CONSTITUTION PIPELINE

NEW YORK STATE
and
U.S. ARMY CORPS OF ENGINEERS

JOINT APPLICATION
SUPPLEMENTAL INFORMATION

U.S. Army Corps of Engineers
Section 404 of the Clean Water Act – Nationwide Permit 12 (NAN-2012-00449-UBR)

New York State Department of Environmental Conservation
Section 401 of Clean Water Act - Water Quality Certification (0-9999-00181/00001)
Article 15, Title 15 of the New York State
Environmental Conservation Law - Protection of Waters
(0-9999-0011181/00002 and 0-9999-00181/00003)
Article 24 of the New York State
Environmental Conservation Law - Freshwater Wetlands
(0-9999-00181/00004)

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ATTACHMENT P **CONSTITUTION'S FERC *FINAL ENVIRONMENTAL REPORT RESOURCE REPORT NO. 10 – ALTERNATIVES* AND *SUPPLEMENT TO JUNE 13, 2013 AND JULY 24, 2013ENVIRONMENTAL RESOURCE REPORT NO. 10 – ALTERNATIVES***

1.0 INTRODUCTION

The Constitution Pipeline Company, LLC (Constitution) is filing this supplemental information to the New York State (NYS) Joint Application/verification that was previously submitted in August 2013 with the U.S. Army Corps of Engineers (USACE) for authorization under Section 404 of the Clean Water Act (CWA) under its Nationwide Permit (NWP) Program in New York State (NYS) and with the New York State Department of Environmental Conservation (NYSDEC) to satisfy the requirements for obtaining a Section 401 Water Quality Certification for the proposed Constitution Pipeline (Project). The Joint Application identification numbers include:

- NAN-2012-00449-UBR (Section 404 of CWA, NWP)
- 0-9999-00181/00001 (Water Quality Certification)
- 0-9999-00181/00002 (Excavation and Fill in Navigable Waters)
- 0-9999-00181/00003 (Stream Disturbance)
- 0-9999-00181/00004 (Freshwater Wetlands)

This supplement provides updated information for components of the Project that have been modified or new information that has been obtained since the previous Joint Application submission, including the modified pipeline alignment, impacts associated with temporary and permanent access roads, and updated field survey data from April 8 through September 6, 2013. The supplemental information that has been added is identified in blue text, and information that has been deleted is identified in redline-strike out text. Constitution is also filing this Joint Application/verification supplemental information for purposes of review and coordination with the NYSDEC under the Protection of Waters Permit and a Freshwater Wetlands Permit programs. The USACE will evaluate each single and complete crossing of the pipeline or access road to verify that each crossing meets the terms and conditions of the NWP. In addition, as part of the NWP evaluation process, the USACE will evaluate the "overall utility line" related to cumulative impacts as provided for in the NWPs effective in March 2012.

The Project consists of approximately 124-miles of new interstate natural gas pipeline that originates in northeastern Pennsylvania and crosses into New York in Broome County, continuing in a northeasterly direction through Chenango and Delaware Counties before terminating in Schoharie County. The Project will provide 650,000 dekatherms per day (Dth/d) of new firm natural gas transportation capacity from ~~two~~three receipt points in Susquehanna County, Pennsylvania, to a proposed interconnection with Iroquois Gas Transmission System, L.P. (Iroquois) at a new transfer compressor station to be located in Wright, New York, and through a capacity lease with Iroquois to delivery points on the existing Iroquois and Tennessee Gas Pipeline Company LLC (Tennessee) systems. The proposed interconnection with Iroquois and the delivery points into the Iroquois and Tennessee pipeline systems will be located within Iroquois' existing Wright Compressor Station property in Schoharie County, New York. ~~Pending~~ Upon receipt of applicable permits and approvals, ~~construction of the Project would commence as early as June 2014 to meet contractual in service date of March 2015~~ Constitution proposes to commence limited vegetation clearing and construction between June 1 and September 30, 2014 for installation of access roads to install waterbody crossings for streams with timing restrictions related to fisheries, begin trenchless crossings installations (i.e., horizontal directional drill and Direct Pipe®), and metering station construction. Constitution further proposes to commence the majority of mainline vegetation clearing and construction in September 2014 and continue through March to meet the in-service date of March 2015.

The proposed Project facilities required in New York include the construction of approximately 99 miles of new 30-inch diameter pipeline, temporary and permanent access roads, and one ~~meter~~ meter and regulator (M&R) station with interconnecting piping, and additional ancillary facilities, such as main line valves (MLVs) and cathodic protection systems. These facilities are further described in Section 2.0 below.

Interstate natural gas pipelines are licensed by the Federal Energy Regulatory Commission (FERC) under the federal Natural Gas Act (NGA). The FERC is the lead agency under the National Environmental Policy Act (NEPA) for the siting of interstate natural gas infrastructure and administrating the NEPA. The FERC is the lead agency responsible for reviewing the Project, preparing an Environmental Impact Statement (EIS) in compliance with NEPA, and issuing or denying a Certificate of Public Convenience and Necessity (Certificate) for the Project. The FERC has developed a process that allows stakeholders input into the project planning prior to submittal of an application for a Certificate (i.e., pre-filing). Among others, the NYSDEC, USACE, and U.S. Fish and Wildlife Service (USFWS) have participated in the pre-filing process and will be involved with the EIS. Constitution filed its application for a Certificate with the FERC on June 13, 2013.

1.1 PRE-EMPTION STATEMENT[1]

Constitution's operations and the location of its facilities are subject to exclusive federal jurisdiction under the Natural Gas Act (15 U.S.C. Sections 717-717z), and the operations, maintenance, and safety of its facilities are also subject to exclusive federal jurisdiction under the re-codified Pipeline Safety Act (49 U.S.C. 60, 101 et seq.).

This Project will comply with federal environmental and energy policies and regulations, and state environmental and energy regulations to the extent that they are consistent with the FERC approval, once issued, and do not prohibit or unreasonably delay the construction and operation of the facilities approved by FERC.

[1] *See* Letter from Frank V. Bifera, Hiscock & Barclay, LLP to Patricia J. Desnoyers, New York State Department of Environmental Conservation, dated August 22, 2013 (H&B Letter).

2.0 GENERAL PROJECT DESCRIPTION

2.1 PROPOSED FACILITIES

2.1.1 Purpose and Need as Defined for the FERC NEPA Process

Constitution held an Open Season for the Project from February 21 through March 12, 2012, and has executed long-term, binding agreements with two shippers for 100 percent of the firm transportation capacity:

- Cabot Oil & Gas Corporation will furnish up to 500,000 Dth/d; and
- Southwestern Energy will furnish up to 150,000 Dth/d.

Gas demand is projected to increase in the northeastern US. The demand for natural gas in New York State and the New England Census Region will increase by 0.7 billion cubic feet per day (Bcf/d) between 2012 and 2020 and by 1.8 Bcf/d between 2012 and 2031 according to recent estimates by Wood Mackenzie (H2 2012 Base Case). Also, the percentage of natural gas production from shale gas supplies is forecasted to increase substantially. According to the Energy Information Administration (EIA) 2012 Annual Energy Outlook (p. 62, Reference Case), shale gas accounted for 23 percent of US natural gas production in 2010, and by 2035 shale gas will account for 49 percent of US natural gas production. Therefore, the pipeline will provide access to a source of domestic natural gas supply and will support the overall reliability and security of the energy infrastructure. Additional detail on the Project purpose and need is included in Constitution's Final Environmental Report Resource Report 1 (General Project Description) submitted to the FERC on June 13, 2013 in support of its application for a Certificate.

The Project and proposed impacts are consistent with federal and state laws and regulations related to public health and welfare. The construction of interstate natural gas pipelines are licensed by FERC under the Natural Gas Act and the issuance of a Certificate of Public Convenience and Necessity from the FERC demonstrates a project's economic need and public benefit.

2.1.2 Location and Description of Facilities and Land Requirements

A summary of the proposed facilities for the Project in New York is provided in Table 2.1-1. In Attachment B, Figure 1 provides an overview of the Project location and Figure 2 provides excerpts of the U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles depicting the proposed pipeline route and meter station facility locations.

Table 2.1-1 Summary of Project Facilities in New York

Facility ID	Facility Type[a]	Length (miles)[b]	County	State
Pipeline Facilities				
Constitution Pipeline	30-inch Pipeline	17.00	Broome	NY
		8.30	Chenango	NY
		43.00	Delaware	NY
		30.90	Schoharie	NY
Pipeline Facilities Total		**99.20**	-	-
Facility ID	**Facility Type[a]**	**Horsepower**	**County**	**State**
Aboveground Facilities				
Westfall Road M&R Delivery Station	Meter & Regulator Station	N/A	Schoharie	NY
Aboveground Facilities Total		**N/A**	-	-

This table has been entirely updated since the August submittal

The construction workspace for the Project will include permanent right of way (ROW), temporary workspace (TWS), additional temporary workspace (ATWS), access roads, a meter and regulation (M&R) station, main line valves (MLVs), and contractor yards. ~~and pipe yards.~~ Table 2.1-2 includes a summary of land requirements for construction and operation of the Project within New York, including access roads, and contractor ~~and pipe~~ yards. The FERC Alignment Sheets in Attachment C depict the location and configuration of temporary construction workspace as well as the proposed permanent operational ROW. The access roads required for the Project are depicted on Figure 2 in Attachment B.

Table 2.1-2 Summary of Land Requirements in New York

Facility[a]	Land Affected During Construction[b] (acres)	Land Affected During Operation[c] (acres)
Pipeline Facilities:		
Pipeline	1,238.80	561.96
Additional Temporary Workspace	87.94	0.00
Pipeline Subtotal	1,326.74	561.96
Aboveground Facilities:		
Westfall Road M&R Delivery Station (includes MLV Terminus, interconnecting piping and Pig Receiver)	3.33	2.29
Access Roads	37.36	21.07
Contractor Yards	90.04	0.00

Table 2.1-2 Summary of Land Requirements in New York

Facility[a]	Land Affected During Construction[b] (acres)	Land Affected During Operation[c] (acres)
Cathodic Protection Ground Beds	TBD	TBD
New York Total	**1,457.47**	**585.32**

This table has been entirely updated since the August submittal

a: MLVs are located within the operation ROW of the pipeline and do not contribute additional acres affected.
b: Land Affected During Construction for the Pipeline facilities is comprised of above ground facilities, the 50-foot permanent ROW, the 60 feet of TWS in upland areas; 25 feet of TWS in wetland and waterbody areas; and 75 feet of TWS in agricultural areas, and ATWS where required. Acreages are approximate.
c: Land Affected During Operation includes the new 50-foot permanent ROW and Westfall Road M&R station.
d: Cathodic Protection Ground Bed land requirements have not yet been determined.
TBD = To be determined.

2.1.2.1 Pipeline Facilities

A summary of the pipeline route and milepost designations within each township and county is provided in Table 2.1-3. Since the interstate pipeline originates in Pennsylvania and crosses the New York state line, the interstate milepost numbering system will be used as part of this application.

Table 2.1-3 Proposed Pipeline Length in New York

Milepost[a]		Length[b] (miles)	Township/Town	County	State
Begin	End				
25.24	42.24	17.00	Sanford	Broome	NY
42.24	47.53	5.29	Afton	Chenango	NY
47.53	50.54	3.01	Bainbridge	Chenango	NY
50.54	52.23	1.69	Masonville	Delaware	NY
52.23	64.24	12.01	Sidney	Delaware	NY
64.24	73.67	9.43	Franklin	Delaware	NY
73.67	89.03	15.36	Davenport	Delaware	NY
89.03	93.54	4.51	Harpersfield	Delaware	NY
93.54	93.88	0.34	Summit	Schoharie	NY
93.88	94.12	0.24	Jefferson	Schoharie	NY
94.12	96.01	1.89	Summit	Schoharie	NY
96.01	96.50	0.49	Jefferson	Schoharie	NY
96.50	97.02	0.52	Summit	Schoharie	NY
97.02	98.94	1.92	Jefferson	Schoharie	NY
98.94	105.06	6.12	Summit	Schoharie	NY
105.06	109.94	4.88	Richmondville	Schoharie	NY

Table 2.1-3 Proposed Pipeline Length in New York

Milepost[a]		Length[b] (miles)	Township/Town	County	State
Begin	End				
109.94	112.07	2.13	Cobleskill	Schoharie	NY
112.07	115.60	3.53	Middleburgh	Schoharie	NY
115.60	123.95	8.35	Schoharie	Schoharie	NY
123.95	124.44	0.49	Wright	Schoharie	NY
New York Total		**99.20**	-	-	-

This table has been entirely updated since the August submittal
a: Since the interstate pipeline originates in Pennsylvania and crosses the New York border the interstate milepost numbering system will be used as part of this application.
b: Horizontal distance

The Environmental Construction Plan (ECP) in Attachment D contains typical construction layouts for various topographic conditions along the pipeline route. Standard pipeline construction will require a 110 foot workspace width in uplands, a 125 foot wide workspace in agricultural land, and a 75 foot wide workspace in wetlands. Constitution is proposing a standard construction workspace width of 110 feet, based on a 30-foot wide spoil side, a 10-foot wide trench and a 70-foot wide working side. The working side includes a 12 foot width for the pipe stringing, 20 feet for equipment operation and 38 feet for a travel lane. The travel lane width allows for an emergency vehicle travel lane on the outside of the equipment passing lane. Workspace areas in uplands within the 100-foot Adjacent Area of NYSDEC State-regulated Freshwater Wetlands will be consistent with the workspace dimensions described above.

Within agricultural land, Constitution proposes a standard construction workspace width of 125 feet to accommodate full width topsoil segregation within the workspace and a minimum cover depth of 48 inches for the pipeline (except in areas with shallow depth to bedrock). The increased workspace width in agricultural areas is required to allow for topsoil storage, increased trench width associated with deeper trench depths and additional subsoil storage related to the increased excavation depth.

In areas along the pipeline route where steep side slopes exist, the two-tone cut and fill construction methods will be utilized for equipment and/or personnel safety considerations. A 150 foot workspace width is required for implementation of the two-tone cut and fill construction method. Therefore, an ATWS width of 40 feet is required and will be used to accommodate excavated material from the temporary cut and fill areas and allow for the temporary storage of trench spoil, excess rock material, cut timber, and topsoil.

Interior forest areas, defined as areas 300 feet or more from a forest edge, will be reduced to a 100 foot width with the exception of steep slope areas where ATWS is required for safe construction of the pipeline.

The proposed standard construction workspace widths are based on guidelines for safe construction of similarly sized pipelines developed by the Interstate Natural Gas Association of America (INGAA) (INGAA 1999). The proposed standard construction workspace widths are expected to allow for safe installation of the pipeline facilities based on the variable topographic terrain and diverse land use types

crossed by the Project. Currently, Constitution does not anticipate the need for the expansion of the construction workspace widths in excess of those currently identified for the Project; though it is potential that ATWS may be required if new construction methods are developed. For instance a Horizontal Directional Drill (HDD) method may require ATWS to allow for pipe stringing and pull back.

2.1.2.2 Aboveground Facilities

In New York, aboveground facilities proposed for the Project include the Westfall Road M&R Station and interconnecting piping located at the terminus of the pipeline route and MLVs. A pipeline integrity receiver (e.g., Smart Pig) and one MLV will be located within the bounds of the Westfall Road M&R Station. The Westfall Road M&R Station will consist of an unmanned facility enclosed by a chain link fence containing a meter and regulator building, receiver assembly, associated above and below ground piping, and valve fixtures to tie-in to proposed and existing pipelines. The metering and regulator building will be constructed on poured concrete slab foundations with the balance of the ground surface inside the facility fence-line covered with crushed stone. Land requirements for the Westfall Road M&R Station summarized in Table 2.1-4 below.

Table 2.1-4 Land Requirements for the Westfall Road M&R Station

Facility ID[a]	Approximate Milepost	Township/ County	Co-located Facility (Yes/No)	Land Affected During Construction (acres)[b]	Land Affected During Operation (acres)[b]
Westfall Road M&R Delivery Station	124.44	Wright/ Schoharie	No	3.33	2.29

This table has been entirely updated since the August submittal

a: Facilities are new and require new land development. Includes one MLV, interconnecting piping & Pig Receiver).

b: Acreages are approximate.

Nine MLVs will be installed at locations along the pipeline in New York within the permanent ROW. Table 2.1-5 provides a summary by milepost location of the MLVs. Appurtenant facilities such as blowdown valves will be associated with each of the aboveground facilities. MLVs installed on the Project require additional equipment for remote control functionality. This additional equipment will be located within the permanent ROW.

Table 2.1-5 Proposed Main Line Valve Facility Locations in New York

Facility ID[a]	Milepost	Township	County
MLV #3 Vale Rd.	26.72	Sanford	Broome
MLV #4 Obrien Rd.	41.24	Sanford	Broome
MLV #5 Access Rd./Town Rd.	52.13	Masonville	Delaware
MLV #6 Stewart Rd.	66.74	Franklin	Delaware
MLV #7 County Rd. 10	81.77	Davenport	Delaware
MLV #8 Clapper Hollow Rd.	95.05	Summit	Schoharie
MLV #9 Access Rd/Dodge Lodge Rd.	108.52	Richmondville	Schoharie
MLV #10 Smith Rd.	119.61	Schoharie	Schoharie
MLV Terminus (Westfall M&R Station)	124.44	Wright	Schoharie

This table has been entirely updated since the August submittal

a: Proposed aboveground facilities are new. Land impacts for the aboveground facilities, except the meter stations and internal inspection facilities, are included in workspace totals for the pipeline facilities.

2.1.2.3 Access Roads

ROW intersections with public roads and existing non-public roads will primarily be used for access to the workspace when conditions are favorable. Existing and new non-public temporary and permanent access roads will be modified or constructed to facilitate construction of the pipeline. There is a combination of permanent and temporary access roads associated with the Project. Permanent access roads (PARs) are being proposed for use both during construction and operation of the pipeline once construction is complete. Access roads are depicted on Figure 2 in Attachment B. Temporary access roads (TARs) are being proposed for use during construction only and will be removed once construction is complete in the case of new roads, or their use will be discontinued in case of existing access roads. The PARs are required for post-construction access to the permanent ROW for the pipeline so it can be maintained and inspected in accordance with applicable regulatory requirements.

Constitution has located and designed the PARs and TARs in a manner that avoids and minimizes impacts to wetlands and waterbodies to the extent practicable. In general, Constitution has attempted to locate as many of the roads as possible along existing access roads that were previously utilized as construction access roads, currently utilized agricultural access roads, along existing logging roads, and along existing all-terrain-vehicle (ATV) trails. Utilizing these existing road features minimizes vegetation clearing and limits other impacts to sensitive environmental resources to previously disturbed areas.

Temporary access roads that cross waterbodies will utilize equipment mats or a rail car to span the waterbody from bank to bank. Once construction of the pipeline is complete and the ROW is restored, the temporary equipment bridge crossing will be removed and the waterbody banks will be restored to pre-construction grades and contours, seeded, and stabilized with erosion control fabric.

Waterbodies that are too wide for typical construction bridge crossings for temporary equipment passage along the pipeline ROW may require alternative temporary equipment bridges with in-stream support (i.e. equipment mats or rail cars with flume pipes to provide mid-span support, or aggregate fill overtop of cross culverts to build a stable road base). Cross culvert size and type will vary based on the waterbody characteristics, including size of the contributing watershed and the water quality classification and standard (e.g., perennial fisheries stream, road side ditch, etc.). Constitution is currently evaluating which waterbody crossings will require some form of in-stream support, and will provide a listing of such waterbodies and the proposed equipment bridge type when completed. Once construction of the pipeline is complete and the ROW is restored, the temporary cross culvert and temporary bridge or fill crossing will be removed and the waterbody banks and channel bottom will be restored as required with natural stream bed material and native vegetation.

Permanent access roads will cross identified waterbodies using a permanent cross culvert and associated road base fill. Cross culvert size and type will vary based on the waterbody characteristics, including size of the contributing watershed and the water quality classification and standard (e.g., perennial fisheries stream, road side ditch, etc.).

~~Constitution currently is in the process of designing these access roads that will allow safe construction travel lanes and minimize environmental impacts, and for use during pipeline operation following construction. Access roads proposed for use will be approximately 24 feet wide, with an overall disturbance corridor width of 40 feet to accommodate vegetation clearing setbacks, pull offs, and road shoulder/stormwater management features. Access road travel lanes in S~~Access road travel lanes in straight sections ~~of the access roads~~ are anticipated to ~~have a travel surface of~~ be approximately 12 feet in width, ~~with an overall grading disturbance of approximatelyexpanding 24 to 24feet~~expanding to 24-foot widths where required at corners or pull-offs to allow for other vehicles to pass. Additional widths will be required for grading on side slopes (road shoulders) and stormwater management structures (i.e., water quality swales) at certain locations. Site-specific drawings for wetland and waterbody crossings associated with access roads are provided in Attachment E. Table 2.1-6 provides a summary of the access roads proposed for use on the Project. The majority of the existing non-public access roads will require minor improvements. New access roads may require temporary modification of existing land use associated with the identified access roads during construction and operation. Subsequent to construction, temporary access roads (TARs) will be restored to their preconstruction condition or allowed to remain in place in accordance with individual landowner agreements but will not be used for operation of the pipeline.

2.1.2.4 Contractor Yards ~~and Pipeyards~~

Currently, ~~the Spread 3Contractor Yard~~ five contractor yards ~~is~~are proposed in New York. ~~but additional Contractor Yards and Pipe Yards are being located and assessed for use during construction. The Spread 3 Contractor Yard is located in the Town of Richmondville, Schoharie County, New York in proximity to milepost 106.80 approximately 1.25 miles from the Project near the intersection of interstate 88 (I-88), Route 7, and Beards Hollow Road. Current land use of the Spread 3 Contractor Yard is an open field.~~ Table 2.1-7 provides a summary of the proposed contractor yards. Total acreage associated with the contractor yards ~~and pipe yards~~ is included in Table 2.1-2, and ~~above;~~ individual land impacts have been provided in Table ~~2.1-6~~2.1-7 below. Contractor yards will be used for equipment, pipe, and material storage, as well as temporary field offices and pipe preparation/field assembly areas. ~~Pipe~~Contractor yards will be used for unloading of pipe from transportation vehicles and pipe storage. Constitution will

advise contractors that they shall utilize the contractor and pipe yard locations approved for the Project, and shall not establish a staging or warehouse yard for this Project without Constitution first being advised and the proper approvals granted.

Field surveys for wetland and watercourses have been conducted for the Spread 4b Yard and Spread 5 Yard. Field surveys for wetlands and watercourses and agency consultations for the remaining three contractor yards will be conducted and this information will be provided when it is available.

Constitution identified surface water resources within the proposed boundaries for the Spread 5 Yard. Constitution will design the contractor yard limit of disturbance and implement erosion and sediment control best management practices (BMPs) as detailed in the Project ECP to avoid impacts to any existing environmental resources located at the proposed contractor yard locations. Once the final design(s) of the contractor yards is complete, Constitution will provide this information to the NYSDEC and USACE.

Table 2.1-6 Access Roads Associated with the Constitution Pipeline in New York[e]

Access Road ID	Milepost[a]	County	Existing Road Type	Modification Required/New	Existing Land Use[b]	Length (feet)	Affected Area (Construction) (acres)[c]	Affected Area (Operation) (acres)	Justification and Comments
BROOME COUNTY									
PAR19	26.23	Broome	dirt	some grading possible/graveling	RE	489	0.31	0.13	Need access between Tower Drive and Vale Road for construction and post construction operational maintenance due to steep terrain and saturated wetlands / waterbodies. Use of this existing road would not result in impacts to wetlands or waterbodies.
PAR20	26.71	Broome	none	grading/gravel/tree removal	RD, UF	74	0.05	0.02	Need permanent access to the MLV site in this location. Access to the MLV site from Vale Road to the north would require a wetland crossing. Construction of this new access road will not impact wetlands or waterbodies. Impacts on upland forest have been minimized by siting the MLV site adjacent to the roadway; therefore, minimizing the length of the access road and amount of tree clearing need to reach the site.
PAR21	27.77	Broome	dirt	Needs nothing-great road	RD, RE, UF, WB	2018	1.05	0.75	Need permanent access between Laurel Lake Road and railroad for access to rough terrain to the north, and to avoid crossing the waterbody to the south during operational maintenance. Use of this existing road would not result in impacts to wetlands or waterbodies, and avoids impacts on upland forest. No modifications to existing culvert proposed. Existing culvert will remain and timber mats will be placed overtop of culvert.
PAR22	28.47	Broome	gravel	barrier fence/railroad ballast/existing BlueStone access road/grading	ID, RD, UF	4726	1.33	1.11	Need access between Laurel Lake Road and the railroad for access to Hwy 17 and the Fly Creek crossing during construction and for operational maintenance post construction. Use of this existing road would not result in impacts to wetlands or waterbodies.
PAR27	33.80	Broome	dirt	grading/graveling	AG, WB	443	0.25	0.15	Need permanent access for operational maintenance, as there is no other access along Hwy 41. This access road will also help during construction for the Oquaga Creek crossing. Use of this existing road would not result in impacts to wetlands or waterbodies. No modifications to existing culvert proposed. Existing culvert will remain and timber mats will be placed overtop of culvert.
PAR28	35.16	Broome	gravel / dirt	grading	OL, RD, RE	558	0.26	0.16	Need access between Shaver Hill Road and CR-241 during construction due to workspace limitations associated with nearby wetland areas. Permanent access is needed for operational maintenance post construction to minimize wetland crossings. Use of this existing access road would not result in impacts to wetlands or waterbodies.

Table 2.1-6 Access Roads Associated with the Constitution Pipeline in New York[e]

Access Road ID	Milepost[a]	County	Existing Road Type	Modification Required/New	Existing Land Use[b]	Length (feet)	Affected Area (Construction) (acres)[c]	Affected Area (Operation) (acres)	Justification and Comments
PAR29	36.13	Broome	dirt	graveling-existing road	AG, RD, UF	598	0.44	0.24	Need access between CR-241 and Clark Road during construction because of the limited workspace associated with nearby wetlands and for access to the Clark Road bore. Permanent access is needed for operational maintenance post construction to minimize wetland crossings. Use of this existing access road would not result in impacts to wetlands or waterbodies.
PAR31	40.65	Broome	gravel	grading/culvert/brush removal/graveling	AG, OL, RD, RE, UF, WB	176	0.08	0.05	Need access between two road bore crossings under O'brien Road during construction. Access to the pipeline at either crossing locations would result in wetland impacts. Permanent access is needed for operational maintenance post construction to minimize wetland crossings. Use of this existing road would not result in impacts to wetlands or waterbodies. No modifications to existing culvert proposed. Existing culvert will remain and timber mats will be placed overtop of culvert.
PAR32	41.24	Broome	dirt	grading/graveling	RD, UF	106	0.09	0.07	Need permanent access to the MLV site. Access from O'brien Road from the north or south would require crossing wetlands and waterbodies. Use of this existing road would not result in impacts to wetlands or waterbodies, and minimizes impacts to upland forest area.
				Broome County Subtotal		**9188**	**3.86**	**2.68**	
CHENANGO COUNTY									
PAR33	43.63	Chenango	gravel	grading	AG, OL, RD	379	0.27	0.21	Need access between Oxbow Road and Edwards Lane during construction and for operational maintenance. This will provide access between wetland areas. Use of this existing road would not result in impacts to wetlands or waterbodies, and minimizes impacts to upland forest. No modifications to existing culvert proposed. Existing culvert/bridge will remain and timber mats will be placed overtop of culvert.
PAR34	44.23	Chenango	dirt/none	tree removal/culvert/grading/graveling	PSS, RD, RE, UF	1725	0.92	0.46	Need access between Edwards Lane and Melondy Hill Road during construction and for operational maintenance. Use of this access road minimizes crossings of the wetland/waterbody complex to the south of Edwards Lane and of the wetland/waterbody complex to the south of Melondy Hill Road. Use of Edwards Lane as a PAR was assessed and not chosen because it is a residential subdivision road. Impacts on wetlands and waterbodies and upland forest have been minimized although there is a small amount of wetland fill associated with roadway crossing construction. Constitution will implement its NY ECP when using this access road to

Table 2.1-6 Access Roads Associated with the Constitution Pipeline in New York[e]

Access Road ID	Milepost[a]	County	Existing Road Type	Modification Required/New	Existing Land Use[b]	Length (feet)	Affected Area (Construction) (acres)[c]	Affected Area (Operation) (acres)	Justification and Comments
									further minimize impacts.
					Chenango County Subtotal	**2104**	**1.19**	**0.67**	
DELAWARE COUNTY									
PAR36	52.14	Delaware	dirt	brush removal and grading at end of road/graveling	OL, PEM, RD, RE, SG, UF, WB	2435	1.36	0.81	Need permanent access to MLV site and rough terrain to the northeast during construction and for operational maintenance of the pipeline. Impacts on wetlands and waterbodies and upland forest have been minimized through use of the existing roadway, although there is a small amount of permanent wetland fill from roadway side slope grading. Constitution will implement its NY ECP when using this access road to further minimize impacts.
PAR36a	54.08	Delaware	dirt	grading/graveling	OL, UF	3075	2.10	0.99	Need temporary access between Pine Hill Road and Parker Hollow Road for access to an HDD location during construction. This access route was chosen to avoid an archaeological site and large wetland area to the west while utilizing portions of existing farm and utility ROW access roads. Use of this existing road will result in temporary impacts to wetlands and waterbodies. The wetlands will be covered with temporary equipment mats and the waterbody will be crossed using a temporary bridge equipment crossing. Constitution will implement its NY ECP when using this access road to further minimize impacts.
PAR36b	54.30	Delaware	dirt	grading/graveling	OL, RD, UF	1977	1.32	0.72	Need temporary access between Pine Hill Road and Parker Hollow Road for access to an HDD location during construction. This access route will have temporary wetland impacts associated with it. The impacts will be minimized by installing temporary equipment mats overtop of them to avoid rutting. Constitution will implement its NY ECP when using this access road to further minimize impacts.

Table 2.1-6 Access Roads Associated with the Constitution Pipeline in New York[e]

Access Road ID	Milepost[a]	County	Existing Road Type	Modification Required/New	Existing Land Use[b]	Length (feet)	Affected Area (Construction) (acres)[c]	Affected Area (Operation) (acres)	Justification and Comments
PAR37	58.85	Delaware	dirt	tree removal/grading/widening/graveling	AG, OL, PEM, RD, UF, WB	4049	2.03	1.22	Need access between Crane Hill Road and CR-357 to get through wetland areas with limited workspace during construction and for operational maintenance to minimize wetland crossings. Use of this existing road and side slope grading and swale installation along the roadway shoulder does not result in minor impacts to wetlands and minimizes impacts on upland forest. No modifications to existing culvert proposed. Existing culvert will remain and timber mats will be placed overtop of culvert.
PAR38	60.07	Delaware	dirt	brush and tree removal/grading/widening/graveling	AG, OL, PEM, RD	1438	0.90	0.48	Need access between Crane Hill Road and CR-357 during construction and operational maintenance to access rough terrain to the west and east. Access from Crane Hill Road and CR-357 would require multiple wetland crossings. Use of this existing road would not result in impacts to wetlands or waterbodies.
PAR39	62.57	Delaware	dirt	tree removal/grading/widening/graveling	AG, OL, RD, RE, UF	1985	1.57	0.63	Need access between Patent Line Road and Bissell Road to access steep terrain during construction and for operational maintenance. Use of this existing road minimizes impacts to wetlands and waterbodies and upland forest. This road provides access between wetland areas, rather than through them, thereby minimizing impacts.
PAR40	63.50	Delaware	dirt/none	grading/brush removal/graveling. tree removal at the beginning of road for approx 300 feet	AG, PFO, UF	2050	0.95	0.73	Need access between Patent Line Road and Bissell Road to access steep terrain during construction and for operational maintenance post construction. Wetlands will be permanently filled for roadway crossing construction. Constitution will implement its NY ECP when using this access road to further minimize impacts.
PAR41	65.88	Delaware	dirt	tree removal/grading/culvert/graveling	AG, RD, UF	668	0.30	0.21	Need access between Bissell Road and Otego Road during construction and for operational maintenance post construction. Use of this existing road minimizes impacts to active agricultural fields. There will be no wetland or waterbody impacts associated with this road.
PAR42	66.76	Delaware	none	grading/brush removal for widening possible/graveling	OL	193	0.07	0.06	Need permanent access to MLV site. This new road is not anticipated to disturb any wetlands or waterbodies or require tree clearing based on desktop assessment (this is a no access parcel). Impacts to potentially present environmental features will be minimized by siting the MLV site adjacent to the roadway to minimize the length of the access road.

Table 2.1-6 Access Roads Associated with the Constitution Pipeline in New York[e]

Access Road ID	Milepost[a]	County	Existing Road Type	Modification Required/New	Existing Land Use[b]	Length (feet)	Affected Area (Construction) (acres)[c]	Affected Area (Operation) (acres)	Justification and Comments
PAR43[f]	68.29	Delaware	dirt/none	grading/graveling/culvert	OL, PEM, UF	2480	1.35	0.77	Need access between Stewart Road and Chamberlain Hill Road to access steep terrain during construction and for operational maintenance. Use of this existing road will minimize crossing of steep slopes and reduce potential long-term erosion issues. Wetlands will be permanently filled for roadway side slope construction. Constitution will implement its NY ECP when using this access road to further minimize impacts.
PAR44	69.80	Delaware	gravel	some widening/grading/tree clearing-part existing rd	AG, OL, RD, UF, WB	3236	1.25	0.76	Need access between Chamberlain Hill Road and Rich Road to minimize crossings of active agricultural fields during construction and during operational maintenance post construction. Use of this existing roadway avoids impacts to wetlands, waterbodies, and minimizes impacts to upland forest. No modifications to existing culvert proposed. Existing culvert will remain and timber mats will be placed overtop of culvert. Constitution will implement its NY ECP when using this access road to further minimize impacts.
PAR45	70.52	Delaware	dirt	tree removal/grading/culverts/brush removal/graveling	AG, OL, PEM, RD, UF, WB	4809	1.87	1.25	Need access between Chamberlain Hill Road and Rich Road to minimize crossings of agricultural fields during construction during operational maintenance. Impacts to wetlands, waterbodies, and upland forest have been minimized through use of the existing agricultural roadway. Constitution will implement its NY ECP when using this access road to further minimize impacts.
PAR46[d]	72.81	Delaware	none	grading/tree removal for widening/culvert/graveling	RD, RE, UF, WB	4512	4.14	2.51	Need access between CR-28 and Grange Hall Road to access steep terrain during construction and for operational maintenance. This also provides access to the pipeline between two perennial stream crossings, therefore minimizing crossings of these streams. Constitution will minimize impacts on wetlands and waterbodies and forested areas through implementation of its NY ECP during construction and operation. This access road is currently being designed (design pending detailed field survey).
PAR47	73.65	Delaware	dirt	culvert/tree removal/grading/graveling	OL, UF	1982	1.24	0.63	Need access between Grange Hall Road and Swart Hollow Road to minimize crossings through an agricultural field and wetland resources during construction and to avoid crossing these areas during operational maintenance. Use of this existing road is not anticipated to disturb any wetlands or waterbodies and minimizes tree clearing based on desktop analysis (this road is located on a no access parcel).

Table 2.1-6 Access Roads Associated with the Constitution Pipeline in New York[e]

Access Road ID	Milepost[a]	County	Existing Road Type	Modification Required/New	Existing Land Use[b]	Length (feet)	Affected Area (Construction) (acres)[c]	Affected Area (Operation) (acres)	Justification and Comments
PAR48	76.83	Delaware	existing/none	tree and brush removal/grading/culvert/graveling	AG, RD, UF	1013	0.64	0.29	Need access between Coe Hill Road and Prosser Hollow Road to access steep terrain during construction and for operational maintenance post construction. Extension of this existing road minimizes tree clearing and is not anticipated to disturb any wetlands or waterbodies based on desktop analysis (this road is to be surveyed).
PAR54	84.26	Delaware	none	tree removal/culvert/grading/graveling	AG, OL, PFO, UF, WB	2201	1.09	0.77	Need access between Taylor Road and Brick House Hill Road to minimize crossings of active agricultural fields during construction and to avoid crossing the fields during operational maintenance. Constitution will minimize impacts on wetlands and waterbodies and forested areas through implementation of its NY ECP during construction of this new road. This access road is currently being designed (design pending detailed field survey).
TAR5	87.67	Delaware	none	tree removal/grading/culvert/graveling	AG, RD, UF	1339	0.76	0.00	Need temporary access between Old Route 96 and CR-23 to access steep terrain, and to minimize crossings of wetlands and waterbodies during construction. This road is also needed to access an HDD site during construction. Construction of this temporary road avoids impacts to wetlands and waterbodies. Impacts to forested area will be temporary and the area will be restored and allowed to revert to pre-construction vegetation cover types once construction is complete. Constitution will implements its NY ECP during construction of this temporary access road.
PAR56	89.31	Delaware	dirt	grading/graveling	AG, RD	1310	0.94	0.43	Need access between Parker Schoolhouse Road and Quaker Hill Road to minimize crossings of agricultural fields during construction and to avoid crossing the fields during operational maintenance post construction. Use of this existing road avoids impacts to wetlands and waterbodies and minimizes impacts to upland forest.
TAR4	92.70	Delaware	none	tree removal/grading/culvert/graveling	OL, RD	490	0.32	0.00	Need temporary access between Titus Lake Road and Wood Chuck Run during construction to access temporary workspace associated with a construction spread break and to access of steep terrain. Construction of this new road avoids impacts to wetlands and waterbodies. Impacts to forested areas will be temporary and the area will be restored and allowed to revegetate post construction. Constitution will implements its NY ECP during construction of this temporary access road.
					Delaware County Subtotal	**41242**	**24.20**	**13.26**	
SCHOHARIE COUNTY									

Table 2.1-6 Access Roads Associated with the Constitution Pipeline in New York[e]

Access Road ID	Milepost[a]	County	Existing Road Type	Modification Required/New	Existing Land Use[b]	Length (feet)	Affected Area (Construction) (acres)[c]	Affected Area (Operation) (acres)	Justification and Comments
PAR59	95.05	Schoharie	gravel	grading/culvert/tree removal	AG, RD	245	0.18	0.10	Need permanent access to MLV site. Use of this existing road will not result in impacts to wetlands or waterbodies. Impacts to upland forest have been minimized by siting the MLV site adjacent to the roadway in existing field.
PAR60	95.99	Schoharie	none	tree and brush removal/grading/culvert/graveling	RD, UF	2224	1.51	0.69	Need access between Clapper Hollow Road and Stannard Road to access steep terrain and wetland/waterbody areas during construction and for operational maintenance post construction. Use of this access road minimizes crossings of the steep slopes and wetlands present along the ROW in this area. Extension of this existing access road avoids impacts to wetlands and waterbodies and minimizes impacts to upland forest.
PAR63	99.91	Schoharie	dirt	tree and brush removal/grading/graveling	UF	544	0.47	0.21	Need access between Arabia Road and CR-10 to minimize crossing active agricultural fields during construction and during operational maintenance post construction. Use of this existing access road will avoid impacts to wetlands and waterbodies and minimizes impacts to upland forest.
TAR2	101.47	Schoharie	none	tree and brush removal/grading/culvert/graveling	OL	178	0.11	0.00	Need temporary access to a Direct Pipe© entry pit. Construction of this temporary road avoids impacts to wetlands and waterbodies. Tree removal has been minimized by siting this access road in open land. Impacts will be temporary because the area will be restored and allowed to revert to preconstruction conditions. Constitution will implement its NY ECP during construction of this temporary access road.
PAR66	103.44	Schoharie	dirt	tree and brush removal/grading/culvert/graveling	RD, SG, UF, WB	3181	1.67	1.04	Need access between Sawyer Hollow Road and Decker Road to access rough terrain during construction and for operational maintenance. Use of this access road will minimize travel across the steep terrain, and minimizes crossing wetlands located to the north and south. Use of the existing road will avoid impacts to wetlands and waterbodies, and minimizes impacts to upland forest.
PAR68	106.45	Schoharie	none	grading/culvert/tree and brush removal/graveling	UF	382	0.18	0.11	Need access between Lape Road and Cross Hill Road to access steep terrain and to access area between several stream crossings during construction and for operational maintenance post construction. Use of this access road will minimize crossing streams to the north and south for maintenance and potential erosion and sedimentation to these streams. A permanent culvert is proposed for the ephemeral roadside ditch crossing and no fisheries are present. Constitution will minimize impacts to wetlands, waterbodies, and forested areas through implementation of its NY ECP during construction of

Table 2.1-6 Access Roads Associated with the Constitution Pipeline in New York[e]

Access Road ID	Milepost[a]	County	Existing Road Type	Modification Required/New	Existing Land Use[b]	Length (feet)	Affected Area (Construction) (acres)[c]	Affected Area (Operation) (acres)	Justification and Comments
									this new road.
PAR71	117.07	Schoharie	none	grading/culvert/graveling	AG,OL, RD, RE	1085	0.97	0.32	Need access between Schoharie Hill Road and Terrace Mountain Road. Construction of this new road is not anticipated to impact wetlands and waterbodies based on desktop analysis (this is a no access parcel). Impacts to forested area are avoided by locating the access road in open field.
PAR73	117.89	Schoharie	dirt	grading/tree removal/graveling	AG, OL, RD, UF	2102	1.42	0.71	Need access between Terrace Mountain Road and Smith Road to access steep terrain to the east and to minimize crossing agricultural fields during construction and for operational maintenance. Use of this existing access road avoids impacts to wetlands and waterbodies and minimizes impacts to upland forest.
PAR74	119.60	Schoharie	none	tree removal/culvert/grading/graveling	AG, RD	144	0.11	0.07	Need permanent access to MLV site and to access a Direct Pipe© entry/exit pit during construction. Construction of this new access road will avoid impacts to wetlands and waterbodies. Impacts to forested area have been minimized by siting the access road in existing open field adjacent to the roadway.
PAR73a	120.57	Schoharie	existing/ none	tree removal/grading/graveling	OL, SP, UF, WB	2343	1.48	1.20	Need access between CR-30A and CR-30 during construction to access ATWS for adjacent wetland and waterbody crossings and for operational maintenance. Extension of this existing access road avoids impacts to wetlands and waterbodies and minimizes impacts to upland forest. No modifications to existing culvert proposed. Existing culvert to be used and timber mats will be placed overtop of culvert.
					Schoharie County Subtotal	**12428**	**8.10**	**4.45**	
OTSEGO COUNTY									

Table 2.1-6 Access Roads Associated with the Constitution Pipeline in New York[e]

Access Road ID	Milepost[a]	County	Existing Road Type	Modification Required/New	Existing Land Use[b]	Length (feet)	Affected Area (Construction) (acres)[c]	Affected Area (Operation) (acres)	Justification and Comments
PAR43[f]	68.29	Otsego	dirt/none	grading/graveling/culvert	RD	0	0.01	0.01	Need access between Stewart Road and Chamberlain Hill Road to access steep terrain during construction and for operational maintenance. Use of this existing road will minimize crossing of steep slopes and reduce potential long-term erosion issues. Impacts to wetlands, waterbodies and forested areas have been minimized through use of the existing roadway. Constitution will implement its NY ECP when using this access road to further minimize impacts.
					Otsego County Subtotal	**0**	**0.01**	**0.01**	
					NEW YORK SUBTOTAL	**64962**	**37.36**	**21.07**	
					PROJECT TOTAL	**93480**	**66.53**	**31.86**	

This table has been entirely replaced since the August 2013 submittal.
a: Milepost indicates the point at which the access road connects with the pipeline ROW.
b: Agricultural (AG); Industrial (ID); Residential (RE); Roads (RD); Open Land (existing ROW, Open Field, Non-Agriculture) (OL); Wetlands (palustrine forested, scrub-shrub, and emergent (WL); Upland Forest (UF); Sand and Gravel (SG); Palustrine Forested Wetland (PFO); Palustrine scrub-shrub wetland (PSS); Palustrine emergent wetland (PEM); Waterbody (WB).
c: Temporary access roads will be restored to pre-construction land use and will not result in permanent land impacts or land use modification.
d: PAR46 is still being designed. Therefore a width of 40' has been used for construction impact calculations and a width of 24' has been used for operations impact calculations.
e: Access road lengths and impacts have been calculated based on the site specific designs.
f: PAR43 has impacts in both Delaware County and Otsego County, but the centerline only crosses through Delaware
TAR - Temporary Access Road
PAR - Permanent Access Road

Table 2.1-7 Proposed Contractor Yards in New York

Name/ Purpose	Approximate Location	Address	Construction Year	Existing Land Use Classification	Size[a] (Acres)	Comments
Spread 2 Contractor Yard	1502' east of MP 37.00	689 North Sanford Road Deposit, NY 13754	2014	Agriculture & Open Land	19.12	Site improvements to facilitate use of contractor yards are anticipated to consist of the installation of soil erosion and sediment control devices (as needed), topsoil segregation (for agricultural locations), site grading, and the installation of a construction entrance and gravel base (as described in the ECPs).
Spread 3 Contractor Yard	8702' north of MP 53.80	16486 County Hwy 23 Sidney, NY 13838	2014	Agriculture	17.76	Site improvements to facilitate use of contractor yards are anticipated to consist of the installation of soil erosion and sediment control devices (as needed), topsoil segregation (for agricultural locations), site grading, and the installation of a construction entrance and gravel base (as described in the ECPs).
Spread 4a Contractor Yard	16176' north of MP 77.10	361 Otsego Co Hwy 58 Oneonta, NY 13820	2014	Sand and Gravel, Open Land, & Road	26.89	Site improvements to facilitate use of contractor yards are anticipated to consist of the installation of soil erosion and sediment control devices (as needed), topsoil segregation (for agricultural locations), site grading, and the installation of a construction entrance and gravel base (as described in the ECPs).
Spread 4b Contractor Yard	25624' north-west of MP 90.60	8412 State Highway 7 Maryland, NY	2014	Open Land & Industrial	12.52	Site improvements to facilitate use of contractor yards are anticipated to consist of the installation of soil erosion and sediment control devices (as needed), topsoil segregation (for agricultural locations), site grading, and the installation of a construction entrance and gravel base (as described in the ECPs).
Spread 5 Contractor Yard	7610' north-west MP 107.00	1238 State Route 7 Richmondville, NY	2014	Agriculture (Cornfield) & Open Land	13.75	Site improvements to facilitate use of contractor yards are anticipated to consist of the installation of soil erosion and sediment control devices (as needed), topsoil segregation (for agricultural locations), site grading, and the installation of a construction entrance and gravel base (as described in the ECPs).
				New York Total	**90.04**	-

This table has been entirely updated since the August 2013 submittal.
a: Acreage impact refers to construction acreage (TWS, ATWS and operational).

2.1.2.5 Additional Temporary Workspaces (ATWS)

ATWS areas typically are required at road, railroad, wetland, and waterbody crossing locations and for areas requiring specialized construction techniques including areas containing steep slopes and side slopes. The configurations and sizes of ATWS areas are based on site-specific conditions and vary in accordance with the construction methodology, crossing type, and other construction needs. ATWS acreages have been incorporated into the Land Affected During Construction summary column in Table 2.1-2.

2.2 CONSTRUCTION PROCEDURES

The Project facilities will be designed, constructed, tested, operated, and maintained to conform with regulations, including USDOT regulations at 49 CFR Part 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards," and FERC regulations at 18 CFR Section 380.15, "Siting and Maintenance Requirements." In addition, unless otherwise authorized through a modification granted by the FERC, Constitution will comply with the FERC's Upland Erosion Control, Revegetation and Maintenance Plan (Plan) (2013), the FERC's Wetland and Waterbody Construction and Mitigation Procedures (Procedures) (2013), as well as Constitution's Project-specific Environmental Construction Plan (ECP) in Attachment D.

2.2.1 Pipeline Construction

The general procedures for pipeline construction that will be followed for the Project are described in this section. Constitution will use conventional buried pipeline construction techniques and will follow the requirements set forth in Constitution's ECP to ensure safe, stable, and reliable transmission facilities, consistent with FERC and USDOT specifications. At a minimum, Constitution will perform the following procedures:

- Marking the corridor;
- Clearing and grading;
- Trenching;
- Stringing;
- Pipe preparation (bending, welding, X-ray, weld coating, and coating repair) and lowering in;
- Backfilling and grade restoration;
- Hydrostatic testing and tie-ins; and
- Cleanup and restoration.

The above-listed procedures typically will follow in the sequence listed. Areas requiring special construction plans and techniques may include road or utility crossings, waterbodies and wetlands, unusual topographies associated with unstable soils and trench conditions, residential or urban areas, agricultural areas, areas requiring rock removal, and permanent recreation facilities, among others.

2.2.1.1 Marking the Corridor

Land survey crews began marking the centerline of Constitution's proposed pipeline with stakes in June 2012 on those properties where landowner access has been granted. The centerline was marked at

frequent intervals, as well as at known crossings of foreign lines and utilities, at road crossings, and at points of inflection. Additionally, resource areas, including wetland boundaries, cultural resource sites, and rare species habitat, as applicable, will be marked with appropriate fencing, signage, and/or flagging, based on environmental and archaeology surveys and applicable environmental permit conditions.

