  
**PIPELINE LOOP SEGMENTS**

Approximate Milepost	Project Wetland Number	Wetland Classification <sup>a</sup>	Crossing Length (ft)	Acreage Affected		Proposed Crossing Methodology
				Temporary <sup>b</sup>	Permanent <sup>c</sup>	
Boonville, NY Loop Segment						
0.00	W-1-1	PFO/PEM	0	0.21	0.05	N/A
0.38-0.49	W-1-4	PFO/PEM	572	0.94	0.66	Open Trench
0.60-0.61	W-1-5	PEM/PFO	64	0.0	0.09	Open Trench
0.74-1.17	W-1-6	PFO/PEM/PSS	2026	2.01	2.38	Open Trench
1.18-1.19	W-1-7	PEM/PSS/POW	96	0.09	0.07	Open Trench
1.26-1.29	W-1-9	PEM/PFO/POW	158	0.43	0.22	Open Trench
1.38-1.40	W-1-10	PSS	92	0.21	0.11	Open Trench
1.45-1.46	W-1-11	PSS	52	0.02	0.05	Open Trench
1.65-1.66	W-1-14	PFO	53	0.07	0.06	Open Trench
1.87-1.90	W-1-17	PFO	0	0.15	0.0	N/A
1.91-1.95	W-1-18	PFO/PSS/PEM	0	0.06	0.0	N/A
2.00-2.40	W-1-19	PFO/PEM	988	1.45	1.13	Open Trench
2.05-2.08	W-1-20	PFO	0	0.15	0.0	N/A
2.44-2.55	W-1-22	PFO/PEM/PSS	166	0.30	0.19	Open Trench
2.87-2.97	W-1-23	PFO/PEM/PSS	439	0.59	0.51	Open Trench
3.28-3.33	W-1-24	PFO/PEM	185	0.18	0.18	Open Trench
3.56-3.64	W-1-27	PEM/PSS	356	0.46	0.40	Open Trench
3.76-3.79	W-1-29	PSS	0	0.14	0.0	N/A
3.94-4.30	W-1-30	PEM/PSS/PFO	1907	2.14	2.19	Open Trench
4.55-4.63	W-1-31	PEM	66	0.40	0.10	Open Trench
4.65-4.69	W-1-32	PEM	59	0.11	0.07	Open Trench
4.96-4.98	W-1-33	PEM	33	0.04	0.04	Open Trench
4.99-5.01	W-1-34	PEM	78	0.10	0.08	Open Trench
5.09-5.23	W-1-35	PEM	184	0.45	0.24	Open Trench
5.24-5.42	W-1-36	PEM	438	0.37	0.49	Open Trench
5.72-5.75	W-1-40	PEM	167	0.18	0.20	Open Trench
5.71	W-1-41	PEM	0	0.01	0.0	N/A
5.76-5.78	W-1-42	PFO	0	0.10	0.01	N/A
Sub Total			8,179	11.36	9.52	
Wright Loop Segment						
0.79	W-2-2	PEM	18	0.01	0.03	Open Trench
Sub Total			18	0.01	0.03	
Newtown, CT Loop Segment						
0.17-0.30	W-3-1	PEM	730	0.76	0.93	Open Trench
0.45	W-3-2	PFO	53	0.02	0.03	Open Trench
0.76-0.81	W-3-4	PFO/PEM	252	0.0	0.63	Open Trench

**TABLE 2.3-1**  
**WETLANDS CROSSED BY THE 08/09 EXPANSION PROJECT**  
**PIPELINE LOOP SEGMENTS**

Approximate Milepost	Project Wetland Number	Wetland Classification <sup>a</sup>	Crossing Length (ft)	Acreage Affected		Proposed Crossing Methodology
				Temporary <sup>b</sup>	Permanent <sup>c</sup>	
1.02	W-3-5	PFO/PEM	83	0.0	0.17	Open Trench
1.08	W-3-6	PEM	51	0.0	0.08	Open Trench
1.15	W-3-7	PFO/PEM	21	0.0	0.07	Open Trench
1.24-1.38	W-3-8	PFO/PEM/PSS	738	0.07	1.61	Open Trench
N/A	W-3-9	PEM	40	0.04	0.02	N/A
<b>Sub Total</b>			<b>1,968</b>	<b>0.89</b>	<b>3.54</b>	
<b>Project Total</b>			<b>10,165</b>	<b>12.26</b>	<b>13.09</b>	