2.2.1.2 Erosion and Sediment Control

Temporary soil erosion and sediment control measures will be installed along the proposed construction ROW, ATWS areas, access roads, and other work areas, as applicable, in accordance with Constitution's ECP. The ECP details the Best Management Practices (BMPs) that will be implemented during and after construction to minimize potential impacts to the surrounding environment. The BMPs will be used to minimize erosion of disturbed soils and prevent the transportation of sediment outside of the construction ROW into environmentally sensitive areas such as wetlands and waterbodies. The ECP provides specifications for the installation, implementation, and maintenance of the BMPs, while allowing for flexibility in the selection of specific BMPs based on site-specific conditions. This document will be included as part of the construction contract and will provide contractors and Environmental Inspectors (EIs) a reference to specific environmental conditions and associated BMP plans and procedures. The ECP was developed in accordance with applicable federal and state documents.

2.2.1.3 Clearing, Grading, and Fencing

The construction corridor will be cleared and graded to remove vegetation, brush, trees, roots, and other obstructions, such as large rocks and stumps. Temporary fences and gates will be installed, as needed. No cleared material will be placed within wetland areas.

Constitution has evaluated workspace locations to ensure impacts in and adjacent to wetlands and waterbodies are minimized to the greatest extent practicable. Activity related to the storage of materials adjacent to wetland and waterbody locations will be limited to the temporary placement of cleared vegetation, permitted construction equipment and materials, as well as spoils generated from trenching operations. The placement of these materials in these locations will be temporary and all materials (excluding installed erosion controls) will be removed prior to restoration of these areas.

Constitution anticipates that tree and vegetation clearing will be completed using mechanical means to the extent practicable, including feller-bunchers, hydro-axes, forwarders, skidders, and other appropriate equipment. Clearing by hand with chainsaws may be implemented as a mitigation measure where specific safety or environmental concerns warrant. At no time will the burning of vegetation, brush, trees, roots or stumps be allowed.

Disposal of trees cleared from the ROW may be accomplished using several different methods. Trees, if suitable, may be taken off-site by the clearing contractor and used for timber. Trees may be chipped on-site and removed. Chipped material not removed may be spread across the ROW within upland areas in a manner that does not inhibit revegetation. Wood chips will not be left within agricultural lands or wetlands. Also, wood chips will not be stockpiled in a manner that could result in transport into a wetland.

Constitution will ensure that the transport and treatment of wood materials generated during clearing operations will be managed in accordance with the project-specific Invasive Species Management Plan

(ISMP), as well as in compliance with the USDA federal regulations pertaining to the movement of wood products within quarantine locations (7 CFR Part 301). The ISMP is provided as an attachment in the ECP.

Should individual landowners wish to utilize the trees cleared from the ROW, the timber will be cut to manageable lengths and stacked at the edge of the ROW in areas identified by the EI prior to the commencement of clearing activities and directly accessible to the landowner, in accordance with individual landowner agreements. Timber will be stacked along the ROW only at the specific request of a landowner, under the condition that it is in an already cleared upland area that will be accessible to the landowner without disturbing the restored ROW. Timber not designated for other uses will be disposed of by Constitution's contractor at an appropriate receiving facility (e.g., landfills, transfer stations, composting centers, wood product processors/purveyors, etc). Timber will not be stacked in drainage ways or left within wetlands. Constitution does not plan to use timber stacks as wildlife habitat.

Grading activities will be scheduled to minimize the time between initial clearing operations and the actual installation of pipe. The duration required from clearing operations to pipe installation is dependent on the time of the year in which construction occurs. Pending receipt of applicable permits and approvals, Constitution proposes to commence limited vegetation clearing and construction between June 1 and September 30, 2014 for installation of access roads to install waterbody crossings for streams with timing restrictions related to fisheries, begin trenchless crossings installations (i.e., horizontal directional drill and Direct Pipe®), and M&R station construction, with mainline vegetation clearing and construction commencing in September 2014 and continuing through March to meet the in-service date of March 2015. ~~Constitution is currently proposing to commence construction as early as June 2014.~~ To the extent possible, access to the construction corridor normally will be obtained via public roads that intersect the ROW; however, use of existing private roads and construction of new access roads may also be required. Permission will be obtained from landowners for the use and upgrade of access roads across their property to the construction ROW.

Immediately following clearing of the construction ROW, Constitution will install appropriate temporary erosion controls and sediment barriers. Typically, staked straw bales and/or silt fence barriers are positioned along the limit of wetland boundaries within the construction workspace. To ensure that appropriate erosion and sediment control measures are maintained until the construction workspace is fully stabilized, the EI will inspect disturbed areas of the construction spread(s) (e.g., construction ROW, pipe storage yards, temporary contractor yards) that have not been permanently stabilized. Inspections will occur in accordance with the following schedule: 1) on a daily basis in areas of active construction; 2) on a weekly basis in areas with no construction or equipment operation; or 3) within 24 hours of a storm event that is 0.5 inch or greater.

Grading of the construction workspace will allow for the movement of heavy equipment and the safe passage of work crews. Grading will include removing rock outcrops, tree stumps, ridges and topographic irregularities. Generally, machinery will operate on one side of the trench (working side) with excavated materials stockpiled on the other (non-working side).

As appropriate, the clearing and grading operations will incorporate special construction procedures to minimize the amount of vegetation removed from waterbody banks and slopes, prevent undue disturbance of the soil profile, restore the original contours of the natural ground, and prevent topsoil erosion. Constitution will implement the construction and restoration procedures detailed in the Project-specific

ECP to minimize impacts to waterbodies during construction, and to effectively restore disturbed locations during restoration. These BMPs will protect aspects of water quality related to temperature, dissolved oxygen, and suspended solids.

To minimize impact to the soil profile on agricultural lands, up to 12 inches of topsoil will be segregated from subsoil during trenching and will remain segregated during construction to avoid loss due to mixing with subsoil material. In agricultural lands Constitution will utilize full ROW topsoil segregation as required by the FERC in consultation with the NYSDAM. Upon the completion of backfilling operations, the topsoil will be properly replaced over the graded area. Grading activities will be scheduled to minimize the time between initial clearing operations and the actual installation of pipe.

2.2.1.4 Trenching

In most areas characterized by normal soils, the trench for the pipeline will be excavated by track-mounted excavators. The trench generally will be approximately 14 to 24 inches wider than the diameter of the pipe, depending upon the nature of the substrate, and of sufficient depth to allow for the minimum cover requirements to the top of the pipe, in accordance with USDOT regulations pursuant to the Natural Gas Pipeline Safety Act of 1968.

Except as depicted on site-specific plans, the depth of cover for the proposed pipeline, as well as the depth of cover for other, non-typical conditions, such as horizontal directional drills (HDDs), will be in accordance with Constitution's minimum specifications, as set forth in Table 2.2-1. Scour analysis and potential for external damage may increase these depths. In actively cultivated agricultural lands, Constitution plans to install the pipeline with a minimum of 48 inches of cover, except where rock prevents this depth. In these cases, Constitution's minimum specifications for depth of cover will be used.

Table 2.2-1 Minimum Specifications for Depth of Cover (inches)

Location[a]	Normal Soil	Consolidated Rock
USDOT PHMSA Class 1	36	24
USDOT PHMSA Class 2, 3, and 4	36	24
Land in Agriculture	48	24
Drainage ditches of public roads or railroad crossings	60	24
Navigable river, stream, or harbor	60	24
Minor stream crossings	60	24

a: As defined by USDOT Pipeline and Hazardous Materials Safety Administration (PHMSA) at 49 CFR 192.5.

Class 1: offshore areas and areas within 220 yards of a pipeline with ≤10 buildings intended for human occupancy.

Class 2: areas within 220 yards of a pipeline with >10 but <46 buildings intended for human occupancy.

Class 3: areas within 220 yards of a pipeline with >46 buildings intended for human occupancy and areas within 100 yards of either a building or a small, well defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least five days a week for 10 weeks in any 12-month period.

Class 4: areas within 220 yards of a pipeline where buildings with four or more stories are prevalent.

In accordance with Constitution's ECP, measures will be employed to minimize erosion during trenching operations and construction activities. Measures also will be taken to minimize the free flow of water into the trench and through the trench into waterbodies. Compacted earth for temporary trench breakers and sandbags or foam for permanent trench breakers may be installed within the trench to reduce erosion.

2.2.1.5 Pipe Stringing

The stringing operation involves moving the pipe into position along the prepared ROW. Pipe will be delivered to the Project's pipeline storage areas, typically by truck, and then will be moved by truck from the pipeline storage areas to the construction zone, where it will be placed along the ROW in a continuous line in preparation for subsequent lineup and welding operations. Individual joints of pipe will be strung along the ROW parallel to the centerline and arranged so they are easily accessible to construction personnel. The amount of pipe necessary for waterbody or road crossings will be stockpiled in pipeline storage areas in the vicinity of each crossing.

2.2.1.6 Pipe Bending

The pipe will be delivered to the Project site in straight sections. However, bending of the pipe will be required to allow the pipeline to follow natural grade changes and direction changes of the ROW. For this purpose, prior to line-up and welding, selected joints will be field-bent by track-mounted hydraulic bending machines. For larger horizontal changes of direction, manufactured induction bends may be used. Pipe bending in the field will be utilized for turns involving slight deflections and/or large radii. For turns involving larger deflections and/or small radii, often related to spatial limitations due to easement and topographic constraints, prefabricated elbow fitting (ells) will be utilized, rather than pipe bending on-site.

2.2.1.7 Pipe Assembly and Welding

Following stringing and bending, the joints of pipe will be placed on temporary supports adjacent to the trench. The ends will be carefully aligned and welded together using multiple passes for a full penetration weld. Only welders qualified according to applicable ANSI, ASME, and American Petroleum Institute (API) Standards will be permitted to perform the welding. A Constitution-approved welding inspector will conduct the welder qualification testing and document all test results. A welder failing to meet acceptance criteria of the Williams Company Standard Welder Qualification Test will be disqualified. Bending, welding, and coating in the field will comply with USDOT regulations (49 CFR Part 192).

It has not been determined if automated welding will be implemented during pipe assembly. It is assumed that portions of the proposed route could use automated welding; however, the use of automated welding may prove impractical for steep construction areas. Constitution will allow the construction contractor to decide whether or not automated welding is appropriate for parts of the Project.

2.2.1.8 X-Ray and Weld Repair

To ensure that the assembled pipe meets or exceeds the design strength requirements and to ensure weld quality and integrity, the welds will be inspected visually and tested non-destructively using radiographic (x-ray) or another approved test method, in accordance with API Standards. Welds displaying inclusions

(void spaces) or other defects will be repaired, or they will be cut out (removed) and new welds will be installed and retested.

2.2.1.9 Coating Field Welds, Inspection, and Repair

Following welding, the previously uncoated ends of the pipe at the joints will be field-coated with a Constitution and industry approved anti-corrosion coating. Prior to lowering the pipe into the trench, the coating on the entire pipe section will be inspected and any damaged areas repaired.

2.2.1.10 Pipe Preparation and Lowering-In

Once the pipeline has been welded together, coated, and inspected, the pipe will be lowered into the trench. If the bottom of the trench is rocky, methods to protect the pipe will be used, including the possible use of sandbags or support pillows at designated intervals along the trench. Trench dewatering may be required in certain locations to prevent the pipe from floating and to allow certain limited activities to be performed in the trench. Trench dewatering will be performed in accordance with Constitution's ECP.

2.2.1.11 Tie-Ins

At select locations, such as waterbody crossings, road crossings, and terrain changes along the pipeline system, the pipe will be lowered into the trench in segments. The segments then will be welded together or tied-in prior to backfilling. A crew will be assigned to make these tie-ins at designated locations ahead of the backfill operations.

2.2.1.12 Backfilling and Grade Restoration

After the pipe is lowered into the trench, the trench will be backfilled. Backfill usually consists of the material originally excavated from the trench; however, in some cases, additional backfill from other sources may be required. Constitution will utilize a padding machine prior to conventional backfilling operations. Use of this equipment will prevent rock material mixed with subsoil from making direct contact with the pipeline. Padding operations are anticipated to provide six inches of screened subsoil cover below and along the sides of the pipe, as well as one foot of screened subsoil cover above the pipe. Once the pipeline is adequately protected with screened subsoil, conventional backfilling operations will occur. Any excess excavated materials or materials unsuitable for backfill will be handled as approved by the landowner or land management agency or disposed of in accordance with applicable regulations. In areas where topsoil has been segregated, the subsoil will be placed in the trench first, and then the topsoil will be placed over the subsoil. Backfilling will occur to approximate grade. However, a soil crown may be placed above the trench to accommodate any future soil settlement.

2.2.1.13 Clean-up and Restoration

After the completion of backfilling, disturbed areas will be graded, and any remaining trash and debris will be properly disposed of in compliance with applicable regulations. The construction corridor will be protected by the implementation of erosion control measures, including site specific contouring, permanent slope breakers, mulching, and reseeding to establish soil-holding vegetation. Contouring will

be accomplished using acceptable excess soils from construction. If sufficient soils are not available, additional soil will be imported by Constitution in accordance with applicable requirements.

Constitution will restore the construction workspace in accordance with the ECP and the FERC's Procedures, using applicable seed mix recommendations from the Natural Resource Conservation Service (NRCS) and consultation with the Susquehanna County Conservation District, or relevant landowner agreements. Initial consultations and meetings regarding the Project and specific restoration activities have occurred with the NYSDEC and USACE. Constitution has incorporated recommendations for restoration activities from the abovementioned agencies into the Project's ECP.

Clean-up and restoration of Project locations will be conducted in accordance with the procedures outlined in the ECP as well applicable regulatory approvals. Compliance with these requirements will be recorded in the field by EIs, and details of the activities will be documented in the weekly construction inspection reports.

2.2.1.14 Hydrostatic Testing and Tie-Ins

Hydrostatic testing procedures are described in Constitution's ECP. Discharges proposed in New York will follow BMPs developed for the discharge of hydrostatic test water within upland areas through filter structures, in accordance with Constitution's ECP.

The pipeline will be tested hydrostatically in accordance with the USDOT's regulations, 49 CFR Part 192. The pipeline will be filled with water and maintained at a test pressure and duration in compliance with Constitution's engineering standards and applicable federal regulations. After the completion of a satisfactory test, the water will be discharged to the ground through a containment structure to a vegetated upland area. The discharge rate of the test water will be regulated using valves and energy dissipation devices to reduce the potential for erosion. Tie-in locations will be cleaned and restored after hydrostatic testing. An inline caliper tool will be run through the entire length of the pipeline to verify pipe geometry. Table 3.2-7 in Section 3.2.4 contains additional information regarding hydrostatic pressure testing of the pipeline, including anticipated water volumes from streams.

2.2.2 Specialized Construction Procedures

Depending on site conditions, Constitution may implement specialized pipeline construction methods in residential, agricultural, and environmentally sensitive areas. Typical construction drawings for each of these specialized construction procedures are included in Constitution's ECP, as applicable.

2.2.2.1 Rugged Topography

Rugged topography is present along portions of the pipeline route. During routing of the pipeline alignment, Constitution attempted to minimize the crossing of locations characterized as rugged topography (i.e., steep slopes, steep side slopes, and ridge tops). Where disturbances to rugged terrain could not be avoided, Constitution will implement the BMPs detailed in the Project ECP for New York to minimize impacts during construction and to effectively restore workspace locations during restoration. Permanent trench breakers consisting of sandbags or foam will be installed in the ditch over and around the pipe in areas of slope with high erosion potential. Cement filled sacks will not be utilized to construct

trench breakers during construction. Trench breakers also will be used to isolate wet areas and to minimize channeling of groundwater along the ditch line.

In the areas of construction where the slope exceeds 30 percent (and on lesser slopes where dictated by soils, geologic hazards, and other conditions), a special means of manipulating the construction equipment must be utilized. The preferred method will be "winching" the equipment. This process consists of placing and anchoring a piece of equipment at the top of the slope and using a winch to manipulate the construction equipment up and down the slope. In areas of rugged topography, ROW restoration will begin within 10 days of final pipeline installation to minimize potential erosion and sedimentation control problems.

In areas along the ROW where steep side slopes are encountered, the two-tone cut and fill construction methods will be utilized for equipment and/or personnel safety considerations. ATWS will be needed at these locations to accommodate excavated material from the temporary cut and fill areas, while allowing for the temporary storage of trench spoil, excess rock material, cut timber, and, in some cases, salvageable topsoil.

~~When side slopes that require special construction are encountered, the up-slope side of the pipeline ROW will be cut during grading. The material removed from the cut will be used to fill the down-slope edge of the ROW to provide a safe and level surface from which to operate the heavy equipment. During grade restoration, the spoil will be placed back in the cut and compacted. Any springs or seeps found in the cut will be carried down-slope through polyvinyl chloride (PVC) pipe and/or gravel French drains installed as part of the cut restoration.~~ When side slopes that require special construction are encountered, the two-tone construction technique will be employed, which entails benching into the side-slope to provide a level work surface. During grade restoration of side slope locations, the spoil will be placed back in the cut and compacted. Any springs or seeps found in the cut will be carried down-slope through polyvinyl chloride (PVC) pipe and/or gravel French drains installed as part of the cut restoration. BMP figures illustrating construction and restoration procedures for locations requiring installation of pipeline facilities on steep slopes and side slopes can be found in the ECP.

In areas of rugged topography, ROW restoration will begin within 10 days of final pipeline installation to minimize potential erosion and sedimentation control problems. Constitution will attempt to restore workspace locations within rugged terrain to preconstruction grades and contours. Excavated locations will be backfilled with the original substrate material and ~~if necessary,~~ permanent erosion control devices will be installed following site grading. To facilitate revegetation of the ROW, restored workspace locations will be seeded, fertilized and mulched in accordance with the Project ECP for New York. Figures illustrating construction and restoration procedures for locations requiring installation of pipeline facilities on steep slopes, side slopes, and ridge top locations can be found in the Project ECP for New York.

2.2.2.2 Wetland Crossing Procedures

Wetland locations along the pipeline are described in Section 3.3 and are shown on the aerial alignment sheets in Attachment C. Site-specific wetland crossing plans have also been included in Attachment E. Pipeline construction across wetlands will be performed in accordance with applicable permit conditions, the FERC's Procedures, and Constitution's ECP.

Constitution will utilize construction methods for installing the pipeline within wetlands described in Section 3.3.4.9.

Typical drawings depicting these construction methods are included in Constitution's ECP. Wetland impact summary tables are located in Section 3.3. The alignment sheets and the site specific wetland crossing plans provide additional supporting information and identify the proposed crossing technique for each wetland.

2.2.2.3 Waterbody Crossing Procedures

Waterbody locations along the pipeline are described in Section 3.2 and are shown on the aerial alignment sheets. Site-specific waterbody crossing plans have also been included in Attachment E. Pipeline construction across waterbodies will be performed in accordance with applicable permit conditions, the FERC Procedures, and Constitution's ECP.

Constitution will utilize construction methods for installation of the pipeline across waterbodies described in Section 3.2.5.1.

Typical plan and cross-section drawings depicting these construction methods are included in Constitution's ECP. Waterbody impact summary tables are located in Section 3.2.1. The alignment sheets and the site specific waterbody crossing plans and provide additional supporting information and identify the proposed crossing technique for each waterbody.

2.2.3 Timeframe for Construction

Construction of the Project will commence after Constitution has obtained a Certificate from the FERC, as well as other applicable regulatory approvals. ~~Dependent upon receipt of all applicable regulatory approvals, Constitution anticipates that construction activities will commence as early as June 2014 and that Project facilities would be placed into service no later than March 2015.~~ Upon receipt of applicable permits and approvals, Constitution proposes to commence limited vegetation clearing and construction between June 1 and September 30, 2014 for installation of access roads to install waterbody crossings for streams with timing restrictions related to fisheries, begin trenchless crossings installations (i.e., horizontal directional drill and Direct Pipe®), and metering station construction. Constitution further proposes to commence the majority of mainline vegetation clearing and construction in September 2014 and continue through March to meet the in-service date of March 2015.

2.2.4 Supervision and Inspection

For purposes of quality assurance and compliance with mitigation measures, applicable regulatory requirements, and Constitution specifications, Constitution will be represented on the construction spread by a chief inspector. The chief inspector will be assisted by one or more craft inspectors, agricultural inspectors (AI), and an environmental compliance manager. Additionally, a lead environmental inspector (LEI) will oversee several other EIs. The EI position will be a full-time position. The LEI will report directly to Constitution's chief inspector. All inspectors and Constitution employees have stop-work authority. The EI's duties are more detailed in the ECP and will be consistent with those contained in paragraph II.B (*Responsibilities of Environmental Inspectors*) of the FERC Procedures and will include ensuring compliance with environmental conditions from the FERC Certificate, Constitution's

environmental designs and specifications, and other applicable regulatory approvals. An adequate number of copies of the Construction Drawing package will be distributed to Constitution's inspectors and to contractors' supervisory personnel. If a contractor's performance is unsatisfactory, the terms of the contract will allow Constitution to stop work in progress and cause a contractor to begin remedial work.

2.3 OPERATION AND MAINTENANCE PROCEDURES

The pipeline and aboveground facilities will be operated, and maintained by Constitution. Constitution has entered into a Construction, Operation and Maintenance Agreement with Williams Gas Pipeline Company, LLC (Williams), under which Williams will provide the operation and maintenance for the Constitution Pipeline in the same manner as Williams currently operates and maintains its affiliated major interstate pipeline facilities, in accordance with the requirements of the FERC guidance in 18 CFR 380.15, the USDOT's PHMSA pursuant to 49 CFR Part 192, and industry-proven practices and techniques. The facilities will be operated and maintained in a manner such that pipeline integrity is protected to ensure that a safe, continuous supply of natural gas reaches its ultimate destination. Maintenance activities will include regularly scheduled gas-leak surveys and measures necessary to repair any potential leaks. The latter may include repair or replacement of pipe segments. Fence posts, signs, marker posts, aerial markers, and decals will be painted or replaced to ensure that the pipeline locations will be visible from the air and ground. The pipeline and aboveground facilities will be patrolled on a routine basis, and personnel well qualified to perform both emergency and routine maintenance on interstate pipeline facilities will handle maintenance.

2.3.1 Pipeline Facilities

Operational activity on the pipeline will be limited primarily to maintenance of the permanent ROW and inspection, repair, and cleaning of the pipeline itself. The pipeline will be patrolled on a periodic basis. These patrols will provide information on possible leaks, construction activities, erosion, exposed pipe, population density, possible encroachment, and any other potential problems that may affect the safety and operation of the pipeline. In addition, Constitution will be a participant in the "Dig Safe" system for utility companies in New York, as well as the national "Call Before You Dig" system. Under either system, anyone planning excavation activities must call a dedicated telephone number to alert all utility companies. Representatives of the utility companies that may be affected then visit the site and mark their facilities so that the excavation can proceed with relative certainty as to the location of underground lines. The pipeline cathodic protection system also will be monitored and inspected periodically to ensure proper and adequate corrosion protection. Appropriate responses to conditions observed during inspection will be taken.

Other maintenance functions will include: (1) periodic seasonal mowing of the ROW in accordance with the timing restrictions outlined in Section VII.A.5 of the FERC Procedures; (2) terrace repair, backfill replacement, and drain tile repair, as necessary; (3) periodic inspection of water crossings; and (4) maintenance of a supply of emergency pipe, leak repair clamps, sleeves, and other equipment needed for repair activities. Constitution will not use herbicides or pesticides within 100 feet of a wetland or waterbody unless approved by applicable regulatory agencies.

2.3.1.1 Cleared Areas

A typical post-construction permanent ROW of 50 feet will be maintained for the pipeline, in accordance with the FERC Procedures. Maintaining a cleared ROW is necessary for the following reasons:

- Access for routine pipeline patrols and corrosion surveys;
- Access in the event that emergency repairs of the pipeline are needed;
- Visibility during aerial patrols; and
- To serve as a visual indicator to the public of an underground pipeline utility and easement.

Operational vegetation maintenance of Constitution's permanent ROW in uplands will be conducted at a frequency necessary to maintain an herbaceous to low scrub-shrub cover state. To facilitate routine patrols and emergency access on their ROW, Constitution will annually mow/cut a 10-foot corridor centered over their pipeline, and every three years will mow/cut the entire 50-foot width of their permanent ROW within uplands. This same maintenance regime will also be followed within upland areas that fall within the path of a horizontal directional drill.

Within wetlands, Constitution will maintain only a 10-foot corridor centered over the pipeline, allowing the balance of Constitution's permanent easement to revert to its natural, preconstruction vegetated cover state. Additionally, within wetlands, Constitution reserves the right to selectively cut and remove trees that are located within 15 feet on either side of the pipeline that have roots that could compromise the integrity of the pipeline coating. Wetlands within the path of a horizontal directional drill will only have 10-foot corridor centered over the pipeline that will be maintained in an herbaceous state in order to allow for routine patrols and emergency access.

Post-construction management of the ROW will be conducted in accordance with the procedures outlined in the Project-specific ISMP provided in the ECP. Vegetation maintenance (with respect to the control of invasive species), as well as yearly monitoring and mitigation measures are detailed in Sections 3.4 and 3.5 of the ISMP located within the ECP.

Following construction of the pipeline facilities, areas used for TWS and ATWS will be allowed to revert to their preconstruction land use/land cover, with no further vegetation maintenance by Constitution. Additionally, crop production will be allowed to continue in agricultural areas immediately following construction or during the following growing season.

2.3.1.2 Erosion Control

Erosion problems on the pipeline ROW will be reported to the local operations supervisor. These reports may originate from landowners or Constitution personnel performing routine patrols. Corrective measures will be conducted, as needed.

2.4 PERMITS AND APPROVALS

Construction, operation, and maintenance of the Project will be conducted in accordance with Constitution's specifications and applicable federal permit requirements. The environmental permits, licenses, approvals, and certificates that have been identified to date and will be applied for / requested for

the Project are identified in Table 2.4-1. Constitution will apply for certain federal permits including ~~a~~ CWA Section 404 crossing authorizations ~~Permit~~ with the USACE and a 401 Water Quality Certification with the NYSDEC. Constitution and its representatives have consulted regulatory officials and government agencies regarding this Project, and agency correspondence for the Project is located in Attachment F. Constitution is committed to complying with the resource protection measures set forth in the environmental conditions and requirements as specified within applicable federal permits and the FERC's Order. Constitution shall also endeavor to comply with state environmental and energy regulations to the extent they do not conflict with the FERC approval, impose conditions above the federal requirements, or would prohibit or unreasonably delay the construction and operation of facilities ultimately approved by the FERC.

Table 2.4-1 Permits, Licenses, Approvals, and Consultations to be Applied for/Requested for the Constitution Pipeline in New York

Permit/Approval	Administering Agency	Status
Federal		
Enter FERC Pre-Filing Process	FERC	Docket No. PF12-9-000 May 2012
Certificate of Public Convenience and Necessity	FERC	ER submitted June 13, 2013 (Docket No. CP13-499-000)
Clean Water Act (CWA) Section 404 Nationwide Permit Verifications (Application included herein)	USACE New York District (Lead)	Consultation began in August 2012 Application(s) ~~to be~~ submitted August 2013
	USACE Buffalo District	
Consultation for: Rare, Threatened and Endangered Species Migratory Bird Treaty Act Bald and Golden Eagle Protection Act	U.S. Fish and Wildlife Service (USFWS) New York Field Office (Lead)	Informal consultations initiated May 2012 and are ongoing
	USFWS Pennsylvania Field Office	
New York State		
Surface Water Withdrawal ~~-~~Permit	Susquehanna River Basin Commission (SRBC)	Applications to be submitted ~~fourth~~first quarter of ~~2013~~2014
Water Withdrawal Permit	Delaware River Basin Commission (DRBC)	Applications to be submitted in the ~~fourth~~first quarter of ~~2013~~2014

Table 2.4-1 Permits, Licenses, Approvals, and Consultations to be Applied for/Requested for the Constitution Pipeline in New York

Permit/Approval	Administering Agency	Status
Joint Application including 401 Water Quality Certificate, Article 15 Protection of Waters (Stream Disturbance, Excavation and Fill in Navigable Waters), and Article 24 Freshwater Wetlands (Application included herein)	NYSDEC Division of Environmental Permits	Applications ~~to be~~ submitted August 2013
Title 33 Water Withdrawal (Hydrostatic Test Water Withdrawal)	NYSDEC Division of Environmental Permits	Water Withdrawal Application Supplement WW-1 to be submitted ~~fourth~~first quarter of ~~2013~~2014
State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity	NYSDEC Division of Water Bureau of Water Permits	Notice of Intent (NOI) to be submitted ~~October~~fourth quarter of 2013
Temporary Revocable Permit	NYSDEC Bureau of Forest Lands Management	Application to be submitted first quarter of 2014
Consultation (Rare Species)	NYSDEC Division of Fish, Wildlife, and Marine Resources Bureau of Wildlife's Endangered Species Program	Consultation initiated May 2012 and is ongoing
Section 106, National Historic Preservation Act Consultation	NY State Office of Parks, Recreation & Historic Preservation (OPRHP) State Historic Preservation Office (SHPO)	Consultation initiated May 2012 and is ongoing
Consultation (Agricultural Lands)	NYSDAM	Consultation initiated May 2012 and is ongoing
Highway Occupancy Permit	NY State Department of Transportation (NYSDOT)	Applications to be submitted first quarter of 2014~~2013~~
New York Local and County		
County/Municipal Road Opening Permits	Counties /Municipalities	Applications to be submitted 2013

This table has been entirely updated since the August 2013 submittal.

3.0 SURFACE WATER RESOURCES

3.1 WATERSHEDS

The Project traverses three major river basins in New York (i.e., 4-digit Hydrologic Unit Codes [HUCs]) as defined by the United States Geological Survey (USGS): the Susquehanna River basin, the Delaware-Mid Atlantic Coastal basin, and Upper Hudson River basin. Each hydrologic unit is identified by a unique HUC consisting of two to twelve digits based on the six levels of classification. The 4-digit HUC units are broken down to 6-digit HUC third-level (accounting unit), 8-digit HUC fourth-level (cataloging unit), and 10-digit HUC fifth-level (watershed). The HUC-4, HUC-6, and HUC-8 and HUC-10 watersheds within the Project area are included in Table 3.1-1 and depicted on Figure 3 in Attachment B.

These major basins (i.e., 4-digit HUCs) are further divided into smaller drainage areas by New York water management agencies (NYSDEC) and the water quality classifications and standards pursuant to 6 NYCRR Parts 700 through 704, Part 815 (Delaware River Drainage Basin), Part 879 (Schoharie Creek Drainage Basin), and Part 931 (Susquehanna River Drainage Basin). These smaller drainage areas are identified as Watersheds and Subwatersheds by NYSDEC for water management, monitoring, and assessment activities (NYSDEC 2012a).

3.2 WATERBODIES

3.2.1 Federal Clean Water Act

Waterbodies include streams, rivers, lakes, and ponds. Constitution's review indicates that there are no waterbodies crossed by the Project that are considered to be navigable waters as regulated by the U.S. Army Corps of Engineers (USACE) New York and Buffalo Districts under Section 10 of the Rivers and Harbors Act. Waterbody boundaries were field-delineated using the regulatory definition included in 33 CFR 328.4, which identifies the limit of federal jurisdiction under Section 404 of the CWA (33 USC 1344) for non-tidal waters of the United States in the absence of adjacent wetlands as the ordinary high water mark (OHWM). The OHWM is established by observations of water fluctuation, physical characteristics, such as a clear natural line impressed on the bank, shelving, changes in the soil character, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR 328.3(e)).

Field delineated waterbodies on accessible land parcels up to ~~April,~~ September 6, 2013 are shown on the FERC Alignment Sheets in Attachment C. For waterbodies in locations where survey access has not been granted, Constitution utilized publicly available National Hydrography Dataset (NHD) to document the presence of waterbodies boundaries and to develop approximate impact calculations. NHD waterbodies are also included on the FERC Alignment Sheets. Waterbodies impacted as a result of the Project are summarized in Table 3.2-1. Based on a sample table format provided by the NYSDEC to Constitution on May 30, 2013 (Tomasik 2013a), a waterbody impact master table has been developed and included in Attachment J that identifies the location, condition, classification, impacts, and proposed methodology for each waterbody crossing, including modifications to proposed crossings based on field visits with the NYSDEC conducted in July and August, 2013.

Table 3.1-1 Designated HUC Watersheds Crossed by the Constitution Pipeline in New York

Enter Milepost	Exit Milepost	County	HUC-4 Basin[a]	HUC-6 Basin[a]	HUC-8 Basin[a]	HUC-10 Basin[a]
25.24	25.57	Broome	Susquehanna (0205)	Upper Susquehanna (020501)	Upper Susquehanna (02050101)	Middle Susquehanna River (0205010112)
25.57	25.92	Broome				Lower Susquehanna River (0205010113)
25.92	25.94	Broome				Middle Susquehanna River (0205010112)
25.94	26.19	Broome				Lower Susquehanna River (0205010113)
26.19	26.73	Broome				Middle Susquehanna River (0205010112)
26.73	40.34	Broome	Delaware-Mid Atlantic Coastal (0204)	Upper Delaware (020401)	Upper Delaware (02040101)	Lower West Branch Delaware River (0204010103)
40.34	42.23	Broome	Susquehanna (0205)	Upper Susquehanna (020501)	Upper Susquehanna (02050101)	Middle Susquehanna River (0205010112)
42.23	50.52	Chenango				Middle Susquehanna River (0205010112)
50.52	52.03	Delaware				Middle Susquehanna River (0205010112)
52.03	52.23	Delaware				Upper Susquehanna River (0205010111)

Table 3.1-1 Designated HUC Watersheds Crossed by the Constitution Pipeline in New York

Enter Milepost	Exit Milepost	County	HUC-4 Basin[a]	HUC-6 Basin[a]	HUC-8 Basin[a]	HUC-10 Basin[a]
52.23	52.27	Delaware	Susquehanna (0205) (con't)	Upper Susquehanna (020501) (con't)	Upper Susquehanna (02050101) (con't)	Middle Susquehanna River (0205010112)
52.27	52.96	Delaware				Upper Susquehanna River (0205010111)
52.96	54.14	Delaware				Middle Susquehanna River (0205010112)
54.14	58.76	Delaware				Upper Susquehanna River (0205010111)
58.76	62.31	Delaware				Ouleout Creek (0205010110)
62.31	63.40	Delaware				Upper Susquehanna River (0205010111)
63.40	63.49	Delaware				Ouleout Creek (0205010110)
63.49	64.50	Delaware				Upper Susquehanna River (0205010111)
64.50	68.17	Delaware				Ouleout Creek (0205010110)
68.17	68.64	Delaware				Upper Susquehanna River (0205010111)
68.64	73.09	Delaware				Ouleout Creek (0205010110)

Table 3.1-1 Designated HUC Watersheds Crossed by the Constitution Pipeline in New York

Enter Milepost	Exit Milepost	County	HUC-4 Basin[a]	HUC-6 Basin[a]	HUC-8 Basin[a]	HUC-10 Basin[a]
73.09	73.71	Delaware	Susquehanna (0205) (con't)	Upper Susquehanna (020501) (con't)	Upper Susquehanna (02050101) (con't)	Headwaters Susquehanna River (0205010106)
73.71	75.43	Delaware				Ouleout Creek (0205010110)
75.43	75.62	Delaware				Headwaters Susquehanna River (0205010106)
75.62	77.06	Delaware				Ouleout Creek (0205010110)
77.06	93.54	Delaware				Charlotte Creek (0205010104)
93.54	99.35	Schoharie				Charlotte Creek (0205010104)
99.35	99.76	Schoharie	Upper Hudson (0202)	Upper Hudson (020200)	Schoharie (02020005)	West Kill-Schoharie Creek (0202000503)
99.76	99.80	Schoharie	Susquehanna (0205)	Upper Susquehanna (020501)	Upper Susquehanna (02050101)	Charlotte Creek (0205010104)
99.80	103.26	Schoharie	Upper Hudson (0202)	Upper Hudson (020200)	Schoharie (02020005)	West Kill-Schoharie Creek (0202000503)
103.26	107.69	Schoharie				Cobleskill Creek (0202000506)

Table 3.1-1 Designated HUC Watersheds Crossed by the Constitution Pipeline in New York

Enter Milepost	Exit Milepost	County	HUC-4 Basin[a]	HUC-6 Basin[a]	HUC-8 Basin[a]	HUC-10 Basin[a]
107.69	107.85	Schoharie	Upper Hudson (0202) (con't)	Upper Hudson (020200) (con't)	Schoharie (02020005) (con't)	Panther Creek-Schoharie Creek (0202000504)
107.85	107.93	Schoharie				Cobleskill Creek (0202000506)
107.93	108.40	Schoharie				Panther Creek-Schoharie Creek (0202000504)
108.40	109.33	Schoharie				Cobleskill Creek (0202000506)
109.33	111.29	Schoharie				Panther Creek-Schoharie Creek (0202000504)
111.29	112.13	Schoharie				Cobleskill Creek (0202000506)
112.13	115.50	Schoharie				Panther Creek-Schoharie Creek (0202000504)
115.50	115.60	Schoharie				Cobleskill Creek (0202000506)
115.60	115.97	Schoharie				Panther Creek-Schoharie Creek (0202000504)
115.97	116.04	Schoharie				Cobleskill Creek (0202000506)
116.04	116.24	Schoharie				Panther Creek-Schoharie Creek (0202000504)

Table 3.1-1 Designated HUC Watersheds Crossed by the Constitution Pipeline in New York

Enter Milepost	Exit Milepost	County	HUC-4 Basin[a]	HUC-6 Basin[a]	HUC-8 Basin[a]	HUC-10 Basin[a]
116.24	116.69	Schoharie	Upper Hudson (0202) (con't)	Upper Hudson (020200) (con't)	Schoharie (02020005) (con't)	Cobleskill Creek (0202000506)
116.69	117.04	Schoharie				Panther Creek-Schoharie Creek (0202000504)
117.04	117.08	Schoharie				Cobleskill Creek (0202000506)
117.08	117.33	Schoharie				Panther Creek-Schoharie Creek (0202000504)
117.33	117.39	Schoharie				Cobleskill Creek (0202000506)
117.39	117.59	Schoharie				Panther Creek-Schoharie Creek (0202000504)
117.59	118.27	Schoharie				Cobleskill Creek (0202000506)
118.27	118.42	Schoharie				Panther Creek-Schoharie Creek (0202000504)
118.42	118.44	Schoharie				Cobleskill Creek (0202000506)
118.44	118.75	Schoharie				Panther Creek-Schoharie Creek (0202000504)
118.75	122.76	Schoharie				Fly Creek-Schoharie Creek (0202000507)

Table 3.1-1 Designated HUC Watersheds Crossed by the Constitution Pipeline in New York

Enter Milepost	Exit Milepost	County	HUC-4 Basin[a]	HUC-6 Basin[a]	HUC-8 Basin[a]	HUC-10 Basin[a]
122.76	124.44	Schoharie	Upper Hudson (0202) (con't)	Upper Hudson (020200) (con't)	Schoharie (02020005) (con't)	Fox Creek (0202000505)

This table has been entirely updated since the August submittal

a: USGS 2012b

HUC: Hydrologic Unit Code

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
WATERBODIES ASSOCIATED WITH PIPELINE															
UPPER SUSQUEHANNA (HUC 02050101)															
BR-1C-S207	UNT to Cascade Creek	26.37	27 of 126	26-09-85/BR-1C-S207-1-0	42.009105	-75.527984	Sanford/ Broome	P	0	N/A	D	N/A	N/A	No	N/A
BR-1C-S207A	UNT to Cascade Creek	26.40	27 of 126	26-09-85/BR-1C-S207-1-0	42.009418	-75.527976	Sanford/ Broome	I	0	N/A	D	N/A	N/A	No	N/A
BR-1S-S206A	UNT to Cascade Creek	26.45	27 of 126	26-09-85/BR-1S-S206-1-0	42.009844	-75.527736	Sanford/ Broome	I	0	N/A	D	N/A	N/A	No	N/A
BR-1S-S206	UNT to Cascade Creek	26.45	27 of 126	26-09-85/BR-1S-S206-1-0	42.009943	-75.527664	Sanford/ Broome	P	8	MI	C(T)	(T)	June 1 - Sep 30	Yes	II
BR-1C-S204	UNT to Cascade Creek	26.66	27 of 126	26-09-85/BR-1C-S204-1-0	42.012904	-75.527940	Sanford/ Broome	I	6	MI	D	N/A	N/A	No	II
UPPER DELAWARE (HUC 02040101)															
BR-1H-S131	UNT to Fly Creek	27.39	28 of 126	26-09-85/BR-1H-S131-1-2	42.022303	-75.523929	Sanford/ Broome	E	0	N/A	D	N/A	June 1 - Sep 30	No	N/A
BR-1L-S222	UNT to Fly Creek	28.12	29 of 126	26-09-85/BR-1L-S222-1-0	42.029433	-75.515713	Sanford/ Broome	E	0	N/A	D	N/A	N/A	No	N/A
BR-1H-S179	UNT to Fly Creek	28.29	29 of 126	26-09-85/BR-1H-S179-1-2	42.031781	-75.515655	Sanford/ Broome	P	18	I	B(T)	(T)	June 1 - Sep 30	Yes	II
BR-1H-S178	Fly Creek	28.71	29 of 126	26-09-85/BR-1H-S178-1-5	42.037392	-75.516363	Sanford/ Broome	P	31	I	B(T)	(T)	June 1 - Sep 30	Yes	II
BR-1B-S049	UNT to Fly Creek	28.81	29 of 126	26-09-85/BR-1B-S049-1-2	42.038305	-75.517522	Sanford/ Broome	I	12	I	B(T)	(T)	June 1 - Sep 30	Yes	II
BR-1J-S170	UNT to Fly Creek	28.89	30 of 126	26-09-85/BR-1J-S170-1-3	42.039404	-75.518164	Sanford/ Broome	I	2	MI	D	N/A	N/A	No	III
BR-1H-S208	UNT to Fly Creek	29.00	30 of 126	26-09-85/BR-1H-S208-1-0	42.040867	-75.518400	Sanford/ Broome	E	5	MI	D	N/A	N/A	No	II
BR-1J-S048	UNT to Fly Creek	29.17	30 of 126	26-09-85/BR-1J-S048-1-2	42.042839	-75.516644	Sanford/ Broome	P	18	I	B(T)	(T)	June 1 - Sep 30	Yes	II
BR-1I-S050	UNT to Fly Creek	29.35	30 of 126	26-09-85/BR-1I-S050-1-0	42.044544	-75.514211	Sanford/ Broome	E	0	N/A	D	N/A	N/A	No	N/A
BR-1I-S050B	UNT to Fly Creek	29.35	30 of 126	26-09-85/BR-1I-S050B-1-2	42.044650	-75.514321	Sanford/ Broome	E	16	I	D	N/A	N/A	No	II
BR-1I-S051	UNT to Fly Creek	29.71	30 of 126	26-09-85/BR-1I-S051-1-2	42.049569	-75.512628	Sanford/ Broome	I	3	MI	D	N/A	N/A	No	II
BR-1I-S001	UNT to Marsh Creek	30.30	31 of 126	26-09-85/BR-1I-S001-1-2	42.056744	-75.507968	Sanford/ Broome	P	53	I	C(T)	(T)	June 1 - Sep 30	Yes	II

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
BR-1B-S054B	UNT to Marsh Creek	30.59	31 of 126	26-09-85/BR-1B-S054B-1-3	42.059605	-75.504963	Sanford/ Broome	E	0	N/A	D	N/A	N/A	No	N/A
BR-1I-S055	Marsh Creek	30.72	31 of 126	26-09-85/BR-1I-S055-1-2	42.061263	-75.503764	Sanford/ Broome	P	30	I	C(T)	(T)	June 1 - Sep 30	Yes	II
BR-1I-S188A	UNT to Oquaga Creek	32.92	34 of 126	26-09-85/BR-1I-S188A-1-3	42.083166	-75.478012	Sanford/ Broome	P	13	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
BR-1G-S186	UNT to Oquaga Creek	33.60	34 of 126	26-09-85/BR-1G-S186-1-3	42.092322	-75.480990	Sanford/ Broome	I	3	MI	D	N/A	N/A	No	II
BR-1B-S056A	UNT to Oquaga Creek	33.62	34 of 126	26-09-85/BR-1G-S186-1-3	42.092576	-75.481013	Sanford/ Broome	P	18	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
BR-1I-S057	Oquaga Creek	33.96	35 of 126	26-09-85/BR-1I-S057-1-3	42.097252	-75.479783	Sanford/ Broome	P	42	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
BR-1H-S181A	Road Ditch	34.53	35 of 126	26-09-85/BR-1B-S181-1-3	42.103985	-75.474338	Sanford/ Broome	E	1	MI	N/A	N/A	N/A	No	III
BR-1B-S181	Road Ditch	34.56	35 of 126	26-09-85/BR-1B-S181-1-3	42.104306	-75.474107	Sanford/ Broome	I	1	MI	N/A	N/A	N/A	No	III
BR-1G-S189	UNT to Oquaga Creek	34.59	35 of 126	26-09-85/BR-1G-S189-1-4	42.104724	-75.474073	Sanford/ Broome	P	4	MI	C(T)	(T)	N/A	Yes	II
BR-1I-S190	UNT to Oquaga Creek	34.69	35 of 126	26-09-85/BR-1I-S190-1-4	42.105859	-75.473229	Sanford/ Broome	P	11	I	C(T)	(T)	June 1 - Sep 30	Yes	II
BR-1U-S135	UNT to Oquaga Creek	35.17	36 of 126	26-09-85/BR-1U-S135-1-2	42.112551	-75.471360	Sanford/ Broome	I	6	MI	D	N/A	N/A	No	II
BR-1K-S138	UNT to Oquaga Creek	35.27	36 of 126	26-09-85/BR-1K-S138-1-2	42.113902	-75.470561	Sanford/ Broome	I	18	I	D	N/A	N/A	No	II
BR-1K-S140	UNT to Oquaga Creek	35.54	36 of 126	26-09-85/BR-1K-S140-1-2	42.117459	-75.468552	Sanford/ Broome	I	13	I	C(T)	(T)	June 1 - Sep 30	Yes	II
BR-1I-S062	UNT to Oquaga Creek	35.90	37 of 126	26-09-85/BR-1I-S062-1-2	42.122154	-75.466352	Sanford/ Broome	P	3	MI	C(T)	(T)	N/A	Yes	II
BR-1I-S065	UNT to Oquaga Creek	36.22	37 of 126	26-09-85/BR-1I-S065-1-2	42.126271	-75.463879	Sanford/ Broome	I	2	MI	C(T)	(T)	N/A	Yes	II
BR-1U-S141	Oquaga Creek	36.54	37 of 126	26-09-85/BR-1U-S141-1-2	42.130818	-75.462993	Sanford/ Broome	P	50	I	C(T)	(T)	June 1 - Sep 30	Yes	II
BR-1I-S067	Dry Brook	37.32	38 of 126	26-09-85/BR-1I-S067-1-2	42.140667	-75.467334	Sanford/ Broome	P	19	I	C(T)	(T)	June 1 - Sep 30	Yes	II
BR-1I-S067	Dry Brook	37.33	38 of 126	26-09-85/BR-1I-S067-1-2	42.140667	-75.467334	Sanford/ Broome	P	36	I	C(T)	(T)	June 1 - Sep 30	Yes	II
BR-1C-S071A	UNT to Dry Brook	38.40	39 of 126	26-09-85/BR-1C-S071A-1-3	42.152218	-75.481193	Sanford/ Broome	E	2	MI	D	N/A	N/A	No	II

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
BR-1Q-S209	UNT to Dry Brook	38.69	40 of 126	26-09-85/BR-1Q-S209-1-0	42.155606	-75.484655	Sanford/ Broome	P	7	MI	C(T)	(T)	June 1 - Sep 30	Yes	III
BR-1Q-S210	UNT to Dry Brook	38.89	40 of 126	26-09-85/BR-1Q-S210-1-0	42.157731	-75.487109	Sanford/ Broome	E	5	MI	D	N/A	N/A	No	II
BR-1C-S150A	UNT to Dry Brook	39.09	40 of 126	26-09-85/BR-1C-S150A-1-2	42.160054	-75.489448	Sanford/ Broome	E	29	I	D	N/A	June 1 - Sep 30	No	II
BR-1C-S150	Dry Brook	39.20	40 of 126	26-09-85/BR-1C-S150-1-3	42.161396	-75.490708	Sanford/ Broome	P	12	I	C(T)	(T)	June 1 - Sep 30	Yes	II
BR-1C-S221	UNT to Dry Brook	39.62	40 of 126	26-09-85/BR-1C-S221-1-0	42.166319	-75.495373	Sanford/ Broome	E	3	MI	D	N/A	N/A	No	II
UPPER SUSQUEHANNA (HUC 02050101)															
BR-1B-S072	Road Ditch	40.64	42 of 126	26-09-85/BR-1B-S072-1-3	42.178154	-75.506472	Sanford/ Broome	E	1	MI	N/A	N/A	N/A	No	II
BR-1G-S196	UNT of Cornell Creek	41.19	42 of 126	26-09-85/BR-1G-S196-1-2	42.182957	-75.513316	Sanford/ Broome	E	3	MI	D	N/A	N/A	No	II
BR-1I-S198	UNT of Cornell Creek	41.27	42 of 126	26-09-85/BR-1I-S198-1-3	42.184071	-75.513211	Sanford/ Broome	I	9	MI	D	N/A	N/A	No	II
BR-1C-S151	UNT of Cornell Creek	41.38	42 of 126	26-09-85/BR-1C-S151-1-2	42.185620	-75.512994	Sanford/ Broome	E	0	N/A	D	N/A	N/A	No	N/A
BR-1S-S200A	UNT to Cornell Creek	41.76	43 of 126	26-09-85/BR-1S-S200-1-0	42.190237	-75.510889	Sanford/ Broome	I	0	N/A	D	N/A	N/A	No	N/A
BR-1S-S200	Road Ditch	41.77	43 of 126	26-09-85/BR-1S-S200-1-0	42.190373	-75.510884	Sanford/ Broome	I	3	MI	N/A	N/A	N/A	No	III
BR-1S-S203	UNT to Cornell Creek	41.85	43 of 126	26-09-85/BR-1S-S203-1-0	42.190691	-75.509327	Sanford/ Broome	I	1	MI	D	N/A	N/A	No	II
CH-1L-S250	UNT to Cornell Creek	42.26	43 of 126	26-09-85/CH-1L-S250-1-0	42.195367	-75.505191	Afton/ Chenango	P	23	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
CH-1H-S011	UNT of Cornell Creek	42.40	43 of 126	26-09-85/CH-1H-S011-1-2	42.196835	-75.504489	Afton/ Chenango	P	11	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
CH-1H-S011A	UNT of Cornell Creek	42.40	43 of 126	26-09-85/CH-1H-S011-1-2	42.196883	-75.504596	Afton/ Chenango	P	0	N/A	C(TS)	(TS)	June 1 - Sep 30	Yes	N/A
CH-1L-S051	UNT to Cornell Creek	42.53	43 of 126	26-09-85/CH-1L-S051-1-0	42.198715	-75.504918	Afton/ Chenango	I	0	N/A	D	N/A	N/A	No	N/A
CH-1J-S014A	UNT of Cornell Creek	42.72	44 of 126	26-09-85/CH-1J-S014A-1-4	42.201349	-75.505431	Afton/ Chenango	E	1	MI	C	N/A	N/A	No	II
CH-1J-S014	UNT of Cornell Creek	42.73	44 of 126	26-09-85/CH-1J-S014A-1-4	42.201493	-75.505459	Afton/ Chenango	P	21	I	C	N/A	N/A	No	II

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
CH-1J-S015	UNT of Cornell Creek	42.76	44 of 126	26-09-85/CH-1J-S014A-1-4	42.202029	-75.505645	Afton/ Chenango	P	0	N/A	C	N/A	N/A	No	N/A
CH-1H-S016	UNT of Cornell Creek	43.76	45 of 126	26-09-85/CH-1H-S016-1-2	42.215274	-75.500310	Afton/ Chenango	P	5	MI	C	N/A	June 1 - Sep 30	No	II
CH-1S-S060	UNT to Landers Creek	45.20	46 of 126	26-09-85/CH-1S-S060-1-0	42.233563	-75.489913	Afton/ Chenango	I	12	I	D	N/A	N/A	No	II
CH-1A-S048	Landers Creek	45.29	46 of 126	26-09-85/CH-1S-S060-1-0	42.234778	-75.489117	Afton/ Chenango	P	29	I	C(TS)	(TS)	June 1 - Sep 30	Yes	III
CH-1C-S065	UNT to Susquehanna River	45.72	47 of 126	26-20-85/CH-1C-S065-1-0	42.238560	-75.482859	Afton/ Chenango	E	17	I	D	N/A	N/A	No	II
CH-1C-S065A	UNT to Susquehanna River	45.72	47 of 126	26-20-85/CH-1C-S065-1-0	42.238493	-75.482805	Afton/ Chenango	E	0	N/A	D	N/A	N/A	No	N/A
CH-1X-S063	UNT to Susquehanna River	46.21	47 of 126	26-09-85/CH-1X-S063-1-0	42.242052	-75.475125	Afton/ Chenango	I	3	MI	C(T)	(T)	N/A	Yes	II
CH-1X-S062A	UNT to Susquehanna River	46.28	47 of 126	26-09-85/CH-1X-S063-1-0	42.242985	-75.474416	Afton/ Chenango	I	1	MI	C(T)	(T)	N/A	Yes	II
CH-1X-S062	UNT to Susquehanna River	46.29	47 of 126	26-09-85/CH-1X-S063-1-0	42.242973	-75.474349	Afton/ Chenango	I	0	N/A	D	N/A	N/A	No	N/A
CH-1X-S061	UNT to Susquehanna River	46.38	47 of 126	26-09-85/CH-1X-S061-1-B	42.244236	-75.473602	Afton/ Chenango	E	2	MI	D	N/A	N/A	No	II
CH-1C-S035	UNT to Susquehanna River	46.55	48 of 126	26-09-85/CH-1C-S035-1-2	42.246393	-75.472182	Afton/ Chenango	E	3	MI	D	N/A	N/A	No	II
CH-1C-S035A	UNT to Susquehanna River	46.55	48 of 126	26-09-85/CH-1C-S035-1-2	42.246489	-75.472130	Afton/ Chenango	E	4	MI	D	N/A	N/A	No	II
CH-1C-S035B	UNT to Susquehanna River	46.57	48 of 126	26-09-85/CH-1C-S035-1-2	42.246587	-75.472064	Afton/ Chenango	E	3	MI	D	N/A	N/A	No	II
CH-1Q-S036A	UNT to Susquehanna River	46.68	48 of 126	26-09-85/CH-1Q-S036A-1-3	42.248135	-75.471146	Afton/ Chenango	E	0	N/A	D	N/A	N/A	No	N/A

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
CH-1Q-S036	UNT to Susquehanna River	46.68	48 of 126	26-09-85/CH-1Q-S036A-1-3	42.248164	-75.471174	Afton/ Chenango	I	0	N/A	D	N/A	N/A	No	N/A
CH-1C-S008	UNT to Bennettsville Creek	47.31	48 of 126	26-09-85/CH-1C-S008-1-3	42.256455	-75.466257	Afton/ Chenango	E	1	MI	D	N/A	N/A	No	II
CH-1K-S009	UNT to Bennettsville Creek	47.44	48 of 126	26-09-85/CH-1K-S009-1-4	42.258288	-75.465870	Afton/ Chenango	E	11	I	D	N/A	N/A	No	II
CH-1C-S010B	Bennettsville Creek	47.65	49 of 126	26-09-85/CH-1C-S010B-1-3 26-09-85/CH-1A-S010-OC-1-0	42.260456	-75.462942	Bainbridge/ Chenango	I	48	I	C(T)	(T)	N/A (HDD) May 15 - Oct 15 (Contingency)	Yes	IV
CH-1C-S010C	Bennettsville Creek	47.68	49 of 126	26-09-85/CH-1C-S010B-1-3 26-09-85/CH-1A-S010-OC-1-0	42.260761	-75.462453	Bainbridge/ Chenango	I	165	MA	C(T)	(T)	N/A (HDD) May 15 - Oct 15 (Contingency)	Yes	IV
CH-1A-S010	Bennettsville Creek	47.71	49 of 126	26-09-85/CH-1A-S010-1-3 26-09-85/CH-1A-S010-OC-1-0	42.261052	-75.462051	Bainbridge/ Chenango	P	144	MA	C(T)	(T)	N/A (HDD) May 15 - Oct 15 (Contingency)	Yes	IV
CH-1A-S010D	Bennettsville Creek	47.75	49 of 126	26-09-85/CH-1A-S010-1-3 26-09-85/CH-1A-S010-OC-1-0	42.261408	-75.461558	Bainbridge/ Chenango	P	85	I	C(T)	(T)	N/A (HDD) May 15 - Oct 15 (Contingency)	Yes	IV
CH-1A-S010E	Bennettsville Creek	47.75	49 of 126	26-09-85/CH-1A-S010-1-3 26-09-85/CH-1A-S010-OC-1-0	42.261389	-75.461479	Bainbridge/ Chenango	P	0	N/A	C(T)	(T)	N/A (HDD) May 15 - Oct 15 (Contingency)	Yes	N/A
CH-1B-S025	UNT to Bennettsville Creek	48.22	49 of 126	26-09-85/CH-1B-S025-1-3	42.264830	-75.454232	Bainbridge/ Chenango	I	2	MI	D	N/A	N/A	No	II
CH-1B-S029	UNT to Bennettsville Creek	48.67	50 of 126	26-09-85/CH-1B-S029-1-2	42.269344	-75.447982	Bainbridge/ Chenango	I	0	N/A	D	N/A	N/A	No	N/A
CH-1S-S042	UNT to Bennettsville Creek	49.62	51 of 126	26-09-85/CH-1S-S042-1-0	42.276265	-75.433128	Bainbridge/ Chenango	P	4	MI	C	N/A	N/A	No	II

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
CH-1S-S044	UNT to Bennettsville Creek	49.65	51 of 126	26-09-85/CH-1S-S042-1-0	42.276489	-75.432728	Bainbridge/ Chenango	I	0	N/A	C	N/A	N/A	No	N/A
CH-1S-S046	UNT to Bennettsville Creek	49.69	51 of 126	26-09-85/CH-1S-S042-1-0	42.277049	-75.432196	Bainbridge/ Chenango	I	6	MI	C	N/A	N/A	No	II
CH-1A-S047	Road Ditch	50.09	51 of 126	26-09-85/CH-1A-S047-1-0	42.277493	-75.424656	Bainbridge/ Chenango	E	2	MI	N/A	N/A	N/A	No	II
CH-1A-S038	UNT to Bennettsville Creek	50.22	51 of 126	26-09-85/CH-1A-S038-1-0	42.277541	-75.422003	Bainbridge/ Chenango	I	5	MI	D	N/A	N/A	No	II
DE-1B-S026A	UNT to Masonville Creek	50.97	52 of 126	26-09-85/DE-1B-S026A-1-4	42.278059	-75.407530	Masonville/ Delaware	I	3	MI	D	N/A	N/A	No	II
DE-1H-S026B	UNT to Masonville Creek	50.98	52 of 126	26-09-85/DE-1B-S026A-1-4	42.278121	-75.407343	Masonville/ Delaware	E	19	I	D	N/A	N/A	No	II
DE-1H-S026	Rock Creek	50.98	52 of 126	26-09-85/DE-1B-S026A-1-4	42.278095	-75.407202	Masonville/ Delaware	P	20	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1C-S270	UNT to Masonville Creek	51.13	52 of 126	26-09-85/DE-1C-S270-1-0	42.278621	-75.404419	Masonville/ Delaware	I	4	MI	D	N/A	N/A	No	II
DE-1H-S028	Road Ditch	51.64	53 of 126	26-09-85/DE-1H-S028-1-3	42.278580	-75.394627	Masonville/ Delaware	I	3	MI	N/A	N/A	N/A	No	III
DE-1B-S029	UNT to Susquehanna River	52.54	54 of 126	26-09-85/DE-1B-S029-1-2	42.286679	-75.381730	Sidney/ Delaware	P	9	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1H-S033	UNT to Masonville Creek	53.90	55 of 126	26-09-85/DE-1H-S033-1-2	42.289068	-75.357378	Sidney/ Delaware	P	1	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1H-S013	UNT to Susquehanna River (Collar Brook)	54.50	56 of 126	26-09-85/DE-1H-S013-1-2	42.290996	-75.345867	Sidney/ Delaware	P	80	I	AA	N/A	N/A	No	IV
DE-1H-S013	UNT to Susquehanna River (Collar Brook)	54.53	56 of 126	26-09-85/DE-1H-S013-1-2 26-09-85/DE-1H-S013-OC-1-0	42.291080	-75.345373	Sidney/ Delaware	P	70	I	AA	N/A	N/A	Yes	IV

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
DE-1M-S075	UNT to Susquehanna River	55.11	56 of 126	26-09-85/DE-1M-S075-1-0 26-09-85/DE-1P-W075-OC-1-0	42.292979	-75.334246	Sidney/ Delaware	E	3	MI	C	N/A	N/A	No	IV
DE-1M-S077	UNT to Carrs Creek	55.69	57 of 126	26-09-85/DE-1M-S077-1-0	42.295255	-75.323708	Sidney/ Delaware	E	9	MI	D	N/A	N/A	No	II
DE-1K-S077A	Road Ditch	55.71	57 of 126	26-09-85/DE-1M-S077-1-0	42.295116	-75.323417	Sidney/ Delaware	I	3	MI	N/A	N/A	N/A	No	III
DE-1M-S077	UNT to Carrs Creek	55.77	57 of 126	26-09-85/DE-1M-S077-2-0	42.295204	-75.322502	Sidney/ Delaware	E	19	I	D	N/A	N/A	No	II
DE-1F-S078	UNT to Carrs Creek	55.91	57 of 126	26-09-85/DE-1F-S078-1-4	42.296136	-75.320083	Sidney/ Delaware	P	21	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1C-S269	Road Ditch	56.01	57 of 126	26-09-85/DE-1C-S269-1-0	42.296706	-75.318150	Sidney/ Delaware	E	0	N/A	N/A	N/A	N/A	No	N/A
DE-1C-S110B	UNT to Susquehanna River	57.89	59 of 126	26-09-85/DE-1C-S110B-1-4	42.317555	-75.297472	Sidney/ Delaware	I	7	MI	D	N/A	N/A	No	II
DE-1C-S113C	UNT to Susquehanna River	58.00	59 of 126	26-09-85/DE-1C-S113C-1-3	42.318414	-75.295848	Sidney/ Delaware	P	2	MI	C	N/A	N/A	No	II
DE-1C-S113D	UNT to Susquehanna River	58.10	59 of 126	26-09-85/DE-1C-S113D-1-3	42.319501	-75.294406	Sidney/ Delaware	I	2	MI	D	N/A	N/A	No	II
DE-1N-S079A	UNT to Susquehanna River	58.43	60 of 126	26-09-85/DE-1N-S079A-1-4	42.322340	-75.289522	Sidney/ Delaware	I	0	N/A	D	N/A	N/A	No	N/A
DE-1N-S079	UNT to Susquehanna River	58.43	60 of 126	26-09-85/DE-1N-S079A-1-4	42.322415	-75.289444	Sidney/ Delaware	P	13	I	C	N/A	N/A	No	II
DE-1C-S190	UNT to Susquehanna River	58.78	60 of 126	26-09-85/DE-1C-S190-1-4	42.326083	-75.284755	Sidney/ Delaware	I	7	MI	D	N/A	N/A	No	II
DE-1S-S100	UNT to Pond	58.86	60 of 126	26-09-85/DE-1S-S100-1-3	42.326845	-75.283663	Sidney/ Delaware	E	41	I	D	N/A	N/A	No	II
DE-1N-S101	UNT to Pond	59.05	60 of 126	26-09-85/DE-1N-S101-1-3	42.328975	-75.281727	Sidney/ Delaware	I	19	I	D	N/A	N/A	No	II
DE-1M-S081	UNT to Ouleout Creek	59.58	61 of 126	26-09-85/DE-1M-S081-1-3	42.333371	-75.273152	Sidney/ Delaware	I	8	MI	D	N/A	N/A	No	II

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
DE-1S-S102	UNT to Ouleout Creek	59.90	61 of 126	26-09-85/DE-1S-S102-1-5	42.335344	-75.267459	Sidney/ Delaware	P	21	I	C	N/A	N/A	No	II
DE-1Q-S071	UNT to Ouleout Creek	60.28	61 of 126	26-09-85/DE-1Q-S071-1-3	42.336926	-75.260535	Sidney/ Delaware	I	20	I	D	N/A	N/A	No	II
DE-1P-S129	Ouleout Creek	60.79	62 of 126	26-09-85/DE-1P-S129-1-2	42.342426	-75.254658	Sidney/ Delaware	P	97	I	C(T)	(T)	June 1 - Sep 30	Yes	II
DE-1W-S130	UNT to Ouleout Creek	61.12	62 of 126	26-09-85/DE-1W-S130-1-2	42.344865	-75.250142	Sidney/ Delaware	I	17	I	C	N/A	N/A	No	II
DE-1P-S211	UNT to Susquehanna River	63.13	64 of 126	26-09-85/DE-1P-S211-1-3	42.356278	-75.217768	Sidney/ Delaware	I	0	N/A	C	N/A	N/A	No	N/A
DE-1X-S235	UNT to Susquehanna River	63.94	65 of 126	26-09-85/DE-1X-S235-1-2	42.357003	-75.201897	Sidney/ Delaware	P	8	MI	C	N/A	N/A	No	II
DE-1L-S176	UNT to Susquehanna River	66.24	68 of 126	26-09-85/DE-1L-S176-1-3	42.372948	-75.163487	Franklin/ Delaware	I	7	MI	D	N/A	N/A	No	II
DE-1P-S054	UNT to Ouleout Creek	69.48	71 of 126	26-09-85/DE-1P-S054-1-2	42.388206	-75.106030	Franklin/ Delaware	P	14	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1W-S055A	UNT to Ouleout Creek	70.57	72 of 126	26-09-85/DE-1W-S055A-1-2	42.400949	-75.094819	Franklin/ Delaware	E	0	N/A	D	N/A	N/A	No	N/A
DE-1C-S273	UNT to Ouleout Creek	70.85	72 of 126	26-09-85/DE-1C-S273-1-0	42.403754	-75.091252	Franklin/ Delaware	I	3	MI	D	N/A	N/A	No	II
DE-1P-S056	UNT to Ouleout Creek	70.92	72 of 126	26-09-85/DE-1P-S056-1-3	42.403732	-75.089876	Franklin/ Delaware	P	13	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1P-S056A	UNT to Ouleout Creek	70.95	72 of 126	26-09-85/DE-1P-S056-1-3	42.403753	-75.089319	Franklin/ Delaware	P	3	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1P-S058	UNT to Ouleout Creek	71.77	73 of 126	26-09-85/DE-1P-S058-1-2	42.408700	-75.076297	Franklin/ Delaware	P	12	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1P-S058B	UNT to Ouleout Creek	71.78	73 of 126	26-09-85/DE-1P-S058B-1-2	42.408609	-75.076118	Franklin/ Delaware	I	0	N/A	C(TS)	(TS)	June 1 - Sep 30	Yes	N/A
DE-1C-S192	UNT to Ouleout Creek	71.89	73 of 126	26-09-85/DE-1C-S192-1-2	42.409385	-75.074377	Franklin/ Delaware	I	2	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1C-S192A	UNT to Ouleout Creek	71.90	73 of 126	26-09-85/DE-1C-S192-1-2	42.409457	-75.074270	Franklin/ Delaware	I	2	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1P-S125	UNT to Ouleout Creek	74.19	76 of 126	26-09-85/DE-1P-S125-1-2	42.418050	-75.036883	Davenport/ Delaware	I	3	MI	D	N/A	N/A	No	II

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
DE-1P-S126	UNT to Ouleout Creek	74.30	76 of 126	26-09-85/DE-1P-S126-1-2	42.418785	-75.035113	Davenport/ Delaware	P	30	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1C-S268	Road Ditch	75.31	77 of 126	26-09-85/DE-1C-S268-1-0	42.422607	-75.016856	Davenport/ Delaware	I	4	MI	N/A	N/A	N/A	No	II
DE-1B-S263C	UNT to Charlotte Creek	78.07	80 of 126	26-09-85/DE-1B-S263-1-0	42.424032	-74.965467	Davenport/ Delaware	I	0	N/A	C(TS)	(TS)	June 1 - Sep 30	Yes	N/A
DE-1B-S263	UNT to Charlotte Creek	78.08	80 of 126	26-09-85/DE-1B-S263-1-0	42.424091	-74.965345	Davenport/ Delaware	P	32	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1B-S264	UNT to Charlotte Creek	78.09	80 of 126	26-09-85/DE-1B-S263-1-0	42.424121	-74.965146	Davenport/ Delaware	I	4	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1G-S209	UNT to Charlotte Creek	78.20	80 of 126	26-09-85/DE-1G-S209-1-2	42.423874	-74.963276	Davenport/ Delaware	P	28	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1G-S209A	UNT to Charlotte Creek	78.20	80 of 126	26-09-85/DE-1G-S209A-1-3	42.423812	-74.963279	Davenport/ Delaware	P	0	N/A	C(TS)	(TS)	June 1 - Sep 30	Yes	N/A
DE-1G-S241	Road Ditch	78.24	80 of 126	26-09-85/DE-1G-S209A-1-3	42.423493	-74.962627	Davenport/ Delaware	I	3	MI	N/A	N/A	N/A	No	III
DE-1L-S210	UNT to Charlotte Creek	78.33	80 of 126	26-09-85/DE-1L-S210-1-3	42.423255	-74.961029	Davenport/ Delaware	P	13	I	C	N/A	N/A	No	II
DE-1L-S210A	UNT to Charlotte Creek	78.33	80 of 126	26-09-85/DE-1L-S210-1-3	42.423328	-74.960995	Davenport/ Delaware	I	4	MI	C	N/A	N/A	No	II
DE-1G-S242	UNT to Charlotte Creek	78.63	80 of 126	26-09-85/DE-1G-S242-1-3	42.422955	-74.955201	Davenport/ Delaware	E	5	MI	D	N/A	N/A	Yes	II
DE-1G-S243	UNT to Charlotte Creek	78.64	80 of 126	26-09-85/DE-1G-S242-1-3	42.422935	-74.954945	Davenport/ Delaware	E	3	MI	D	N/A	N/A	Yes	II
DE-1G-S244	UNT to Charlotte Creek	78.66	80 of 126	26-09-85/DE-1G-S242-1-3	42.422946	-74.954526	Davenport/ Delaware	E	0	N/A	D	N/A	N/A	Yes	N/A
DE-1L-S254	UNT to Charlotte Creek	79.08	81 of 126	26-09-85/DE-1L-S254-1-0	42.422283	-74.946436	Davenport/ Delaware	I	17	I	D	N/A	N/A	No	II
DE-1L-S256	UNT to Charlotte Creek	79.12	81 of 126	26-09-85/DE-1L-S254-1-0	42.422081	-74.945822	Davenport/ Delaware	I	12	I	D	N/A	N/A	No	II
DE-1L-S255	UNT to Charlotte Creek	79.18	81 of 126	26-09-85/DE-1L-S254-1-0	42.421846	-74.944730	Davenport/ Delaware	I	11	I	D	N/A	N/A	No	II
DE-1P-S134	UNT to Charlotte Creek	79.86	81 of 126	26-09-85/DE-1P-S134-1-2	42.425211	-74.932685	Davenport/ Delaware	I	11	I	D	N/A	N/A	No	II
DE-1M-S135	UNT to Charlotte Creek	79.95	81 of 126	26-09-85/DE-1P-S134-1-2	42.425108	-74.931060	Davenport/ Delaware	E	15	I	D	N/A	N/A	No	II
DE-1P-S136	UNT to Charlotte Creek	80.26	82 of 126	26-09-85/DE-1P-S136-1-2	42.424659	-74.925003	Davenport/ Delaware	P	1	MI	C	N/A	N/A	No	II

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Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
DE-1P-S138	UNT to Charlotte Creek	80.35	82 of 126	26-09-85/DE-1P-S138-1-3	42.424639	-74.923253	Davenport/ Delaware	P	6	MI	C	N/A	June 1 - Sep 30	No	II
DE-1P-S137	UNT to Charlotte Creek	80.36	82 of 126	26-09-85/DE-1P-S138-1-3	42.424644	-74.923073	Davenport/ Delaware	P	13	I	C	N/A	June 1 - Sep 30	No	II
DE-1G-S207	UNT to Charlotte Creek	80.36	82 of 126	26-09-85/DE-1P-S138-1-3	42.424655	-74.922895	Davenport/ Delaware	P	6	MI	C	N/A	N/A	No	II
DE-1L-S208	UNT to Charlotte Creek	80.37	82 of 126	26-09-85/DE-1P-S138-1-3	42.424626	-74.922777	Davenport/ Delaware	P	4	MI	C	N/A	N/A	No	II
DE-1L-S206	UNT to Charlotte Creek	80.42	82 of 126	26-09-85/DE-1P-S138-1-3	42.424643	-74.921726	Davenport/ Delaware	I	4	MI	D	N/A	June 1 - Sep 30	No	III
DE-1B-S267	UNT to Charlotte Creek	80.50	82 of 126	26-09-85/DE-1B-S267-1-0	42.424634	-74.920306	Davenport/ Delaware	I	13	I	D	N/A	N/A	No	II
DE-1G-S183	Pumpkin Hollow Brook	80.60	82 of 126	26-09-85/DE-1G-S183-1-3	42.425330	-74.918766	Davenport/ Delaware	P	4	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1G-S183B	Pumpkin Hollow Brook	80.60	82 of 126	26-09-85/DE-1G-S183-1-3	42.425442	-74.918838	Davenport/ Delaware	I	0	N/A	D	N/A	N/A	No	N/A
DE-1G-S183C	Pumpkin Hollow Brook	80.60	82 of 126	26-09-85/DE-1G-S183-1-3	42.425418	-74.918783	Davenport/ Delaware	I	3	MI	D	N/A	N/A	No	II
DE-1I-S201/DE-XX-S81.64	Kortright Creek	81.64	83 of 126	26-09-85/DE-1I-S201-1-2	42.434158	-74.902447	Davenport/ Delaware	P	50	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1G-S203	UNT to Kortright Creek	82.01	83 of 126	26-09-85/DE-1G-S203-1-2	42.437123	-74.896605	Davenport/ Delaware	P	12	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1I-S203A	UNT to Kortright Creek	82.01	83 of 126	26-09-85/DE-1G-S203-1-2	42.437180	-74.896450	Davenport/ Delaware	I	3	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1G-S204	UNT to Kortright Creek	82.05	84 of 126	26-09-85/DE-1G-S204-1-3	42.437277	-74.895787	Davenport/ Delaware	E	0	N/A	D	N/A	N/A	No	N/A
DE-1B-S271	UNT to Kortright Creek	83.15	85 of 126	26-09-85/DE-1B-S271-1-3	42.442486	-74.876178	Davenport/ Delaware	P	9	MI	C	N/A	June 1 - Sep 30	No	II
DE-1B-S272	UNT to Kortright Creek	83.42	85 of 126	26-09-85/DE-1B-S272-1-3	42.444391	-74.871647	Davenport/ Delaware	P	15	I	C	N/A	N/A	No	II
DE-1L-S252	UNT to Middle Brook	86.11	88 of 126	26-09-85/DE-1L-S252-1-2	42.457020	-74.823441	Davenport/ Delaware	I	19	I	D	N/A	N/A	No	II
DE-1R-S001	UNT to Middle Brook	87.11	89 of 126	26-09-85/DE-1R-S001-1-4	42.462854	-74.806686	Davenport/ Delaware	I	16	I	C	N/A	N/A	No	II
DE-1C-S117	Mud Lake/UNT to Middle Brook	87.12	89 of 126	26-09-85/DE-1R-S001-1-4	42.462779	-74.806567	Davenport/ Delaware	P	10	MI	C	N/A	N/A	No	II

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Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
DE-1C-S051A	UNT to Middle Brook	87.82	89 of 126	26-20-85/DE-1C-S051A-1-0 26-20-85/DE-1C-S051A-OC-1-0	42.467475	-74.794558	Davenport/ Delaware	P	10	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	IV
DE-1T-S051	Middle Brook	87.87	89 of 126	26-09-85/DE-1T-S051-1-4 26-09-85/DE-1T-S051-OC-1-0	42.467900	-74.793658	Davenport/ Delaware	P	64	I	C(TS)	(TS)	June 1 - Sep 30	Yes	IV
DE-1T-S052	UNT to Middle Brook	88.06	89 of 126	26-09-85/DE-1T-S052-1-3 26-09-85/DE-1T-S052-OC-1-0	42.469261	-74.790592	Davenport/ Delaware	P	15	I	C(TS)	(TS)	June 1 - Sep 30	Yes	IV
DE-1P-S053B	UNT to Middle Brook	88.46	90 of 126	26-09-85/DE-1P-S053-1-4	42.472108	-74.784089	Davenport/ Delaware	I	1	MI	D	N/A	N/A	No	II
DE-1P-S053	UNT to Middle Brook	88.49	90 of 126	26-09-85/DE-1P-S053-1-4	42.472100	-74.783535	Davenport/ Delaware	P	15	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1L-S250	Road Ditch	90.22	92 of 126	26-20-85/DE-1L-S250-1-0	42.490083	-74.760948	Harpersfield/ Delaware	I	1	MI	N/A	N/A	N/A	No	III
SC-1F-S002	UNT to Charlotte Creek	94.60	96 of 126	26-09-85/SC-1F-S002-1-3	42.516501	-74.691606	Summit/ Schoharie	P	13	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1S-S315	UNT to Charlotte Creek	94.61	96 of 126	26-09-85/SC-1F-S002-1-3	42.516604	-74.691479	Summit/ Schoharie	I	4	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1Y-S341	Road Ditch	94.97	96 of 126	26-09-85/SC-1Y-S341-1-0	42.519058	-74.685288	Summit/ Schoharie	I	0	N/A	N/A	N/A	N/A	No	N/A
SC-1Y-S342	Road Ditch	94.97	96 of 126	26-09-85/SC-1Y-S341-1-0	42.519113	-74.685430	Summit/ Schoharie	I	1	MI	N/A	N/A	N/A	No	III
SC-1Q-S286A	Unnamed Pond/UNT to Clapper Hollow Creek	95.20	97 of 126	26-09-85/SC-1C-S325-1-3	42.520851	-74.681505	Summit/ Schoharie	N/A	0	N/A	N/A	N/A	N/A	No	N/A
SC-1C-S325E	UNT to Clapper Hollow Creek	95.20	97 of 126	26-09-85/SC-1C-S325-1-3	42.520965	-74.681649	Summit/ Schoharie	P	0	N/A	C(TS)	(TS)	June 1 - Sep 30	Yes	N/A
SC-1C-S325D	UNT to Clapper Hollow Creek	95.20	97 of 126	26-09-85/SC-1C-S325-1-3	42.521043	-74.681659	Summit/ Schoharie	P	0	N/A	C(TS)	(TS)	June 1 - Sep 30	Yes	N/A

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
SC-1C-S325F	UNT to Clapper Hollow Creek	95.20	97 of 126	26-09-85/SC-1C-S325-1-3	42.521027	-74.681746	Summit/ Schoharie	P	3	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1C-S325	Clapper Hollow Creek	95.21	97 of 126	26-09-85/SC-1C-S325-1-3	42.521081	-74.681841	Summit/ Schoharie	P	21	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1C-S232A	UNT to Clapper Hollow Creek	95.23	97 of 126	26-09-85/SC-1C-S325-1-3	42.521348	-74.682073	Summit/ Schoharie	I	0	N/A	C(TS)	(TS)	June 1 - Sep 30	Yes	N/A
SC-1Q-S284	UNT to Clapper Hollow Creek	95.38	97 of 126	26-09-85/SC-1Q-S284-1-0	42.522471	-74.679752	Summit/ Schoharie	P	6	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1Q-S278	UNT to Clapper Hollow Creek	96.07	98 of 126	26-09-85/SC-1Q-S278-1-2	42.525247	-74.666666	Jefferson/ Schoharie	P	16	I	C(T)	(T)	June 1 - Sep 30	Yes	II
SC-1C-S280	Road Ditch	96.40	98 of 126	26-09-85/SC-1C-S280-1-3	42.527950	-74.661564	Jefferson/ Schoharie	E	1	MI	N/A	N/A	N/A	No	III
SC-1G-S342	UNT to Clapper Hollow Creek	97.43	99 of 126	26-09-85/SC-1G-S342-1-2	42.535310	-74.645602	Jefferson/ Schoharie	I	0	N/A	C(T)	(T)	June 1 - Sep 30	Yes	N/A
SC-1G-S343	UNT to Clapper Hollow Creek	97.44	99 of 126	26-09-85/SC-1G-S342-1-2	42.535386	-74.645410	Jefferson/ Schoharie	P	13	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1C-S329	Road Ditch	97.73	99 of 126	26-09-85/SC-1C-S329-1-2	42.537105	-74.640422	Jefferson/ Schoharie	I	10	MI	N/A	N/A	N/A	No	II
SC-1L-S335	UNT to Clapper Hollow Creek	98.62	100 of 126	26-20-85/SC-1L-S335-1-0	42.542707	-74.625147	Jefferson/ Schoharie	P	42	I	C(T)	(T)	June 1 - Sep 30	Yes	II
SCHOHARIE (HUC 02020005)															
SC-1E-S102	West Kill	101.75	103 of 126	26-09-85/SC-1E-S102-1-3	42.571151	-74.585873	Summit/ Schoharie	P	34	I	C(T)	(T)	June 1 - Sep 30	Yes	II
SC-1E-S104	UNT to West Kill	102.09	104 of 126	26-09-85/SC-1E-S104-1-3	42.574394	-74.581079	Summit/ Schoharie	I	4	MI	C	N/A	N/A	No	II
SC-1E-S105	UNT to West Kill	102.97	104 of 126	26-09-85/SC-1E-S105-1-4	42.585599	-74.574029	Summit/ Schoharie	I	6	MI	D	N/A	N/A	No	II
SC-1M-S013	UNT to Cobleskill Creek	104.06	106 of 126	26-09-85/SC-1M-S013-1-2	42.596606	-74.560902	Summit/ Schoharie	E	1	MI	D	N/A	N/A	No	II

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
SC-1G-S151	Beards Hollow Brook	104.52	106 of 126	26-09-85/SC-1G-S151-1-2	42.602119	-74.556089	Summit/ Schoharie	P	6	MI	C	N/A	N/A	No	II
SC-1Q-S244	UNT to Beards Hollow Brook	104.86	106 of 126	26-09-85/SC-1Q-S244-1-3	42.605504	-74.552196	Summit/ Schoharie	E	2	MI	D	N/A	N/A	No	II
SC-1P-S218	UNT to Beards Hollow Brook	105.24	107 of 126	26-09-85/SC-1P-S218-1-3	42.608532	-74.546191	Richmondville /Schoharie	I	5	MI	D	N/A	N/A	No	II
SC-1P-S218A	UNT to Beards Hollow Brook	105.26	107 of 126	26-09-85/SC-1P-S218-1-3	42.608746	-74.546000	Richmondville /Schoharie	I	4	MI	D	N/A	N/A	No	II
SC-1G-S249	UNT to Beards Hollow Brook	105.65	107 of 126	26-09-85/SC-1G-S249-1-2	42.612444	-74.540292	Richmondville /Schoharie	I	7	MI	D	N/A	N/A	No	II
SC-1L-S166	UNT to Cobleskill Creek	105.81	107 of 126	26-09-85/SC-1L-S166-1-3	42.612970	-74.537364	Richmondville /Schoharie	P	15	I	C	N/A	N/A	No	II
SC-1L-S166A	UNT to Cobleskill Creek	105.82	107 of 126	26-09-85/SC-1L-S166A-1-0	42.612834	-74.537229	Richmondville /Schoharie	P	0	N/A	C	N/A	N/A	No	N/A
SC-1L-S164	UNT to Cobleskill Creek	106.18	108 of 126	26-09-85/SC-1L-S164-1-3	42.614111	-74.530801	Richmondville /Schoharie	I	4	MI	C	N/A	N/A	No	II
SC-1I-S297	UNT to Cobleskill Creek	106.39	108 of 126	26-09-85/SC-1I-S297-1-3	42.616158	-74.527807	Richmondville /Schoharie	E	2	MI	D	N/A	N/A	No	II
SC-1J-S300	UNT to Cobleskill Creek	106.46	108 of 126	26-09-85/SC-1J-S300-1-2	42.616909	-74.526710	Richmondville /Schoharie	E	0	N/A	C	N/A	N/A	No	N/A
SC-1J-S298	UNT to Cobleskill Creek	106.48	108 of 126	26-09-85/SC-1J-S300-1-2	42.617068	-74.526384	Richmondville /Schoharie	E	1	MI	D	N/A	N/A	No	II
SC-1L-S195	UNT to Cobleskill Creek	106.55	108 of 126	26-09-85/SC-1L-S195-1-2	42.617608	-74.525357	Richmondville /Schoharie	E	1	MI	D	N/A	N/A	No	II
SC-1L-S264	UNT to Cobleskill Creek	106.57	108 of 126	26-09-85/SC-1L-S195-1-2	42.617783	-74.524987	Richmondville /Schoharie	E	1	MI	D	N/A	N/A	No	II
SC-1L-S165A	UNT to Cobleskill Creek	106.59	108 of 126	26-09-85/SC-1L-S165A-1-3	42.617999	-74.524574	Richmondville /Schoharie	I	5	MI	D	N/A	N/A	No	II

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
SC-1L-S265	UNT to Cobleskill Creek	106.61	108 of 126	26-09-85/SC-1L-S165A-1-3	42.618107	-74.524504	Richmondville /Schoharie	E	1	MI	D	N/A	N/A	No	II
SC-1L-S165B	UNT to Cobleskill Creek	106.62	108 of 126	26-09-85/SC-1L-S165A-1-3	42.618390	-74.524379	Richmondville /Schoharie	I	6	MI	C	N/A	N/A	No	II
SC-1Q-S165C	UNT to Cobleskill Creek	106.66	108 of 126	26-09-85/SC-1Q-S165C-1-3	42.618912	-74.524080	Richmondville /Schoharie	I	0	N/A	D	N/A	N/A	No	N/A
SC-1L-S267	UNT to Cobleskill Creek	107.00	108 of 126	26-09-85/SC-1L-S267-1-4	42.622768	-74.520192	Richmondville /Schoharie	P	4	MI	C	N/A	N/A	No	II
SC-1C-S271	UNT to Cobleskill Creek	108.80	110 of 126	26-09-85/SC-1C-S271-1-2	42.632224	-74.488946	Richmondville /Schoharie	E	10	MI	D	N/A	N/A	No	II
SC-1C-S279	UNT to Cobleskill Creek	109.13	111 of 126	26-09-85/SC-1C-S279-1-2	42.634083	-74.483149	Richmondville /Schoharie	E	5	MI	D	N/A	N/A	No	II
SC-1C-S278	UNT to Cobleskill Creek	109.14	111 of 126	26-09-85/SC-1C-S279-1-2	42.634228	-74.482858	Richmondville /Schoharie	E	7	MI	D	N/A	N/A	No	II
SC-1Q-S274	UNT to House Creek	109.49	111 of 126	26-09-85/SC-1Q-S274-1-3	42.634131	-74.476586	Richmondville /Schoharie	I	0	N/A	D	N/A	N/A	No	N/A
SC-1Q-S273	UNT to House Creek	109.51	111 of 126	26-09-85/SC-1Q-S274-1-3	42.633952	-74.476192	Richmondville /Schoharie	I	2	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1Q-S280	UNT to House Creek	109.70	111 of 126	26-09-85/SC-1I-S280-1-2	42.634037	-74.472394	Richmondville /Schoharie	P	5	MI	C	N/A	N/A	No	II
SC-1I-S280A	UNT to House Creek	109.72	111 of 126	26-09-85/SC-1I-S280-1-2	42.634185	-74.472061	Richmondville /Schoharie	I	8	MI	D	N/A	N/A	No	II
SC-1C-S186	House Creek	110.10	112 of 126	26-09-85/SC-1C-S186-1-3	42.635982	-74.465168	Cobleskill/ Schoharie	P	30	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1C-S186A	UNT to House Creek	110.28	112 of 126	26-09-85/SC-1C-S186A-1-4	42.636843	-74.461787	Cobleskill/ Schoharie	P	15	I	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1C-S187	Road Ditch	110.56	112 of 126	26-09-85/SC-1C-S187-1-3	42.638253	-74.456539	Cobleskill/ Schoharie	E	2	MI	N/A	N/A	N/A	No	III
SC-1C-S331	UNT to House Creek	110.57	112 of 126	26-09-85/SC-1C-S187-1-3	42.638288	-74.456408	Cobleskill/ Schoharie	I	1	MI	D	N/A	N/A	No	III

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
SC-1C-S332	UNT to House Creek	110.76	112 of 126	26-09-85/SC-1C-S332-1-0	42.639151	-74.452937	Cobleskill/ Schoharie	P	8	MI	D	N/A	N/A	No	II
SC-1P-S019	UNT to Limekiln Creek	113.39	115 of 126	26-09-85/SC-1P-S019-1-3	42.650149	-74.407882	Middleburgh/ Schoharie	P	7	MI	C	N/A	N/A	No	II
SC-1M-S018	UNT to Limekiln Creek	113.75	115 of 126	26-09-85/SC-1M-S018-1-3	42.653837	-74.402852	Middleburgh/ Schoharie	E	1	MI	C	N/A	N/A	No	II
SC-1N-S016	UNT to Limekiln Creek	114.51	116 of 126	26-09-85/SC-1N-S016-1-0	42.659327	-74.390340	Middleburgh/ Schoharie	E	3	MI	D	N/A	N/A	No	II
SC-1Q-S289	Schoharie Creek	119.75	121 of 126	26-09-85/SC-1Q-S289-1-2 26-09-85/SC-1Q-S289-OC-1-0	42.702126	-74.317183	Schoharie/ Schoharie	P	248	MA	C	N/A	Jul 16 - Feb 28	Yes (Navigable River)	V
SC-1Q-S291	UNT to Schoharie Creek	119.89	121 of 126	26-09-85/SC-1Q-S291-1-0	42.703300	-74.314854	Schoharie/ Schoharie	E	6	MI	D	N/A	N/A	No	II
SC-1D-S181A	UNT to Schoharie Creek	120.49	122 of 126	26-09-85/SC-1D-S181-1-3	42.707117	-74.305161	Schoharie/ Schoharie	I	3	MI	D	N/A	N/A	No	II
SC-1D-S181	UNT to Schoharie Creek	120.49	122 of 126	26-09-85/SC-1D-S181-1-3	42.707083	-74.305120	Schoharie/ Schoharie	E	3	MI	D	N/A	N/A	No	II
SC-1C-S180/SC-XX-S120.70	UNT to Schoharie Creek	120.70	122 of 126	26-09-85/SC-1D-S180-1-2	42.707430	-74.301038	Schoharie/ Schoharie	P	3	MI	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1G-S196	UNT to Schoharie Creek	122.54	124 of 126	26-09-85/SC-1G-S196-1-2	42.702763	-74.269642	Schoharie/ Schoharie	P	11	I	C	N/A	N/A	No	II
SC-1Q-S060	Louse Kill	123.95	125 of 126	26-09-85/SC-1Q-S060-1-2	42.700538	-74.243016	Schoharie/ Schoharie	I	19	I	C	N/A	N/A	No	II
Pipeline Total Crossing Length									**2,838**						
WATERBODIES ASSOCIATED WITH ACCESS ROADS															
UPPER DELAWARE (HUC 02040101)															
BR-1L-S223 PAR21	UNT to Fly Creek	27.80	Not on Alignments	PAR-21-BR-1L-S223/BR-1L-S223A	42.020591	-75.518976	Sanford /Broome	P	0	N/A	B(T)	(T)	June 1 - Sep 30	Yes	N/A
BR-1L-S223A PAR21	UNT to Fly Creek	27.80	Not on Alignments	PAR-21-BR-1L-S223/ BR-1L-S223A	42.020591	-75.518976	Sanford / Broome	E	0	N/A	D	N/A	N/A	No	N/A

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
BR-1L-S224 PAR21	UNT to Fly Creek	27.80	Not on Alignments	PAR-21-BR-1L-S224	42.022147	-75.518972	Sanford /Broome	E	0	N/A	D	N/A	N/A	No	N/A
BR-1B-S056A PAR27	UNT to Oquaga Creek	33.80	35 of 126	PAR-27-BR-1B-S056A	42.095449	-75.481314	Sanford /Broome	P	0	N/A	C(TS)	(TS)	June 1 - Sep 30	Yes	Existing Culvert/ Bridge
UPPER SUSQUEHANNA (HUC 02050101)															
BR-1B-S073 PAR31	UNT to Cornell Creek	40.65	42 of 126	PAR-31-BR-1B-S072/BR-1B-S073	42.177907	-75.507061	Sanford /Broome	E	0	N/A	D	N/A	N/A	No	N/A
BR-1B-S072 PAR 31	Road Ditch	40.65	42 of 126	PAR-31-BR-1B-S072/BR-1B-S073	42.178114	-75.506545	Sanford /Broome	E	N/A	N/A	N/A	N/A	N/A	No	Existing Culvert
CH-1H-S016 PAR33	UNT to Cornell Creek	43.63	45 of 126	PAR-33-CH-1H-S016	42.213479	-75.501847	Afton/ Chenango	P	N/A	N/A	C	N/A	June 1 - Sep 30	No	Existing Culvert
DE-1C-S186 PAR-36	Road Ditch	52.10	53 of 126	Pending final design	42.280396	-75.394777	Masonville/ Delaware	E	0	N/A	N/A	N/A	N/A	No	Existing Culvert
DE-1K-S189 PAR37	UNT to Pond	58.84	60 of 126	PAR-37-DE-1K-S189	42.328796	-75.284071	Sidney/ Delaware	I	0	N/A	D	N/A	N/A	No	Existing Culvert/ Bridge
DE-1J-S225 PAR 44	Ouleout Creek	69.98	71 of 126	PAR 44-DE-1J-S225	42.389992	-75.095052	Franklin/ Delaware	P	N/A	N/A	C(TS)	(TS)	N/A	Yes	N/A
DE-1J-S226 PAR44	UNT to Ouleout Creek	69.98	Not on Alignments	PAR-44-DE-1J-S226	42.390695	-75.095978	Franklin/ Delaware	I	0	N/A	C(TS)	(TS)	June 1 - Sep 30 (only applicable if replacing culvert)	Yes	Existing Culvert/ Bridge
DE-1J-S226 PAR44	UNT to Ouleout Creek	69.98	Not on Alignments	PAR-44-DE-1J-S226	42.390713	-75.095915	Franklin/ Delaware	I	0	N/A	C(TS)	(TS)	June 1 - Sep 30 (only applicable if replacing culvert)	Yes	N/A
DE-1D-S237 PAR45	UNT to Ouleout Creek	70.51	Not on Alignments	PAR-45-DE-1D-S237/DE-1D-S238	42.391467	-75.093378	Franklin/ Delaware	P	N/A	N/A	C(TS)	(TS)	N/A	Yes	N/A
DE-1D-S238 PAR45	UNT to Ouleout Creek	70.51	Not on Alignments	PAR-45-DE-1D-S237/DE-1D-S238	42.394770	-75.094566	Franklin/ Delaware	I	0	N/A	C(TS)	(TS)	N/A	Yes	N/A
DE-1B-S217 PAR46[k]	UNT to Ouleout Creek	72.60	Not on Alignments	Pending final design	42.423449	-75.072926	Franklin /Delaware	I	8	MI	C(TS)	(TS)	N/A	Yes	Permanent Culvert/ Bridge

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]
DE-1Q-S260 PAR54	UNT to Kortright Creek	84.30	86 of 126	PAR-54-DE-1Q-S260	42.448381	-74.854225	Davenport/ Delaware	I	3	MI	D	N/A	N/A	No	Permanent Culvert/ Bridge
SCHOHARIE (HUC 02020005)															
SC-1D-S361 PAR66	UNT to Cobleskill Creek	103.44	Not on Alignments	PAR-66-SC-1D-S361/SC-1D-S361A	42.590567	-74.575034	Summit/ Schoharie	E	0	N/A	D	N/A	N/A	No	N/A
SC-1D-S361A PAR66	UNT to Cobleskill Creek	103.44	Not on Alignments	PAR-66-SC-1D-S361/SC-1D-S361A	42.590645	-74.574364	Summit/ Schoharie	E	N/A	N/A	D	N/A	N/A	No	N/A
SC-1L-S163 PAR 68	UNT to Cobleskill Creek	106.45	108 of 126	PAR-68-SC-1J-S300/SC-1L-S165/SC-1L-S163	42.617640	-74.527012	Richmondville /Schoharie	E	5	MI	D	N/A	N/A	No	Proposed Culvert
SC-1L-S165 PAR68	UNT to Cobleskill Creek	106.45	108 of 126	PAR-68-SC-1J-S300/SC-1L-S165/SC-1L-S163	42.617020	-74.527050	Schoharie/ Schoharie	E	N/A	N/A	C	N/A	N/A	No	N/A
SC-1J-S300 PAR68	UNT to Cobleskill Creek	106.45	108 of 126	PAR-68-SC-1J-S300/SC-1L-S165/SC-1L-S163	42.617020	-74.527050	Schoharie/ Schoharie	E	N/A	N/A	C	N/A	N/A	No	N/A
SC-1A-S364 PAR73a	Unnamed Pond	120.56	122 of 126	PAR-73a-SC-1A-S364	42.706127	-74.303390	Schoharie/ Schoharie	N/A	0	N/A	N/A	N/A	N/A	No	Existing culvert/ Bridge
Access Road Total Crossing Length									**16**						
Total Crossing Length New York									**2,854**						

Table 3.2-1 Waterbodies Crossed by the Constitution Pipeline - Pipeline Facilities - New York

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Alignment Sheet Number	Waterbody Crossing Site-Specific Drawing Number	Latitude	Longitude	Town / County	Type[d]	Crossing Length (feet)[e]	FERC Class[f]	Water Quality Standard[g]	Fishery Class[h]	State Fishery Construction Window[i]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[j]

Note: This table has been entirely updated since the August 2013 submittal.
N/A = Not Applicable
a: Waterbody features with "XX" indicate a portion of the feature is located on a no access parcel. The feature has been identified through field delineation where access has been granted, and as an NHD/NYSDEC waterbody where access has not been granted.
b: UNT: Unnamed Tributary. UNT name was identified based on review of USGS topographical mapping.
c: MP provided for access roads indicate the point at which the access road meets the proposed pipeline.
d: P = perennial; I = intermittent; POW = open water; E = Ephemeral.
e: 0.0 = waterbody is not crossed but is in workspace. For minor waterbodies less than 3 feet in width delineated in the survey area and shown as a single line feature on the Project alignment sheets, an assumed 3 foot width has been used for this analysis. For USGS NHD waterbody data used to identify waterbodies on no-access parcels and shown as a single line feature on the Project alignment sheets, an assumed 3 foot width has been used for this analysis. Where tree canopy cover allowed for suitable analysis, scaled aerial photography was used to estimate crossing length for these NHD stream features.
f: MI = Minor (<10 feet); I = Intermediate (>10 - <100 feet); MA = Major (>100 feet).
g: NY Water Quality Standards Definition: Water quality standards based on the classification and best use of waterbody as determined by NYSDEC (6 NYCRR Parts 815, 879, 931).
h: N/A = Not applicable, no state fishery classification; NY Fishery Classifications: T = Trout; TS = Trout Spawning (6 NYCRR 701.25).
i: Construction Windows for cold water fisheries are a based on correspondence from P. Desnoyers of NYSDEC to Secretary K. Bose of FERC dated May 28, 2013, which include NYSDEC's Best Management Practices (BMPs) for Gas Transmission Line Construction Projects (dated May 16, 2013). Section 3.0 includes Stream and Wetland Protection Procedures. Potential timing restrictions reflect dates during which construction activities may occur. Streams with no construction timing restrictions, shown as "N/A" on the Table, do not have timing restrictions for construction based on NYSDEC regulations and consultations. Waterbody-specific assignment of construction window based on in-field consultation with the NYSDEC.
j: I = Wet Open Cut Method; II = Dry Crossing Method, including Flume or Dam and Pump, Cofferdam, or Dry Open Cut for waterbodies that are dry at the time of crossing; Method III = Conventional Bore; IV = HDD, V = Direct Pipe Method. Intermittent waterbodies containing discernible flow at the time of construction will be crossed using a dry crossing method, unless otherwise authorized by applicable regulatory agencies.
k: PAR46 is still being designed. Therefore a width of 40' has been used for construction impact calculations and a width of 24' has been used for operations impact calculations.