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

**b –** Temporary acreage affected includes temporary workspace only.

**c –** Permanent acreage affected includes permanent easement only.

## **2.4 HYDROSTATIC TEST WATER**

### **2.4.1 Pipeline Facilities**

In compliance with U. S. Department of Transportation (DOT) specifications, Iroquois will conduct hydrostatic testing on all segments of the newly constructed pipeline facilities prior to connection to Iroquois' mainline system. Iroquois anticipates the use of water from several different sources for hydrostatic pressure testing as identified in Table 2.4-1. Upon completion of the hydrostatic test, the wastewater will be discharged to approved upland areas as specified in the individual state permits for hydrostatic test wastewater discharge. Environmental impacts from withdrawal and discharge of test water will be minimized by utilizing the measures outlined in the FERC Plan & Procedures (Appendix C), Iroquois' SPCC for the Project (Appendix D) and by complying with all applicable state and federal permit requirements.

### **2.4.2 Aboveground Facilities**

#### **2.4.2.1 Milford Compressor Station**

Prior to the start of station operations, the Milford Compressor Station piping would be hydrostatically tested. It is estimated that 30,000 gallons of water would be required for compressor station hydrostatic testing. Either municipal supplies or water trucked to the site would be used for testing purposes. After the completion of the hydrostatic test, the water would be discharged in accordance with the FERC Plan and Procedures and conditions specified in the CTDEP General Permit for the Discharge of Hydrostatic Pressure Testing Wastewater. For discharges specifically associated with the hydrostatic pressure testing of natural gas pipelines, registration is required to be submitted and approved in writing by the CTDEP for the discharges to be authorized by this general permit. Iroquois anticipates compliance with the registration and general permit requirements, including sampling test water discharges.



#### **2.4.2.2 Brookfield Compressor Station Modifications**

Iroquois is proposing to hydrostatically pressure test the Brookfield Compressor Station modifications per Subpart J of Section 192 of the DOT Code of Federal Regulations that require minimum leak-test and strength-test requirements for pipelines, including testing to substantiate the maximum allowable operating pressure. Approximately 59,000 gallons of water would be needed to test the new facilities prior to the start of operation. Either municipal supplies or water trucked to the site would be used for testing purposes. After the completion of the hydrostatic test, the water would be discharged in accordance with the FERC (2003) Plan and Procedures, and conditions specified in the CTDEP hydrostatic test water discharge permit. For discharges specifically associated with the hydrostatic pressure testing of natural gas pipelines, registration is required to be submitted and approved in writing by the CTDEP for the discharges to be authorized by this general permit. Iroquois anticipates compliance with the registration and general permit requirements, including sampling test water discharges.

**TABLE 2.4-1  
HYDROSTATIC TEST WATER SOURCES  
FOR THE 08/09 EXPANSION PROJECT FACILITIES**

<b>Facility</b>	<b>Potential Source</b>	<b>Approximate Milepost</b>	<b>Quantity of Water Required (gallons)</b>
Boonville Loop Segment	Municipal water supply (Boonville Village, NY)	N/A	1,530,000
Wright Loop Segment	Municipal water supply (Schoharie County, NY)	N/A	260,000
Newtown Loop Segment	Municipal water supply (Newtown, CT)	N/A	430,000
Milford Compressor Station	Municipal water supply (Milford, CT)	N/A	80,000
Brookfield Compressor Station Modifications	Municipal water supply (Brookfield, CT)	0.00	10,000

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