Waterbody types were classified as perennial, intermittent, or ephemeral. Perennial waterbodies were categorized as those that flow throughout the year. Intermittent watercourses were categorized as waterbodies that carry water during portions of the year and may be supplied by ground water part of the year. During other portions of the year, intermittent streams do not convey water flow. Ephemeral waterbodies were categorized as those that flow only during or subsequent to a precipitation event.

As part of Constitution's reporting requirements to the FERC, waterbodies are characterized into three main categories depending on the width of the waterbody. The categories are as follows:

- A "minor waterbody" includes waterbodies less than or equal to 10 feet wide at the edges of water at the time of construction.
- An "intermediate waterbody" includes waterbodies greater than 10 feet wide but less than or equal to 100 feet wide at the edges of water at the time of construction.
- A "major waterbody" includes waterbodies greater than 100 feet wide at the edges of water at the time of construction.

Table 3.2-2 provides a summary of waterbodies crossed by the Project as classified by the three categories of the FERC (i.e., minor, intermediate, major). The majority of the waterbody crossings for the Project are minor or intermediate crossings.

Table 3.2-2 Summary of Waterbody Crossings for the Constitution Pipeline - Pipeline Facilities by FERC Classification[ab]

State	Minor <10 feet	Intermediate >10 - ≤100 feet	Major >100 feet	Total
New York	113	73	2	188

This table has been entirely replaced since the August submittal

a: Waterbodies in the workspace but not crossed by the pipeline are not counted in this table as crossings.

b: Waterbodies impacted by access roads are not counted in this table as crossings.

c: For this table, the Bennettsville Creek crossings CH-1A-S010, CH-1A-S010B, CH-1A-S010C, and CH-1A-S010D were counted together as one major crossing.

3.2.2 NYSDEC Protection of Waters

New York's Article 15, Title 5 of the Environmental Conservation Law (ECL), referred to as Protection of Waters, prohibits the unauthorized disturbance of certain protected streams and water bodies to prevent unreasonable erosion of soil, increased turbidity of the waters, irregular variations in velocity, temperature and level of waters, loss of fish and aquatic wildlife, destruction of natural habitat, and the danger of flood or pollution.

In New York, waterbodies are assigned classifications and standards under the New York State Water Quality Standards Program (6 NYCRR Part 701 et seq.). All waters in New York are assigned a letter classification that denotes their best uses. Letter classes, such as A, B, C, and D (the lowest classification), are assigned to fresh surface waters. Best uses include sources of drinking water, swimming, boating, fishing, and shellfishing areas. The letter classifications and their best uses are described in regulation 6 New York Code of Rules and Regulations (NYCRR) Part 701 and are

summarized below. Waterbodies with classifications of A, B, and C may also have a standard of (T) or (TS) indicating that they may support trout populations, or trout spawning, respectively. Special requirements apply to sustain these waters for fishery resources. Streams and small water bodies located in the course of a stream that are designated as C(T) or higher (i.e., C(T), C(TS), B, A or AA) are referred to collectively as "protected streams," and are regulated by NYSDEC under its Protection of Waters Program regulations (6 NYCRR Part 608) (NYSDEC 2012b).

Stream water quality classifications and standards in the Project area include AA, B, B(T), C(T), C(TS), C and D. These stream water quality classifications and standards are shown on Figure 4 in Attachment B. The majority of the surface waters in the Project area in New York are classified as C and D. The classifications of waters crossed by the Project are included in Table 3.2-1 in Section 3.2.1.

Regulated activities in protected streams include modifications or disturbance of the bed or banks, including temporary removal of sand and gravel in the channel or the placement of fill or excavation below the mean high water level in navigable waters of the state. According to 6 NYCRR Part 608.1(b), "bed" means that land area of a watercourse covered by water at mean high water. The jurisdictional limit of the Protection of Waters is understood to be the mean high water mark of all navigable waters (regardless of water quality class and standard) and a minimum of 50 feet from the mean high water mark of a protected waterbody and potentially further as determined by NYSDEC based on the site-specific slope conditions. Under 6 NYCRR Part 608.1(a), "banks" include the land area immediately adjacent to and which slopes toward the bed of a watercourse and which is necessary to maintain the integrity of the watercourse. A bank will not be considered to extend more than 50 feet horizontally from the mean high water line; with the following exception: Where a generally uniform slope of 45 degrees (100%) or greater adjoins the bed of a watercourse, the bank is extended to the crest of the slope or the first definable break in slope, either a natural or constructed (road, or railroad grade) feature lying generally parallel to the watercourse. Table 3.2-3 provides a list of locations where ATWS areas will be located within ~~50 feet from the edge of a waterbody.~~regulated areas (i.e. waterbodies, wetlands, and state-regulated 100-foot adjacent areas).

Constitution has consulted with the NYSDEC Division of Fish, Wildlife, and Marine Resources staff regarding review of current stream water quality and standard classifications pending changes to existing classifications and timing restrictions (Tomasik 2013a; Lemon 2013a, 2013b, and 2013c). NYSDEC provided Constitution with several revised stream classifications that are currently pending (VanMaaren 2013, Lemon 2013a). The NYSDEC revised stream classifications provided by the NYSDEC have been presented in Table 3.2-1.

Table 3.2-3 Additional Temporary Workspace in Regulated Areas Associated with Construction of the Constitution Pipeline in New York[a, e, h]

ATWS ID #	Township/ Town	County	Start Milepost	End Milepost	Nominal Dimensions[b] (feet)		Area Affected[e] (square feet)	Area Affected[e] (acres)	Existing Land Use[c]	Wetland or Waterbody	Distance from Wetland or Waterbody	Justification[d]
					Width	Length						
ATWS 131	Sanford	Broome	28.89	28.93	50	198	8,914	0.20	OL, RE, WB	BR-1J-S170	0	a
ATWS 156	Sanford	Broome	33.29	33.32	50	150	7,500	0.17	PSS	BR-1I-W059	0	b
ATWS 247	Afton	Chenango	47.40	47.47	65	388	23,116	0.53	AG, PEM	CH-1C-W018	0	c
ATWS 275	Sidney	Delaware	55.23	55.28	100	250	22,512	0.52	PEM, PFO, OL, UF	DE-1F-W075	0	c
ATWS 551[g]	Schoharie	Schoharie	119.55	119.70	150	815	94,427	2.17	AG, OL, RD, PEM	SC-1L-W399, SC-1J-W398	0, 1	d
Total							156,469	3.59				

This table has been entirely replaced since the August 2013 submittal.

a:. Areas of temporary workspace that are greater than 75 feet within a wetland but do not include ATWS are not included in this table

b: Several ATWS areas are irregularly shaped - dimensions of such areas are approximate.

c: AG = Agricultural; ID = Industrial; RE = Residential; RD = Roads; OL = Open Land (existing ROW, Open Field, Non-agriculture); PFO = Palustrine Forested Wetlands; PSS = Palustrine Scrub-Shrub Wetlands; PEM = Palustrine Emergent Wetlands; WB = Waterbody; UF = Upland Forest.

d: a=road bore; b=powerline crossing; c=HDD Crossing, d=direct pipe drill crossing.

e: Area shown is the actual area of the ATWS shape, calculated using GIS software. Nominal length x width will only match this area if the ATWS is a perfect rectangle. If the shape is not a perfect rectangle, the nominal length x width will only give approximate area of the shape.

3.2.2.1 Water Quality Classifications and Standards

Waterbodies and watersheds crossed by the Project are assigned the following water quality classifications and standards pursuant to 6 NYCRR Parts 700 through 704, Part 815 (Delaware River Drainage Basin), Part 879 (Schoharie Creek Drainage Basin), and Part 931 (Susquehanna River Drainage Basin).

Information on waterbody classifications and standards, including fishery type for each waterbody crossed by the Project in New York were determined through review of the NYS Water Quality Classifications as well as through consultation with NYSDEC Bureau of Fisheries staff in both Region 4 and Region 7 (Bishop 2012; Fraine 2012; Van Maaren 2013). Information related to the specific parameter associated with a water quality standard class is included in 6 NYCRR Part 703 and 704.

3.2.3 Sensitive Surface Waters

Constitution's review indicates that none of the surface waters crossed by the proposed Project in New York are included on the National Rivers Inventory, National Wild and Scenic Rivers list, or the state Wild, Scenic, and Recreational Rivers list (NPS 2012; National Wild and Scenic Rivers Program 2012; NYSDEC 2012c).

3.2.3.1 Cold Water Fisheries

Data on fishery type and presence of sensitive fisheries for each stream crossed by the alignment in New York were identified by Constitution through review of the New York State Water Quality Classifications GIS data layer as well as through direct consultation with NYSDEC Bureau of Fisheries (Bishop 2012; Fraine 2012; VanMaaren 2013). The majority of waterbodies crossed in New York are considered to support coldwater fisheries with the exception of Schoharie Creek, which contains warmwater fishery habitat characteristics. Correspondence received from the NYSDEC Bureau of Fisheries and review of available GIS data identified waterbodies crossed by the Project that have the habitat to support coldwater fisheries (Bishop 2012, Fraine 2012, VanMaaren 2013, Lemon 2013a, Lemon 2013b, Lemon 2013c). Table 3.2-1 lists waterbodies along the pipeline that have been identified by NYSDEC to date as supporting sensitive fisheries in New York.

Waterbodies with classifications of B and C that also have a standard of (T) or (TS) indicating that they may support trout populations, or trout spawning, respectively are regulated by the NYSDEC with an allowable in-stream construction work window policy that limits activities such that they may occur between June 1 and September 30 based on the Recommended Best Management Practices for Gas Transmission Line Construction Projects (NYSDEC 2013a). Table 3.2-4 summarizes the number of streams crossed by the Project that are classified as cold water fisheries.

Table 3.2-4 Summary of Waterbodies Containing Cold Water Fisheries Crossed by the Project in New York

County	State Water Quality Standard[a]	Number of Waterbody Crossings[b]	Proposed Crossing Method[c]
Broome	B(T)	4	II
	C(T)	12	II
	C(T)	1	III
	C(TS)	3	II
Chenango[d]	C(T)	2	II
	C(T)	1	IV
	C(TS)	2	II
	C(TS)	1	III
Delaware	C(T)	1	II
	C(TS)	21	II
		3	IV
Schoharie	C(T)	3	II
	C(TS)	10	II
Total		**64**	-

This table has been entirely updated since the August submittal

a: NY Water Quality Standards Definition: Water quality standards based on the classification and best use of waterbody as determined by NYSDEC (6 NYCRR Parts 815, 879, 931); T = Trout; TS = Trout Spawning (6 NYCRR 701.25).
b: Waterbodies impacted by access roads are not counted in this table as crossings.
c: II = Dry Crossing Method, including Flume and Dam and Pump (Intermittent streams containing discernible flow at the time of construction will be crossed using a dry crossing method); III = Conventional Bore; IV = HDD.
d: For this table, the Bennettsville Creek crossings CH-1A-S010, CH-1A-S010B, CH-1A-S010C, and CH-1A-S010D were counted together as one HDD crossing.

3.2.3.2 Impaired Waters

Review of the United States Environmental Protection Agency (USEPA) NEPAssist online GIS data viewer did not identify any impaired streams crossed by the Project in New York. Review of the New York State Proposed Final 2012 Section 303(d) list (July 2012) identified the Susquehanna River (minor tributaries to lower) in Broome County and Cobleskill Creek (lower and tributaries) in Schoharie County as impaired waters. Cobleskill Creek is a Class C water listed for pathogens, with a water treatment facility identified as the pollutant source, and the Susquehanna River is a Class C water listed for phosphorous, with agriculture and urban runoff listed as the pollutant source (NYSDEC 2012d). Review of the NYSDEC GIS data layer Waterbody Inventory and Priority Waterbodies List (WI/PWL) did not identify any crossings of listed streams. Constitution will adhere to its ECP during construction and operation of the Project; therefore, the Project will not impact any water quality management and improvement plans associated with listed waters in the vicinity of the Project, including NYSDEC's

Watershed Implementation Plan for the New York Susquehanna and Chemung River Basins (NYSDEC 2010 and 2013b).

3.2.3.3 Public Drinking Water Watersheds

Residents in the Project area in New York mainly depend on private wells as a primary source of drinking water. The proposed alignment crosses an unnamed tributary to the Susquehanna River in Sidney, Delaware County, New York. This tributary (DE-1H-S013) is a Class AA waterbody under the New York State Water Quality Classifications. The tributary (known locally as Collar Brook) flows into The Pine Hill Reservoirs, owned by the Village of Sidney. According to the *Village of Sidney Annual Drinking Water Report for 2011*, this reservoir supply system is not currently in use for drinking water, but is available for backup, if needed (Village of Sidney 2011). This class AA water will be crossed using trenchless methods of construction involving Horizontal Directional Drilling (HDD).

3.2.3.4 Floodplains and Flood Hazard Zones

Constitution has reviewed National Flood Insurance Program, Flood Insurance Rate Maps (FIRM) issued by the Federal Emergency Management Agency (FEMA) to identify Special Flood Hazard Areas (SFHAs), including those areas subject to flooding by the one percent annual chance flood (i.e., a 100-year flood event). FEMA Flood Hazard Zones crossed by the Constitution Pipeline are identified in Table 3.2-5

Table 3.2-5 FEMA Flood Hazard Zones Crossed by the Constitution Pipeline in New York

Stream Name	Feature ID[a]	Milepost	Town	County	FEMA Flood Zone
Lander's Creek	CH-1A-S048	42.29-45.30	Afton	Chenango	Zone A SFHA
Carrs Creek	N/A	56.68-56.80	Sidney	Delaware	Zone A SFHA
Ouleout Creek	DE-1P-S129 DE-1P-S129A	60.72-60.73 60.78-60.80	Sidney	Delaware	Zone AE Floodway, Zone AE SFHA, Zone X Flood Area
Schoharie Creek	SC-1Q-S289	119.67-119.98	Schoharie	Schoharie	Zone AE Floodway, Zone AE SFHA, Zone X Flood Area

This table has been entirely updated since the August submittal

Source: FEMA 2004, 2010, 2012, and 2013a, b, c, d, e, f.
N/A = Not Available
a: No aboveground facilities are located within a FEMA Flood Hazard Zone.

3.2.4 Hydrostatic Test Water and Water Withdrawal

In compliance with USDOT specifications, Constitution will conduct hydrostatic tests on the pipeline to verify its structural integrity prior to placement in service. Integrity is tested by capping pipeline

segments with test manifolds and filling the capped segments with water. The water is then pressurized at or above the maximum allowable operating pressure of the pipeline and held for 8 hours (4 hours for pre-tested, pre-fabricated units or short visible sections). Any significant loss of pressure indicates that a leak may have occurred and that the pipeline needs to be repaired and re-tested prior to being put into service.

The source of the water used for testing is typically taken from local streams, rivers, or potable water supply systems. Hydrostatic testing of the pipeline will be performed in multiple sections along the Project due to changes in ground elevation. The sections will be selected based on the length of the section and/or elevation change of the terrain. Hydrostatic testing activities will be performed in compliance with applicable regulatory requirements.

Preliminary evaluations have identified four water withdrawal sources to be used to complete the hydrostatic testing in New York including Oquaga Creek, Ouleout Creek, Kortright Creek, and Schoharie Creek. The withdrawal location will be at or near the construction corridor. The withdrawal is expected to occur between December and March, with water being held in the pipe for a maximum of 14 days. All discharge locations will be sited within a well vegetated upland area within the same watershed. No inter-basin transfers are expected to occur as a result of the hydrostatic testing. Constitution is in the preliminary stage of coordinating with the Susquehanna River Basin Commission (SRBC), the Delaware River Basin Commission (DRBC) and the NYSDEC. When the water withdrawal plan is complete, Constitution will apply for the appropriate water withdrawal permits. Constitution anticipates filing in the first quarter 2014 for the following permits associated with the withdrawal and discharge of hydrostatic test water: SRBC Water Withdrawal Permit, Hydrostatic Test Water Discharge General Permit (PAG 10), DRBC Water Withdrawal and Discharge Permit, NYSDEC Water Withdrawal Permit and a General Permit for Discharge of Stormwater Associated with Construction Activities.

If required, and as approved by applicable regulatory agencies, any clearing / disturbance associated with withdrawing water from a nearby waterbody will be kept to the minimum needed to install the above ground withdrawal pipe. Impacts will be minimized by implementation of applicable best management practices to prevent erosion and sedimentation and permanently stabilize and restore the disturbed area. Potential sources of hydrostatic test water for the proposed Project in New York are supplied in Table 3.2-6.

Table 3.2-6 Potential Sources of Hydrostatic Test Water for the Constitution Pipeline Project in New York

Potential Source(s)	HUC-8 Watershed	Approximate Withdrawal Milepost	Estimated Potential Quantity of Water Required (Gallons)
Oquaga Creek	Upper Delaware (02040101)	32.92	2,629,575
Ouleout Creek	Upper Susquehanna (02050101)	60.79	6,233,571
Kortright Creek	Upper Susquehanna	81.64	2,040,627

Table 3.2-6 Potential Sources of Hydrostatic Test Water for the Constitution Pipeline Project in New York

Potential Source(s)	HUC-8 Watershed	Approximate Withdrawal Milepost	Estimated Potential Quantity of Water Required (Gallons)
	(02050101)		
Schoharie Creek	Schoharie (02020005)	119.75	5,688,747
		New York Total	**16,592,520**

This table has been entirely updated since the August submittal

Due to the topographic changes along the proposed alignment, multiple test sections are required to meet the pressure requirements for an acceptable test. Test sections are selected based on several factors, including the pipe parameters, the elevation changes within the alignment, the target design pressure of 1,480 pound force per square-inch gauge (psig), and the class locations of the pipeline. To the extent practicable, Constitution will transfer hydrostatic test water from one test segment to the next, to reduce the volume of testing water required.

Upon completion of the hydrostatic tests, the wastewater will be discharged to an upland area through a dewatering structure consisting of an energy dissipation device and water filtration structure. Environmental impacts from withdrawal and discharge of test water will be minimized by utilizing the measures outlined in Constitution's ECP for this Project, as well as by complying with applicable regulatory requirements. Constitution will develop withdrawal intake designs and metering plans to be implemented during surface water withdrawals to maintain adequate stream flow rates and ensure adequate volumes are available downstream for withdrawals by existing users.

Water withdrawal within the Upper Delaware and Upper Susquehanna watersheds exceeding regulatory limits will be assessed and authorized by the Delaware River Basin Commission (DRBC) and the Susquehanna River Basin Commission (SRBC), respectively. Withdrawals within the Schoharie watershed exceeding regulatory thresholds will be assessed under applicable regulations by the NYSDEC. Constitution anticipates filing applications to the NYSDEC for hydrostatic testing and the Water Withdrawal Permit under Article 15, Title 15 of the ECL subsequent to submittal of this application once withdrawal rates have been determined. Applications will provide specific details pertaining to the proposed withdrawal and discharge rates, durations, locations, and any additives that may be included. Constitution does not anticipate the use of any additives within the hydrostatic test water at this time. Hydrostatic test water will not be obtained from, or discharged to, designated exceptional value waters unless approved by the applicable regulatory agency.

Additionally, Constitution is proposing to incorporate surface water withdrawals and access at water sources near three of the proposed trenchless waterbody crossings, including Middle Brook (DE-1T-S051), Bennettsville Creek (CH-1A-S010) and Schoharie Creek (SC-1Q-S289). Constitution is developing the water withdrawal plan to support these trenchless crossing methods and if the withdrawals

surpass regulatory thresholds requiring a permit from the SRBC or NYSDEC, Constitution will file an application for these surface water withdrawals.

3.2.5 Waterbody Construction and Operation Impacts

Construction and operation of the proposed Project may include temporary impacts on waterbodies and fisheries crossed by the pipeline alignment or located within the associated workspace. No permanent filling of waterbodies is proposed along the pipeline and therefore no "loss" of waters of the U.S. are anticipated from pipeline construction. Temporary impacts on waterbodies and fisheries include disturbance of stream banks, removal of bank vegetation, and, in some instances, modification of flow during dry-crossing construction. Constitution will mitigate for impacts resulting from construction through adherence to Constitution's ECP and the FERC Plan and Procedures (FERC 2013a, b). Additionally, Constitution will adhere to its Construction Spill Plan and HDD Contingency Plan (provided in the ECP) during construction, as well as to applicable regulatory permit conditions. Where temporary impacts on surface waterbodies cannot be avoided during construction activities, Constitution will restore and stabilize these areas to preconstruction conditions upon completion of pipeline installation.

Constitution will implement dry crossing techniques (See BMP Figure Nos. 1, 2, 5, 6, 7, and 9 in ECP) for the majority of the waterbodies crossed by the Project that have flowing water present at the time of crossing. Hydrologic and hydraulic calculations have been completed for all waterbody crossings based on design storm events and upstream watershed size and characteristics to determine anticipated flow rates, temporary dam height elevation and flume pipe diameters to be used during construction to withstand and convey anticipated flows (Table 6.0-1 of Attachment G). Under waterbodies, the pipeline will be buried with a minimum cover of 5 feet over the pipe, unless in consolidated rock where the minimum cover depth may decrease. Table 3.2-1 provides a summary related to the waterbodies crossed by the Project and the associated impact to waters of the U.S. and State-regulated protected streams. A waterbody crossing master table for surveyed parcels has been provided in Attachment J.

Aboveground facility locations have been identified and surveyed for the presence of waterbodies, and the field surveys confirmed that there are no waterbodies located within the designated workspace associated with these facilities. No surface water related impacts area associated with construction or operation of the Westfall Road M&R Station or pig receiver located at the terminus of the pipeline. MLV assemblies will be installed entirely within the proposed permanent ROW. Therefore, the potential impacts on sensitive surface waters will be the same as those associated with the corresponding pipeline segments. Any sensitive resource areas present at identified contractor ~~and pipe~~ yards will be protected from adverse impacts through avoidance and/or implementation of appropriate BMPs during the site preparation of the yards.

Constitution in the process of access road design to allow safe travel to and from the construction ROW and to avoid and minimize impacts to waterbodies both during construction and operation of the pipeline.

Temporary access roads that cross waterbodies will utilize equipment mats or a rail car to span the waterbody from bank to bank. Once construction of the pipeline is complete and the ROW is restored, the temporary equipment bridge crossing will be removed and the waterbody banks will be restored to pre-construction grades and contours, seeded, and stabilized with erosion control fabric.

Waterbodies that are too wide for typical construction bridge crossings for temporary equipment passage along the pipeline ROW may require alternative temporary equipment bridges with in-stream support (i.e. equipment mats or rail cars with flume pipes to provide mid-span support, or aggregate fill overtop of cross culverts to build a stable road base). Cross culvert size and type will vary based on the waterbody characteristics, including size of the contributing watershed and the water quality classification and standard (e.g., perennial fisheries stream, road side ditch, etc.). Constitution will provide a listing of which waterbody crossings will require some form of in-stream support and the proposed equipment bridge type when completed. Once construction of the pipeline is complete and the ROW is restored, the temporary cross culvert and temporary bridge or fill crossing will be removed and the waterbody banks and channel bottom will be restored as required with natural stream bed material and native vegetation.

Permanent access roads will cross identified waterbodies using a permanent cross culvert and associated road base fill. Cross culvert size and type will vary based on the waterbody characteristics, including size of the contributing watershed and the water quality classification and standard (e.g., perennial fisheries stream, road side ditch, etc.).

Table 3.2-7 provides a list of waterbodies that are proposed to be crossed using trenchless construction methods. These methods are designed to avoid impacts to surface waterbodies. Constitution is proposing to incorporate surface water withdrawal access for three trenchless waterbody crossings including Middle Brook (DE-1T-S051), Bennettsville Creek (CH-1A-S010) and Schoharie Creek (SC-1Q-S289). Vegetation clearing of a 10-foot wide corridor centered over the pipeline in wetlands and uplands between the entry point and the adjacent surface water source is proposed to provide access to the surface water and for pumping system equipment staging (i.e., portable pump and water supply hose).

Constitution has prepared a Trenchless Construction Methods for Sensitive Environmental Resource Crossings Report as part of its FERC Environmental Report Supplement to June 13, 2014 and July 24, 2013 filing submitted on November 11, 2013. The use of trenchless construction methods is not feasible or practical in every location along a pipeline project. Trenchless construction methods are limited by unfavorable underlying geology, available workspace, available time (i.e., limited construction windows), and the inherent weighted risks associated with use of trenchless construction methods, including extended crossing times. All of these factors must be considered to determine if trenchless construction methods are a suitable option for crossing a specific resource. The trenchless crossing locations proposed for this Project have been selected by Constitution based on their potential for success and ability to minimize impacts to specific Project locations, while allowing for safe installation of the pipeline. Additional information related to feasibility issues associated with trenchless methods is provided in Section 3.4.6 of this document.

To mitigate for potential impacts during trenchless construction operations, Constitution has developed a HDD Contingency Plan within the ECP for the Project that establishes procedures for addressing potential impacts associated with a trenchless installation. Additionally, this HDD Contingency Plan establishes the criteria by which Constitution will determine when a trenchless crossing method is unsuccessful and must be abandoned in favor of an approved alternative crossing method (i.e., dry crossing waterbody and conventional wetland crossing methods). Constitution has designed and incorporated alternative crossing method impacts and drawings for each proposed trenchless construction location into the HDD Contingency Plan for the Project. This alternative design will be implemented in the event that ongoing geotechnical site investigations reveal subsurface conditions that do not support a trenchless installation method or where trenchless crossing method failure were to arise during drilling or

installation operations, resulting in abandonment of the trenchless operation. The alternative crossing method contingency plans for the proposed trenchless crossings are provided in Attachment E. Waterbody impacts associated with alternative contingency crossing methods are summarized in Section 3.4.6.

Table 3.2-7 Waterbodies Crossed Using Trenchless Construction Methods

Waterbody ID	Waterbody Name[a]	Approximate Milepost	Latitude	Longitude	Town / County	Type[b]	Crossing Length (feet)[c]	Water Quality Standard[d]	Fishery Classification[e]	State Fishery Construction Window[f]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[g]
BR-1J-S170	UNT to Fly Creek	28.89	42.039404	-75.518164	Sanford/Broome	I	2	D	N/A	N/A	No	III
BR-1H-S181A	Road Ditch	34.53	42.103985	-75.474338	Sanford/Broome	E	1	N/A	N/A	N/A	No	III
BR-1B-S181	Road Ditch	34.56	42.104306	-75.474107	Sanford/Broome	I	1	N/A	N/A	N/A	No	III
BR-1Q-S209	UNT to Dry Brook	38.69	42.155606	-75.484655	Sanford/Broome	P	7	C(T)	(T)	June 1 - Sep 30	Yes	III
BR-1S-S200	Road Ditch	41.77	42.190373	-75.510884	Sanford/Broome	I	3	N/A	N/A	N/A	No	III
CH-1A-S048	Landers Creek	45.29	42.234778	-75.489117	Afton/Chenango	P	29	C(TS)	(TS)	June 1 - Sep 30	Yes	III
CH-1C-S010B	Bennettsville Creek	47.65	42.260456	-75.462942	Bainbridge/Chenango	I	48	C(T)	(T)	N/A (HDD) May 15 - Oct 15 (Contingency)	Yes	IV
CH-1C-S010C	Bennettsville Creek	47.68	42.260761	-75.462453	Bainbridge/Chenango	I	165	C(T)	(T)	N/A (HDD) May 15 - Oct 15 (Contingency)	Yes	IV
CH-1A-S010	Bennettsville Creek	47.71	42.261052	-75.462051	Bainbridge/Chenango	P	144	C(T)	(T)	N/A (HDD) May 15 - Oct 15 (Contingency)	Yes	IV
CH-1A-S010D	Bennettsville Creek	47.75	42.261408	-75.461558	Bainbridge/Chenango	P	85	C(T)	(T)	N/A (HDD) May 15 - Oct 15 (Contingency)	Yes	IV

Table 3.2-7 Waterbodies Crossed Using Trenchless Construction Methods

Waterbody ID	Waterbody Name[a]	Approximate Milepost	Latitude	Longitude	Town / County	Type[b]	Crossing Length (feet)[c]	Water Quality Standard[d]	Fishery Classification[e]	State Fishery Construction Window[f]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[g]
CH-1A-S010E	Bennettsville Creek	47.75	42.261389	-75.461479	Bainbridge/Chenango	P	0	C(T)	(T)	N/A (HDD) May 15 - Oct 15 (Contingency)	Yes	N/A
DE-1H-S028	Road Ditch	51.64	42.278580	-75.394627	Masonville/Delaware	I	3	N/A	N/A	N/A	No	III
DE-1H-S013	UNT to Susquehanna River (Collar Brook)	54.50	42.290996	-75.345867	Sidney/Delaware	P	80	AA	N/A	N/A	No	IV
DE-1H-S013	UNT to Susquehanna River (Collar Brook)	54.53	42.291080	-75.345373	Sidney/Delaware	P	70	AA	N/A	N/A	Yes	IV
DE-1M-S075	UNT to Susquehanna River	55.11	42.292979	-75.334246	Sidney/Delaware	E	3	C	N/A	N/A	No	IV
DE-1K-S077A	Road Ditch	55.71	42.295116	-75.323417	Sidney/Delaware	I	3	N/A	N/A	N/A	No	III
DE-1G-S241	Road Ditch	78.24	42.423493	-74.962627	Davenport/Delaware	I	3	N/A	N/A	N/A	No	III
DE-1L-S206	UNT to Charlotte Creek	80.42	42.424643	-74.921726	Davenport/Delaware	I	4	D	N/A	June 1 - Sep 30	No	III
DE-1C-S051A	UNT to Middle Brook	87.82	42.467475	-74.794558	Davenport/Delaware	P	10	C(TS)	(TS)	June 1 - Sep 30	Yes	IV
DE-1T-S051	Middle Brook	87.87	42.467900	-74.793658	Davenport/Delaware	P	64	C(TS)	(TS)	June 1 - Sep 30	Yes	IV
DE-1T-S052	UNT to Middle Brook	88.06	42.469261	-74.790592	Davenport/Delaware	P	15	C(TS)	(TS)	June 1 - Sep 30	Yes	IV
DE-1L-S250	Road Ditch	90.22	42.490083	-74.760948	Harpersfield/Delaware	I	1	N/A	N/A	N/A	No	III
SC-1Y-S342	Road Ditch	94.97	42.519113	-74.685430	Summit/Schoharie	I	1	N/A	N/A	N/A	No	III
SC-1C-S280	Road Ditch	96.40	42.527950	-74.661564	Jefferson/Schoharie	E	1	N/A	N/A	N/A	No	III
SC-1C-S187	Road Ditch	110.56	42.638253	-74.456539	Cobleskill/Schoharie	E	2	N/A	N/A	N/A	No	III
SC-1C-S331	UNT to House Creek	110.57	42.638288	-74.456408	Cobleskill/Schoharie	I	1	D	N/A	N/A	No	III
SC-1Q-S289	Schoharie Creek	119.75	42.702126	-74.317183	Schoharie/Schoharie	P	248	C	N/A	Jul 16 - Feb 28	Yes (Navigable River)	V

This entire table has been updated since the August 2013 submittal

a: UNT: Unnamed Tributary. UNT name was identified based on review of USGS topographical mapping.

Table 3.2-7 Waterbodies Crossed Using Trenchless Construction Methods

Waterbody ID	Waterbody Name[a]	Approximate Milepost	Latitude	Longitude	Town / County	Type[b]	Crossing Length (feet)[c]	Water Quality Standard[d]	Fishery Classification[e]	State Fishery Construction Window[f]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[g]

b: P = perennial; I = intermittent; POW = open water; E = Ephemeral.

c: 0.0 = waterbody is not crossed but is in workspace. For minor waterbodies less than 3 feet in width delineated in the survey area and shown as a single line feature on the Project alignment sheets, an assumed 3 foot width has been used for this analysis.

d: NY Water Quality Standards Definition: Water quality standards based on the classification and best use of waterbody as determined by NYSDEC (6 NYCRR Parts 815, 879, 931).

e: N/A = Not applicable, no state fishery classification; NY Fishery Classifications: T = Trout; TS = Trout Spawning (6 NYCRR 701.25).

f: Construction Windows for cold water fisheries are a based on correspondence from P. Desnoyers of NYSDEC to Secretary K. Bose of FERC dated May 28, 2013, which include NYSDEC's Best Management Practices (BMPs) for Gas Transmission Line Construction Projects (dated May 16, 2013). Section 3.0 includes Stream and Wetland Protection Procedures. Potential timing restrictions reflect dates during which construction activities may occur. Streams with no construction timing restrictions, shown as "N/A" on the Table, do not have timing restrictions for construction based on NYSDEC regulations and consultations. Waterbody-specific assignment of construction window based on in-field consultation with the NYSDEC.

g: Method III = Conventional Bore; IV = HDD, V = Direct Pipe Method. Intermittent waterbodies containing discernible flow at the time of construction will be crossed using a dry crossing method, unless otherwise authorized by applicable regulatory agencies.

Impacts to aquatic communities from construction and operation of the Project will depend upon the physical characteristics of the streams (e.g., flow, bottom substrate, channel configuration, and gradient), construction technique utilized, time of year of the crossing, and presence of game fish and state-listed or federal-listed species. Any potential impacts typically are temporary in nature because the sediments are flushed during subsequent storm events, and aquatic communities subsequently re-colonize the affected area.

For waterbodies with no discernible flow at the time of crossing, the dry open cut method will be used. The necessary equipment to perform dry crossings under these circumstances will be available on-site during construction. In cases where continuous standing water is present across the work area, but there is no discernible flow, a dry crossing (flume crossing, dam and pump or cofferdam) method will be implemented in the field to allow for excavation and installation of the pipe under dry conditions while maintaining stream flow. Field determinations will be made at the time of crossing. Constitution will avoid and minimize impacts resulting from construction through adherence to Constitution's ECP.

Removal of streamside trees and vegetation at the pipeline crossing may reduce shading of a stream temporarily, eliminate escape cover, and potentially result in a locally elevated water temperature. Elevated water temperature can lead to a reduction in levels of dissolved oxygen and influence fish survival and fitness, but due to the temporary and local temperature increase at the crossing it is not anticipated that the crossing will have a significant effect on water temperature that could adversely affect existing fish populations. Once installation activities for the pipeline are complete, disturbed areas will be restored to pre-construction conditions and stabilized to prevent erosion of exposed soils and sedimentation to on- and off-site resource areas. Constitution's ECP has been developed to incorporate best management practices (BMPs). Approved BMPs will be implemented during installation of the pipeline to avoid, minimize, and mitigate for potential direct and indirect impacts during wetland and waterbody construction crossings.

Post-construction or operational impacts to fisheries are expected to be minimal. Following construction of the Project pipeline and restoration/stabilization of the ROW, Constitution will allow a riparian strip at least 25 feet wide, as measured from a waterbodies mean high water mark, to permanently revegetate with native plant species across the entire construction ROW. Within wetlands and across waterbodies, Constitution will limit the maintenance of the permanent ROW to a 10-foot-wide corridor centered over the proposed pipeline alignment. In addition, trees located within 15 feet of the pipeline that are greater than 15 feet in height may be selectively cut and removed from the permanent ROW. Additionally, this practice will allow for the re-establishment of woody and herbaceous vegetation species along the stream banks. This vegetation will provide needed shading and crucial cover habitat to sufficiently maintain necessary coldwater fisheries habitat characteristics.

Constitution will employ several measures designed to reduce the likelihood of entrainment or impingement of juvenile and adult fishes during hydrostatic test water withdrawal operations. Constitution will attempt to avoid low-flow conditions to limit any potential impact to downstream aquatic resources. Hydrostatic test water intake structures (typically a box design) will be floated so they are not laying on the streambed and screened with wire to prevent larger fish from entering the intake structure. The screen around the intake will be fabricated to provide an adequate surface area of fine meshed screen designed to reduce the approach velocity to prevent impingement or entrainment of small fish and/or macroinvertebrates.

If water levels are shallow and the device will be within 12 inches of the bed of the waterbody, the device will be placed in a retrievable plastic containment device to provide a closed bottom to protect aquatic life and to prevent the intake of benthic communities located on the stream bed. If the water levels are such that the device cannot be fully submerged, adjustments to the intake structure and intake flow calculations will be made to resize the device such that it can be fully submerged. Modifications can be easily fabricated in the field. Constitution will regularly inspect the water intake screen for entrained fish and will address any such issues immediately. There will also be a debris deflector placed within the waterway either around the intake device or perpendicular to the waterbody crossing to help protect the device from foreign matter that may impact its effectiveness.

Environmental impacts associated with the withdrawal and discharge of test water will be minimized by:

- Compliance with applicable permit conditions in the Water Withdrawal Permit from the NYSDEC pursuant to Article 15 Title 15 of the NY ECL for regulated withdrawals outside of the Susquehanna and Delaware River basins.
- Compliance with DRBC and SRBC regulations within the Susquehanna and Delaware River basins.
- Implementation of the ECP and SWPPP for the Project required under the SPDES General Permit for Stormwater Discharges from Construction Activity.
- Locating hydrostatic test manifolds outside of wetlands and riparian areas.
- Withdrawing from and discharging to water sources will comply with regulatory requirements.
- Screening the water inlet to avoid intake of fish.
- Maintaining adequate stream flow rates during withdrawal activities to protect aquatic life, provide for all existing waterbody uses, and downstream withdrawals of water by existing users.
- Anchoring the discharge pipe for safety.
- Discharging test water into a suitable receiving body of water, across a well-vegetated area or filtered through a filter bag or other dewatering structure.
- Discharging test water against a splash plate or other energy dissipating device approved by the Environmental Inspector (EI) to aerate, slow, and disperse the flow (BMP Figure No. 53 in the ECP).
- Controlling the rate of discharge at a level that appropriately prevents flooding or erosion.

3.2.5.1 Waterbody Construction

Except for those waterbodies proposed to be crossed using a trenchless method, waterbodies will be crossed by one of the open cut methods described below. To minimize temporary impacts associated with installation of the pipeline facilities, Constitution will implement the waterbody construction procedures, erosion control measures, and post-construction restoration activities identified in Constitution's ECP. Constitution's preferred methodology for restoration is the use of natural stream restoration techniques where flow velocities allow. Descriptions of stream restoration techniques are included in Constitution's ECP.

Constitution is proposing to provide a minimum depth of cover of five feet over the pipeline across waterbodies. The proposed cover will generally provide adequate scour protection from high flows and flooding. Prior to construction, field observations will be conducted to determine stability of the banks and appropriate bank stabilization techniques. Some crossings will only require replacement of natural

streambed materials while others may require more extensive stabilization such as riprap stabilization, branch packing, brush mattresses, or an equivalent measure. Constitution's EI will monitor construction of waterbody crossings to ensure that disturbed locations are restored in accordance with the procedures detailed in the ECP.

Constitution proposes to use the following methods for crossing waterbodies:

- Wet Open Cut Method
- Dry Crossing Method
  - Flume Crossing
  - Dam and Pump
  - Cofferdam
  - Dry Open Cut (Conventional trenching of waterbodies that are dry or frozen at the time of crossing during periods of no flow)
- Trenchless Construction Methods
  - Conventional Bore
  - Horizontal Directional Drilling
  - Direct Pipe

For waterbodies with discernible flow at the time of crossing, one of the above dry crossing methods will be used. For waterbodies with no discernible flow at the time of crossing, the dry open cut method will be used. In cases where continuous standing water is present across the work area, but there is no discernible flow, a dry crossing (flume crossing, dam and pump or cofferdam) method will be implemented in the field to allow for excavation and installation of the pipe under dry conditions. Field determinations of the crossing method will be made at the time of crossing. The necessary equipment to perform dry crossings under these circumstances will be available on-site during construction. The wet open cut method will only be used when all dry crossing methods have been deemed infeasible and the methodology has been approved by applicable agencies. Additional detail on waterbody crossing methods is provided below.

3.2.5.1.1 General Waterbody Construction Procedures

The proposed waterbody crossing procedures will ensure that potential adverse impacts on streams during crossings are minimized. Grubbing will not take place within 50 feet of the top of bank on either side of the stream until all materials required to complete the crossing are on-site and the pipe is ready for installation. Trench spoil will be placed a minimum of 10 feet from the water's edge and the construction workspace will be reduced to 75 feet at each stream crossing. Constitution will attempt to install the pipe within 24 hours at minor conventional trench stream crossings and within 48 hours at intermediate conventional trench stream crossings. To the extent practicable, stream crossings have been designed perpendicular to the stream channel. Temporary erosion control measures will be implemented, as necessary, to prevent downstream migration of sediment or turbid water.

Where required to reduce buoyancy in saturated soil conditions, the pipe used for stream crossings and in floodplains will be concrete coated or otherwise weighted to prevent flotation. The pipe will be welded together in staging areas and then carried or floated along the ROW into place. If the streambed is composed of unconsolidated material, the pipe will be pulled into place. In rock bottomed streams, the pipe will be floated or lifted across and then lowered into place. After the pipe is lowered into the trench,

previously excavated material will be returned to the trench line for backfill. Stream flow, where present, will be maintained at waterbody crossings, and no alteration of the stream capacity will result from pipeline construction. At small waterbodies encountered along the ROW, a tracked excavator, or similar equipment will be used for trench excavation. Stream bed surface materials will be removed, segregated and stockpiled prior to trench excavation of the waterbody for reuse during restoration activities.

After installation of the pipeline, stream beds will be restored to their preconstruction elevations and grades using the stockpiled stream bed material. Spoil, debris, flume pipes, cofferdams, construction materials, and any other obstructions resulting from or used during installation of the pipeline will be removed to prevent interference with normal stream flow. Any excavated material not used as backfill will be removed and disposed of in accordance with federal, state, and local requirements. Following grading, waterbody banks will be restored to preconstruction conditions and in accordance with applicable permit requirements. Further, Constitution will install markers to identify riparian buffer strips adjacent to waterbodies where clearing limitations exist for maintenance activities.

The crossing techniques described below, in addition to implementation of the erosion and spill prevention, control and countermeasure measures, as described within Constitution's ECP for this Project, will ensure that construction activities do not adversely affect surface waters.

3.2.5.1.2 Method I – Wet Open Cut

Wet open cut crossings will be performed by using excavation equipment to trench across the waterbody. Equipment used to dig the trench will work from the waterbody banks, temporary equipment bridge crossings, or by straddling the trenchline where the width of the waterbody prohibits excavations solely from the banks. The depth of trench will be sufficient to allow a minimum of five feet of cover over the pipeline below the streambed, provided bedrock is not encountered. Constitution plans to complete construction activities within 24 hours at minor wet open cut crossings and within 48 hours at intermediate wet open cut crossings.

The following additional stipulations will apply to wet open cut crossings:

- use of equipment operating in the waterbody will be limited to only that equipment needed to construct the crossing;
- material excavated from the trench will be stockpiled in the construction ROW at least 10 feet from the water's edge or in ATWS (located at least 50 feet from the water's edge);
- material excavated from the trench generally will be used as backfill, unless applicable federal or state permits specify otherwise;
- any excess material will be removed from the body of water; and
- the waterbody bottom will be returned to its original elevations and contours.

Currently no waterbodies will be crossed using the wet open cut method. Use of wet open cut crossing will only be used if the preferred dry crossing or trenchless method has failed. If a wet open cut becomes necessary to facilitate crossing under this circumstance, Constitution will notify the applicable agencies prior to implementation of the wet open cut method.

3.2.5.1.3 Method II – Dry Crossings

Flumed Crossing

A flumed waterbody crossing redirects the water flow through one or more pipes to allow for the trenching and pipeline installation to occur in dry conditions. The number, length and diameter of the pipes are dependent on estimated stream flow for the waterbody being crossed. ~~A hydraulic~~ Hydrologic and hydraulic calculations have~~hydrologic analysis has~~ been conducted to determine estimated flow capacity and sizing of flume pipes for waterbody crossings (Table 6.0-1 of Attachment G). This flumed crossing method allows for drier trenching, pipe installation, and restoration, while maintaining continuous downstream flow and passage for aquatic organisms. Soil types must have characteristics that allow stable stream bank conditions, and stream flow must be low enough for this method to be used successfully and safely. The flume pipe(s) must be long enough to account for the potential for the ditch width to increase during excavation (due to sloughing) and over-sized somewhat to accommodate the possibility of high flow conditions. An effective seal must be created around the flume(s) at both the inlet and outlet ends, so water will not enter the workspace. Constitution will implement the following measures where the dry flume crossing method is utilized:

- the flume pipe will be installed after blasting (if necessary), but before any trenching;
- an effective seal will be created around the flume pipe with sand bags or an equivalent seal mechanism;
- the flume pipe(s) will be aligned parallel with natural water flow to prevent scouring of the bank, preventing erosion and sedimentation;
- the flume pipe will not be removed during trenching, pipe-laying, backfilling activities, or initial streambed restoration efforts, except in rare conditions where a severe flow event causes conditions that make it unsafe for the pipe to remain; and
- flume pipes and dams that are not associated with an equipment bridge will be removed as soon as final cleanup of the stream bed and bank is complete.

Weather will be monitored to determine if heavy precipitation events are forecasted for the construction area(s) where waterbody crossings are planned. Attempts will be made to conduct dry open-cut crossings outside of any forecasted heavy precipitation events. In waterbodies where no discernible flow is observed and no by-pass system is installed, supplies will be on site to construct a by-pass system if precipitation occurs and the stream begins to show a discernible flow. If an unexpected heavy precipitation event occurs during construction at a dry-crossing location, resulting in discernible flow in the waterbody channel, an alternate dry crossing method using the by-pass system will be employed. For proposed crossings where there is a discernible flow, if forecasted precipitation amounts are determined to potentially overwhelm the proposed by-pass system, the crossing will be postponed until the rain event has passed and it has been determined that the by-pass systems can safely flow water volume and velocity of the waterbody.

To facilitate construction of the Project, temporary equipment bridges will be required to be installed across waterbodies along the ROW to allow for construction equipment to move along the pipeline ROW. Flume pipe or dam and pump crossings will generally be used in conjunction with temporary equipment bridge crossings at waterbodies. Flume pipes or dam and pump crossings required to install the pipeline will be removed once work is complete and the waterbody bottom and banks have been restored.

However, temporary equipment bridge crossings may still be required to facilitate ongoing construction equipment access along the ROW. Once the Project facilities are constructed and restoration is complete, temporary equipment bridges and associated flume pipes and dams will be removed.

Dam and Pump

The dam and pump method may be used for waterbody crossings where pumps and hoses can adequately transfer stream flow volumes from upstream of the work area to downstream of the work area, and there are no concerns with preventing the passage of aquatic organisms. Hydrologic and hydraulic calculations have been completed for all waterbody crossings based on design storm events and upstream watershed size and characteristics to determine anticipated flow rates and temporary dam height elevation to be used during construction to withstand and convey anticipated flows (Table 6.0-1 of Attachment G). Constitution will implement the following measures where the dam and pump method is utilized:

- sufficient pump size, horsepower and hose capacity, including on-site backup pumps, will be used to maintain downstream flows;
- cofferdams will be constructed with "clean" materials to prevent pollutants from entering the waterbody (e.g., sandbags or clean gravel with plastic liner);
- water intakes will be suspended in the water column above the stream bed and will be screened to reduce entrainment of aquatic organisms or particles that may clog the pump;
- pumps will be located within secondary containment structures to catch and prevent petroleum liquids from entering the waterbody during refueling or if a pump failure occurs;
- large volume and strong velocity discharges will use water dispersion structures placed at the downstream discharge location to prevent streambed scour; and
- the coffer dam, pumps, and hoses will be monitored and maintained when necessary to ensure proper operation for the duration of the waterbody crossing.

Cofferdam

A cofferdam is a temporary barrier that is installed across or at the limits of the workspace within waterbodies to isolate the work area during construction and allow for dry working conditions. Cofferdams will be used for waterbody crossings with high flow volumes that preclude the use of a flume crossing or dam and pump. This method will consist of installing the pipeline across the waterbody in multiple stages, typically two, using a cofferdam to divert the waterbody around the workspace in each stage. The first stage would involve installation of one-half to two-thirds of the crossing, and the second stage would consist of completing the remainder of the crossing. Typical cofferdam materials include, but are not limited to, sand bags, sheet piling, timber lagging and inflatable dams.

The typical installation procedure will consist of the following:

- installing turbidity curtains around the work area;
- installing the cofferdam;
- dewatering the work area and maintaining it in a dewatered state;
- excavating the trench;
- installing the pipeline and an anti-seep collar, or equivalent, near the end of the pipe to help prevent water from traveling along the trench and flooding the work area;

- backfilling the trench and restoring the waterbody bed and banks;
- removing equipment from the work area;
- filling the area with water from outside the cofferdam;
- remove the cofferdam and turbidity curtain; and
- repeating the procedures above to construct the remainder of the crossing. Stage two may require installation of multiple sump pits to keep the trench line dewatered while the pipe sections are welded together.

Cofferdam crossings will be designed in accordance with applicable federal and state guidelines to ensure that the cofferdam can withstand maximum anticipated waterbody flows during the time of the crossing. Dewatering operations will require silt laden water to be discharged to an appropriate dewatering device (e.g., silt bags) prior to discharge back to the waterbody.

Cofferdams that require driving materials into the waterbody bottom for support (e.g. sheet piling) will require a modification when constructing stage two of the cofferdam over the pipe that was installed during stage one. Driving of the cofferdam will not be permitted within five feet of either side of the pipe installed during stage one. The modification may include, but is not limited to, driving steel H-piles on either side of the pipe and constructing a barrier between them to prevent water from entering the work area. The barrier will not be allowed to be driven into the waterbody bed over the pipe. Any gaps that remain between the bottom of the barrier and the waterbody bottom will be sealed with sand bags or an equivalent material. As noted above, an anti-seep collar or equivalent will be installed during stage one to help prevent flooding the work area.

Dry Open Cut

A dry open cut will be utilized for waterbodies that are dry or frozen during the time of the crossing with no discernible or anticipated flow. This method will utilize conventional construction techniques with no temporary diversion structures (e.g., flume pipes, cofferdams) required during construction of the crossing. Constitution plans to complete construction activities within 24 hours at minor open cut waterbody crossings and within 48 hours at intermediate open cut crossings. A minimum cover depth of five feet will be maintained over the pipeline for all designated waterbodies crossed with the dry open cut method.

Temporary diversion structures will be required to be available onsite in the event that an unexpected precipitation event occurs and the waterbody crossing is not complete.

3.2.5.1.4 Method III – Conventional Bore

The conventional bore method may be used at suitable locations to avoid surface disturbance of sensitive wetlands. Boring consists of creating a shaft / tunnel for a pipe or conduit to be installed below wetland without directly disrupting the wetland surface. This is accomplished by first excavating a bore pit on one side of the feature to be crossed and a receiving pit on the other side. The bore pit is excavated to a depth equal to the depth of the ditch and is graded such that the bore will follow the proposed slope of the pipe. A boring machine is then lowered to the bottom of the bore pit to tunnel under the wetland using a cutting head mounted on an auger shaft. The auger shaft rotates through a bore tube and the cutting head and bore tube are pushed forward by the boring machine as the tunnel is cut. The pipeline section is then

installed through the bored hole and welded to the adjacent pipeline sections. The waterbodies crossed using conventional bore are listed in Table 3.2-7

3.2.5.1.5 Method IV – Horizontal Directional Drill

The decision to install certain waterbody crossings by HDD instead of by conventional means, at specific locations on the Project will depend on the following:

- crossing location;
- environmental sensitivity and associated constraints;
- geotechnical concerns;
- substrate composition; and
- hydrological data.

HDD is an advanced, controllable trenchless boring method of installing underground pipes, conduits and cables in a shallow arc along a predetermined bore path. HDD will be used in areas where trenching or excavating is not practical. The HDD process consists of drilling a pilot hole with a cutting head along the predetermined path and then enlarging the pilot hole with a larger cutting tool (back reamer) to the diameter required to install the casing, pipe, or conduit. The HDD process is done with the help of a viscous fluid known as drilling fluid. The fluid generally consists of a mixture of water and usually bentonite or polymer. The fluid is pumped through holes in the cutting heads to facilitate the removal of cuttings, stabilize the bore hole, cool the cutting head, and lubricate the passage of the pipe. The fluid is recycled throughout the drilling process.

This method of installation will require a large amount of additional temporary workspace and is only used in areas where boring and conventional open cut methods are not suitable. The large amount of temporary workspace is directly related to the required drilling fluid pits and pipe stringing corridor. The pipe stringing corridor is required to pre-connect the pipe so that it can be pulled through the bore hole in one piece. Pulling the pipe in one piece greatly increases the probability of a successful HDD.

Constitution is currently investigating specific waterbody and wetland crossings to determine the feasibility of using HDD based on the specific conditions at the crossing location. Specific locations being evaluated for an HDD crossing are provided in Table 3.2-7 When a final determination has been made regarding crossing methods, Constitution will submit this information to the USACE and NYSDEC for review as supplemental information.

3.2.5.1.6 Method V - Direct Pipe Method

Direct Pipe® is a trenchless method that combines the advantage of established pipeline installation methods of microtunnelling and HDD. A single continuous working operation allows the trenchless laying of pre-fabricated pipeline and the simultaneous development of the required bore hole. Earth excavation is performed by means of a microtunnelling machine (equipped with a cutting head) which is navigable and uses a flushing circuit (pipes) method to transport the earthen materials to the surface. Modern and proven controlled pipejacking techniques ensure accurate measurement of the current pipe position along the intended route. The axial force that is necessary for the boring process is transferred

along the pipeline from the pipe thruster or hydraulic jacking system at the entry bore hole to the cutting head.

Direct pipe installations may be much shorter and shallower than HDD installations because the excavation is continuously cased, reducing the risk of hole collapse and subsequent settlement. Additionally the external fluid pressures of the excavation slurry system and bentonite lubrication system are much lower than a typical HDD thereby reducing the relative risk of hydraulic fracture and inadvertent returns. The length limitation for the Direct Pipe technology (for a 30-inch diameter pipeline) is approximately 900 feet due to the requirements of the hydraulic motors in the smaller diameter tunneling machines. Soils with abundant, strong, and/or abrasive boulders or other large obstructions present risk to the Direct Pipe method. Direct Pipe can be more sensitive to soil conditions than HDD, as it cannot go through rocky terrain that the cutting head cannot sufficiently grind and pulverize. Direct Pipe also requires sending people into the pipe to monitor and adjust settings underground. This requires a specialized team of individuals to always be on-site in the event that an incident occurs. While Direct Pipe has been used overseas, the United States has very little experience with this type of machinery. Also, Direct Pipe is used for much larger pipe or tunneling applications, 42-inch diameter bores and larger. The equipment has been scaled down to be used for smaller diameter bore holes (30 inches) but this diameter was not common with use of Direct Pipe overseas.

Specific locations being evaluated for a direct pipe crossing are provided in Table 3.2-7. Schoharie Creek (a NYSDEC Class C navigable waterbody per 6 NYCRR Part 608.1) ~~and several waterbodies are is proposed being evaluated~~ is proposed for the use of a direct pipe crossing method. ~~Additional information will be provided once geotechnical and feasibility analyses are complete. When a final determination has been made regarding crossing methods, Constitution will submit this information to the USACE and NYSDEC for review as supplemental information.~~Geotechnical investigations conducted by Constitution in the vicinity of the proposed crossing location for Schoharie Creek have documented surficial and sub-surface geologic conditions that may support the use of a direct pipe method, whereas a directional drill method would not be feasible at this location.

3.2.5.1.7 Blasting in Waterbodies

If conventional trenching operations within waterbodies are deemed ineffective by Constitution due to the presence of bedrock, blasting may be required to allow pipeline installation to the proposed minimum of five feet below stream beds. A final determination on the need for blasting will be made at the time of construction. It is not anticipated that any in-water blasting will be required for the Project. However, if required, blasting operations will be conducted in accordance with the ECP which includes the Blasting Plan for the Project. The plan requires the pipeline contractor to develop a detailed plan for in-water blasting operations. This detailed plan will comply with applicable permit conditions relative to in-water blasting operations. In all cases, Constitution's contractors will utilize blasting standards that meet or exceed applicable requirements regarding the use of explosives. Blasting operations will be conducted by or under the direct and constant supervision of experienced personnel legally licensed and certified to perform such activities in the jurisdiction where blasting occurs. A list of waterbodies located within areas potentially having shallow depth to bedrock is provided in Table 3.2-8.

Table 3.2-8 Waterbodies Located in Areas of Shallow Depth to Bedrock Crossed by the Constitution Pipeline in New York

Waterbody ID	Start Milepost	End Milepost
SU-1D-S235	10.59	10.59
SU-1K-S076	15.82	15.82
BR-1I-S067	37.31	37.33
DE-1M-S075	55.11	55.11
DE-1Q-S071	60.28	60.28
DE-1R-S001	87.11	87.12
DE-1C-S117	87.12	87.13
SC-1C-S280	96.40	96.40
SC-1C-S329	97.73	97.73
SC-1E-S102	101.75	101.75
SC-1M-S013	104.07	104.07
SC-1P-S218	105.24	105.25
SC-1P-S218A	105.26	105.26
SC-1G-S249	105.64	105.64
SC-1L-S164	106.18	106.18
SC-1I-S297	106.38	106.39
SC-1J-S298	106.48	106.48
SC-1L-S195	106.55	106.55
SC-1L-S264	106.57	106.57
SC-1C-S271	108.80	108.80
SC-1C-S279	109.12	109.13
SC-1C-S278	109.14	109.15
SC-1I-S280A	109.72	109.73
SC-1C-S186A	110.28	110.28
SC-1C-S332	110.76	110.76
SC-1N-S016	114.51	114.51
SC-1Q-S060	123.95	123.95

Note: This table has been entirely updated since the August 2013 submittal.

3.2.5.1.8 Major Waterbody Crossings

The FERC Procedures (FERC 2013b) classify major waterbodies as those waterbodies with a water width greater than 100 feet wide at the time of crossing (Table 3.2-9). Two major waterbodies crossed by the Project include Bennettsville Creek and Schoharie Creek. Constitution is currently proposing to cross

Bennettsville Creek using HDD. Schoharie Creek is currently proposed to be crossed using Direct Pipe. Site-specific crossing plans for these two waterbodies are provided in Attachment E.

Table 3.2-9 Summary of Major Waterbodies Crossed by the Constitution Pipeline in New York

Town/County	State	Waterbody ID	Waterbody Name	Milepost	Approximate Crossing Length (feet)	Crossing Method
Bainbridge/Chenango	NY	CH-1C-S010 / CH-1C-S010C CH1A-S010/CH-1A-S010D	Bennettsville Creek	47.68	442	HDD
Schoharie/Schoharie	NY	SC-1Q-S289	Schoharie Creek	119.75	248	Direct Pipe

Note: This table has been entirely updated since the August 2013 submittal.
HDD = Horizontal Directional Drilling

3.2.5.2 Avoidance, Minimization and Mitigation

3.2.5.2.1 Avoidance

Due to the length of the interstate pipeline (approximately 99 miles in NY) and complexity of locating the Project with regard to various other factors used during the FERC process including regional topography, existing land use and infrastructure, and construction safety, there were no alternative sites for the Project alignment where all waterbodies could be avoided entirely. The pipeline was routed to avoid waterbodies to the extent practicable and in a manner that minimizes disturbance. A comprehensive alternatives analysis has been completed evaluating various route locations as part of the FERC process. A copy of the Alternatives Analysis prepared by Constitution as part of the FERC process is included in Attachment P.

Review of existing and available natural resource mapping was used during the planning process to determine the route with the least amount of waterbody impacts. The pipeline has been routed around numerous waterbodies in order to avoid impacts to these environmentally sensitive areas. Trenchless Construction Methods of waterbodies, including several State-regulated protected streams, are being utilized for this Project at numerous locations since they are the best measure of avoidance to wetland and waterbodies.

3.2.5.2.2 Minimization

Constitution has minimized impacts to waterbodies within the construction ROW but not directly crossed by the pipeline. If waterbodies cannot be avoided, impacts will be limited to minor disturbances associated with the installation of equipment crossings (where necessary) and/or potential impacts related to the clearing of adjacent vegetation. Waterbodies located within the construction ROW that cannot be avoided due to constraints associated with site access or construction workspace configurations, will be

traversed via equipment crossings consisting of temporary equipment mats supported by temporary culverts or equipment bridges in accordance with the Project-specific ECP for New York. In locations where equipment crossing impacts can be avoided, Constitution will attempt to maintain a 15-foot undisturbed vegetated buffer between the waterbodies and the construction workspace, except where maintaining this offset will result in greater impacts to wetlands or waterbodies. Sediment barriers will be installed, inspected, and maintained in accordance with the New York ECP at the limit of clearing, parallel to the banks of all waterbodies located within the construction ROW.

Constitution has evaluated workspace locations to ensure impacts in and adjacent to waterbodies are minimized to the greatest extent practicable. Activity related to the storage of materials adjacent to waterbody locations will be limited to the temporary placement of cleared vegetation, permitted construction equipment and materials, as well as spoils generated from trenching operations. The placement of these materials in these locations will be temporary and all materials (excluding installed erosion controls) will be removed prior to restoration of these areas. No cleared vegetation material will be placed within waterbodies.

Constitution has adjusted their proposed construction schedule to allow for instream work for trout (T) and trout spawning (TS) streams to occur during the allowed construction window from June 1st through September 30th. Constitution will install the pipeline at least 5 feet below the streambed.

Constitution will work to protect and minimize potential adverse impacts to waterbodies by:

- accelerating construction activities in waterbodies;
- limiting clearing of vegetation between additional temporary workspace areas and the edge of the waterbody to the certificated construction right-of-way;
- limiting the use of equipment operating in the waterbodies to those required to construct the crossing;
- crossing non-essential construction equipment over an equipment bridge;
- maintaining downstream flow rates by use of adequately sized pumps of flume pipes to protect aquatic life and prevent interruption of existing downstream uses;
- crossing waterbodies perpendicular to the waterbody as engineering and routing conditions permit;
- restoring the stream channel and banks to preconstruction contours;
- removing construction equipment and materials from within the waterbody as soon as practical;
- permanently stabilizing stream banks immediately following the pipe installation;

Waterbody crossing procedures will be selected based upon the site-specific conditions as well as consultation with applicable regulatory agencies. Mobilization of construction equipment, trench excavation, and backfilling will be performed in a manner that will minimize the potential for erosion and sedimentation within the waterbody. Erosion control measures will be implemented to confine water quality impacts to within the designated work areas and minimize impacts to downstream resources.

Some of the engineering design guidelines followed in developing site-specific waterbody crossings include:

- Crossings will be constructed as close to perpendicular to the axis of the waterbody channel as engineering and field conditions permit.
- Constitution will attempt to maintain a minimum of 15 feet of undisturbed vegetation between the waterbody and the construction workspace where the pipeline parallels a waterbody, but at no time intersects the waterbody, except where maintaining this offset will result in a greater environmental impact.
- Constitution will attempt to minimize the number of waterbody crossings where waterbodies meander or have multiple channels.
- Constitution will maintain average daily flow rates downstream of the crossing to protect aquatic life, and prevent the interruption of existing downstream waterbody uses.
- Waterbody setbacks will be clearly marked in the field with signs and/or highly visible flagging through the course of construction-related activities.

Dry open cut crossings will be applied at intermittent streams that are dry and expected to remain dry at the time of construction. Dry crossing techniques will be applied at perennial streams and waterbodies with discernible water flow at the time of construction. Wet crossing techniques will be applied at locations where the other crossing techniques were determined impractical.

Waterbodies crossed by the Project or within the construction workspace will be protected by adherence to Constitution's ECP, and applicable requirements. The ECP contains measures to protect and minimize potential adverse impacts to streams, including:

- expediting construction and limiting the amount of equipment and activities in waterbodies;
- coordinating construction activities to avoid high flow and spawning periods;
- installing erosion controls to prevent sediment and siltation from entering streams;
- constructing waterbody crossings as perpendicular to the axis of the waterbody channel as engineering and routing conditions allow;
- maintaining ambient downstream flow rates;
- installing temporary construction bridging over waterbodies not directly crossed by the pipeline to facilitate equipment movement and avoid impacts to the waterbody;
- removing construction material and structures from the waterbody after construction;
- restoring stream channels and bottoms to their original configurations and contours;
- permanently stabilizing stream banks and adjacent upland areas after construction;
- inspecting ROWs regularly during and after construction and repairing any erosion controls and/or performing restoration, as needed, in a timely manner; and
- reducing clearing and maintaining existing vegetation in place on stream banks to the extent practicable.

The use of a dry crossing method, together with the proposed timing restrictions and restoration methods, is anticipated to minimize the extent and duration of potential impacts to fisheries and associated habitat. Additionally, should compliance with timing restrictions not be feasible, Constitution is evaluating alternative construction techniques (including trenchless methods) that may be employed to avoid direct alteration of the waterbodies. Constitution will continue to coordinate with the regulatory agencies regarding crossing methods and fishery restrictions. Field visits with agency staff are currently in progress to evaluate site-specific conditions at individual waterbodies. Additional correspondence with applicable agencies will be provided to the USACE and NYSDEC as supplemental information.

Based on consultations with the NYSDEC, Constitution will determine the appropriate crossing method for each waterbody (excluding upland conveyances, such as roadside ditches and hillside drainage ways) with discernible flow at the time of construction.

Timing Restrictions

The USACE New York District and the NYSDEC have seasonal timing restrictions for in-stream construction. The USACE New York District requires that, to the maximum extent practicable, no discharge of fill material within waters of the U.S. shall occur between March 1 and June 30. The NYSDEC has timing restrictions for waterbodies containing fisheries. Table 3.2-10 summarizes construction timing restrictions and in-stream work windows. Constitution will adhere to the timing restrictions for those waterbodies containing fisheries of special concern to the extent practicable. To minimize potential Project-related impacts on water quality and fisheries, Constitution will schedule its construction activities within the in-stream work window recommended for waterbodies containing fisheries. Upon receipt of applicable permits and approvals, Constitution proposes to commence limited vegetation clearing and construction between June 1 and September 30, 2014 for installation of access roads to install waterbody crossings for streams with timing restrictions related to fisheries, begin trenchless crossings installations (i.e., horizontal directional drill and Direct Pipe®), and metering station construction. Constitution further proposes to commence mainline vegetation clearing and construction commencing in September 2014 and continuing through March to meet the contractual in-service date of March 2015.

Table 3.2-10 Construction Timing Restrictions for Certain Waterbodies Crossed by the Project

Water and Classification	Construction Restriction Window	In-Stream Work Window	Agency
Trout and Trout Spawning	October 1 through May 30	June 1 through September 30[a]	NYSDEC
Warmwater Fisheries	March 1 through July 15	July 16 through February 28	NYSDEC
Waters of the U.S.[ab]	March 1 through June 30	July 1 through February 28	USACE New York District

a: Timing restrictions determined based on NYSDEC Best Management Practices (BMPs) for Gas Transmission Line Construction Projects (dated May 16, 2013).
b: For work involving the discharge of fill material within waters of the U.S.

Waterbody Setbacks

~~Except where noted in Table 3.2-3 ATWS areas (such as staging areas and additional spoil storage areas) will be located at least 50 feet away from the edge of a waterbody, except where the adjacent upland consists of actively cultivated or rotated cropland or other disturbed land.~~ Constitution will limit clearing of vegetation between ATWS areas and the edge of the waterbody to the certificated construction ROW and limit the size of ATWS areas to the minimum needed to construct the waterbody crossing. Where

applicable, waterbody setbacks will be maintained at all times. The setback distances vary based on the type of activity being performed. Activities such as stacking cut lumber, discharging water from trenches, ATWS areas and fueling equipment all have setback distance requirements. Waterbody setbacks (e.g. ATWS setbacks, refueling restrictions, etc.) will be clearly marked in the field with signs and/or highly visible flagging prior to pipeline construction and will be maintained until construction-related ground disturbing activities are complete.

Constitution and its Contractor will structure their operations in accordance with the following setback requirements adjacent to waterbodies:

- equipment will be parked overnight and/or fueled at least 100 feet from a waterbody boundary;
- hazardous materials, including chemicals, fuels, and lubricating oils, are not stored within 100 feet of a waterbody boundary, unless the location is approved for such use by applicable regulatory agencies;
- concrete coating activities are not performed within 100 feet of a waterbody boundary, unless the location is an existing industrial site designated for such use;
- ~~ATWS areas will be located a minimum of 50 feet from the edge of a waterbody. However, there are exceptions and those locations that require ATWS within 50 feet of a waterbody are located in Table 3.2-3;~~
- cut lumber will be stacked a minimum of 50 feet from the edge of a waterbody;
- pumped water from trench dewatering operations will not be directly discharged into a waterbody. Pumped water will be discharged into an appropriately sized filter device (e.g. filter bag, sediment coral) located in a well vegetated area a minimum of 15 feet from the edge of a waterbody; and
- any excavated material from the trench line will be placed a minimum of 10 feet from the top of waterbody bank.

Spoil Placement and Control

Spoil from minor and intermediate waterbody crossings, as well as upland spoil from major waterbody crossings, will be placed in the construction right-of-way at least 10 feet from the water's edge or in ATWS areas. Sediment barriers will be used to prevent the flow of spoil or heavily silt-laden water into any waterbody. Spoil will not be stored within waterbodies, unless otherwise approved by applicable regulatory agencies on a site-specific basis.

Maintenance of Erosion Control Devices

Erosion control devices will be installed immediately after initial earth disturbance of the waterbody or adjacent upland and will be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in other sections of the ECP; however, the following specific measures may be implemented at waterbody crossings:

- sediment barriers will be installed across the entire construction right-of-way at waterbody crossings where necessary to prevent the flow of sediments into the waterbody. In the travel lane,

these may consist of removable sediment barriers or drivable berms. Removable sediment barriers may be removed during the construction day, but will be re-installed after construction has stopped for the day or when heavy precipitation is imminent;

- where waterbodies are adjacent to the construction right-of-way, sediment barriers will be installed along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way; and
- trench breakers will be used at waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the waterbody, unless otherwise approved by the EI to allow natural flow of water into the waterbody.

As previously noted, erosion control devices, including at or adjacent to waterbodies, will be maintained in proper working condition as required by this document and applicable permit conditions. Inspecting and ensuring the maintenance of temporary erosion control measures will be conducted at a minimum:

- on a daily basis in areas of active construction or equipment operation;
- a minimum of once a week in areas with no construction or equipment operation and where disturbance is less than 5 acres and final stabilization has not been achieved;
- a minimum of two times per week in areas with no construction or equipment operation and where the disturbance is greater than 5 acres and final stabilization has not been achieved; and
- within 24 hours of each 0.5 inch of rainfall or greater. This means that an inspection will be required once a storm event has produced 0.5 inches, even if the storm event is still continuing. Inspections will be required within 24 hours of the first day of the storm that produces more than 0.5 inches of rainfall and with 24 hours after the end of the storm for multiple day storm events that produce 0.5 inches of rainfall or more per day.

3.2.5.2.3 Mitigation

After the completion of construction, stream beds will be restored to their preconstruction elevations and grades using the stockpiled stream bed material. Spoil, debris, pilings, cofferdams, construction materials, and any other obstructions resulting from or used during construction of the pipeline will be removed to prevent interference with normal stream flow. Any excavated material not used as backfill will be removed and disposed of in accordance with federal, state, and local requirements. Following grading, waterbody banks will be restored to preconstruction conditions and in accordance with applicable requirements.

Constitution will utilize the following criteria to restore disturbed waterbodies to as close to their pre-construction condition as practical:

- Clean stone or native cobbles will be used for the upper one (1) foot of trench backfill in waterbodies that contain coldwater fisheries.
- For open-cut crossings, waterbody crossing banks will be stabilized and temporary sediment barriers will be installed within 24 hours of completing in-stream construction activities. returning flow to the waterbody channel.
- Waterbody banks will be returned to preconstruction contours or to a stable angle of repose as approved by the applicable regulatory agencies.

- Application of riprap for bank stabilization will comply with applicable regulatory agency approvals. In general, Constitution, to the extent practical, will employ natural stream bank restoration techniques (e.g. planting native plant species to stabilize the banks) before utilizing riprap stabilization. The use of riprap will generally be limited to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric.
- Disturbed riparian areas will be revegetated with conservation grasses and legumes or native woody plant species.
- Permanent slope breakers will be installed across the construction right-of-way at the base of slopes greater than 5 percent that are less than 50 feet from the waterbody, or as needed to prevent sediment transport into the waterbody.
- Sediment barriers will be installed as outlined in of the ECP and as approved or specified by the EI. As approved by the EI, earthen berms may be utilized as sediment barriers adjacent to the waterbodies.

Additionally, Constitution is currently evaluating all waterbody crossing locations in New York to ensure bank, as well as floodplain restoration procedures conform to the NYSDEC restoration standards for waterbodies that require specific protection measures. Constitution will continue to consult with the NYSDEC on this matter and will incorporate, where feasible, additional BMPs relative to the protection of waterbodies into the Project construction and design plans. BMPs applicable to the restoration of waterbodies may include, but are not limited to the following:

- Existing stream bed substrates will be stripped and stockpiled for use during stream bed trench excavation, backfill, and restoration. Constitution will separate the top 12 inches of the stream bed surface and replace it during backfill to maintain consistent stream bed substrate during restoration in waterbodies that contain coldwater fisheries. Where a deficit of backfill material occurs, clean gravel or native stone material will be used.
- For open-cut crossings, waterbody banks will be stabilized and temporary sediment barriers minimizing runoff and potential erosion will be installed within 24 hours of completing in-stream construction activities.
- For dry-ditch crossings, streambed and bank stabilization will be completed prior to returning flow to the waterbody channel.
- Waterbody banks will be returned to preconstruction contours or as approved by the regulatory agencies.
- Application of riprap or other hard bank armor for bank stabilization will comply with agency requests. In general, Constitution, to the extent practicable, will employ natural stream bank restoration techniques (e.g. planting native plant species to stabilize the banks) before utilizing riprap or other hard armor stabilization. The use of riprap or other hard armor will generally be limited to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric.
- Disturbed riparian areas will be revegetated with native conservation grasses and native legumes or native woody plant species.
- Permanent slope breakers will be installed across the construction right-of-way at the base of slopes greater than 5 percent that are less than 50 feet from the waterbody, or as needed to prevent sediment transport into the waterbody. Sediment barriers will be installed as outlined in the ECP and as approved or specified by the EI.

3.3 WETLANDS

Constitution identified, located, classified and delineated wetland resources within and adjacent to the Project area through field surveys conducted in 2012 and 2013. Jurisdictional wetlands crossed by the Project in New York were field delineated in accordance with the USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (USACE 2012). Field surveys ~~are continuing~~ continued throughout the 2013 field season, as survey access permission ~~is~~was granted. For properties without negotiated survey access, the schedule for the completion of field surveys may extend past the issuance of a Certificate of Public Convenience and Necessity should the project be approved by the FERC.

Jurisdictional wetlands crossed by the Project in New York have been field delineated on accessible land parcels up to ~~April~~September 6, 2013. Detailed information regarding the field delineated wetlands is included in the Wetland Delineation Report (WDR) provided in Attachment H which has been revised to include wetlands delineated up to September 6, 2013. A Preliminary Jurisdictional Determination (PJD) request was submitted to the USACE in late July 2013 and field visits to confirm the boundaries have been ongoing with the USACE during the summer and fall of 2013. Field visits with the NYSDEC to review state regulated freshwater wetlands commenced on November 14, 2013 and are ongoing. Any modification to the wetland boundaries as a result of the agency field reviews will be provided on revised Project plans and drawings, and submitted to the agencies as supplemental information.

Identification of wetlands in locations where survey access has not been granted is determined using publicly available NWI and New York Freshwater Wetlands mapping. Both the field delineated and NWI and New York state-regulated Freshwater Wetlands are included on the Project alignment sheets in Attachment C. Wetland areas impacted on surveyed parcels as a result of the Project are summarized in Table 3.3-1. Table 3.3-2 provides a summary of wetland impacts on surveyed parcels by wetland vegetative cover type for New York. A wetland impact master table for surveyed parcels has been provided in Attachment J. Table 3.3-3 provides a summary of wetland impacts on surveyed parcels by HUC 8 watershed for New York. Construction workspace greater than 75 feet within wetlands is provided in Table 3.3-4.

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
WETLANDS ASSOCIATED WITH PIPELINE																		
UPPER SUSQUEHANNA (HUC 02050101)																		
BR-1C-W220	26.38	27 of 126	26-20-85/BR-1C-W220-1-0	42.009187	-75.528202	Sanford	Broome	PFO	1	0.01			0.01			N/A	No	II
BR-1S-W219	26.46	27 of 126	26-20-85/BR-1C-W220-1-0	42.009936	-75.527575	Sanford	Broome	PFO, PSS	289	0.52	0.07		0.14	0.01		N/A	No	II
BR-1C-W217	26.57	27 of 126	26-20-85/BR-1C-W217-1-0	42.011579	-75.527470	Sanford	Broome	PFO	0	0.05						N/A	No	N/A
	26.63	27 of 126		42.012423	-75.527572	Sanford	Broome	PFO	89	0.25			0.06			N/A	No	II
BR-1S-W216	26.66	27 of 126	26-20-85/BR-1C-W217-1-0	42.012847	-75.527931	Sanford	Broome	PFO	21	0.07			0.03			N/A	No	II
UPPER DELAWARE (HUC 02040101)																		
BR-1H-W151	26.77	27 of 126	26-20-85/BR-1H-W151-1-3	42.014372	-75.527983	Sanford	Broome	PEM	29			0.07				N/A	No	II
BR-1L-W253	28.17	29 of 126	26-20-85/BR-1L-W253-1-0	42.030090	-75.515886	Sanford	Broome	PEM	22			0.03				N/A	No	II
BR-1H-W211	28.32	29 of 126	26-20-85/BR-1H-W211-1-5	42.032172	-75.515471	Sanford	Broome	PSS	40		0.08			0.01		N/A	No	II
BR-1J-W210	28.57	30 of 126	26-20-85/BR-1J-W210-1-3	42.035591	-75.516245	Sanford	Broome	PEM, PSS	261		0.01	0.36				N/A	No	II
	28.65	30 of 126		42.036699	-75.515832	Sanford	Broome	PSS	0		0.01					N/A	No	N/A
	28.69	30 of 126	26-20-85/BR-1J-W210-2-0	42.037304	-75.515938	Sanford	Broome	PSS	43		0.10			0.01		N/A	No	II
BR-1B-W048	28.76	30 of 126	26-20-85/BR-1B-W048-1-0	42.037700	-75.517264	Sanford	Broome	PEM	15			0.02				N/A	No	II
	28.79	30 of 126		42.038013	-75.517372	Sanford	Broome	PEM	0			0.01				N/A	No	N/A
BR-1H-W206	29.26	30 of 126	26-20-85/BR-1H-W206-1-4	42.043609	-75.515317	Sanford	Broome	PEM	0			0.01				N/A	No	N/A
BR-1I-W052	29.75	30 of 126	26-20-85/BR-1I-W052-1-2	42.050145	-75.512214	Sanford	Broome	PEM	80			0.16				N/A	No	II
BR-1I-W005	30.30	31 of 126	26-20-85/BR-1I-W005-1-3	42.056644	-75.507917	Sanford	Broome	PFO	0	0.03			0.01			N/A	No	N/A
BR-1I-W055	30.39	31 of 126	26-20-85/BR-1I-W055-1-3	42.057800	-75.507572	Sanford	Broome	PEM	80			0.13				N/A	No	II
BR-1I-W056	30.45	31 of 126	26-20-85/BR-1I-W056-1-2	42.057970	-75.506503	Sanford	Broome	PEM	24			0.10				N/A	No	II
BR-1I-W054B	30.50	31 of 126	26-20-85/BR-1I-W054B-1-2	42.058533	-75.505742	Sanford	Broome	PEM	68			0.09				N/A	No	II

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
BR-1I-W054C	30.52	31 of 126	26-20-85/BR-1I-W054B-1-2	42.058773	-75.505657	Sanford	Broome	PEM	30			0.06				N/A	No	II
BR-1B-W057	30.60	31 of 126	26-20-85/BR-1B-W057-1-4	42.059781	-75.504912	Sanford	Broome	PEM	582			0.84				N/A	No	II
	30.68	31 of 126	26-20-85/BR-1B-W057-2-4	42.060808	-75.504136	Sanford	Broome	PEM	8			0.02				N/A	No	II
BR-1K-W172	32.37	33 of 126	26-20-85/BR-1K-W172-1-2	42.079817	-75.486755	Sanford	Broome	PFO	153	0.26			0.10			N/A	No	II
BR-1I-W059	33.47	34 of 126	26-20-85/BR-1I-W059-1-1 26-20-85/BR-1I-W059-2-4	42.090349	-75.480921	Sanford	Broome	PSS, PFO, PEM	1965	0.04	2.58	1.06		0.41		N/A	No	II
	33.64	34 of 126	26-20-85/BR-1I-W059-3-0 26-20-85/BR-1I-W059-4-4 26-20-85/BR-1I-W059-5-4	42.092884	-75.480921	Sanford	Broome	PEM	0			0.02				N/A	No	N/A
BR-1I-W228	34.32	35 of 126	26-20-85/BR-1I-W228-1-2	42.101922	-75.477331	Sanford	Broome	PEM	6			0.01				N/A	No	II
BR-1I-W226	34.44	35 of 126	26-20-85/BR-1I-W226-1-2	42.103295	-75.475852	Sanford	Broome	PSS	40		0.06			0.01		N/A	No	II
BR-1B-W214	34.52	35 of 126	26-20-85/BR-1B-W214-1-2	42.103832	-75.474603	Sanford	Broome	PEM	19			0.05				N/A	No	II & IV
BR-1G-W229	34.59	35 of 126	26-20-85/BR-1G-W229-1-3	42.104726	-75.474010	Sanford	Broome	PFO	0	0.01			0.01			N/A	No	N/A
BR-1I-W230	34.70	35 of 126	26-20-85/BR-1I-W230-1-3	42.105999	-75.473397	Sanford	Broome	PEM	0			0.01				N/A	No	N/A
BR-1H-W156	34.79	36 of 126	26-20-85/BR-1H-W156-1-3	42.107362	-75.473148	Sanford	Broome	PSS, PEM	372		0.22	0.37		0.03		N/A	No	II
	34.95	36 of 126	26-20-85/BR-1H-W156-2-1	42.109640	-75.473060	Sanford	Broome	PSS	413		0.55			0.09		N/A	No	II
BR-1K-W161	35.17	36 of 126	26-20-85/BR-1K-W161-1-3	42.112532	-75.471389	Sanford	Broome	PSS	13		0.02			0.01		N/A	No	II
BR-1K-W162	35.23	36 of 126	26-20-85/BR-1K-W162-1-3	42.113415	-75.470855	Sanford	Broome	PEM	12			0.02				N/A	No	II

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
BR-1U-W165	35.30	36 of 126	26-20-85/BR-1K-W162-1-3	42.114303	-75.470298	Sanford	Broome	PEM	15			0.03				N/A	No	II
BR-1U-W168	35.53	36 of 126	26-20-85/BR-1U-W168-1-2	42.117390	-75.468443	Sanford	Broome	PSS	8		0.02			0.01		N/A	No	II
BR-1I-W062	35.83	37 of 126	26-20-85/BR-1I-W062-1-3	42.121201	-75.466685	Sanford	Broome	PSS, PEM	256		0.33	0.12		0.04		N/A	No	II
BR-1B-W064	35.89	37 of 126	26-20-85/BR-1B-W064-1-3	42.122008	-75.466393	Sanford	Broome	PEM	133			0.23				N/A	No	II
	36.01	37 of 126	26-20-85/BR-1B-W064-2-3	42.123652	-75.465611	Sanford	Broome	PSS	0		0.01					N/A	No	N/A
	36.07	37 of 126	26-20-85/BR-1B-W064-3-3	42.124484	-75.465287	Sanford	Broome	PSS	24		0.07			0.01		N/A	No	II
BR-1B-W066	36.21	37 of 126	26-20-85/BR-1B-W066-1-3	42.126233	-75.463861	Sanford	Broome	PSS, PFO	243	0.23	0.18		0.07	0.03		N/A	No	II
BR-1H-W174	36.53	37 of 126	26-20-85/BR-1H-W174-1-4	42.130739	-75.462917	Sanford	Broome	PFO, PSS	19	0.05	0.02		0.01			NS-1, Class II	Yes	II
BR-1I-W070	37.78	39 of 126	26-20-85/BR-1I-W070-1-2	42.145368	-75.473381	Sanford	Broome	PSS	246		0.39			0.06		N/A	No	II
BR-1B-W074	37.96	39 of 126	26-20-85/BR-1B-W074-1-3	42.147445	-75.475731	Sanford	Broome	PEM	15			0.03				N/A	No	II
BR-1I-W073	38.01	39 of 126	26-20-85/BR-1I-W073-1-3	42.147988	-75.476382	Sanford	Broome	PFO, PSS	263	0.20	0.20		0.08	0.03		N/A	No	II
BR-1C-W075	38.10	39 of 126	26-20-85/BR-1C-W075-1-3	42.148903	-75.477576	Sanford	Broome	PSS, PFO	15	0.03	0.01		0.01			N/A	No	II
	38.16	39 of 126		42.149592	-75.478191	Sanford	Broome	PFO	83	0.15			0.06			N/A	No	II
	38.18	39 of 126		42.149852	-75.478468	Sanford	Broome	PFO	14	0.03			0.01			N/A	No	II
BR-1B-W076	38.27	39 of 126	26-20-85/BR-1B-W076-1-2	42.150723	-75.479661	Sanford	Broome	PEM	0			0.01				N/A	No	N/A
BR-1B-W077	38.28	39 of 126	26-20-85/BR-1B-W076-1-2	42.150925	-75.479722	Sanford	Broome	PFO	18	0.03			0.01			N/A	No	II
BR-1B-W078	38.35	39 of 126	26-20-85/BR-1B-W076-1-2	42.151742	-75.480655	Sanford	Broome	PEM	27			0.04				N/A	No	II
BR-1B-W079	38.40	39 of 126	26-20-85/BR-1B-W079-1-3	42.152198	-75.481183	Sanford	Broome	PEM	25			0.04				N/A	No	II
	38.53	39 of 126	26-20-85/BR-1B-W079-2-3	42.153600	-75.482938	Sanford	Broome	PEM, PFO	673	0.11		1.14	0.02			N/A	No	II

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
BR-1H-W240	38.59	39 of 126	26-20-85/BR-1H-W240-1-0	42.154239	-75.483702	Sanford	Broome	PSS, PFO	178	0.27	0.01		0.12			N/A	No	II
	38.66	40 of 126		42.155257	-75.484382	Sanford	Broome	PFO	91	0.19			0.06			N/A	No	II
	38.69	40 of 126		42.155600	-75.484614	Sanford	Broome	PFO	0	0.01						N/A	No	N/A
	38.69	40 of 126		42.155581	-75.484706	Sanford	Broome	PFO	19	0.04			0.01			N/A	No	II & IV
BR-1H-W243	38.74	40 of 126	26-20-85/BR-1H-W243-1-0	42.156228	-75.485276	Sanford	Broome	PFO, PSS	78	0.05	0.06		0.01	0.01		N/A	No	II
BR-1H-W242	38.81	40 of 126	26-20-85/BR-1H-W243-1-0	42.156875	-75.486156	Sanford	Broome	PSS	24		0.14			0.01		N/A	No	II
BR-1Q-W241	38.88	40 of 126	26-20-85/BR-1Q-W241-1-1	42.157634	-75.487179	Sanford	Broome	PFO	0	0.01						N/A	No	N/A
BR-1C-W180	38.99	40 of 126	26-20-85/BR-1C-W180-1-3	42.158898	-75.488287	Sanford	Broome	PFO, PEM	435	0.66		0.10	0.28			N/A	No	II
	39.08	40 of 126	26-20-85/BR-1C-W180-2-3	42.159960	-75.489512	Sanford	Broome	PEM	0			0.01				N/A	No	N/A
BR-1C-W182	39.14	40 of 126	26-20-85/BR-1C-W182-1-2	42.160679	-75.490092	Sanford	Broome	PEM	50			0.08				N/A	No	II
BR-1C-W251	39.62	40 of 126	26-20-85/BR-1C-W251-1-0	42.166214	-75.495420	Sanford	Broome	PFO	1	0.02			0.01			N/A	No	II
UPPER SUSQUEHANNA (HUC 02050101)																		
BR-1T-W160C	40.37	41 of 126	26-20-85/BR-1T-W160C-1-3	42.174872	-75.503849	Sanford	Broome	PEM	104			0.12				N/A	No	II
	40.45	41 of 126	26-20-85/BR-1T-W160C-2-3	42.175806	-75.504490	Sanford	Broome	PEM	0			0.01				N/A	No	N/A
BR-1C-W081	40.49	41 of 126	26-20-85/BR-1C-W081-1-4	42.176418	-75.504604	Sanford	Broome	PEM	0			0.03				N/A	No	N/A
	40.52	41 of 126		42.176723	-75.505094	Sanford	Broome	PFO, PSS	57	0.13	0.01		0.04			N/A	No	II
	40.54	41 of 126		42.176856	-75.505428	Sanford	Broome	PEM	0			0.01				N/A	No	N/A
	40.55	41 of 126		42.177049	-75.505465	Sanford	Broome	PFO	14	0.03			0.01			N/A	No	II
BR-1B-W083	40.79	42 of 126	26-20-85/BR-1B-W083-1-5	42.179529	-75.508529	Sanford	Broome	PEM	182			0.46				N/A	No	II & IV
BR-1I-W233	40.98	42 of 126	26-20-85/BR-1I-W233-1-3	42.180193	-75.511662	Sanford	Broome	PEM, PFO	367	0.01		0.62	0.01			N/A	No	II
	41.10	42 of 126	26-20-85/BR-1I-W233-2-3	42.181850	-75.512574	Sanford	Broome	PFO	261	0.41			0.18			N/A	No	II
	41.17	42 of 126		42.182614	-75.513273	Sanford	Broome	PFO	0	0.01						N/A	No	N/A
BR-1G-W234	41.21	42 of 126	26-20-85/BR-1G-W234-1-3	42.183248	-75.513213	Sanford	Broome	PFO	0	0.01						N/A	No	N/A

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
BR-1I-W236	41.27	42 of 126	26-20-85/BR-1I-W236-1-3	42.184028	-75.513217	Sanford	Broome	PFO	15	0.04			0.01			N/A	No	II
BR-1C-W184	41.36	42 of 126	26-20-85/BR-1C-W184-1-3	42.185334	-75.513200	Sanford	Broome	PFO	0	0.01			0.01			N/A	No	N/A
	41.38	42 of 126		42.185724	-75.513088	Sanford	Broome	PFO, PSS	108	0.10	0.08		0.05	0.01		N/A	No	II
BR-1X-W179	41.43	42 of 126	26-20-85/BR-1X-W179-1-3	42.186369	-75.512959	Sanford	Broome	PEM	15			0.03				N/A	No	II
BR-1X-W192	41.60	43 of 126	26-20-85/BR-1X-W192-1-3 26-20-85/BR-1X-W192-2-1	42.188676	-75.512553	Sanford	Broome	PFO, PSS	581	0.51	0.57		0.17	0.08		N/A	No	II
BR-1C-W215	41.77	43 of 126	26-20-85/BR-1C-W215-1-0 26-20-85/BR-1C-W215-2-0	42.190262	-75.510812	Sanford	Broome	PEM, PFO	61	0.20		0.02	0.05			N/A	No	II
	41.84	43 of 126		42.190478	-75.509353	Sanford	Broome	PEM, PFO	78	0.11		0.01	0.05			N/A	No	II
	41.87	43 of 126		42.190817	-75.508972	Sanford	Broome	PEM	0			0.03				N/A	No	N/A
	41.87	43 of 126		42.190979	-75.509117	Sanford	Broome	PFO	0	0.01						N/A	No	N/A
BR-1L-W250	42.17	43 of 126	26-20-85/BR-1L-W250-1-0	42.194589	-75.506752	Sanford	Broome	PEM	115			0.20				N/A	No	II
CH-1A-W064	42.26	43 of 126	26-20-85/CH-1A-W064-1-0	42.195446	-75.505263	Afton	Chenango	PFO	0	0.01						N/A	No	N/A
CH-1H-W021	42.41	43 of 126	26-20-85/CH-1H-W021-1-3	42.196947	-75.504528	Afton	Chenango	PSS	68		0.12			0.02		N/A	No	II
CH-1G-W062	42.54	43/44 of 126	26-20-85/CH-1G-W062-1-0	42.198795	-75.505013	Afton	Chenango	PSS	51		0.08			0.01		N/A	No	II
CH-1H-W022	42.65	44 of 126	26-20-85/CH-1H-W022-1-3	42.200402	-75.505257	Afton	Chenango	PSS	17		0.06			0.01		N/A	No	II
	42.68	44 of 126		42.200834	-75.505237	Afton	Chenango	PEM	0			0.01				N/A	No	N/A
CH-1H-W023	42.73	44 of 126	26-20-85/CH-1H-W023-1-3	42.201600	-75.505521	Afton	Chenango	PFO	59	0.07			0.04			N/A	No	II
CH-1C-W075	43.50	44 of 126	26-20-85/CH-1C-W075-1-0	42.211627	-75.501005	Afton	Chenango	PEM	457			0.77				N/A	No	II
CH-1J-W045B	43.65	45 of 126	26-20-85/CH-1J-W045B-1-2	42.213620	-75.500399	Afton	Chenango	PSS, PFO	559	0.87	0.17		0.34	0.02		N/A	No	II
CH-1G-W045C	43.77	45 of 126	26-20-85/CH-1G-W045C-1-0	42.215809	-75.500313	Afton	Chenango	PFO	253	0.50			0.17			N/A	No	II
CH-1C-W014	44.66	45 of 126	26-20-85/CH-1C-W014-1-2	42.227861	-75.497117	Afton	Chenango	PFO	0	0.01			0.01			N/A	No	N/A

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
CH-1A-W056	45.09	45 of 126	26-20-85/CH-1A-W056-1-0	42.232353	-75.491200	Afton	Chenango	PFO, PSS	393	0.10	0.57		0.03	0.08		N/A	No	II
CH-1C-W073	45.27	46 of 126	26-20-85/CH-1C-W073-1-0	42.234533	-75.489418	Afton	Chenango	PFO	0	0.01						N/A	No	N/A
CH-1X-W072	45.72	47 of 126	26-20-85/CH-1X-W072-1-0	42.238494	-75.482775	Afton	Chenango	PFO	0	0.09			0.01			N/A	No	N/A
CH-1X-W071	45.95	47 of 126	26-20-85/CH-1X-W071-1-1	42.239762	-75.478753	Afton	Chenango	PEM	0			0.01				N/A	No	N/A
	46.00	47 of 126		42.239880	-75.477704	Afton	Chenango	PEM	78			0.13				N/A	No	II
	46.05	47 of 126		42.239978	-75.476701	Afton	Chenango	PEM	0			0.01				N/A	No	N/A
	46.07	47 of 126		42.240278	-75.476408	Afton	Chenango	PEM	19			0.06				N/A	No	II
CH-1X-W069	46.27	47 of 126	26-20-85/CH-1X-W069-1-0	42.242713	-75.474496	Afton	Chenango	PEM	0			0.06				N/A	No	N/A
CH-1X-W067	46.28	47 of 126	26-20-85/CH-1X-W069-1-0	42.242965	-75.474452	Afton	Chenango	PSS	20		0.01			0.01		N/A	No	II
CH-1X-W066	46.38	47 of 126	26-20-85/CH-1X-W066-1-0	42.244266	-75.473607	Afton	Chenango	PEM	83			0.13				N/A	No	II
CH-1Q-W038	46.57	48 of 126	26-20-85/CH-1C-W041-1-2	42.246618	-75.471919	Afton	Chenango	PFO	0	0.04						N/A	No	N/A
CH-1C-W039	46.59	48 of 126	26-20-85/CH-1C-W041-1-2	42.247032	-75.471894	Afton	Chenango	PFO	0	0.01						N/A	No	N/A
CH-1C-W041	46.62	48 of 126	26-20-85/CH-1C-W041-1-2	42.247371	-75.471693	Afton	Chenango	PFO	0	0.01						N/A	No	N/A
CH-1Q-W040	46.68	48 of 126	26-20-85/CH-1Q-W040-1-2	42.248194	-75.471110	Afton	Chenango	PFO	63	0.10			0.04			N/A	No	II
CH-1C-W043	46.79	48 of 126	26-20-85/CH-1C-W043-1-2	42.249566	-75.470030	Afton	Chenango	PFO	22	0.08			0.02			N/A	No	II
CH-1C-W017	47.30	48 of 126	26-20-85/CH-1C-W017-1-3	42.256346	-75.466242	Afton	Chenango	PEM	0			0.06				N/A	No	N/A
CH-1C-W018	47.41	48 of 126	26-20-85/CH-1C-W018-1-3	42.257918	-75.466274	Afton	Chenango	PEM	50			0.08				N/A	No	II
	47.43	48 of 126		42.258166	-75.466094	Afton	Chenango	PEM	55			0.09				N/A	No	II
	47.48	49 of 126		42.258726	-75.465300	Afton	Chenango	PEM	238			0.32				N/A	No	II
CH-1A-W063	47.81	49 of 126	26-20-85/CH-1A-W063-1-0 26-20-85/CH-1A-W063-OC-0	42.262040	-75.460652	Bainbridge	Chenango	PFO	17	0.02						N/A	No	V

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
CH-1H-W025	48.01	49 of 126	26-20-85/CH-1H-W025-1-3	42.263964	-75.457908	Bainbridge	Chenango	PEM	9			0.01				N/A	No	IV
CH-1B-W026	48.22	49 of 126	26-20-85/CH-1B-W026-1-3	42.264818	-75.454263	Bainbridge	Chenango	PSS, PFO	102	0.17	0.03		0.06	0.01		N/A	No	II
	48.31	49 of 126		42.265742	-75.453091	Bainbridge	Chenango	PEM	0			0.01				N/A	No	N/A
CH-1B-W028	48.33	49 of 126	26-20-85/CH-1B-W028-1-2	42.265945	-75.452771	Bainbridge	Chenango	PFO	12	0.03			0.01			N/A	No	II
	48.36	49 of 126		42.266155	-75.452266	Bainbridge	Chenango	PFO	79	0.20			0.05			N/A	No	II
CH-1B-W027	48.68	50 of 126	26-20-85/CH-1B-W027-1-3	42.269371	-75.447759	Bainbridge	Chenango	PFO	54	0.11			0.04			N/A	No	II
	48.71	50 of 126		42.269725	-75.447419	Bainbridge	Chenango	PFO	0	0.01			0.01			N/A	No	N/A
CH-1X-W034	49.18	50 of 126	26-20-85/CH-1X-W034-1-2	42.274526	-75.440999	Bainbridge	Chenango	PFO	81	0.12			0.06			N/A	No	II
	49.28	50 of 126		42.275433	-75.439560	Bainbridge	Chenango	PFO	0	0.01						N/A	No	N/A
	49.32	50 of 126		42.275615	-75.438825	Bainbridge	Chenango	PFO	15	0.01			0.01			N/A	No	II
CH-1C-W051	49.60	51 of 126	26-20-85/CH-1C-W051-1-0	42.275927	-75.433437	Bainbridge	Chenango	PFO	0	0.01						N/A	No	N/A
	49.62	51 of 126		42.276186	-75.433073	Bainbridge	Chenango	PFO	0	0.04						N/A	No	N/A
	49.67	51 of 126		42.276802	-75.432424	Bainbridge	Chenango	PFO	317	0.48			0.20			N/A	No	II
CH-1S-W052	49.94	51 of 126	26-20-85/CH-1S-W052-1-0 26-20-85/CH-1S-W052-2-0	42.277381	-75.427493	Bainbridge	Chenango	PFO	1169	2.00			0.80			N/A	No	II
CH-1A-W047	50.09	51 of 126	26-20-85/CH-1A-W047-1-0	42.277493	-75.424665	Bainbridge	Chenango	PEM	148			0.25				N/A	No	II
	50.14	51 of 126		42.277581	-75.423594	Bainbridge	Chenango	PEM	0			0.01				N/A	No	N/A
CH-1A-W048	50.16	51 of 126	26-20-85/CH-1A-W047-1-0	42.277434	-75.423210	Bainbridge	Chenango	PEM	0			0.01				N/A	No	N/A
CH-1A-W049	50.22	51 of 126	26-20-85/CH-1A-W049-1-0	42.277504	-75.421990	Bainbridge	Chenango	PFO	71	0.10			0.05			N/A	No	II
CH-1A-W050	50.49	51/52 of 126	26-20-85/CH-1A-W050-1-0	42.277672	-75.416820	Bainbridge	Chenango	PFO	289	0.50			0.20			N/A	No	II
DE-1B-W025	50.53	52 of 126	26-20-85/DE-1B-W025-1-4	42.277685	-75.416018	Masonville	Delaware	PFO	6	0.01			0.01			N/A	No	II
	50.56	52 of 126		42.277706	-75.415464	Masonville	Delaware	PFO	105	0.18			0.07			N/A	No	II
DE-1H-W026	50.86	52 of 126	26-20-85/DE-1H-W026-1-2	42.277834	-75.409658	Masonville	Delaware	PEM	0			0.02				N/A	No	N/A
DE-1B-W027	50.95	52 of 126	26-20-85/DE-1B-W027-1-2	42.277981	-75.407917	Masonville	Delaware	PFO	100	0.25			0.08			N/A	No	II

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
DE-1H-W028	51.00	52 of 126	26-20-85/DE-1H-W028-1-2	42.278084	-75.406797	Masonville	Delaware	PFO	48	0.10			0.03			N/A	No	II
	51.02	52 of 126		42.278154	-75.406465	Masonville	Delaware	PFO, PEM	45	0.02		0.02	0.02			N/A	No	II
DE-1H-W030	51.12	52 of 126	26-20-85/DE-1H-W030-1-3	42.278537	-75.404692	Masonville	Delaware	PFO	223	0.34			0.16			SD-3, Class II	Yes	II
DE-1B-W032	51.57	53 of 126	26-20-85/DE-1B-W032-1-2	42.278510	-75.395990	Masonville	Delaware	PFO	0	0.03						N/A	No	N/A
DE-1H-W034	51.57	53 of 126	26-20-85/DE-1B-W032-1-2	42.278662	-75.395832	Masonville	Delaware	PFO	0	0.02			0.01			N/A	No	N/A
DE-1B-W033	51.60	53 of 126	26-20-85/DE-1B-W032-1-2	42.278478	-75.395413	Masonville	Delaware	PFO	0	0.01						N/A	No	N/A
DE-1K-W227	52.19	53 of 126	26-20-85/DE-1K-W227-1-2	42.282676	-75.385775	Masonville	Delaware	PSS	218		0.45			0.05		N/A	No	II
DE-1H-W035	52.26	53 of 126	26-20-85/DE-1H-W035-1-2	42.283564	-75.385051	Sidney	Delaware	PEM	39			0.04				N/A	No	II
DE-1B-W037	52.35	53 of 126	26-20-85/DE-1B-W037-1-3	42.284489	-75.383965	Sidney	Delaware	PFO	0	0.01						N/A	No	N/A
DE-1B-W046	53.89	55 of 126	26-20-85/DE-1B-W046-1-3	42.289033	-75.357395	Sidney	Delaware	PFO	60	0.11			0.04			N/A	No	II
	53.92	55 of 126		42.289047	-75.356930	Sidney	Delaware	PFO, PEM	0			0.01				N/A	No	N/A
DE-1X-W158	54.32	55 of 126	26-20-85/DE-1X-W158-1-3 26-20-85/DE-1X-W158-2-3	42.290363	-75.349297	Sidney	Delaware	PFO	0							N/A	No	N/A
	54.38	55 of 126	26-20-85/DE-1X-W158-3-3 26-20-85/DE-1X-W158-4-3	42.290593	-75.348227	Sidney	Delaware	PFO, PEM	427							N/A	No	V
	54.47	56 of 126	26-20-85/DE-1X-W158-OC-1-0 26-20-85/DE-1X-W158-OC-2-0	42.290952	-75.346447	Sidney	Delaware	PEM, PFO	189							N/A	No	V
	54.55	56 of 126	26-20-85/DE-1X-W158-OC-3-0 26-20-85/DE-1X-W158-OC-4-0	42.291159	-75.344824	Sidney	Delaware	PEM, PFO	1387							N/A	No	V

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
DE-1F-W075	55.09	56 of 126	26-20-85/DE-1F-W075-1-1	42.292926	-75.334601	Sidney	Delaware	PFO	164							N/A	No	V
	55.13	56 of 126		42.293026	-75.333925	Sidney	Delaware	PFO	28							N/A	No	V
	55.18	56 of 126	26-20-85/DE-1F-W075-OC-1-0	42.293028	-75.332809	Sidney	Delaware	PEM, PFO	0	0.01		0.03				N/A	No	N/A
DE-1K-W228	55.25	56 of 126	26-20-85/DE-1K-W228-1-0	42.293481	-75.331648	Sidney	Delaware	PEM	16			0.03				N/A	No	II
DE-1C-W229	55.60	57 of 126	26-20-85/DE-1C-W229-1-2	42.295287	-75.325377	Sidney	Delaware	PEM	0			0.01				N/A	No	N/A
DE-1M-W079	55.78	57 of 126	26-20-85/DE-1M-W079-1-2	42.295241	-75.322117	Sidney	Delaware	PEM	14			0.04				N/A	No	II
	55.82	57 of 126		42.295479	-75.321513	Sidney	Delaware	PEM	74			0.14				N/A	No	II
DE-1M-W080	55.86	57 of 126	26-20-85/DE-1M-W080-1-0	42.295853	-75.320842	Sidney	Delaware	PEM	132			0.16				N/A	No	II
	55.90	57 of 126		42.296073	-75.320210	Sidney	Delaware	PEM	38			0.07				N/A	No	II
DE-1D-W215	56.25	57 of 126	26-20-85/DE-1D-W215-1-2	42.297971	-75.313823	Sidney	Delaware	PEM	54			0.05				N/A	No	II
DE-1C-W214	56.31	57 of 126	26-20-85/DE-1D-W215-1-2	42.298364	-75.312670	Sidney	Delaware	PSS	0		0.02					N/A	No	N/A
DE-1Y-W085	56.99	58 of 126	26-20-85/DE-1Y-W085-1-2	42.307403	-75.308307	Sidney	Delaware	PEM, PFO	351	0.13		0.37	0.06			N/A	No	II
DE-1M-W088	57.12	58 of 126	26-20-85/DE-1M-W088-1-2	42.308915	-75.306978	Sidney	Delaware	PEM	8			0.07				N/A	No	II
DE-1C-W211	57.86	59 of 126	26-20-85/DE-1C-W211-1-4	42.317268	-75.297818	Sidney	Delaware	PFO, PSS	555	0.45	0.49		0.19	0.07		N/A	No	II
	57.98	59 of 126	26-20-85/DE-1C-W211-2-4	42.318328	-75.296108	Sidney	Delaware	PFO, PSS	536	0.08	0.77		0.05	0.10		N/A	No	II
	58.09	59 of 126	26-20-85/DE-1C-W211-3-4	42.319424	-75.294503	Sidney	Delaware	PSS	213		0.36			0.05		N/A	No	II
DE-1C-W223	58.29	59 of 126	26-20-85/DE-1C-W223-1-2	42.321165	-75.291670	Sidney	Delaware	PEM, PSS	395		0.21	0.40		0.03		N/A	No	II
DE-1K-W232	58.37	60 of 126	26-20-85/DE-1K-W232-1-2	42.321691	-75.290293	Sidney	Delaware	PFO	0	0.03						N/A	No	N/A
	58.42	60 of 126		42.322292	-75.289537	Sidney	Delaware	PFO	0	0.04			0.01			N/A	No	N/A
DE-1K-W233	58.47	60 of 126	26-20-85/DE-1K-W233-1-3	42.322853	-75.288893	Sidney	Delaware	PSS, PFO	536	0.82	0.22		0.28	0.03		N/A	No	II
	58.68	60 of 126	26-20-85/DE-1K-W233-2-3	42.324944	-75.286118	Sidney	Delaware	PFO, PSS	123	0.17	0.06		0.06	0.01		N/A	No	II
DE-1C-W234	58.77	60 of 126	26-20-85/DE-1C-W234-1-3	42.325950	-75.284775	Sidney	Delaware	PFO	86	0.19			0.06			N/A	No	II

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
DE-1M-W094	59.48	61 of 126	26-20-85/DE-1M-W094-1-2	42.332781	-75.274878	Sidney	Delaware	PSS	218		0.33			0.05		N/A	No	II
DE-1M-W095	59.55	61 of 126	26-20-85/DE-1M-W095-1-3	42.333113	-75.273593	Sidney	Delaware	PSS	0		0.01					N/A	No	N/A
	59.58	61 of 126		42.333264	-75.273124	Sidney	Delaware	PSS	0		0.01					N/A	No	N/A
DE-1M-W096	59.58	61 of 126	26-20-85/DE-1M-W095-1-3	42.333462	-75.273196	Sidney	Delaware	PSS	0		0.01					N/A	No	N/A
	59.61	61 of 126		42.333624	-75.272688	Sidney	Delaware	PSS	0		0.01					N/A	No	N/A
DE-1N-W101	59.73	61 of 126	26-20-85/DE-1N-W101-1-2	42.334446	-75.269880	Sidney	Delaware	PEM	129			0.39				N/A	No	II
DE-1C-W205	60.30	61 of 126	26-20-85/DE-1C-W205-1-2	42.337059	-75.260219	Sidney	Delaware	PSS	120		0.19			0.03		N/A	No	II
DE-1W-W132	60.46	62 of 126	26-20-85/DE-1W-W132-1-2	42.338268	-75.257584	Sidney	Delaware	PEM	0			0.01				N/A	No	N/A
	60.48	62 of 126		42.338454	-75.257299	Sidney	Delaware	PEM	0			0.01				N/A	No	N/A
DE-1P-W133	60.57	62 of 126	26-20-85/DE-1P-W133-1-2	42.339478	-75.255990	Sidney	Delaware	PEM	62			0.10				N/A	No	II
DE-1P-W134	60.72	62 of 126	26-20-85/DE-1P-W134-1-2	42.341543	-75.255013	Sidney	Delaware	PEM	39			0.07				N/A	No	II
DE-1W-W136	61.13	62 of 126	26-20-85/DE-1W-W136-1-3	42.345097	-75.250079	Sidney	Delaware	PEM	57			0.07				N/A	No	II
DE-1Q-W110	61.33	63 of 126	26-20-85/DE-1Q-W110-1-4	42.347246	-75.247505	Sidney	Delaware	PFO, PSS	343	0.01	0.54			0.08		N/A	No	II
DE-1C-W335	61.43	63 of 126	26-20-85/DE-1C-W335-1-0	42.348286	-75.246004	Sidney	Delaware	PSS	0		0.01					N/A	No	N/A
DE-1S-W255	63.11	64 of 126	26-20-85/DE-1S-W255-1-3	42.356141	-75.218151	Sidney	Delaware	PFO	346	0.56			0.24			N/A	No	II
DE-1X-W285	63.72	65 of 126	26-20-85/DE-1X-W285-1-4	42.357029	-75.206311	Sidney	Delaware	PFO	150	0.29			0.11			N/A	No	II
DE-1D-W284	63.90	65 of 126	26-20-85/DE-1D-W284-1-4	42.357129	-75.202790	Sidney	Delaware	PFO	0	0.01						N/A	No	N/A
	63.93	65 of 126		42.357120	-75.202179	Sidney	Delaware	PFO	3	0.03			0.01			N/A	No	II
DE-1D-W283	64.06	65 of 126	26-20-85/DE-1D-W283-1-4	42.357081	-75.199587	Sidney	Delaware	PFO	202	0.25			0.12			N/A	No	II
DE-1A-W281A	64.98	66 of 126	26-20-85/DE-1A-W281A-1-0	42.363251	-75.183867	Franklin	Delaware	PSS	0		0.01					N/A	No	N/A
DE-1S-W021	65.20	66 of 126	26-20-85/DE-1S-W021-1-3	42.365222	-75.180411	Franklin	Delaware	PEM	67			0.12				N/A	No	II & IV
DE-1M-W175	66.25	68 of 126	26-20-85/DE-1M-W175-1-3	42.372975	-75.163324	Franklin	Delaware	PEM, PFO	576	0.61		0.33	0.26			N/A	No	II

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Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
DE-1X-W282	67.70	69 of 126	26-20-85/DE-1X-W282-1-3	42.380202	-75.136961	Franklin	Delaware	PFO	0	0.06						N/A	No	N/A
DE-1C-W332	69.43	71 of 126	26-20-85/DE-1C-W332-1-0	42.388216	-75.107044	Franklin	Delaware	PEM	0			0.01				N/A	No	N/A
DE-1P-W067	70.89	72 of 126	26-20-85/DE-1P-W067-1-3	42.403707	-75.090501	Franklin	Delaware	PSS	51		0.08			0.01		N/A	No	II
DE-1W-W069	70.91	72 of 126	26-20-85/DE-1P-W067-1-3	42.403778	-75.089986	Franklin	Delaware	PSS	12		0.02			0.01		N/A	No	II
DE-1W-W065	70.95	72 of 126	26-20-85/DE-1P-W067-1-3	42.403648	-75.089356	Franklin	Delaware	PSS	48		0.08			0.01		N/A	No	II
	70.96	72 of 126		42.403790	-75.089010	Franklin	Delaware	PSS	0		0.01					N/A	No	N/A
DE-1P-W071	71.36	73 of 126	26-20-85/DE-1P-W071-1-0	42.406267	-75.083172	Franklin	Delaware	PFO	0	0.01						N/A	No	N/A
DE-1W-W073	71.83	73 of 126	26-20-85/DE-1W-W073-1-4 26-20-85/DE-1W-W073-2-4	42.408992	-75.075214	Franklin	Delaware	PEM, PFO	697	1.10		0.04	0.45			N/A	No	II
DE-1P-W074	73.36	75 of 126	26-20-85/DE-1P-W074-1-3	42.418548	-75.052609	Franklin	Delaware	PSS	221		0.32			0.05		ON-4, Class II	Yes	II
DE-1W-W075	73.41	75 of 126	26-20-85/DE-1P-W074-1-3	42.418448	-75.051578	Franklin	Delaware	PEM	54			0.05				N/A	No	II
DE-1W-W125	73.48	75 of 126	26-20-85/DE-1W-W125-1-3	42.418247	-75.050332	Franklin	Delaware	PFO	398	0.76			0.27			ON-4, Class II	Yes	II
DE-1W-W126	74.29	76 of 126	26-20-85/DE-1W-W126-1-2	42.418738	-75.035272	Davenport	Delaware	PFO	103	0.15			0.07			N/A	No	II
DE-1C-W331	75.31	77 of 126	26-20-85/DE-1C-W331-1-0	42.422583	-75.016821	Davenport	Delaware	PEM	25			0.04				N/A	No	IV
DE-1M-W154	76.89	78 of 126	26-20-85/DE-1M-W154-1-5	42.422748	-74.988357	Davenport	Delaware	PFO	145	0.22			0.10			N/A	No	II
DE-1B-W327	78.06	80 of 126	26-20-85/DE-1B-W327-1-0	42.424046	-74.965771	Davenport	Delaware	PFO, PEM	139	0.13		0.09	0.06			N/A	No	II
	78.09	80 of 126		42.424066	-74.965138	Davenport	Delaware	PFO	0	0.02			0.01			N/A	No	N/A
DE-1G-W248	78.21	80 of 126	26-20-85/DE-1G-W248-1-4	42.423827	-74.963103	Davenport	Delaware	PFO	22	0.03			0.02			N/A	No	II
DE-1L-W250	78.62	80 of 126	26-20-85/DE-1L-W250-1-3 26-20-85/DE-1L-W250-2-3	42.422917	-74.955337	Davenport	Delaware	PSS	511		0.84			0.12		N/A	No	II
	78.65	80 of 126		42.422916	-74.954807	Davenport	Delaware	PSS	201		0.37			0.05		N/A	No	II
	78.72	80 of 126		42.422794	-74.953416	Davenport	Delaware	PSS	23		0.05			0.01		N/A	No	II

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
DE-1G-W251	78.73	80 of 126	26-20-85/DE-1G-W251-1-2	42.422520	-74.953214	Davenport	Delaware	PSS	0		0.01					N/A	No	N/A
DE-1L-W252	78.77	80 of 126	26-20-85/DE-1G-W251-1-2	42.422667	-74.952417	Davenport	Delaware	PSS	0		0.01					N/A	No	N/A
DE-1L-W304	79.06	81 of 126	26-20-85/DE-1L-W304-1-0	42.422385	-74.946844	Davenport	Delaware	PFO	38	0.03			0.02			N/A	No	II
DE-1L-W303	79.09	81 of 126	26-20-85/DE-1L-W304-1-0	42.422219	-74.946432	Davenport	Delaware	PFO	110	0.18			0.07			N/A	No	II
DE-1L-W305	79.12	81 of 126	26-20-85/DE-1L-W304-1-0	42.421968	-74.945788	Davenport	Delaware	PFO	0	0.01						N/A	No	N/A
DE-1L-W306	79.16	81 of 126	26-20-85/DE-1L-W304-1-0	42.421974	-74.944992	Davenport	Delaware	PFO	0	0.01			0.01			N/A	No	N/A
DE-1M-W148	79.82	81 of 126	26-20-85/DE-1M-W148-1-5	42.425315	-74.933557	Davenport	Delaware	PEM	104			0.13				N/A	No	II
DE-1P-W149	79.89	81 of 126	26-20-85/DE-1M-W148-1-5	42.425114	-74.932373	Davenport	Delaware	PEM	0			0.05				N/A	No	N/A
DE-1M-W150	79.98	81 of 126	26-20-85/DE-1M-W150-1-3	42.425032	-74.930380	Davenport	Delaware	PEM	12			0.02				N/A	No	II
	80.00	81 of 126		42.425064	-74.929926	Davenport	Delaware	PEM	24			0.02				N/A	No	II
DE-1M-W151	80.25	82 of 126	26-20-85/DE-1M-W151-1-2	42.424631	-74.925161	Davenport	Delaware	PFO	73	0.17			0.05			N/A	No	II
	80.30	82 of 126		42.424717	-74.924180	Davenport	Delaware	PFO	33	0.04			0.02			N/A	No	II
	80.36	82 of 126	26-20-85/DE-1M-W151-2-2	42.424656	-74.922974	Davenport	Delaware	PFO	201	0.41			0.14			N/A	No	II
DE-1Q-W180	80.60	82 of 126	26-20-85/DE-1Q-W180-1-3	42.425391	-74.918858	Davenport	Delaware	PFO	286	0.49			0.20			N/A	No	II
DE-1Q-W181	80.83	82 of 126	26-20-85/DE-1Q-W181-1-4	42.427234	-74.915118	Davenport	Delaware	PFO	189	0.29			0.13			N/A	No	II & IV
DE-1I-W245	82.00	83 of 126	26-20-85/DE-1I-W245-1-3	42.437026	-74.896717	Davenport	Delaware	PFO	0	0.01						N/A	No	N/A
	82.04	84 of 126		42.437149	-74.896093	Davenport	Delaware	PFO	139	0.23			0.09			N/A	No	II
DE-1B-W336	83.19	85 of 126	26-20-85/DE-1B-W336-1-0	42.442871	-74.875490	Davenport	Delaware	PFO	37	0.06			0.02			N/A	No	II
DE-1B-W337	83.36	85 of 126	26-20-85/DE-1B-W337-1-0	42.443994	-74.872598	Davenport	Delaware	PFO	47	0.13			0.03			N/A	No	II
	83.43	85 of 126		42.444474	-74.871507	Davenport	Delaware	PFO	79	0.12			0.06			N/A	No	II
DE-1N-W006	83.94	85 of 126	26-20-85/DE-1N-W006-1-3	42.448170	-74.862831	Davenport	Delaware	PFO	134	0.16			0.09			N/A	No	II
DE-1G-W008	85.22	87 of 126	26-20-85/DE-1G-W008-1-2	42.454193	-74.840427	Davenport	Delaware	PFO	0	0.04						N/A	No	N/A

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
DE-1N-W156A	85.87	87 of 126	26-20-85/DE-1N-W156A-1-5 26-20-85/DE-1N-W156A-2-4 26-20-85/DE-1N-W156A-OC-1-0 26-20-85/DE-1N-W156A-OC-2-0	42.456437	-74.828142	Davenport	Delaware	PFO	319							D-11, Class II	Yes	V
DE-1L-W301	86.09	88 of 126	26-20-85/DE-1L-W301-1-0	42.457003	-74.823929	Davenport	Delaware	PFO	12	0.02			0.01			N/A	No	II
DE-1L-W300	86.13	88 of 126	26-20-85/DE-1L-W301-1-0	42.456936	-74.823168	Davenport	Delaware	PFO	0	0.01						N/A	No	N/A
	86.17	88 of 126		42.457007	-74.822271	Davenport	Delaware	PFO	369	0.59			0.25			N/A	No	II
DE-1C-W215	87.07	89 of 126	26-20-85/DE-1C-W215-1-5	42.462563	-74.807515	Davenport	Delaware	PFO	0	0.01						D-13, Class II	Yes	N/A
	87.08	89 of 126		42.462640	-74.807235	Davenport	Delaware	PFO	0	0.02			0.01			N/A	No	N/A
DE-1Q-W216	87.10	89 of 126	26-20-85/DE-1C-W215-1-5	42.462847	-74.806981	Davenport	Delaware	PFO	0	0.01			0.01			N/A	No	N/A
	87.11	89 of 126		42.462891	-74.806772	Davenport	Delaware	PFO	0	0.01						N/A	No	N/A
DE-1C-W217	87.13	89 of 126	26-20-85/DE-1C-W215-1-5	42.462825	-74.806419	Davenport	Delaware	PFO	22	0.04			0.01			D-13, Class II	Yes	II
DE-1C-W050A	87.77	89 of 126	26-20-85/DE-1P-W052-1-2 26-20-85/DE-1P-W052-OC-1-0	42.467082	-74.795320	Davenport	Delaware	PSS	0							N/A	No	N/A
DE-1P-W050	87.80	89 of 126	26-20-85/DE-1P-W052-1-2 26-20-85/DE-1P-W052-OC-1-0	42.467396	-74.794908	Davenport	Delaware	PEM	0							N/A	No	N/A
DE-1P-W052	87.82	89 of 126	26-20-85/DE-1P-W052-1-2 26-20-85/DE-1P-W052-OC-1-0	42.467479	-74.794627	Davenport	Delaware	PSS	266		0.06					N/A	No	V
	87.88	89 of 126		42.467923	-74.793461	Davenport	Delaware	PFO	0							N/A	No	N/A
DE-1T-W053	87.94	89 of 126	26-20-85/DE-1T-W053-1-2 26-20-85/DE-1T-W053-OC-1-0	42.468402	-74.792592	Davenport	Delaware	PEM	45			0.01				N/A	No	V
	87.98	89 of 126		42.468718	-74.791892	Davenport	Delaware	PEM	40			0.01				N/A	No	V

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
DE-1T-W055	88.04	89 of 126	26-20-85/DE-1T-W053-1-2 26-20-85/DE-1T-W053-OC-1-0	42.469110	-74.790904	Davenport	Delaware	PSS	205		0.05					N/A	No	V
DE-1T-W060	89.92	91/92 of 126	26-20-85/DE-1T-W060-1-2 26-20-85/DE-1T-W060-2-2 26-20-85/DE-1T-W060-3-2	42.486329	-74.763907	Harpersfield	Delaware	PSS	812		1.38			0.19		N/A	No	II
	90.07	91/92 of 126		42.488221	-74.762527	Harpersfield	Delaware	PSS	220		0.36			0.05		N/A	No	II
DE-1Q-W212	90.21	92 of 126	26-20-85/DE-1Q-W212-1-3	42.490064	-74.761085	Harpersfield	Delaware	PEM	0			0.01				N/A	No	N/A
DE-1P-W128	90.23	92 of 126	26-20-85/DE-1Q-W212-1-3	42.490166	-74.760787	Harpersfield	Delaware	PEM	9			0.01				D-8, Class II	Yes	II
	90.32	92 of 126	26-20-85/DE-1Q-W212-2-0	42.490920	-74.759190	Harpersfield	Delaware	PEM	894			1.41				N/A	No	II
	90.59	92 of 126	26-20-85/DE-1Q-W212-3-0	42.493429	-74.755351	Harpersfield	Delaware	PFO	330	0.57			0.23			N/A	No	II
	90.69	92 of 126	26-20-85/DE-1Q-W212-4-0	42.494445	-74.753912	Harpersfield	Delaware	PFO	229	0.42			0.16			N/A	No	II
DE-1G-W017	92.10	94 of 126	26-20-85/DE-1G-W017-1-2	42.502862	-74.729280	Harpersfield	Delaware	PFO	53	0.11			0.04			N/A	No	II
DE-1N-W012	92.37	94 of 126	26-20-85/DE-1N-W012-1-3	42.503644	-74.724123	Harpersfield	Delaware	PSS, PFO	242	0.01	0.39		0.01	0.05		N/A	No	II
DE-1P-W258A	92.87	94 of 126	26-20-85/DE-1P-W258A-1-2	42.505573	-74.714775	Harpersfield	Delaware	PEM	0			0.01				N/A	No	N/A
DE-1G-W143	93.38	95 of 126	26-20-85/DE-1G-W143-1-3	42.508823	-74.706052	Harpersfield	Delaware	PSS, PFO	367	0.32	0.26		0.15	0.04		N/A	No	II
DE-1Q-W142	93.47	95 of 126	26-20-85/DE-1Q-W142-1-3	42.508924	-74.704227	Harpersfield	Delaware	PFO	86	0.19			0.06			N/A	No	II
SC-1S-W402	93.86	95 of 126	26-20-85/SC-1S-W402-1-2	42.508050	-74.697055	Summit	Schoharie	PSS	98		0.17			0.02		N/A	No	II
SC-1F-W003	94.60	96 of 126	26-20-85/SC-1F-W003-1-3	42.516549	-74.691715	Summit	Schoharie	PSS	16		0.03			0.01		N/A	No	II
SC-1N-W001	94.68	96 of 126	26-20-85/SC-1N-W001-1-3	42.517196	-74.690303	Summit	Schoharie	PSS	321		0.53			0.07		N/A	No	II

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
SC-1Y-W436	94.89	96 of 126	26-20-85/SC-1Y-W436-1-0	42.518595	-74.686589	Summit	Schoharie	PEM	0			0.01				N/A	No	N/A
SC-1Y-W437	94.96	96 of 126	26-20-85/SC-1Y-W436-1-0	42.518983	-74.685426	Summit	Schoharie	PEM	88			0.14				N/A	No	II
SC-1H-W257	95.19	97 of 126	26-20-85/SC-1H-W257-1-3	42.520869	-74.681769	Summit	Schoharie	PFO	260	0.44			0.18			N/A	No	II
SC-1Q-W377	95.37	97 of 126	26-20-85/SC-1Q-W377-1-3	42.522482	-74.679807	Summit	Schoharie	PEM	25			0.05				N/A	No	II
SC-1H-W257	95.47	97 of 126	26-20-85/SC-1H-W257-2-5	42.523075	-74.677843	Summit	Schoharie	PFO	61	0.16			0.05			N/A	No	II
SC-1X-W256	95.60	97 of 126	26-20-85/SC-1X-W256-1-2 26-20-85/SC-1X-W256-2-2	42.523747	-74.675639	Summit	Schoharie	PFO, PSS	480	0.01	0.86			0.11		N/A	No	II
SC-1X-W256	95.76	97 of 126	26-20-85/SC-1X-W256-2-2	42.524406	-74.672627	Summit	Schoharie	PSS	371		0.76			0.09		N/A	No	II
SC-1Q-W374	96.04	98 of 126	26-20-85/SC-1Q-W374-1-3	42.525214	-74.667260	Jefferson	Schoharie	PSS	53		0.08			0.01		N/A	No	II
SC-1C-W373	96.36	98 of 126	26-20-85/SC-1C-W373-1-3	42.527766	-74.662183	Jefferson	Schoharie	PEM	0			0.01				N/A	No	N/A
	96.38	98 of 126		42.527875	-74.661918	Jefferson	Schoharie	PEM	0			0.01				N/A	No	N/A
SC-1H-W253	96.94	98 of 126	26-20-85/SC-1H-W253-1-2	42.533242	-74.654666	Summit	Schoharie	PEM	0			0.02				N/A	No	N/A
	97.06	99 of 126	26-20-85/SC-1H-W253-2-2	42.534054	-74.652650	Jefferson	Schoharie	PFO	210	0.36			0.14			N/A	No	II
SC-1C-W411	97.34	99 of 126	26-20-85/SC-1C-W411-1-4	42.535248	-74.647304	Jefferson	Schoharie	PEM	191			0.31				N/A	No	II
SC-1G-W443	97.42	99 of 126	26-20-85/SC-1C-W411-1-4	42.535418	-74.645768	Jefferson	Schoharie	PEM	203			0.31				N/A	No	II
SC-1K-W417	97.62	99 of 126	26-20-85/SC-1K-W417-1-2	42.536516	-74.642364	Jefferson	Schoharie	PEM	91			0.17				N/A	No	II
SC-1L-W427	98.61	100 of 126	26-20-85/SC-1L-W427-1-0	42.542563	-74.625246	Jefferson	Schoharie	PFO	25	0.03			0.02			N/A	No	II
SCHOHARIE (HUC 02020005)																		
SC-1P-W133	100.96	102 of 126	26-20-85/SC-1P-W133-1-2	42.567014	-74.599732	Summit	Schoharie	PSS	380		0.66			0.09		N/A	No	II
SC-1P-W135	101.07	102/103 of 126	26-20-85/SC-1P-W135-1-3	42.567377	-74.597660	Summit	Schoharie	PEM, PSS	400		0.04	0.64				N/A	No	II

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
SC-1A-W422	101.45	103 of 126	26-20-85/SC-1A-W422-1-0 26-20-85/SC-1A-W422-OC-1-0	42.570097	-74.591430	Summit	Schoharie	PFO, PEM	0	0.03		0.16				N/A	No	N/A
SC-1A-W421	101.56	103 of 126	26-20-85/SC-1A-W421-1-0	42.570587	-74.589403	Summit	Schoharie	PEM, PSS	32		0.01	0.05				N/A	No	II
SC-1G-W200	101.61	103 of 126	26-20-85/SC-1G-W200-1-0	42.570743	-74.588550	Summit	Schoharie	PEM, PFO	139	0.08		0.11	0.05			N/A	No	II
SC-1E-W100	101.70	103 of 126	26-20-85/SC-1E-W100-1-4	42.570987	-74.586861	Summit	Schoharie	PFO	260	0.41			0.17			N/A	No	II & IV
SC-1E-W103	101.74	103 of 126	26-20-85/SC-1E-W100-1-4	42.571181	-74.585960	Summit	Schoharie	PFO	8	0.01			0.01			N/A	No	II
SC-1E-W105	102.08	104 of 126	26-20-85/SC-1E-W105-1-2	42.574303	-74.581236	Summit	Schoharie	PFO	339	0.58			0.23			N/A	No	II
SC-1R-W111	102.56	104 of 126	26-20-85/SC-1R-W111-1-3	42.580299	-74.577387	Summit	Schoharie	PEM, PFO	43	0.04		0.02	0.02			N/A	No	II & IV
SC-1E-W112	102.91	104 of 126	26-20-85/SC-1E-W112-1-2	42.584857	-74.574389	Summit	Schoharie	PFO	0	0.05						N/A	No	N/A
	102.97	105 of 126		42.585576	-74.574031	Summit	Schoharie	PFO	315	0.53			0.22			N/A	No	II
SC-1M-W233	103.47	105 of 126	26-20-85/SC-1M-W233-1-3	42.590331	-74.567304	Summit	Schoharie	PFO	90	0.19			0.06			N/A	No	II
SC-1M-W181	104.14	106 of 126	26-20-85/SC-1M-W181-1-4	42.597534	-74.560254	Summit	Schoharie	PFO, PEM	329	0.11		0.38	0.04			N/A	No	II
SC-1M-W184	104.33	106 of 126	26-20-85/SC-1M-W184-1-2	42.599950	-74.558342	Summit	Schoharie	PEM	0			0.01				N/A	No	N/A
SC-1M-W188	104.40	106 of 126	26-20-85/SC-1M-W188-1-3	42.600684	-74.557569	Summit	Schoharie	PEM	0			0.01				N/A	No	N/A
SC-1I-W434	104.42	106 of 126	26-20-85/SC-1M-W188-1-3	42.601048	-74.557488	Summit	Schoharie	PEM	38			0.03				N/A	No	II
SC-1P-W056	104.54	106 of 126	26-20-85/SC-1P-W056-1-2	42.602281	-74.555763	Summit	Schoharie	PEM, PFO	70	0.01		0.14				N/A	No	II
SC-1N-W055	104.66	106 of 126	26-20-85/SC-1N-W055-1-3	42.603939	-74.555045	Summit	Schoharie	PSS	315		0.50			0.07		N/A	No	II
	104.72	106 of 126		42.604641	-74.554726	Summit	Schoharie	PEM	110			0.09				N/A	No	II
SC-1B-W458	105.25	107 of 126	26-20-85/SC-1B-W458-1-0	42.608660	-74.546211	Richmondville	Schoharie	PFO	0	0.01						N/A	No	N/A
	105.27	107 of 126		42.608843	-74.545905	Richmondville	Schoharie	PFO	0	0.01			0.01			N/A	No	N/A
SC-1G-W340	105.57	107 of 126	26-20-85/SC-1G-W340-1-3	42.611625	-74.541165	Richmondville	Schoharie	PEM	243			0.36				N/A	No	II

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
SC-1G-W339	105.72	107 of 126	26-20-85/SC-1G-W339-1-0	42.612945	-74.539045	Richmondville	Schoharie	PEM	22			0.03				N/A	No	IV
SC-1L-W304	105.74	107 of 126	26-20-85/SC-1L-W304-1-0	42.612899	-74.538703	Richmondville	Schoharie	PEM	0			0.02				N/A	No	N/A
SC-1L-W303	105.77	107 of 126	26-20-85/SC-1L-W303-1-2	42.613069	-74.538113	Richmondville	Schoharie	PEM	50			0.08				N/A	No	II
SC-1L-W300	105.93	107 of 126	26-20-85/SC-1L-W300-1-3 26-20-85/SC-1L-W300-2-0	42.612661	-74.535258	Richmondville	Schoharie	PEM, PFO	858	0.12		1.32	0.07			N/A	No	II
SC-1J-W385	106.36	108 of 126	26-20-85/SC-1J-W385-1-3	42.615883	-74.528012	Richmondville	Schoharie	PEM	0			0.02				N/A	No	N/A
	106.38	108 of 126		42.616043	-74.527739	Richmondville	Schoharie	PEM	0			0.01				N/A	No	N/A
SC-1L-W352	106.56	108 of 126	26-20-85/SC-1L-W352-1-2	42.617811	-74.525128	Richmondville	Schoharie	PEM	36			0.04				N/A	No	II
SC-1Q-W354	106.70	108 of 126	26-20-85/SC-1Q-W354-1-2	42.619390	-74.523649	Richmondville	Schoharie	PFO	221	0.23			0.15			N/A	No	II
SC-1L-W356	107.01	109 of 126	26-20-85/SC-1L-W356-1-3	42.622880	-74.520037	Richmondville	Schoharie	PSS, PEM	583		0.34	0.69		0.04		N/A	No	II
SC-1D-W295	107.18	109 of 126	26-20-85/SC-1D-W295-1-2	42.624241	-74.517325	Richmondville	Schoharie	PSS	173	0.28				0.04		N/A	No	II
SC-1D-W296	107.47	109 of 126	26-20-85/SC-1D-W296-1-3	42.624378	-74.511809	Richmondville	Schoharie	PFO, PSS	150	0.17	0.11		0.06	0.02		N/A	No	II
SC-1I-W397	107.66	109 of 126	26-20-85/SC-1I-W397-1-3	42.624233	-74.508075	Richmondville	Schoharie	PFO	0	0.01						N/A	No	N/A
SC-1J-W396	107.85	109 of 126	26-20-85/SC-1J-W396-1-2	42.625482	-74.504779	Richmondville	Schoharie	PFO	0	0.01						N/A	No	N/A
SC-1I-W395	107.99	109 of 126	26-20-85/SC-1I-W395-1-3	42.626779	-74.502750	Richmondville	Schoharie	PEM	0			0.01				N/A	No	N/A
SC-1I-W387	108.12	110 of 126	26-20-85/SC-1I-W387-1-3	42.627820	-74.500688	Richmondville	Schoharie	PSS	40		0.05			0.01		N/A	No	II
SC-1Q-W359	108.50	110 of 126	26-20-85/SC-1Q-W359-1-2	42.631021	-74.494643	Richmondville	Schoharie	PFO	68	0.07			0.04			N/A	No	II
SC-1C-W360	108.61	110 of 126	26-20-85/SC-1C-W360-1-2	42.631208	-74.492438	Richmondville	Schoharie	PEM	68			0.14				N/A	No	II
SC-1C-W361	108.81	110 of 126	26-20-85/SC-1C-W361-1-3	42.632153	-74.488821	Richmondville	Schoharie	PEM	0			0.01				N/A	No	N/A

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
SC-1C-W366	109.13	111 of 126	26-20-85/SC-1C-W366-1-3	42.634009	-74.483027	Richmondville	Schoharie	PEM	0			0.01				N/A	No	N/A
SC-1C-W370	109.19	111 of 126	26-20-85/SC-1C-W370-1-3	42.634487	-74.482102	Richmondville	Schoharie	PEM	145			0.21				N/A	No	II
SC-1Q-W363	109.51	111 of 126	26-20-85/SC-1Q-W363-1-3	42.633865	-74.476211	Richmondville	Schoharie	PEM, PFO	248	0.38		0.05	0.15			N/A	No	II
SC-1Q-W365	109.72	111 of 126	26-20-85/SC-1Q-W365-1-2	42.634186	-74.472217	Richmondville	Schoharie	PFO, PEM	278	0.41		0.02	0.19			N/A	No	II
SC-1Q-W367	109.92	111 of 126	26-20-85/SC-1Q-W367-1-2	42.635134	-74.468381	Richmondville	Schoharie	PFO, PEM	240	0.11		0.27				N/A	No	II
SC-1L-W307	110.15	112 of 126	26-20-85/SC-1L-W307-1-2	42.636199	-74.464162	Cobleskill	Schoharie	PSS	384		0.69			0.09		N/A	No	II
SC-1L-W308	110.30	112 of 126	26-20-85/SC-1L-W308-1-2	42.636930	-74.461439	Cobleskill	Schoharie	PSS	186		0.30			0.04		N/A	No	II
SC-1C-W315	110.38	112 of 126	26-20-85/SC-1C-W315-1-3	42.637342	-74.459875	Cobleskill	Schoharie	PFO	203	0.35			0.16			N/A	No	II
	110.51	112 of 126	26-20-85/SC-1C-W315-2-3	42.638028	-74.457590	Cobleskill	Schoharie	PEM	0			0.01				N/A	No	N/A
SC-1C-W419	110.57	112 of 126	26-20-85/SC-1C-W419-1-0	42.638286	-74.456415	Cobleskill	Schoharie	PSS	10		0.01			0.01		N/A	No	IV
SC-1B-W455	110.75	112 of 126	26-20-85/SC-1B-W455-1-0	42.639199	-74.453215	Cobleskill	Schoharie	PSS	19		0.02			0.01		N/A	No	II
SC-1C-W418	110.80	112 of 126	26-20-85/SC-1B-W455-1-0	42.639280	-74.452134	Cobleskill	Schoharie	PFO	0	0.01						N/A	No	N/A
SC-1C-W420	110.93	112 of 126	26-20-85/SC-1C-W420-1-0	42.639938	-74.449661	Cobleskill	Schoharie	PSS	0		0.04					N/A	No	N/A
SC-1G-W441	111.27	113 of 126	26-20-85/SC-1G-W441-1-2	42.641895	-74.443790	Cobleskill	Schoharie	PFO	0	0.01			0.01			N/A	No	N/A
SC-1L-W215	111.50	113 of 126	26-20-85/SC-1L-W215-1-0	42.644167	-74.440600	Cobleskill	Schoharie	PSS, PEM	325		0.36	0.19		0.05		N/A	No	II
	111.65	113 of 126	26-20-85/SC-1L-W215-2-0	42.645054	-74.437974	Cobleskill	Schoharie	PEM	318			0.56				N/A	No	II
SC-1Q-W216	111.97	113 of 126	26-20-85/SC-1Q-W216-1-2	42.646082	-74.431902	Cobleskill	Schoharie	PFO	50	0.11			0.03			N/A	No	II
SC-1L-W213	112.03	114 of 126	26-20-85/SC-1Q-W216-1-2	42.646228	-74.430687	Cobleskill	Schoharie	PFO	151	0.32			0.10			N/A	No	II

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
SC-1M-W071	113.37	115 of 126	26-20-85/SC-1M-W071-1-2 26-20-85/SC-1M-W071-2-2 26-20-85/SC-1M-W071-3-3	42.649971	-74.408261	Middleburgh	Schoharie	PSS, PEM	1273		0.39	1.79		0.05		CO-25, Class II	Yes	II
SC-1M-W067	113.74	115 of 126	26-20-85/SC-1M-W067-1-3	42.653696	-74.403029	Middleburgh	Schoharie	PSS	384		0.64			0.09		CO-25, Class II	Yes	II
SC-1M-W058	114.69	116 of 126	26-20-85/SC-1M-W058-1-0	42.659394	-74.386898	Middleburgh	Schoharie	PEM	205			0.41				N/A	No	II
SC-1N-W063	115.47	117 of 126	26-20-85/SC-1N-W063-1-3	42.663201	-74.373057	Middleburgh	Schoharie	PEM	0			0.01				N/A	No	N/A
	115.49	117 of 126		42.663465	-74.372813	Middleburgh	Schoharie	PEM	0			0.05				N/A	No	N/A
SC-1Q-W334	117.45	119 of 126	26-20-85/SC-1Q-W334-1-3 26-20-85/SC-1Q-W334-2-3	42.683424	-74.351176	Schoharie	Schoharie	PSS	140		0.23			0.03		N/A	No	II
	117.54	119 of 126		42.684664	-74.350636	Schoharie	Schoharie	PSS	41		0.11			0.01		N/A	No	II
	117.58	119 of 126		42.685189	-74.350379	Schoharie	Schoharie	PSS	0		0.04					N/A	No	N/A
SC-1Q-W156	118.40	120 of 126	26-20-85/SC-1Q-W156-1-3	42.692540	-74.338998	Schoharie	Schoharie	PSS, PEM	0		0.03	0.05				N/A	No	N/A
SC-1Q-W164	119.42	121 of 126	26-20-85/SC-1Q-W164-1-2	42.698977	-74.321933	Schoharie	Schoharie	PSS	221		0.36			0.05		N/A	No	II
SC-1I-W399	119.67	121 of 126	26-20-85/SC-1I-W399-1-2	42.701675	-74.318670	Schoharie	Schoharie	PEM	0			0.04				N/A	No	N/A
SC-1Q-W380	119.92	121 of 126	26-20-85/SC-1Q-W380-1-2	42.703728	-74.314646	Schoharie	Schoharie	PEM	154			0.26				N/A	No	II
SC-1A-W382A	119.97	121 of 126	26-20-85/SC-1A-W382A-1-0	42.704370	-74.314215	Schoharie	Schoharie	PEM	0			0.01				N/A	No	N/A
SC-1A-W382B	120.02	121/122 of 126	26-20-85/SC-1A-W382B-1-0	42.704859	-74.313812	Schoharie	Schoharie	PEM	7			0.02				N/A	No	II
	120.04	121/122 of 126		42.704945	-74.313454	Schoharie	Schoharie	PEM	0			0.01				N/A	No	N/A
SC-1C-W457	120.06	121/122 of 126	26-20-85/SC-1A-W382B-1-0	42.705010	-74.313067	Schoharie	Schoharie	PEM	14			0.02				N/A	No	II
SC-1A-W292A	120.09	121/122 of 126	26-20-85/SC-1A-W382B-1-0	42.705255	-74.312447	Schoharie	Schoharie	PEM	12			0.01				N/A	No	IV
SC-1A-W292I	120.20	122 of 126	26-20-85/SC-1A-W292I-1-0	42.705778	-74.310523	Schoharie	Schoharie	PEM	86			0.16				N/A	No	II
SC-1A-W292J	120.26	122 of 126	26-20-85/SC-1A-W292I-1-0	42.706140	-74.309427	Schoharie	Schoharie	PEM	0			0.01				N/A	No	N/A

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
SC-1A-W292G	120.32	122 of 126	26-20-85/SC-1A-W292G-1-0	42.706323	-74.308371	Schoharie	Schoharie	PSS	49		0.11			0.01		N/A	No	II
SC-1U-W292F	120.46	122 of 126	26-20-85/SC-1D-W292-1-0	42.707059	-74.305695	Schoharie	Schoharie	PSS	0		0.01					N/A	No	N/A
SC-1D-W292	120.48	122 of 126	26-20-85/SC-1D-W292-1-0	42.707065	-74.305226	Schoharie	Schoharie	PSS	47		0.08			0.01		N/A	No	II
	120.52	122 of 126		42.707295	-74.304577	Schoharie	Schoharie	PSS	0		0.01			0.01		N/A	No	N/A
	120.53	122 of 126		42.707206	-74.304300	Schoharie	Schoharie	PSS	13		0.03			0.01		N/A	No	II
	120.54	122 of 126		42.707355	-74.304084	Schoharie	Schoharie	PSS	0		0.01					N/A	No	N/A
	120.56	122 of 126		42.707362	-74.303757	Schoharie	Schoharie	PSS	0		0.01					N/A	No	N/A
SC-1C-W313	120.60	122 of 126	26-20-85/SC-1C-W313-1-2	42.707320	-74.303054	Schoharie	Schoharie	PEM	211			0.37				N/A	No	II
SC-1C-W314	120.65	122 of 126	26-20-85/SC-1C-W313-1-2	42.707381	-74.301972	Schoharie	Schoharie	PEM	26			0.06				N/A	No	II
SC-1G-W160	120.95	122 of 126	26-20-85/SC-1G-W160-1-3	42.708878	-74.296824	Schoharie	Schoharie	PSS	10		0.05			0.01		N/A	No	II
SC-1L-W167	123.10	124/125 of 126	26-20-85/SC-1L-W167-1-3	42.703042	-74.259133	Schoharie	Schoharie	PEM	603			1.04				N/A	No	II
	123.17	124/125 of 126		42.703009	-74.257703	Schoharie	Schoharie	PEM	0			0.01				N/A	No	N/A
Pipeline Totals									**45518**	**28.21**	**22.50**	**24.35**	**10.73**	**3.18**	**0.00**			
WETLANDS ASSOCIATED WITH PROPOSED CONTRACTOR YARDS																		
N/A																		
Pipeyard Facilities Totals									**0**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			
WETLANDS ASSOCIATED WITH ABOVEGROUND FACILITIES																		
N/A																		
Aboveground Facilities Total									**0**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			
WETLANDS ASSOCIATED WITH ACCESS ROADS																		
UPPER DELAWARE (HUC 02040101)																		
BR-1L-W254 PAR21	27.77	Not on Alignments	PAR-21-BR-1L-W254	42.020599	-75.518805	Sanford	Broome	PFO	N/A							N/A	No	N/A
BR-1L-W255 PAR21	27.77	Not on Alignments	PAR-21-BR-1L-W255	42.022130	-75.518859	Sanford	Broome	PSS	N/A							N/A	No	N/A

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
UPPER SUSQUEHANNA (HUC 02050101)																		
CH-1J-W024 PAR33	43.63	45 of 126	PAR-33-CH-1J-W045/CH-1J-W045A/CH-1J-W045B/CH-1J-W024	42.213173	-75.510765	Afton	Chenango	PSS	N/A							N/A	No	N/A
CH-1J-W045 PAR33	43.63	45 of 126	PAR-33-CH-1J-W045/CH-1J-W045A/CH-1J-W045B/CH-1J-W024	42.213364	-75.502065	Afton	Chenango	PEM	N/A							N/A	No	N/A
CH-1J-W045A PAR33	43.63	45 of 126	PAR-33-CH-1J-W045/CH-1J-W045A/CH-1J-W045B/CH-1J-W024	42.214192	-75.501513	Afton	Chenango	PFO	N/A							N/A	No	N/A
CH-1J-W045B PAR33	43.63	45 of 126	PAR-33-CH-1J-W045/CH-1J-W045A/CH-1J-W045B/CH-1J-W024	42.213620	-75.500399	Afton	Chenango	PSS	N/A							N/A	No	N/A
CH-1Q-W065 PAR34	44.23	45 of 126	PAR-34-CH-1Q-W065	42.221801	-75.501252	Afton	Chenango	PSS	8		0.01			0.01		N/A	No	Permanent Fill
DE-1C-W226 PAR36	52.14	53 of 126	PAR-36-DE-1C-W226/DE-1C-W224/DE-1K-W223	42.280360	-75.392892	Masonville	Delaware	PEM	0							N/A	No	N/A
DE-1C-W224 PAR36	52.14	53 of 126	PAR-36-DE-1C-W226/DE-1C-W224/DE-1K-W223	42.280438	-75.392543	Masonville	Delaware	PEM	0			0.01			0.01	N/A	No	Permanent Fill
DE-1K-W223 PAR36	52.14	53 of 126	PAR-36-DE-1C-W226/DE-1C-W224/DE-1K-W223	42.280470	-75.391437	Masonville	Delaware	PEM/PSS	N/A							N/A	No	N/A

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
DE-1C-W203 PAR37	58.85	60 of 126	PAR-37-DE-1C-W203/DE-1C-W231	42.328851	-75.283947	Sidney	Delaware	PEM	N/A							N/A	No	N/A
DE-1C-W231 PAR37	58.85	60 of 126	PAR-37-DE-1C-W203/DE-1C-W231	42.328936	-75.284074	Sidney	Delaware	PEM	N/A							N/A	No	N/A
DE-1M-W094 PAR37	58.85	61 of 126	PAR-37-DE-1M-W094	42.332988	-75.275324	Sidney	Delaware	PSS	N/A							N/A	No	N/A
DE-1C-W204 PAR38	60.07	61 of 126	PAR-38-DE-1C-W204	42.337525	-75.267084	Sidney	Delaware	PEM	0							N/A	No	N/A
DE-1X-W285 PAR40	63.87	65 of 126	PAR-40-DE-1X-W285	42.356091	-75.209026	Sidney	Delaware	PFO	423	0.17			0.17			N/A	No	Permanent Fill
DE-1B-W267 PAR43	68.29	70 of 126	PAR-43-DE-1B-W267	42.386175	-75.128462	Franklin	Delaware	PEM	0			0.01			0.01	N/A	No	Permanent Fill
DE-1C-W288 PAR45	70.52	72 of 126	PAR-45-DE-1C-W288	42.398148	-75.095397	Franklin	Delaware	PEM	80			0.03			0.03	N/A	No	Permanent Fill
DE-1C-W330 PAR45	70.52	Not on Alignments	PAR-45-DE-1C-W330	42.394677	-75.096204	Franklin	Delaware	PEM	N/A							N/A	No	N/A
DE-1H-W268 PAR46[g]	72.81	Not on Alignments	Pending final Design	42.424340	-75.071023	Franklin	Delaware	PEM	0			0.01			0.01	ON-2, Class II	Yes	Permanent Fill
	72.81	Not on Alignments	Pending final design	42.424406	-75.071048	Franklin	Delaware	PSS	0		0.01			0.01		ON-2, Class II	Yes	Permanent Fill
DE-1A-W125A PAR47	73.65	75 of 126	Pending wetland field delineation	42.416537	-75.049994	Franklin	Delaware	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	ON-4, Class II	Yes	TBD
DE-1B-W125B PAR47	73.65	75 of 126	Pending wetland field delineation	42.417087	-75.048781	Franklin	Delaware	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	ON-4, Class II	Yes	TBD
DE-1Q-W261B PAR54	84.26	86 of 126	PAR-54-DE-1P-W260/PAR-54-DE-1Q-W261B	42.249792	-74.856883	Davenport	Delaware	PFO	N/A							N/A	No	N/A
DE-1P-W260 PAR54	84.26	86 of 126	PAR-54-DE-1P-W260/PAR-54-DE-1Q-W261B	42.450353	-74.857685	Davenport	Delaware	PEM	N/A							N/A	No	N/A

Table 3.3-1 Wetlands Associated with the Constitution Pipeline - New York

Wetland ID[a]	Approx. Milepost	Alignment Sheet Number	Wetland Crossing Site-Specific Drawing Number	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
										Construction			Operation					
										PFO	PSS	PEM	PFO	PSS	PEM			
DE-1L-W261A PAR54	84.26	Not on Alignments	PAR-54-DE-1L-W261A	42.448692	-74.854999	Davenport	Delaware	PFO	289	0.16			0.16			N/A	No	Permanent Fill
	84.26	Not on Alignments	PAR-54-DE-1L-W261A	42.448413	-74.854298	Davenport	Delaware	PFO	57	0.02			0.02			N/A	No	Permanent Fill
DE-1S-W256 TAR5	87.67	89 of 126	TAR-5-DE-1S-W256	42.468395	-74.797263	Davenport	Delaware	PEM	N/A							N/A	No	N/A
SCHOHARIE (HUC 02020005)																		
SC-1C-W313 PAR73a	120.57	Not on Alignments	PAR-73A-SC-1C-W313	42.707320	-74.303054	Schoharie	Schoharie	PEM	N/A							N/A	No	N/A
									Access Roads Total	**857**	**0.35**	**0.02**	**0.06**	**0.35**	**0.02**	**0.06**			
									New York Total	**46375**	**28.56**	**22.52**	**24.41**	**11.08**	**3.20**	**0.06**			

Note: This table has been partially updated since the August 2013 submittal.

N/A = Not Applicable – for wetland class with N/A it indicates that the wetland is not classified by the NYSDEC

a: No wetlands were identified in the Westfall Road M&R Station site during field surveys in 2012 including pig receiver area. Wetlands associated with MLVs included in the corresponding pipeline segment.

b: Wetland classification according to Cowardin et al. 1979: PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland.

c: 0.0 ft Crossing Length = wetland is not crossed by the pipeline but is within the workspace.

d: Construction Acreage = all workspace during construction activities (temporary & ATWS plus permanent); Operation Acreage = 10-foot wide corridor permanently maintained in herbaceous vegetated cover through PSS wetlands, and 30-foot wide corridor permanently maintained through PFO wetlands where trees taller than 15 feet will be selectively cut and removed. The permanently maintained corridors represent a change in cover type from PFO to PSS and PEM or PSS to PEM; there is no operation impact on PEM wetlands, since there is no change in the pre- and post-construction vegetation cover type. Construction impacts were calculated using a proposed construction footprint surface area and existing land use based on field surveys. Surface area of operational maintenance corridor as described above were used to calculate acres of operation impact to each pre-construction wetland vegetation cover type for each wetland included in the table. The ROW width at all wetland crossings is 75 feet, except for those wetlands described in Table 3.3-4.

e: New York classifies wetlands as Class I, II, III, IV (6 NYCRR Chapter X Part 664).

f: Crossing Methods for wetlands are described in Section 3.4; I = Standard Crossing; II = Conventional Crossing; III = Push/Pull Crossing; IV = Conventional Bore; V = Horizontal Directional Drill; N/A = Wetland not crossed by pipeline

g: PAR46 is still being designed. Therefore a width of 40' has been used for construction impact calculations and a width of 24' has been used for operations impact calculations.

Table 3.3-2 Wetland Impact Summary by Wetland Type for New York

Town	County	Palustrine Forested (acres affected)		Palustrine Scrub-Shrub (acres affected)		Palustrine Emergent (acres affected)		Total (acres affected)	
		Construction[a]	Operation[b]	Construction[a]	Operation[b]	Construction[a]	Operation[b]	Construction[a]	Operation[b]
Sanford	Broome	4.90	1.70	5.80	0.87	6.81	0.00	17.51	2.57
Afton	Chenango	1.90	0.66	1.02	0.16	1.73	0.00	4.65	0.82
Bainbridge	Chenango	3.81	1.49	0.03	0.01	0.29	0.00	4.13	1.50
Masonville	Delaware	0.96	0.38	0.45	0.05	0.05	0.01	1.46	0.44
Sidney	Delaware	3.36	1.40	3.24	0.45	2.07	0.00	8.67	1.85
Franklin	Delaware	2.54	0.98	0.53	0.09	0.60	0.05	3.67	1.12
Davenport	Delaware	3.82	1.66	1.39	0.18	0.37	0.00	5.58	1.84
Harpersfield	Delaware	1.62	0.65	2.39	0.33	1.44	0.00	5.45	0.98
Summit	Schoharie	2.65	1.03	3.56	0.46	1.86	0.00	8.07	1.49
Jefferson	Schoharie	0.39	0.16	0.08	0.01	0.81	0.00	1.28	0.17
Richmondville	Schoharie	1.81	0.67	0.50	0.11	3.29	0.00	5.60	0.78
Cobleskill	Schoharie	0.80	0.30	1.42	0.20	0.76	0.00	2.98	0.50
Middleburgh	Schoharie	0.00	0.00	1.03	0.14	2.26	0.00	3.29	0.14
Schoharie	Schoharie	0.00	0.00	1.08	0.14	2.07	0.00	3.15	0.14
Wright	Schoharie	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New York Total		**28.56**	**11.08**	**22.52**	**3.20**	**24.41**	**0.06**	**75.49**	**14.34**

Note: This table has been entirely updated since the August 2013 submittal.

a: Construction Acreage = all workspace during construction activities (temporary & ATWS plus permanent)

b: Operational impacts that are not permanent fill (i.e. cover type conversion) are not considered as a "loss" of waters of the US under the Nationwide Permit (NWP). Operation Acreage = For conventional crossing methods: 30-foot width permanently maintained through forested wetlands, 10-foot width permanently maintained through scrub-shrub wetlands; there are no operation impacts to PEM wetlands as there is no change in the pre- and post-construction vegetation cover type. Construction impacts were calculated using a proposed construction footprint surface area and existing land use based on field surveys or desktop analysis in those areas where permission has not been granted to conduct field surveys. Surface area of operational maintenance corridor as described above were used to calculate acres of operation impact to each pre-construction wetland vegetation cover type for each wetland included in the table.

Table 3.3-3 HUC-8 Watershed Wetland Impact Summary for Constitution Pipeline in New York

HUC-8 Watershed	Crossing Length (feet)	Wetland Impact (acres)[a]				
		Construction			Operation	
		PFO	PSS	PEM	PFO	PSS
Upper Susquehanna (02050101)	26,857	21.14	12.19	9.06	8.08	1.66
Upper Delaware (02040101)	7,228	2.42	5.07	5.27	0.88	0.77
Schoharie (02020005)	11,433	4.65	5.24	10.02	1.77	0.75
New York Total	**45,518**	**28.21**	**22.50**	**24.35**	**10.73**	**3.18**

Note: This table has been entirely updated since the August 2013 submittal.

a: Construction Acreage = all workspace during construction activities (temporary & ATWS plus permanent); Operation Acreage = 10-foot wide corridor permanently maintained in herbaceous vegetated cover through PSS wetlands, and 30-foot wide corridor permanently maintained through PFO wetlands where trees taller than 15 feet will be selectively cut and removed. The permanently maintained corridors represent a change in cover type from PFO to PSS and PEM or PSS to PEM; there is no operation impact on PEM wetlands, since there is no change in the pre- and post-construction vegetation cover type. Construction impacts were calculated using a proposed construction footprint surface area and existing land use based on field surveys. Surface area of operational maintenance corridor as described above were used to calculate acres of operation impact to each pre-construction wetland vegetation cover type for each wetland included in the table. The ROW width at all wetland crossings is 75 feet, except for those wetlands described in Table 3.3-4.

Table 3.3-4 Construction Workspace >75 feet Within Wetlands for the Constitution Pipeline in New York[a]

County	Town	Wetland ID	Milepost	Crossing Length (feet)	Crossing Width (feet)	Wetland Class Impacted	Justification
Broome	Sanford	BR-1I-W059	33.27	121	135	PSS	This location is within agriculture requiring topsoil segregation and an additional 4 feet of cover over the pipeline. Extra area is also needed for the crossing of a foreign pipeline.
			33.3	190	85		
Broome	Sanford	BR-1B-W083	40.8	127	100	PEM	This area is required for a powerline crossing and to cross O'Brien Road.
			40.8	30	100		

Note: This table has been entirely updated since the August submittal

a: Workspace = Operation and Construction

Use of NWI data has proven not to be a reliable source to identify accurate wetland locations and areas. Therefore, to assist with impact mitigation planning, Constitution has employed remote sensing model technology to further identify wetlands within non-access land parcels. The Remote Sensed Model report with additional information ~~is~~ was located in the original Joint Application submission from late August (Attachment J) and excerpts are presented in Section ~~3.3.3~~3.3.7. However, since that report was completed, Constitution has obtained survey access permission and field delineated wetlands on additional properties crossed by the Project, which has made that report obsolete. On properties where Constitution has not obtained survey access permission, remote sensing data was utilized to estimate areas of wetland on those parcels. Additional information on wetland impacts estimated utilizing remote sensing data is provided in the Wetland Mitigation Plan (Attachment K). Table 3.3-6 provides a summary of wetland impacts on both surveyed and remote sensed parcels.

The USFWS wetland classification system described by Cowardin et al. (1979) was used to classify the wetlands that will be affected by the Project. The wetlands in the Project area were identified as Palustrine Forested (PFO), Palustrine Scrub-Shrub (PSS), Palustrine Emergent (PEM), Palustrine Open Water (POW), or a combination of these four cover types.

3.3.1 Palustrine Forested Wetlands

Dominant vegetation in PFO wetlands includes northern red maple (*Acer rubrum*), American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*), eastern white pine (*Pinus strobus*), swamp white oak (*Quercus bicolor*), yellow birch (*Betula alleghaniensis*), black willow (*Salix niger*), eastern hemlock (*Tsuga canadensis*), tamarack (*Larix laricina*) and black spruce (*Picea mariana*). Dominant shrubs found in PFO systems may include high-bush blueberry (*Vaccinium corymbosum*), winterberry (*Ilex verticillata*), spicebush (*Lindera benzoin*), and dogwood species (*Cornus* spp.).

These areas provide a diverse assemblage of vegetation and an abundance of food and water sources for wildlife. The density and composition of the understory vegetation varies from site to site. These wetlands are important for providing food, shelter, migratory and wintering areas, and breeding areas for wildlife species, including red-backed salamander (*Plethodon cinereus*), wood frog (*Rana sylvatica*), and Eastern garter snake (*Thamnophis sirtalis*).

3.3.1.1 Red Maple-Hardwood Swamp

This type of forested palustrine system dominated by red maple is widespread throughout upstate New York. The community can be found in shallow to deep muck depressions, which receive groundwater discharge. There are sparse shrubs and herbs that may consist of highbush blueberry, cinnamon fern (*Osmunda cinnamomea*), and sensitive fern (*Onoclea sensibilis*) (Edinger et al. 2002).

3.3.1.2 Hemlock-Hardwood Swamp

This type of forested palustrine system is common and widespread throughout upstate New York. The community can be found in deep muck depressions, which receive groundwater discharge and possess an acidic substrate. The canopy cover is between 70 and 90 percent closed and consists of sparse shrub layer, and low species diversity. Water levels in these swamps typically fluctuate seasonally. They may be flooded in spring and relatively dry by late summer (Edinger et al. 2002).

The tree canopy typically is dominated by Eastern hemlock and co-dominated by yellow birch and red maple. Other, less frequently occurring trees include white pine, black gum (*Nyssa sylvatica*), and green ash (*Fraxinus pennsylvanica*). Characteristic shrubs include saplings of canopy trees, plus highbush blueberry, which often is dominant. Other, less frequently occurring shrubs include various viburnums (*Viburnum cassinoides, V. lentago, and V. lanatanoides*), winterberry, and mountain holly (*Nemopanthus mucronatus*) (Edinger et al. 2002).

Characteristic herbs are cinnamon fern and sensitive fern. Other, less frequently occurring herbs include sedges (*Carex trisperma, C. folliculate, and C. bromoides*), gold-thread (*Coptis trifloia*), Canada mayflower (*Maianthemum canadense*), mountain wood sorrel (*Oxalis montana*), foamflower (*Tiarella cordifolia*), and sarsaparilla (*Aralia nudicaulis*) (Edinger et al. 2002).

3.3.1.3 Spruce-Fir Swamp

A Spruce-fir Swamp is a conifer swamp that typically occurs in a drainage basin, in some cases filling the basin, but also can occur at the edge of a lake or pond or along gentle slopes of islands where there is some nutrient input from groundwater discharge or subsurface flow. These swamps are usually dense with a fairly closed canopy (80 to 90 percent cover). Spruce-fir swamps occur in lowlands where they may grade into either spruce flats or balsam flats (upland forests) (Edinger et al. 2002).

The dominant tree is usually red spruce. Co-dominant trees include balsam fir (*Abies balsamea*) and red maple. Other, less frequently occurring trees include yellow birch, white pine, and Eastern hemlock. The shrub layer is often sparse. Characteristic and dominant shrubs include mountain holly, along with sapling canopy trees. Other, less frequently occurring shrubs include alders (*Alnus viridis* ssp. *crispus, A. incana* ssp. *rugosa*), blueberries (*Vaccinium corymbosum, V. myrtilloides*), wild raisin (*Viburnum cassinoides*), mountain ash (*Sorbus americana*), and winterberry (Edinger et al. 2002).

Characteristic herbs are cinnamon fern, sedges (*Carex trisperma, C. folliculata*), gold-thread, bunchberry dogwood (*Cornus canadensis*), starflower (*Trientalis borealis*), wood sorrel (*Oxalis acetosella*), creeping snowberry (*Gaultheria hispidula*), and dewdrop (*Dalibarda repens*). The non-vascular layer often is dominated by *Sphagnum* spp., including *S. girgensohnii, S. central, and S. angustifolium.* Other characteristic bryophytes include *Bazzania trilobata* and *Pleurozium schreberi* (Edinger et al. 2002).

3.3.2 Palustrine Scrub-Shrub Wetlands

Scrub-shrub land types may represent a successional stage leading to a forested wetland and include shrubs, young trees, and trees or shrubs that are small and/or stunted due to environmental conditions. Shrub swamps are widespread, highly variable communities with shrub-dominated wetlands that occur on mineral or mucky mineral soils that are either seasonally or temporarily flooded. They typically are found in flat areas in which the water table is at or above the soil surface for most of the year.

Shrub swamps generally are found on the transition zone of emergent and forested areas that have been previously disturbed. Scrub-shrub wetlands typically are not as structurally diverse as forested wetlands due to the lack of taller mature trees. They contain vegetation that is characteristically low and compact. Under normal conditions, the vegetative structure is influenced by surface water inundation or the presence of high groundwater for extended periods of time. Scrub-shrub wetlands also can be maintained by periodic maintenance activities (such as along existing ROWs) that remove larger tree species.

Dominant vegetation in PSS wetlands include alder (*Alnus incana* ssp. *rugosa*), swamp azalea (*Rhododendron viscosum*), highbush blueberry, silky dogwood (*Cornus amomum*), sweet pepperbush (*Clethera alnifolia*), maleberry (*Lyonia ligustrina*), and winterberry. Other common wetland shrubs observed in the Project area include meadowsweet (*Spirea latifolia*), Northern arrowwood (*Viburnum dentatum*), meadow-sweet (*Spiraea alba* var. *latifolia*), steeple-bush (*Spiraea tomentosa*), gray dogwood (*Cornus foemina* ssp. *racemosa*), smooth alder (*Alnus serrulata*), spicebush, willows (*Salix bebbiana*, *S. discolor*, *S. lucida*, *S. petiolaris*), and wild raisin (Endinger et al. 2002).

Scrub-shrub wetlands supply an abundance of food and cover resources for mammals, reptiles, amphibians, and birds, including the American toad (*Bufo americanus*), black bear (*Ursus americanus*), muskrat (*Ondatra zibethicus*), and gray catbird (*Dumetella carolinensis*).

3.3.3 Palustrine Emergent Wetlands

Palustrine emergent (PEM) wetlands are characterized by erect, rooted, herbaceous hydrophytes, not including mosses and lichens. These wetlands are considered wet meadows and marshes and maintain the same appearance year after year, are typically dominated by non- woody perennial plants, and the vegetation of these wetlands is present for the majority of the growing season. Dominant vegetation in PEM wetlands may include common cattails (*Typha latifolia*), reed canary grass (*Phalaris arundinacea*), bulrushes (*Scirpus tabernaemontani*, *S. fluviatilis*, *S. heterochaetus*, *S. acutus*, *S. pungens*, *S. americanus*), joe-pye weeds (*Eupatorium spp.*), tussock sedge (*Carex stricta*), wool grass (*Scirpus cyperinus*), steeplebush, meadowsweet (*Spirea tomentosa*), skunk cabbage (*Symplocarpus foetidus*) and goldenrod species (*Solidago* spp.).

Emergent wetlands are used by wildlife closely linked to the aquatic environment. These areas often are associated with areas containing standing water for extended periods of time. Many emergent wetlands in the Project area are dominated by reed canary grass. Other common herbaceous plants in the emergent wetlands encountered along the Project alignment include tussock sedge (*Carex stricta*), soft rush (*Juncus effusus*), rough-stemmed goldenrod (*Solidago rugosa*), and sensitive fern (*Onoclea sensibilis*).

3.3.4 Open Water

Open water habitats include streams, rivers, and ponds that occur in the proposed Project area. These areas provide habitat for species, such as wading birds, ducks, and other aquatic species.

3.3.5 Federal Clean Water Act

Wetlands that are adjacent to most lakes, rivers, streams and small tributaries having a significant nexus to navigable waters are considered regulated waters of the U.S. under the federal CWA. Isolated wetlands that are not adjacent to the surface tributary system with a significant nexus may or may not be regulated waters of the US. In many cases application for a Jurisdictional Determination is needed to determine a wetland's regulatory status. Through the Preliminary Jurisdictional Determination (PJD) process Constitution has chosen to assume that all wetlands impacted by the Project are jurisdictional under the CWA and require authorization from the USACE when impacted.

3.3.6 NYSDEC State-Regulated Freshwater Wetlands

To be protected under the New York State Freshwater Wetlands Act (Article 24), a wetland must be a NYSDEC mapped wetland, 12.4 acres (5 hectares) in size or larger. Smaller wetlands may be protected by the state of New York if they are considered of unusual local importance. Around every NYSDEC state-regulated freshwater wetland is an 'adjacent area' of 100 feet that also is regulated to provide protection for the wetland. NYSDEC State-regulated Freshwater Wetlands field-delineated in the Project survey corridor are listed in Table 3.3-1 in Section 3.3. NYSDEC has established four separate classes that rank wetlands according to their ability to perform wetland functions and provide wetland benefits. Class I wetlands have the highest rank, and the ranking descends through Classes II, III, and IV (NYSDEC 2012e). Criteria to support each class designation are established in 6 NYCRR Part 664. All of the NYSDEC state-regulated Freshwater Wetlands within the Project corridor are designated as Class II. The NYSDEC wetlands are shown on Figure 5 in Attachment B.

3.3.6.1 New York State Freshwater Wetlands Adjacent Area

In New York, the land area within 100 feet from the boundary of a state-regulated Freshwater Wetland is the regulated "Adjacent Area" pursuant to 6 NYCRR Part 663 of the Freshwater Wetlands Regulations. In the Project corridor the adjacent areas include uplands that are forested, agricultural land, open land, and previously developed land including residential areas, as well as wetlands. Adjacent Areas impacted as a result of the Project are summarized in Table 3.3-5.

3.3.7 Areas of Remote Sensed Wetlands

Wetlands identified using NWI mapping and NYSDEC state-regulated Freshwater Wetlands mapping and waterbodies identified using NHD data have been placed on the FERC Alignment Sheets in Attachment C within non-surveyed parcels.

In an effort to better estimate wetland impacts on those non-surveyed parcels where it is unlikely that survey access permission will be obtained prior to issuance of a Certificate of Public Convenience and Necessity from the FERC, Constitution used remote sensing and geospatial modeling to map probable wetland community types on these non-surveyed parcels. A presentation was given on July 9, 2013 with the USACE and NYSDEC in attendance to discuss the technology and methods used to develop remote sensed wetland areas and to discuss Constitution's intent to use this data as a planning tool for mitigation of wetland impacts.

The wetland remote sensing model relied on multi-spectral aerial imagery taken at a strategic transitional stage of the spring leaf-off period (May 4 and 5th, 2013) used it in combination with 2012 leaf-off (4-band) imagery, Light Detection and Ranging (LiDAR) and other ancillary data to map potential wetland community types. This modeling led to a mapping effort that delineated wetlands into community types and water bodies for the Project corridor. Remote sensing analysis classified a 1,500-foot wide corridor along the proposed centerline focusing on non-surveyed parcels. The remote sensed wetland impacts have been updated in the Wetland Mitigation Plan based on field surveys completed on parcels where survey access was granted between April and September, 2013. Where field surveys have now been completed within areas where remote sensing data was previously used, the field survey data has replaced the remote sensed data and has been included in the wetland impact table 3.3-1. Table 3.3-6 provides a

summary of remote sensed wetlands impacts by wetland cover type associated with the construction and operation of the Project on non-surveyed parcels. A remote sensed wetland report, wetland impact table for the remote sensed wetlands by HUC watershed, and figures that display the mapped locations of remote sensed wetlands ~~are~~were previously included in Attachment J of the Joint Application submission from August.

Table 3.3-5 Adjacent Areas associated with NYSDEC State-Regulated Freshwater Wetlands Crossed by the Constitution Pipeline Project

Wetland ID	NYSDEC Wetland Number	Nearest Milepost	Crossing Length (feet)[c]	Adjacent Area Impacts (acres)[a]															
				Construction[b]								Operation[b]							
				PFO	PSS	PEM	UF	WB	AG	RD	OL	PFO	PSS	PEM	UF[f]	WB	AG	RD	OL
BR-1H-W174	NS-1	36.5	341				0.97	0.08			0.02				0.33				
DE-1H-W030	SD-3	51.1	399				0.81								0.43				
DE-1H-W268	ON-2	72.9 (PAR 46)	547				0.35	0.04							0.25				
DE-1B-W270	ON-3	72.9	144				0.17								0.16				
DE-1P-W074	ON-4	73.3	375			0.04	0.03		0.34		0.24				0.03				0.14
DE-1W-W125	ON-4	73.5	339				0.51								0.39				
DE-1W-W127	ON-5	75.1	0						0.14										
DE-1N-W005	D-10	84.0	0				0.05								0.05				
DE-1N-W156A[d]	D-11	85.8	608[d]																
DE-1C-W215/ W217	D-13	87.04 - 87.15	514	0.01			0.82	0.08				0.01			0.55				
DE-1P-W128	D-8	90.20 - 90.71	874				1.55		0.11	0.03	0.20				0.88				0.11
DE-1W-W129	D-8	90.9	0				0.01												
SC-1M-W071	CO-25	113.3	223				0.20		0.19						0.13				
SC-1M-W067	CO-25	113.7	208						0.32		0.04								0.02
Totals			**4571**	**0.01**	**0.00**	**0.04**	**5.47**	**0.20**	**1.10**	**0.03**	**0.50**	**0.01**	**0.00**	**0.00**	**3.20**	**0.00**	**0.00**	**0.00**	**0.27**

This entire table has been updated since the August 2013 submittal

PAR=Permanent Access Road; PFO=Palustrine Forested; PSS=Palustrine Scrub-Shrub; PEM=Palustrine Emergent; UF=Upland Forest; WB=Waterbody; OL=Open Land; AG=Agricultural land; RD=Roads

a: Acreage impacts were calculated in the GIS ArcEditor software using a land use shape file and a workspace shape file created.

b: Construction Acreage = all workspace during construction activities (temporary & ATWS plus permanent); Operation Acreage = 10-foot wide corridor permanently maintained in herbaceous vegetated cover through PSS wetlands, and 30-foot wide corridor permanently maintained through PFO wetlands where trees within 15 feet of the pipeline with roots that could potentially compromise the pipeline coating will be selectively cut and removed; 50-foot wide corridor permanently maintained in herbaceous vegetated cover in uplands (UF, AG, OL). PAR 46 is still being designed and therefore a width of 40 feet has been used for construction impact calculations and a width of 24 feet has been used for operational impact calculation
The permanently maintained corridors represent a change in cover type from PFO to PSS and PEM or PSS to PEM; there is no operation impact on PEM wetlands, since there is no change in the pre- and post-construction vegetation cover type. Construction impacts were calculated using a proposed construction footprint surface area and existing land use based on field surveys or desktop analysis in those areas where permission has not been granted to conduct field surveys. Surface area of operational maintenance corridor as described above were used to calculate acres of operation impact to each pre-construction wetland vegetation cover type for each wetland included in the table.

c: Crossing Length does not include the land use type.

d: Wetland DE-1N-W156A and the associated 100-foot Adjacent Area is proposed to be crossed using horizontal directional drilling (HDD) and therefore no impacts are anticipated.

Table 3.3-6 Wetland Impact Summary of Surveyed and Remote Sensed Areas

Watershed (HUC 8)	Palustrine Forested (acres impacted)		Palustrine Scrub-Shrub (acres affected)		Palustrine Emergent (acres affected)		Total (acres affected)	
	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Upper Susquehanna- Surveyed	20.93	8.06	12.16	1.67	9.67	0.02	42.76	9.75
Delaware- Surveyed	2.42	0.88	5.07	0.77	5.27	0.00	12.76	1.65
Schoharie- Surveyed	4.54	1.72	5.23	0.75	9.70	0.00	19.47	2.47
Surveyed Sub-Total	**27.89**	**10.66**	**22.46**	**3.19**	**24.64**	**0.02**	**74.99**	**13.87**
Upper Susquehanna- Remotely Sensed	7.40	5.89	5.97	0.58	8.20	0.00	21.57	6.47
Delaware- Remotely Sensed	0.47	0.16	0.44	0.03	2.39	0.00	3.31	0.20
Schoharie- Remotely Sensed	3.28	1.33	1.43	0.16	5.39	0.00	10.11	1.49
Remotely Sensed Sub-Total[a]	**11.15**	**7.38**	**7.84**	**0.77**	**15.99**	**0.00**	**34.98**	**8.15**
New York Total	**39.04**	**18.04**	**30.30**	**3.96**	**40.63**	**0.02**	**109.97**	**22.02**

This is an entirely new Table since the August submittal

a:Wetlands on non-accessible land parcels were assessed using remote sensing computer models. The remote sensing model is known to overestimate wetlands by approximately 30 percent. The use of this technology will allow Constitution to ensure that all potential impacts are being mitigated without entering the site. Wetland delineation and ground truthing of wetland boundaries will be performed once access to the property is acquired. Impact mitigation estimates will be updated and are expected to be lower than the remote sensed estimates.

Note: Columns may not sum exactly due to rounding of values in individual cells.
Note: No impacts to wetlands occur within construction yards.
Note: The impact numbers above include access road impacts as well as pipeline corridor impacts.
Source: Based on data from Gulf Interstate Engineering (GIE) 11/4/2013

3.3.8 Wetland Construction and Operation Impacts

Temporary impacts on wetlands as a result of the Project may include soil disturbance, temporary alteration of hydrology, and loss of vegetation. All excavated impacts to waters of the U.S. are temporary along the pipeline route, and all wetlands will be restored to pre-construction contours and elevations after construction. The permanent Project impacts include conversion of PFO wetlands to PSS and PEM wetlands within the permanently maintained ROW.

Constitution in the process of access road design to allow safe travel to and from the construction ROW and to avoid and minimize impacts to waterbodies both during construction and operation of the pipeline. Preliminary access road locations are shown on Figure 2 in Attachment B and on the FERC Alignment Sheets in Attachment C. Constitution continues to evaluate the need and location for access roads and will preferably select access roads where they will avoid wetland crossings; however, this will not always be feasible. Any access roads that require temporary or permanent impacts to wetlands will be appropriately designed to minimize impacts to wetlands. Any permanent loss of waters of the U.S. will be minimized to only include that necessary to provide access to the Project site when absolutely necessary. Associated loss of Waters of the U.S. will be properly mitigated in accordance with state and federal requirements. Construction of or improvements to access roads may result in temporary impacts on wetlands from the placement of equipment mats. Impacts will be avoided and minimized by using existing roads and locating access roads in agricultural and open lands to the extent practicable. Subsequent to construction, temporary access roads will be restored to their pre-construction condition. Wetlands that are impacted by temporary access roads will be covered with construction equipment mats during construction. The equipment mats will be removed and the wetland will be restored in accordance with the ECP for New York once construction is complete. Wetlands impacted by permanent access roads will be permanently filled with materials suitable to maintain a stable access road for use during construction and operation of the pipeline facilities. The intent of permanent access roads is to maintain all season access to the pipeline ROW and associated appurtenances (e.g. MLVs). Impacts to the wetlands will be minimized by limiting clearing and grading to the minimum width necessary to construct a stable access road and provide passage for a single construction vehicle. This will be accomplished by steepening tie-in slopes to the extent practicable adjacent to wetlands while still maintaining a stable slope.

Table 3.3-1 provides temporary and permanent wetland impacts by wetland type associated with the construction and operation of the Project. Table 3.3-2 provides a summary of wetland impacts by wetland type for New York. Table 3.3-3 provides a summary of wetlands located within the three HUC 8 watersheds. Construction workspace greater than 75 feet within wetlands is provided in Table 3.3-4. Adjacent Areas of NYSDEC State-regulated Freshwater Wetlands impacted as a result of the Project are summarized in Table 3.3-5. Table 3.3-6 provides a summary of remote sensed wetland impacts by wetland cover type associated with the construction and operation of the Project. To determine the amount of temporary and permanent wetland impacts associated with the Project, the wetland impact table (Table 3.3-1) and the estimated impacts using remote sensed wetlands data were combined in Table 3.3-6 to approximate the total amount of wetland impact for the entire Project on both surveyed and non-surveyed properties. Additional wetland impact summary information related to impacted functions and values is provided in the Wetland Mitigation Plan (Attachment K).

Aboveground facilities including the M&R station and MLVs will not be located in any waters of the U.S., including wetlands, or NYSDEC state-regulated Freshwater Wetlands. No permanent filling of wetlands is proposed along the pipeline and therefore no "loss" to waters of the U.S. are anticipated from pipeline construction.

Permanent impacts associated with construction and operation of the pipeline includes conversion of PFO and PSS wetlands to PSS and PEM wetlands within the permanently maintained ROW. No permanent filling of wetlands associated with pipeline construction is proposed. Following installation of the pipeline, the construction ROW will be restored, including re-establishing pre-construction grades and contours, restoration of hydrologic patterns, and top-dressing with segregated topsoil. Disturbed areas will be reseeded or replanted to promote the re-establishment of native hydrophytic vegetation. TWS and ATWS areas will not be maintained for operation of the proposed facilities and will be allowed to revert to their preconstruction land use and vegetation cover type.

Aboveground facility locations, including MLVs and the Westfall Road M&R Station, have been surveyed for the presence of wetlands, and the field surveys confirmed that there are no wetlands located within the designated workspace associated with these facilities. Therefore, no Project-related wetland impacts will occur as a result of construction and operation of the aboveground facilities. Any sensitive resource areas present at the identified contractor yards ~~and pipe yards~~ will be protected from adverse impacts through avoidance and/or implementation of appropriate BMPs during the site preparation of the yard. Constitution identified surface water resources within the proposed boundaries for the Spread 5 Contractor Yard. The wetland habitat will be fenced off with at least a 10-foot buffer, and BMPs (in accordance with Constitution's ECP) will be installed to prevent the disturbance of the wetland habitat and the transport of sediments from active Project locations to the wetland. In the case where a wetland is adjacent to a contractor yard, Constitution will provide at least a 10-foot undisturbed vegetated buffer between the wetland and contractor yard activities and will employ appropriate BMPs to provide additional protections. Therefore, no adverse impacts on wetlands are expected to occur from any activities associated with the temporary use of the contractor yards. Final design of the contractor yards will be provided as supplemental information.

Constitution has prepared a Trenchless Construction Methods for Sensitive Environmental Resource Crossings Report as part of the 2013 FERC Environmental Report Supplement to the June 13, 2013 and July 24, 2013 filing submitted November 11, 2013. The use of trenchless construction methods is not feasible or practical in every location along a pipeline project. Trenchless construction methods are limited by unfavorable underlying geology, available workspace, available time (i.e., limited construction windows), and the inherent weighted risks associated with use of trenchless construction methods, including extended crossing times. All of these factors must be considered to determine if trenchless construction methods are a suitable option for crossing a specific resource. The trenchless crossing locations proposed for this Project have been selected by Constitution based on their potential for success and ability to minimize impacts to specific Project locations, while allowing for safe installation of the pipeline. Additional information related to feasibility issues associated with trenchless methods is provided in Section 3.4.6 of this document.

To mitigate for potential impacts during trenchless construction operations, Constitution has developed a HDD Contingency Plan within the ECP for the Project that establishes procedures for addressing potential impacts associated with a trenchless installation. Additionally, this HDD Contingency Plan establishes the criteria by which Constitution will determine when a trenchless crossing method is

unsuccessful and must be abandoned in favor of an approved alternative crossing method (i.e., dry crossing waterbody and conventional wetland crossing methods). Constitution has designed and incorporated alternative crossing method impacts and drawings for each proposed trenchless construction location into the HDD Contingency Plan for the Project. This alternative design will be implemented in the event that ongoing geotechnical site investigations reveal subsurface conditions that do not support a trenchless installation method or where trenchless crossing method failure were to arise during drilling or installation operations, resulting in abandonment of the trenchless operation. The alternative crossing method contingency plans for the proposed trenchless crossings are provided in Attachment E. Wetland impacts associated with alternative contingency crossing methods are summarized in Section 3.4.6.

Constitution is proposing to incorporate for including Middle Brook (DE-1T-S051), Bennettsville Creek (CH-1A-S010) and Schoharie Creek (SC-1Q-S289). Vegetation clearing of a 10-foot wide corridor centered over the pipeline in wetlands and uplands between the entry point is proposed

To allow for surface water withdrawal access to support the three trenchless waterbody crossings, Constitution is proposing to conduct vegetation clearing within a 10-foot wide corridor centered over the pipe within uplands and wetlands that are between trenchless entry points and the adjacent surface water source. This access corridor will provide access to the surface water for pumping system equipment staging (i.e., portable pump and water supply hose). Locations where this is anticipated to occur include the Middle Brook (DE-1T-S051) crossing and associated wetlands DE-DE-1P-W052, DE-1T-W053, and DE-1T-W055; and the Bennettsville Creek (CH-1A-S010) crossing and associated wetland CH-1A-W063. There are no wetlands associated with the Schoharie Creek (SC-1Q-S289) crossing. Use of this 10-foot wide corridor will be temporary, conducted in accordance with the ECP and no post-construction ROW vegetation maintenance will occur in these locations.

In wetlands, vegetation maintenance over the full width of the permanent ROW will not be conducted. During operation of the Project, to facilitate periodic pipeline corrosion/leak surveys, ten feet of the permanent ROW, centered over the pipeline, will be maintained within wetlands at an early successional stage. In forested wetlands, Constitution will minimize tree clearing to the maximum extent practicable while maintaining safe construction conditions. Tree clearing within wetlands will be limited to selectively clearing trees within 15 feet of the pipeline with roots that could compromise the integrity of the pipeline coating. Trees and shrubs that become re-established beyond 15 feet on either side of the pipeline will not be disturbed

3.3.8.1 General Wetland Construction Guidelines

Constitution has developed site-specific wetland crossing plans to be implemented during construction. Constitution will protect and minimize potential adverse impacts to wetlands by:

- Ensuring that construction personnel are educated on wetland construction techniques, where wetlands are located, etc.;
- Maintaining a typical workspace width of 75 feet, where possible, through wetlands;
- Accelerating construction activities in and immediately adjacent to wetlands to the extent practicable to limit the activity in the wetland;
- Maintaining a 50-foot setback, where possible, between ATWS areas and the edge of the wetland;

- Limiting the use of equipment operating in the wetlands to those required to construct the pipeline;
- Restoring the wetland to preconstruction contours;
- Removing construction equipment and materials from within the wetland as soon as practical;
- Permanently stabilizing adjacent upland areas following the pipe installation;
- Inspecting the ROW periodically during and after construction and repairing any erosion control or restoration features until permanent revegetation is successful, which is a minimum of uniform, perennial 80% vegetative cover;
- When wetland areas are temporarily disturbed, isolate and stockpile topsoil from the trench for replacement after grading is completed. If temporary vegetative stabilization is necessary, apply the following:
  - ryegrass (annual or perennial) at 30 lbs. per acre (approximately 0.7 lb. / 100 sq. ft. or use 1lb/1000 sq. ft.) during spring, summer or early fall; or
  - Aroostook (if available) winter rye (cereal rye) at a rate of 100 lbs. per acre (2.5 lbs./1000 sq. ft.
- If required in writing by the applicable regulatory agency, mulch using clean straw (weed free) at the rate of 2T /acre. Soil amendments will not be used in wetland areas unless otherwise approved by the EI or applicable regulatory agency; and
- If necessary or required to reduce the potential risk of invasion or spreading of invasive species (such as purple loosestrife, common reed, or Japanese knotweed), an elevated wash rack station will be used for equipment. Detailed information related to means and methods that should be utilized to reduce potential spreading of invasive species can be found in the Invasive Species Management Plan, which is included in the ECP.

3.3.8.2 Minimization of Vegetation Clearing

Wetland boundaries and setbacks will be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete. No rubber-tired equipment will be allowed to work in wetlands unless it will not damage the root systems or cause rutting and its use is approved by the EI. Bulldozers will not be used for clearing within wetlands. Trees and brush will be cut to ground level by hand or with hydroaxes, tree shears or grinders.

The minimum clearing necessary to safely construct the pipeline will be completed. Equipment mats may be placed over top of existing vegetation, including shrubs, where possible. Stumps will be left in place, except within the trench line or unless the removal is necessary to ensure worker safety. Stumps may be ground down to a suitable height for safety reasons. Constitution will attempt to leave the cut tree root system intact where removal is not required for construction or worker safety. All timber and brush will be removed from the wetlands.

Grindings will be removed from the wetlands to the extent that removal will not disturb intact wetland areas. All cleared debris (e.g., slash, logs, brush, woodchips, stumps, etc.) will be completely removed from the wetland and wetland adjacent areas and will be disposed of in approved disposal areas or as directed by the EI. The EI will photo document areas before and after clearing activities for use in revegetation / restoration plans.

3.3.8.3 Minimization of Grading

Minimization of grading will be accomplished using the following methods:

- Extensive grading in wetlands will generally be unnecessary due to the relatively flat topography of most wetlands. Grading will generally be limited to the areas directly over the trench line and spoil pile storage, except where topography, such as side slopes, requires additional grading for safety reasons.
- Topsoil will be segregated over the trench line and returned as an even layer in the same horizon, except for areas with standing water or where soils are saturated or frozen.
- Erosion control measures will be installed prior to grading at wetland crossings.
- Topographic elevations will be documented prior to grading activities so that disturbed areas can be restored to pre-construction contours. Unnatural features and unstable grades will be noted by the EI prior to construction activities so they can be reestablished during restoration activities.

3.3.8.4 Topsoil Segregation

The topsoil in wetlands will be stripped from the trench line and spoil storage area and segregated if it is not saturated or frozen and its depth is sufficient to allow mechanical separation. Topsoil stripping (in non-saturated conditions) will be performed up to a depth of 12 inches or as determined by the EI. The segregated topsoil will be stockpiled separately from subsoil for later restoration of the ROW. Spoil piles will be contained with appropriate erosion control measures to prevent sediment migration off the ROW or into wetlands.

3.3.8.5 Restoration of Soil Layers

The trench will be backfilled with subsoil first. After the subsoil has been rough graded, topsoil that was previously segregated will be replaced in an even layer over the trench. The replaced topsoil depth will be the same as the preconstruction depth. It is important to utilize only the topsoil segregated from each specific wetland because it contains seeds, rhizomes, and other plant propagules, which will aid rapid re-colonization by indigenous wetland species. Rock present in the preconstruction wetland conditions will be placed in the wetlands in the same approximate configuration (density and size) as preconstruction conditions. Preconstruction photos will be taken to aid in the replacement of these features.

3.3.8.6 Maintenance of Hydrology

Permanent trench breakers will be installed at both boundaries of the wetland to prevent draining of the wetland along the pipeline trench. Large wetlands will have additional trench breakers installed every 100 feet or as directed by the EI. The trench breakers are required to prevent water flow along the trench line which could result in undermining of the pipeline. Pipeline padding is generally not required in wetland locations because the wetland soils used to backfill the trench are generally soft and the pipe is concrete coated to ensure negative buoyancy, which provides extra protection from the backfill material damaging the pipe coating.

3.3.8.7 Maintenance of Wetland Erosion Control Devices

Erosion control devices will be installed immediately after initial earth disturbance of the wetland or adjacent upland. Erosion Control devices will be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion control measures or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the ECP; however, the following specific measures will be implemented at wetland crossings:

- Sediment barriers will be installed across the entire construction right-of-way at wetland crossings where necessary to prevent the flow of sediments into the wetland. In the travel lane, these may consist of removable sediment barriers or drivable berms. Sediment barriers may be removed during the construction day, but will be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent;
- Where wetlands are adjacent to the construction right-of-way and the right-of-way slopes toward the wetland, install sediment barriers along the edge of the construction right-of-way as necessary to prevent sediment flow into the wetland; and
- The trench will be dewatered (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in heavily silt laden water flowing into any wetland or waterbody. The dewatering structures will be removed as soon as possible after the completion of dewatering activities.

As previously noted, erosion control devices, including at or adjacent to wetlands, will be maintained in properly working condition at all times. Inspecting and ensuring the maintenance of temporary erosion control measures will be conducted at a minimum:

- on a daily basis in areas of active construction or equipment operation;
- a minimum of once a week in areas with no construction or equipment operation and where disturbance is less than 5 acres and final stabilization has not been achieved;
- a minimum of two times per week in areas with no construction or equipment operation and where the disturbance is greater than 5 acres and final stabilization has not been achieved; and
- within 24 hours of each 0.5 inch of rainfall or greater. This means that an inspection will be required once a storm event has produced 0.5 inches, even if the storm event is still continuing. Inspections will be required within 24 hours of the first day of the storm that produces more than 0.5 inches of rainfall and with 24 hours after the end of the storm for multiple day storm events that produce 0.5 inches of rainfall or more per day.

3.3.8.8 Restoration

Constitution will utilize the following criteria to restore disturbed wetland areas to as close to their pre-construction condition as practical:

- Equipment mats, temporary timber riprap, and other construction debris shall be removed during the final grading of the right-of-way. Once backfilling is complete, the original surface contours and flow regimes will be restored. During final grading, wetlands (including areas within the 100-foot adjacent area) will be restored to their original contours and the buffer areas seeded and

mulched as soon after backfilling as practicable (preferably within 48 hours but not longer than one week) with the exception of the travel portion of the ROW, which will also be restored using these procedures after the travel way is no longer required.

- For each wetland crossed, trench breakers will be installed at the base of slopes near the boundary between the wetland and adjacent upland areas and the trench bottom will be sealed as necessary to maintain the original wetland hydrology in areas where the pipeline trench may affect the groundwater hydrology.
- Permanent slope breakers will be installed across the construction right-of-way at the base of slopes greater than five (5) percent where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. At the discretion of the EI and the Contractor, permanent slope breakers that may alter the permanent overland flow characteristics to wetland areas may not be installed. At the discretion of the EI, hay or straw bales, or an approved equal, will be utilized as temporary slope breakers at the wetland boundaries until restoration is complete to ensure the wetland hydrology remains intact in these situations.
- Sediment barriers will be installed as outlined in the ECP and as approved or specified by the EI.

Constitution, at a minimum, will employ the following measures to maximize the success of wetland revegetation:

- Wetlands will be revegetated, unless standing water is present, in accordance with the following:
  - Ryegrass (annual or perennial) at 30 lbs. per acre (approximately 0.7 lb. / 100 sq. ft. or use 1lb/1000 sq. ft.) during spring, summer or early fall; or
  - Aroostook (if available) winter rye (cereal rye) at a rate of 100 lbs. per acre (2.5 lbs./1000 sq. ft.)
- No fertilizers, lime or mulch will be utilized in wetland areas unless required in writing by applicable regulatory agencies.
- If the affected wetland is within an active agricultural parcel, reseeding will be performed according to consultation with applicable regulatory agencies or individual landowner agreements. If inclement weather limits the effectiveness of reseeding efforts, at the discretion of the EI / AI and as allowed by applicable regulatory approvals, the ROW will be mulched (with straw only) to minimize erosion until conditions are suitable for reseeding. The temporary mulch cover will be monitored and maintained until conditions are suitable for completing restoration. No fertilizer or lime will be used in wetlands unless approved in writing by the regulatory agency. Permanent stabilization is defined as a minimum uniform, perennial 80% vegetative cover with native plant species or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion.

The following measures will be undertaken to maximize and monitor the success of revegetation during forested wetland restoration:

- Minimizing removal of stumps, to the extent practicable, while allowing for safe working conditions, stumps will be left in place within the construction ROW to re-sprout following construction and restoration;
- As indicated in the clearing section of the ECP, tree stumps will only be removed from the trenchline, unless specifically authorized by the EI and required for construction safety;

- Following construction, ROW maintenance in wetlands will be limited to clearing 10 feet on either side of the center of the pipeline. Trees within 15 feet of the pipeline greater than 15 feet in height may be selectively cut and removed from the permanent right-of-way to prevent potential conflicts with the pipeline.

3.3.8.9 Wetland Construction Techniques

Constitution will protect and minimize potential adverse impacts on wetlands using construction procedures specified within its ECP. Constitution will utilize one of the methods described below for installing the pipeline within wetlands during construction. The proposed crossing technique for each wetland crossed has been identified in Table 3.3-1. Crossings being evaluated for trenchless construction techniques are located in Table 3.3-7.

- Standard Pipeline Construction
- Conventional Wetland Construction
- Push-Pull Technique
- Trenchless Construction Methods
  - Conventional Bore
  - Horizontal Directional Drilling
  - Direct Pipe

3.3.8.9.1 Standard Pipeline Construction

The Standard Pipeline Construction method will be utilized in wetlands where soils are non-saturated and able to support construction equipment at the time of crossing as outlined in the ECP. This method requires segregation of topsoil from subsoil over the trenchline excavation. Topsoil down to a maximum depth of 12 inches will be segregated from the area disturbed by trenching (ditch plus spoil side), except where soils are frozen. Topsoil segregation is followed by trench excavation, pipe laying, backfilling, and grade restoration. Immediately after backfilling is complete, the segregated topsoil is restored to its original location at the soil surface. Erosion control measures, including site-specific contouring, silt fence, hay-bale barriers, permanent slope breakers, mulching, and reseeding or sodding with soil-holding vegetation, will be implemented. Contouring will be accomplished using acceptable excess soils from construction. Where this method is to be implemented for construction, the environmental inspector will measure the pre- and post-construction soil density using a penetrometer to determine if the soil has been inadvertently compacted during construction or access. If the soils are found to be compacted, de-compaction of the soil will be conducted using a harrow, paraplow, paratill, or other equipment. Deep subsoil shattering, if necessary, will be performed with a subsoiler tool having angled legs.

3.3.8.9.2 Conventional Wetland Construction

The Conventional Wetland Construction method will be used for crossing wetlands with saturated soils or soils unable to support construction equipment without considerable soil disturbance as outlined in the ECP. Prior to crossing and movement of construction equipment through these wetlands, the ROW will be stabilized using equipment mats to allow for a stable, safe working condition. Unless soils are inundated, topsoil down to a maximum depth of 12 inches will be segregated from the area disturbed by trenching (ditch plus spoil side). Trench spoil will be stockpiled temporarily in a ridge alongside the

pipeline trench. Gaps in the spoil pile will be left at appropriate intervals to provide for natural circulation or drainage of water.

While the trench is being dug, the pipeline will be assembled in a staging area preferably located in an upland area. The pipe will then be moved from the assembly area to the ROW. After the pipeline is lowered into the trench, wide track bulldozers or backhoes supported on equipment mats will be used for backfill, final cleanup, and grading. This method will minimize the amount of equipment and travel in wetland areas.

3.3.8.9.3 Push-Pull Technique

Construction in inundated wetland areas may require the Push-Pull Technique. The Push-Pull Technique can be used in large wetland areas (>300 feet crossing length) where sufficient water is present for floating the pipeline in the trench, and grade elevation over the length of the push-pull area will not require damming to maintain adequate water levels for flotation of the pipe. Currently this method is not proposed for any wetland crossings associated with the Project. However, this technique would be used when inundated conditions preempt the use of conventional construction.

The push-pull method involves pushing the prefabricated pipe from the edge of the wetland or pulling the pipe with a winch from the opposite bank of the wetland into the trench as outlined in the ECP. For implementation of this technique, initial clearing within the wetland will be minimized. The width of the ROW cleared will be limited to only that necessary to install the pipeline. Grading in inundated wetlands generally will not be necessary, due to the typically level topography and the absence of rock outcrops in such areas.

Trees and brush will be cut at ground level by hand, with low ground pressure equipment, or with equipment supported by equipment mats. Constitution will not use dirt, rock, pulled tree stumps, or brush to stabilize the travel lane. Sediment barriers will be installed to protect adjacent wetland areas.

In areas of unconsolidated soils such as muck, Constitution will utilize sediment barriers to contain those soils. The type of sediment barrier employed will vary depending on the amount and physical properties of the material that has to be contained. A variety of sediment barriers proposed for use on the Project have been outlined in Constitution's ECP, and will be selected based on what is best suited for the field conditions at each particular location. For example, Constitution may choose to wrap the containment area with a double row of silt fence, or may choose to use a reinforced silt fence with the ability to handle more slope area than standard silt fence.

The trench will be excavated using amphibious excavators (pontoon mounted excavators) or standard excavators supported on equipment mats or floats. The excavated material will be stored adjacent to the trench, if possible. If storage of excavated material next to the trench is not possible, the material will be stored temporarily in one of the following locations: (1) in upland areas of the ROW as adjacent to the wetland, (2) in construction vehicles, or (3) at an approved off-site staging location until needed for backfilling. The pipe will be assembled in uplands located outside of the wetland and temporarily staged until the trench is excavated and the pipe is ready to be pulled into place. Floats may be attached temporarily to give the pipe positive buoyancy. After floating the pipe into place, these floats will be removed and the negatively buoyant pipe will settle to the bottom of the ditch. This operation will be

repeated, with pipe sections fabricated, pushed into place, and welded together, until the wetland crossing is complete. The excavated material then will be placed over the pipe to backfill the trench.

3.3.8.9.4 Trenchless Construction Methods

Trenchless construction methods, including Conventional Bore, HDD, and Direct Pipe were previously discussed in Sections 3.2.5.1.4 through 3.2.5.1.6, and additional information is provided in Section 3.4. Trenchless construction methods install pipelines in areas where traditional open cut excavations are not feasible due to sensitive resource areas or logistical reasons such as wetland avoidance. Constitution has proposed and is evaluating the use of trenchless methods to cross sensitive resources to avoid and minimize impacts. Wetlands crossed utilizing trenchless construction methods are included in Table 3.3-7.

The U.S. Army Corps NWP 12 for utility lines and the Regional Condition for the New York District does not authorize the discharge into waters of the U.S. of any drilling muds that may be generated through such methods as directional boring or drilling. Further, any directional drilling or boring activities must include a plan that addresses prevention, containment, and cleanup of any accidental releases of drilling fluid. As required by NWP 12 (regional condition for New York District) the ECP includes a HDD Contingency Plan that addresses prevention, containment, and cleanup of any inadvertent releases of drilling fluid. This HDD Contingency Plan is included in the ECP.

Table 3.3-7 Wetlands Crossed Using Trenchless Construction Methods

Wetland ID	Approximate Milepost	Town	County	Wetland Class[a]	Crossing Length (feet)[b]	State Wetland Classification[c]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[d]
CH-1A-W063	47.81	Bainbridge	Chenango	PFO	17	N/A	No	V
CH-1H-W025	48.01	Bainbridge	Chenango	PEM	9	N/A	No	IV
DE-1X-W158	54.32	Sidney	Delaware	PFO	0	N/A	No	N/A
	54.38	Sidney	Delaware	PFO, PEM	427	N/A	No	V
	54.47	Sidney	Delaware	PEM, PFO	189	N/A	No	V
	54.55	Sidney	Delaware	PEM, PFO	1387	N/A	No	V
DE-1F-W075	55.09	Sidney	Delaware	PFO	164	N/A	No	V
	55.13	Sidney	Delaware	PFO	28	N/A	No	V
	55.18	Sidney	Delaware	PEM, PFO	0	N/A	No	N/A
DE-1C-W331	75.31	Davenport	Delaware	PEM	25	N/A	No	IV
DE-1N-W156A	85.87	Davenport	Delaware	PFO	319	D-11, Class II	Yes	V
DE-1C-W050A	87.77	Davenport	Delaware	PSS	0	N/A	No	N/A
DE-1P-W050	87.80	Davenport	Delaware	PEM	0	N/A	No	N/A
DE-1P-W052	87.82	Davenport	Delaware	PSS	266	N/A	No	V
	87.88	Davenport	Delaware	PFO	0	N/A	No	N/A
DE-1T-W053	87.94	Davenport	Delaware	PEM	45	N/A	No	V
	87.98	Davenport	Delaware	PEM	40	N/A	No	V
DE-1T-W055	88.04	Davenport	Delaware	PSS	205	N/A	No	V
SC-1G-W339	105.72	Richmondville	Schoharie	PEM	22	N/A	No	IV
SC-1C-W419	110.57	Cobleskill	Schoharie	PSS	10	N/A	No	IV
SC-1A-W292A	120.09	Schoharie	Schoharie	PEM	12	N/A	No	IV

Table 3.3-7 Wetlands Crossed Using Trenchless Construction Methods

Wetland ID	Approximate Milepost	Town	County	Wetland Class[a]	Crossing Length (feet)[b]	State Wetland Classification[c]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[d]

Note: This Table has been entirely updated since the August submittal.

N/A = Not Applicable – for wetland class with N/A it indicates that the wetland is not classified by the NYSDEC

a: Wetland classification according to Cowardin et al. 1979: PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland.

b: 0.0 ft Crossing Length = wetland is not crossed by the pipeline but is within the workspace.

c: New York classifies wetlands as Class I, II, III, IV (6 NYCRR Chapter X Part 664)

d: Crossing Methods for wetlands are described in Section 3.2.5.1; IV = Conventional Bore; V = Horizontal Directional Drill; N/A = Wetland not crossed by pipeline, but within the area of right-of way crossed by trenchless crossing. Proposed crossing method to be confirmed following assessment of subsurface geotechnical conditions.

3.3.8.9.5 Blasting

Wetlands that are situated over areas where depth to shallow bedrock is present have the highest potential to require blasting. The locations where wetlands occur over shallow depth to bedrock along the proposed Project route are provided in Table 3.3-8. An accurate determination of where blasting will be required can only be determined in the field during the construction process.

Table 3.3-8 Wetlands Located in Areas of Shallow Depth to Bedrock Crossed by the Constitution Pipeline in New York

Wetland ID	Start Milepost	End Milepost	Wetland Class[a]
SU-1F-W134	6.52	6.53	PEM
SU-1X-W259	10.54	10.56	PEM
SU-1G-W308	12.67	12.67	PFO
SU-1D-W327	13.79	13.80	PFO
BR-1H-W151	26.77	26.77	PEM
BR-1K-W172	32.35	32.36	PFO
	32.36	32.39	PFO
BR-1U-W165	35.30	35.30	PEM
BR-1I-W062	35.83	35.83	PEM
BR-1B-W064	35.88	35.88	PEM
BR-1L-W250	42.16	42.18	PEM
CH-1B-W026	48.25	48.26	PFO
	48.26	48.26	PFO
CH-1B-W028	48.34	48.34	PFO
	48.34	48.34	PFO
	48.35	48.36	PFO
CH-1B-W027	48.67	48.68	PFO
CH-1X-W034	49.17	49.19	PFO
	49.31	49.32	PFO
CH-1A-W050	50.46	50.48	PFO
	50.48	50.52	PFO
DE-1B-W025	50.53	50.53	PFO
	50.55	50.57	PFO
	50.57	50.57	PFO
DE-1K-W227	52.17	52.22	PSS
DE-1H-W035	52.26	52.27	PEM
DE-1X-W158	54.73	54.78	PFO
DE-1F-W075	55.07	55.09	PFO
	55.10	55.11	PFO
DE-1F-W075	55.11	55.11	PFO

Table 3.3-8 Wetlands Located in Areas of Shallow Depth to Bedrock Crossed by the Constitution Pipeline in New York

Wetland ID	Start Milepost	End Milepost	Wetland Class[a]
	55.12	55.13	PFO
DE-1K-W228	55.25	55.25	PEM
DE-1C-W205	60.29	60.31	PSS
	60.31	60.31	PSS
DE-1P-W133	60.57	60.57	PEM
DE-1M-W154	76.87	76.90	PFO
DE-1M-W148	79.81	79.82	PEM
DE-1N-W006	83.93	83.95	PFO
DE-1L-W300	86.20	86.20	PFO
DE-1C-W217	87.13	87.13	PFO
DE-1G-W017	92.10	92.11	PFO
DE-1G-W143	93.38	93.39	PFO
DE-1Q-W142	93.47	93.48	PFO
SC-1X-W256	95.74	95.79	PSS
SC-1Q-W374	96.04	96.05	PSS
SC-1H-W253	97.05	97.08	PFO
SC-1C-W411	97.33	97.36	PEM
SC-1K-W417	97.62	97.63	PEM
SC-1L-W427	98.61	98.61	PFO
SC-1E-W103	101.74	101.75	PFO
SC-1E-W105	102.07	102.07	PFO
SC-1R-W111	102.55	102.55	PEM
	102.55	102.56	PFO
	102.56	102.56	PFO
SC-1M-W233	103.47	103.49	PFO
SC-1P-W056	104.54	104.56	PEM
SC-1G-W340	105.59	105.64	PEM
SC-1G-W339	105.72	105.72	PEM
SC-1L-W300	106.01	106.02	PFO
SC-1L-W352	106.56	106.57	PEM
SC-1L-W352	106.57	106.57	PEM
SC-1D-W296	107.46	107.46	PFO
	107.46	107.47	PSS
	107.47	107.49	PFO
SC-1Q-W359	108.49	108.50	PFO
SC-1C-W370	109.17	109.18	PEM

Table 3.3-8 Wetlands Located in Areas of Shallow Depth to Bedrock Crossed by the Constitution Pipeline in New York

Wetland ID	Start Milepost	End Milepost	Wetland Class[a]
	109.18	109.20	PEM
SC-1Q-W363	109.47	109.47	PEM
	109.47	109.49	PFO
SC-1Q-W365	109.72	109.72	PFO
SC-1Q-W365	109.73	109.76	PFO
SC-1Q-W367	109.90	109.95	PEM
SC-1L-W308	110.28	110.29	PSS
SC-1C-W315	110.37	110.39	PFO
SC-1B-W455	110.76	110.76	PSS
SC-1Q-W216	111.96	111.97	PFO
SC-1L-W213	112.02	112.03	PFO
SC-1Q-W334	117.46	117.46	PSS

Note: This table has been entirely updated since the August 2013 submittal.

Source: Wetlands: Field delineated wetland boundaries and NHD GIS data where survey is not complete. Shallow depth to bedrock: NRCS 2013.

a: Waterbodies do not have a wetland class and are therefore identified with a "-". Wetland classification according to Cowardin et al. 1979; PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland.

b: Enter/exit MPs represent where the wetland enters and exits the shallow depth to bedrock area.

Blasting within wetlands can affect wetland hydrology through potential creation or alteration of subsurface fractures or fissures within the bedrock, potentially altering subsurface flow characteristics previously restricted by the local bedrock conditions. If blasting is necessary within wetlands, Constitution will follow its ECP, which includes the Blasting Plan for this Project to minimize adverse impacts on wetlands from blasting. Constitution has developed limitations for blasting operations near or within wetland areas to minimize the potential for adverse impacts on these resource areas. These measures will take into account distances and elevations to sensitive resource areas, enforce limits on peak particle velocity, minimize drill-hole diameters to limit fragmentation, and specifically arrange drill hole patterns, so that fragmentation is limited to a maximum diameter of one foot, or less. To minimize the potential for ground dislocation, blasting/removal of bedrock will be conducted only to a depth sufficient to install the pipeline, typically 6 to 8 feet below the ground surface. Accordingly, impacts to bedrock will occur only at the surface of the rock encountered. Blasting charges will be minimized to only the amount necessary to fracture or loosen rock to the desired depth. Additionally, monitoring during and after construction by an environmental inspector will ensure that hydrology is maintained during and after blasting activities. Monitoring for levels of saturation within the wetland and monitoring the health and type of vegetation in the restored wetland will aid in identifying any negative impacts from blasting. Wetland hydrology will be maintained within the area that has been blasted by installing trench breakers, as outlined in Constitution's ECP for this Project.

3.3.9 Avoidance, Minimization, and Mitigation

3.3.9.1 Avoidance

Due to the nature of linear utility projects, overall length of this interstate pipeline Project and complexity of siting a natural gas pipeline with regard to the various other factors required for consideration during the FERC process including regional topography, existing land use and infrastructure, and construction safety, there are no alternative sites for the Project alignment where wetlands crossings could be entirely avoided. To the extent practicable, the pipeline was routed to avoid and minimize impacts to waters of the U.S. including wetlands. A comprehensive alternatives analysis has been completed evaluating various route locations as part of the FERC process. This alternatives analysis has been provided in Attachment P of this Joint Application.

Review of existing and available natural resource mapping (i.e. NWI, NYSDEC State-regulated Freshwater Wetlands) was used during the planning process to determine a route that would avoid and minimize the potential impacts to wetland. The pipeline has been routed around numerous wetlands in order to avoid impacts to these environmentally sensitive areas. Figure 5 in Attachment B depicts the NYSDEC State-regulated Freshwater Wetlands in the vicinity of the Project that have been avoided. Additionally, Constitution has incorporated trenchless construction methods for crossing wetlands where feasible to avoid impacts to certain wetland crossings. Table 3.3-7 provides information on which wetlands will be crossed using trenchless construction.

3.3.9.2 Impact Minimization

To minimize impacts to wetlands, Constitution will implement the wetland construction procedures described within Constitution's ECP. Within wetlands, the construction corridor will be reduced to a width of 75 feet unless site specific conditions require ATWS. Access within the ROW across wetlands will only be permitted where soils are non-saturated and able to support construction equipment at the time of crossing, during frozen soil conditions (for winter construction) or with the use of equipment mats to avoid rutting of the wetland soil. If mats are not used, the EI will record the pre- and post-construction soil density using a penetrometer to determine if the soil has been inadvertently compacted during construction or access. If the soils have been found to be compacted, de-compaction of the soil will be conducted using a paraplow, paratill or other equipment. Deep subsoil shattering shall be performed with a subsoiler tool having angled legs. Impacts to wetlands will be minimized by segregating the top 12 inches of soil from the area disturbed by trenching activities, except in inundated areas or when soils are frozen. The topsoil will be restored to its original location immediately after backfilling is complete, to preserve the wetlands existing seedbank and promote revegetation of the disturbed area. Seed mixes spread on the restored topsoil for temporary stabilization will include annual rye grass at a rate of 40 pounds per acre (unless standing water is present) or appropriate mixes recommended by the local conservation districts. The use of fertilizers will not be permitted. Mulch will only be used within wetlands as required by state agencies or local Soil Conservation Districts. Erosion controls including silt fence and/or staked hay bales will also be put in place to protect wetlands from sediment disturbed in adjacent uplands during construction. Post-construction, the disturbed area will be monitored to ensure long-term stabilization of the site. Constitution's ECP provides additional details on construction practices within wetlands.

Construction will protect and minimize potential adverse impacts to wetlands by expediting construction in and around wetlands, by restoring wetlands to their original configurations and contours, by segregating topsoil during excavation where applicable, by permanently stabilizing upland areas near wetlands as soon as possible after backfilling, by inspecting the ROW periodically during and after construction and by repairing any erosion control or restoration features until permanent revegetation is successful. Constitution will comply with the applicable permit conditions issued.

3.3.9.3 Mitigation

Constitution will provide mitigation for unavoidable impacts to the NYSDEC state-regulated Freshwater Wetlands and other waters of the U.S. resulting from construction activities. Mitigation will be provided for wetland cover type conversions from PFO to PSS and PEM and from PSS to PEM and the potential associated loss of wetland function and value. ~~If required, m~~Mitigation will be provided for the placement of fill for the construction of permanent access roads that results in a "loss" to waters of the U.S. regulated by the USACE or NYSDEC state-regulated Freshwater Wetlands.

Constitution's mitigation plan for impacts to waters of the U.S. including wetland follows the requirements of detailed in the Code of Federal Regulations (CFR) Title 33, Part 332 and in accordance with the 2008 Final Rule for Compensating Mitigation for Losses of Aquatic Resources (Department of Defense and Environmental Protection Agency 2008). Constitution has included a ~~conceptual~~ wetland mitigation plan with this application in Attachment K and anticipates working with both the USACE and NYSDEC prior to finalization of the mitigation plan to ensure suitability and acceptance of the proposed mitigation plan. As additional mitigation plans and measures are developed for the Project they will be provided to the agencies as supplemental information to this application.

The ~~conceptual~~ wetland mitigation plan provides measures to avoid, minimize, and compensate for temporary and permanent wetland impacts. Compensation for permanent wetland impacts will consist of on-site or off-site wetland restoration, enhancement, or creation. Constitution has initiated conversations with the Wetland Trust (TWT) and the Upper Susquehanna Coalition (USC) regarding the Susquehanna Basin Headwaters In-Lieu Fee (ILF) Wetland Mitigation Program in New York. This ILF mechanism is approved by the USACE in the Buffalo and New York Districts. This ~~in-lieu fee~~ ILF program is ~~being examined for potential use~~ proposed for use as part of the compensation for the portion of the Upper Susquehanna Watershed that is located in New York and ~~could~~will be utilized to provide establishment, enhancement, restoration/rehabilitation, and preservation opportunities within the Upper Susquehanna Watershed. Constitution will continue to investigate mitigation options as the Project progresses toward completion. As part of the mitigation, Constitution proposes to purchase ILF credits from TWT as part of the Susquehanna Basin Headwaters ILF Program. An agreement has been setup in principal to reserve 14 wetland mitigation credits for project planning purposes.

Waters of the U.S. that will be temporarily excavated for pipeline construction and returned to their pre-construction contours and elevations after construction are not considered "losses" of waters of the U.S. for mitigation purposes. However, the final mitigation plan will address and compensate for unavoidable impacts to wetlands associated with permanent conversion of PFO to PSS and PEM and PSS to PEM. The loss to waters of the U.S. from permanent access roads will be mitigated for accordingly.

The ~~conceptual~~ wetland mitigation plan provides descriptions of the way in which Constitution may replace or enhance wetland functions and values per requirements listed in the New York Codes, Rules

and Regulations (NYCRR) Article 6, Part 663.5(g)(1)(i) through (iii). In accordance with the NWP General Condition 23(c), compensatory mitigation will be provided at a minimum one-for-one ratio for wetland losses. Constitution will propose mitigation that will result in no net loss of wetland area or functions; the goal is to, in fact, strive for a net gain in area and function. Constitution proposes to accomplish at least a 3:1 replacement ratio for permanent fill of forested wetlands, and at least 2:1 for shrub and herb-dominated wetlands. Constitution recognizes that the ratios will depend on many factors including the type of wetlands restored or established and the mitigation approach. For example, preservation typically requires ratios that are much higher than restoration and preservation alone, may not be appropriate because it does not address no-net-loss goals. Unavoidable conversion from forested to scrub-shrub and emergent wetlands will also occur as a result of Project construction. While conversion does not constitute a loss of wetland area, wetland structure and function are affected and this must be addressed as part of the Mitigation Plan. Constitution also recognizes temporal impacts (temporary loss of wetlands during construction) need to be addressed as part of the mitigation. Recognizing that it can achieve its mitigation ratio goals for PEM and PSS wetlands through onsite efforts, but not for forested wetlands, Constitution proposes that temporary impacts to PEM and PSS wetlands will be mitigated for entirely on-site through restoration of the construction workspace, whereas PFO wetlands impacted within the temporary workspace areas will be mitigated for at a proportional ratio to the temporary loss of functions and services. These temporary mitigation ratios are not adjusted to account for degraded wetland conditions noted during the functions and services assessment. Constitution has also made an effort to include buffer preservation and buffer establishment as part of the mitigation package. The proposed ratios are different for buffer establishment (*e.g.*, reforestation of an agricultural field) than for preservation (refer to ratios provided in Table 5.1 of the Wetland Mitigation Plan in Attachment K). Refer to Section 6.2.2.3 of this document for additional information related to Mitigation. Constitution will follow the specific guidance cited in the ~~Conceptual~~ Wetland Mitigation Plan, including ensuring that mitigation projects are in the same HUC-8 watersheds as unavoidable impacts and, as much as possible, achieve in-kind replacement or better of wetland resources.

To prevent indirect impacts on upland and wetland ecosystems associated with colonization by invasive species, Constitution has developed a Project-specific ISMP to be implemented during construction and to continue for a minimum of three years following completion of construction. If after three years of monitoring the densities of invasive species are documented below or consistent with densities within undisturbed areas off ROW, then Constitution will cease monitoring activities upon approval from the appropriate regulatory agencies (i.e., USACE, and NYSDEC). The goal of the ISMPs is to control existing populations of non-native invasive species occurring within the Project workspace and prevent the establishment and spread of additional invasive species following disturbance of the existing vegetation community. The ISMP has been included as an attachment to the ECP.

The goal of the final mitigation plan will be to restore, establish (create), and/or enhance wetland hydrology, hydrophytic vegetation, and hydric soil conditions to adequately offset the loss of function and value to the jurisdictional wetlands resulting from Project implementation. Even with the minimization and avoidance measures in place, there will be some unavoidable impacts to wetlands; however, Constitution's multi- facetted approach will endeavor to design a mitigation package that will fully compensate for impacts to wetlands with no net loss of function or values as explained in the ~~Conceptual~~ Wetland Mitigation Plan. A Final Mitigation Plan, to be developed during the course of the Joint Application permitting process, will take into account the site-specific cumulative loss of biological function provided by the impacted wetlands, as well as public value. The ~~conceptual~~ approach outlined in

the ~~Conceptual~~ Wetland Mitigation Plan provides a framework for the development of an acceptable Mitigation Plan. This ~~Conceptual~~ Wetland Mitigation Plan has been developed based on current knowledge of potential impacts and preferred mitigation strategies but will be amended or revised as needed to meet USACE needs. Constitution anticipates that this Plan will be used as a continuation of discussions with the USACE on what potential mitigation techniques and projects will mitigate the functions and values unavoidably impacted by the proposed Project.

3.4 WATERBODY AND WETLAND CROSSING ALTERNATIVES

As part of Constitution's application to the FERC, a comprehensive alternatives analysis has been completed evaluating various alternatives for the Project, including the no-action alternative, system alternatives, route alternatives, and aboveground site alternatives. This analysis was included in Constitution's Resource Report 10 of the Final ER submitted on June 13, 2013, and its supplement to the Final ER submitted on July 24, 2013 (Attachment P). Through its responsibilities under the NEPA, the FERC is required to assess the alternatives for the Project and determine if the Project and associated Primary Route is the alternative that would result in less environmental impacts to the lands and communities crossed by the Project than other alternatives while satisfying the Project objective.

Constitution evaluated pipeline routing and associated aboveground facility site options, based on existing infrastructure, regional topography, potential adverse environmental impacts, population density, existing land use, and construction safety and feasibility considerations. Constitution's primary objective in performing this part of the alternatives analysis was to develop a constructible Project that would accomplish the Project goal, while ensuring safety and avoiding or minimizing potential adverse environmental impacts to the greatest extent practicable. The evaluation examined routes that would avoid impacts to the practicable extent where feasible, and in response to specific landowner requests and feedback received throughout FERC's Pre-Filing Process, including comments from the NYSDEC and the New York State Department of Agriculture and Markets (NYSDAM).

The decision criteria that Constitution used to develop a Primary Route weighed environmental impacts, constructability, technological and procedural constraints, and safety and operational issues. The factors used to select the Primary Route over the alternative routes and deviations focused on FERC scoping information, landowner concerns, minimizing the number of affected landowners, minimizing adverse environmental impacts, ensuring constructability, promoting safety, and meeting Constitution's desire to minimize the extent of potential disruption to communities during construction. Route Alternatives were based on information collected since June 2012 through consultation with stakeholders; civil, environmental, and cultural field surveys; assessments of construction feasibility and safety; and assessments of operational safety. Stakeholders consulted included land owners; local, state and federal government agencies; and advocacy groups. Constitution utilized existing sources of information, such as Google Earth™; Geographic Information Systems (GIS) databases from county, state, and federal sources; aerial photography conducted in spring and fall 2012; United States Geological Survey (USGS) topographic maps; National Wetlands Inventory (NWI) maps; and New York State Freshwater Wetland Maps, to make preliminary assessments prior to creating an alignment or when survey permissions were not granted by the landowner.

In addition, the analysis provided herein reviews the various wetland and waterbody construction alternatives that have been considered for the Project. The evaluation of these construction alternatives is provided specifically for the USACE and NYSDEC review of Constitution's Joint Application.

As noted previously, Constitution conducted desktop routing assessments using GIS database information, aerial photography, USGS topographic maps, as well as NWI and New York State Freshwater Wetland Maps. To the extent practicable, Constitution attempted to route the Project to avoid sensitive environmental features, including waterbodies and wetlands. However, given the nature of linear infrastructure projects, overall length of this interstate pipeline Project and complexity of siting a natural gas pipeline with regard to the various other factors required for consideration during the FERC process, there are no alternative sites for the Project alignment where waterbodies and wetlands crossings could be entirely avoided.

Where crossings of waters of the U.S. could not be avoided, Constitution has routed the pipeline to cross waterbodies in a perpendicular fashion to the extent practicable. Additionally, where waterbodies meander or have multiple channels, Constitution has routed the pipeline to minimize the number of waterbody crossings. For wetland crossings, Constitution has routed the pipeline to avoid impacts that would involve the loss of wetlands in excess of 0.5 acres for single and complete crossings of waters of the U.S., thus maintaining compliance with the NWP 12 general conditions.

During design of the Project, Constitution attempted to avoid and minimize wetland and waterbody impacts that would result from the construction and installation of the Constitution Pipeline to the extent practicable by minimizing construction ROW width from 110 feet to 75 feet and only maintaining 30 feet of the 50-foot permanent ROW. In line with these measures, Constitution is also evaluating several crossing methods. Constitution is addressing the feasibility of trenchless installation methods that would further avoid impacts. Numerous factors were considered as part of the Alternatives Analysis to incorporate trenchless construction techniques and avoid and minimize impacts to wetlands and waterbodies. The decision to install certain waterbody and wetland crossings by one method rather than another method at specific locations will depend upon the following:

- Geotechnical concerns;
- Substrate composition;
- Size and depth of waterbody/wetland;
- Sensitivity (proximity to sensitive resources, e.g. drinking water supply);
- Cost of method;
- Timeframe and duration for construction;
- Accessibility (during construction and post-construction maintenance); and
- Adjacent topography (steep adjacent side slopes, rocky terrain)

There are positive and negative aspects to each crossing type considered for wet open cut , dry crossing , conventional bore , HDD , and direct pipe . Evaluations are being conducted where open cut excavations may not be feasible due to unstable terrain, sensitive environmental resources, or locations where Project facilities would cross existing infrastructure. Geotechnical assessments of these potential trenchless construction crossings are being conducted to determine the probability of success in the selected locations, and results of these assessments will assist in determining whether alternative trenchless or conventional open cut construction procedures is the preferred technique. Some of the critical factors taken into consideration to determine if trenchless construction methods would be successful include surface conditions, workspace requirements, subsurface conditions, ground surface elevation, water allocations, inadvertent returns, drilling fluid disposal, risks, constructability, schedule and post-

construction accessibility. The following details the efforts taken to determine if these methods could be utilized on the Project.

3.4.1 Wet Open Cut

The wet open cut crossing method is typically implemented for intermediate to major waterbody crossings that have site-specific conditions that prohibit effective implementation of a dry crossing method. Waterbodies typically assessed for crossing using the wet open cut method include, but are not limited to deep or fast flowing waters that preclude the use of standard cofferdam assemblies, waterbodies subject to flash flooding, bouldery and cobbley stream bed substrates that would prevent establishment of an effective bottom seal for cofferdam assemblies or sheet pile installation, and waterbodies with subsurface sediments that are not conducive for trenchless construction methods.

The wet open cut method is limited to a short duration construction schedule (i.e., 24 hours for minor waterbodies and 48 hours for intermediate waterbodies) and typically implemented during low flow periods to lessen environmental impacts. However, unconfined in-stream disturbance associated with the wet open cut method typically results in downstream sediment deposition and turbid water conditions that have the potential to negatively impact downstream aquatic habitats. It is because of the indirect downstream impacts that this method is typically utilized only when all other dry or trenchless construction methods have been determined to be impractical. Constitution does not currently propose the wet open cut method for any waterbodies crossed by the Project.

3.4.2 Dry Crossings

A dry crossing method, including dam and flume, dam and pump, cofferdam assembly or a combination of these techniques, allows for drier trenching, pipe installation, and waterbody restoration activities during construction. Use of the dry crossing method for minor to intermediate sized waterbody crossings is more practicable and cost effective when compared to other trenchless construction methods. This construction method is most practical where the width and depth of the waterbody is minimal, and the waterbody can be crossed in short duration (i.e. within 48 hours). The streambed and adjacent land area is able to be restored immediately following a dry crossing construction method. The size of adjacent land area disturbance associated with the dry crossing method is almost always less than the necessary land area required for trenchless crossings. This reduced adjacent workspace area, especially on or near steep slopes, minimizes the potential for erosion and sedimentation to the waterbody from the upgradient work zone. The use of a dry crossing method, together with the proposed timing restrictions and restoration methods, is anticipated to minimize the extent and duration of potential impacts to fisheries and associated habitat.

The use of a dry crossing method allows the contractor to have greater control over the conditions during which construction occurs. This ensures a successful pipeline installation, while avoiding or substantially minimizing environmental impacts as a result of construction.

The dry crossing method may not be an appropriate crossing method in certain instances. Examples include, but are not limited to waterbodies containing threatened and endangered species or their critical habitat, containing contaminated sediments, waterbodies subject to flash flooding or those with unstable banks or an actively migrating channel where additional destabilization as a result of trenching could further exacerbate erosion or channel migration, deep or fast flowing waters that preclude the use of

standard cofferdam assemblies, and waterbodies with bouldery and cobbley stream bed substrates that would prevent establishment of an effective bottom seal for cofferdam assemblies or sheet pile installation.

3.4.3 Conventional Bore

Conventional bore may be used at sensitive crossings including highways, wetlands, and waterbodies. Boring consists of creating a shaft / tunnel for a pipe or conduit to be installed below streambeds (or wetland) without directly disrupting the in-stream channel or wetland soils. This is accomplished by first excavating a bore pit on one side of the waterbody and a receiving pit on the other side. The bore pit is excavated to a depth equal to the depth of the ditch and is graded such that the bore will follow the proposed slope of the pipe. A boring machine is then lowered to the bottom of the bore pit to tunnel under the waterbody using a cutting head mounted on an auger. The auger rotates through a bore tube, both of which are pushed forward as the hole is cut. The pipeline is then installed through the bored hole and welded to the adjacent pipeline.

Bored crossings of streams and wetlands have limitations that increase the required temporary workspace and additional temporary workspace areas adjacent to these resources as well as increase the likelihood of failure of the bore, resulting in an open-cut crossing after the time, expense, and additional clearing/land disturbance has already occurred. There are several feasibility issues and potential limitations using trenchless construction methods. Use of these methods typically requires more and larger ATWS areas adjacent to wetland and waterbody resources. Typical bored crossings would require the following as minimum work areas or measures that would be implemented to conduct the boring operation:

- Use of these methods typically requires more and larger additional temporary workspace (ATWS) areas adjacent to waterbody or wetland resource. Typical conventional bored crossings will require the following as minimum work areas or measures that will be implemented to conduct the boring operation:
- At a minimum, boring operations will require an excavated entry and exit pit of 20 feet wide by 30 feet long by 8 feet deep. Boring contractors typically request a 20-foot-wide by 60-foot-long pit to expedite the crossing pipe assembly. A steeply sloped area adjacent to the waterbody and extensive change in height between top of slope and bed of stream requires excavation and removal of soil in order to conduct a conventional bore.
- If the pit areas cannot be shored with shoring boxes, then the pit walls will need to be sloped (minimum of 2:1) for personnel safety.
- The excavated material will need to be stored temporarily in proximity to the ditch, allowing adequate room adjacent to the ditch for the crossing pipe assembly. Conservatively, this would require an additional 50-foot by 50-foot area per pit for this storage.
- Because a bored crossing has a tendency to drift from the desired alignment as the bore progresses (due to the rotation of the auger within the crossing pipe), a length of 400 feet is the limit of the method.
- Similar elevation of the entry and exit pits and maintaining grade alignment is imperative for a successful bore. The pits will need to be excavated at or above water tables. Constitution would place the pits at a point further away from the wetlands/waterbodies to ensure that water tables are not engaged. If a water table is engaged, a means to evacuate the water within the pit will be required. Another means to prevent the water from entering the pit is by the use of a well point

system. In either case, disposal of the evacuated water would be continuous for the entire period of the bore operation and would require additional workspace.
- Extremely stony soils can present further complications for borings.

3.4.4 Horizontal Directional Drill

HDD is a trenchless method of installing pipelines in areas where traditional open cut excavations are not feasible due to sensitive resource areas or logistical reasons. Perhaps the greatest advantage of the HDD crossing technique is the fact that open cut trenching and some equipment disturbance within sensitive resource areas are not necessary, and, as a result, environmental impacts on sensitive resource areas are minimized. Remaining impacts would include a path for HDD water gathering and tracking equipment. However, a greater amount of equipment staging is required for HDD than for the open cut crossing method. For example, the entry-side equipment and operations typically required for an HDD method will include the drilling rig and entry hole, control cab, drill string pipe storage, site office and tool storage trailers, power generators, bentonite storage, bentonite slurry mixing equipment, slurry pump, cuttings separation equipment, cuttings return/settlement pit, water trucks and water storage, and the heavy construction equipment necessary to support the operation.

Exit-side equipment and operations typically will include the exit point and slurry containment pit, cuttings return/settlement pit, cuttings separation and slurry reclamation equipment, drill string pipe storage, and the heavy construction equipment necessary to support the operation. In addition to the drilling operations to be conducted within this workspace footprint, ATWS will be required along the working side ROW, or ATWS in the form of "false" ROW to provide a straight corridor for handling pipe at HDD locations where the ROW changes direction, in which to prefabricate the pipeline into one continuous section in preparation for the pull-back. Because this false ROW must be relatively straight to accommodate a long section of pipe before it is pulled through the annulus, a significant area of additional temporary workspace would be required outside of the standard pipeline construction workspace. Once assembled, the pipeline will be placed on pipe rollers so that it may be conveyed into the drill hole during the pull back operation.

The decision to install certain waterbody crossings by HDD instead of by conventional means, at specific locations on the Project will depend on the crossing location, environmental sensitivity and associated constraints, geotechnical concerns, substrate composition, and hydrological data. There are feasibility issues and potential limitations using trenchless construction methods. Use of these methods typically requires more and larger ATWS areas adjacent to wetland and waterbody resources. HDD crossings will require the following:

- To accommodate the required construction equipment, a minimum workspace footprint of 200 feet wide by 250 feet long is required at HDD entry and exit points to support the drilling operation. The amount of workspace required can vary considerably from site to site based on site-specific conditions.
- Because of the geometric constraints required to install a 30-inch pipeline using HDD methods, the minimum required length of an HDD is approximately 1,300 feet assuming level topography. Whereas a stream crossing utilizing conventional trenching methods may result in less disturbed area.

- Disposal of drilling fluid and cuttings removed from the hole will be required during and after installation of the product pipe.
- A typical HDD crossing for a narrow stream could require several weeks to complete depending on subsurface conditions.
- Gravelly soils typical of the region can extend the project schedule and may introduce additional risk of failure for HDD installations.

Constitution is currently investigating specific waterbody and wetland crossings to determine the feasibility of using HDD based on the specific conditions at the crossing location. Specific locations being evaluated for an HDD crossing are provided in Table 3.4-1. When a final proposal has been prepared regarding crossing methods, Constitution will submit this information to the NYSDEC and USACE for review as supplemental information to this application.

Table 3.4-1 Potential Trenchless Construction Method Installation Locations Under Consideration for the Constitution Pipeline in New York

Approximate Milepost[a]		Length (feet)[b]	Proposed Installation Method[c]	Township/ County	Reason for Trenchless Evaluation	Status	Preferred Alternative Crossing Method	Comment[c]
Begin	End							
40.30		N/A	DP	Afton/ Chenango	Minimization of impact to Melondy Hill State Forest	N/A	N/A	Conventional construction selected based on route modification and feedback from NYSDEC.
N/A	N/A							
47.60 (Bennettsville Creek)		1,630	HDD	Bainbridge/ Chenango	Avoidance of Wetlands and Waterbodies: • CH-1A-W063 • CH-1A-S010 • CH-1C-S010B • CH-1C-S010C • CH-1H-S010D • CH-1H-S010E	Proposed	Open cut crossing (Wetlands) Dry crossing (Waterbodies)	Conceptual design complete- awaiting site access for geotechnical evaluations.
47.70	48.01							

Table 3.4-1 Potential Trenchless Construction Method Installation Locations Under Consideration for the Constitution Pipeline in New York

Approximate Milepost[a]		Length (feet)[b]	Proposed Installation Method[c]	Township/ County	Reason for Trenchless Evaluation	Status	Preferred Alternative Crossing Method	Comment[c]
Begin	End							
54.16 (Pine Hill Creek)		5,500	HDD	Sidney/ Delaware	Avoidance of Wetlands and Waterbodies: • DE-1X-W158 • DE-1H-S013 • DE-1F-W075 • DE-1M-S075	Proposed	Open cut crossing (Wetlands) Dry crossing (Waterbodies)	Conceptual design complete- awaiting site access (West Side of HDD, have accessed East side borings) for geotechnical evaluations.
54.37	55.30							
78.20		N/A	HDD	Davenport/ Delaware	Avoidance of Kortright Creek, Maridale-Devenport Center Road	N/A	N/A	Avoided by route alterations.
N/A	N/A							
85.55 (NYSDEC Wetland DN-11)		3,188	HDD	Davenport/ Delaware	Avoidance of Wetland: • DE-XX-W85.72 • DE-1N-W156A	Proposed	Open cut crossing (Wetlands)	Conceptual design complete- awaiting site access for geotechnical evaluations.
85.75	86.08							

Table 3.4-1 Potential Trenchless Construction Method Installation Locations Under Consideration for the Constitution Pipeline in New York

Approximate Milepost[a]		Length (feet)[b]	Proposed Installation Method[c]	Township/ County	Reason for Trenchless Evaluation	Status	Preferred Alternative Crossing Method	Comment[c]
Begin	End							
87.70 (Middle Brook)		2,050	HDD	Davenport/ Delaware	Avoidance of Highway 23 and Wetlands and Waterbodies: • DE-1T-W051 • DE-1C-W050A • DE-1P-W050 • DE-1P-W052 • DE-1T-W053 • DE-1T-W055 • DE-1C-S051A • DE-1T-S051 • DE-1T-S052	Proposed	Open cut crossing (Wetlands) Dry crossing (Waterbodies)	Geotechnical exploration complete, lab testing and analysis ongoing.
87.80	88.19							
94.70		N/A	CB	Jefferson/ Schoharie	Minimization of impacts to Clapper Hollow State Forest	N/A	N/A	Conventional construction selected based on route modification and feedback from NYSDEC.
N/A	N/A							
96.40		N/A	CB & DP	Summit/ Schoharie	Avoidance of wetlands and Arabia Road	N/A	N/A	Avoided by route alterations.
N/A	N/A							

Table 3.4-1 Potential Trenchless Construction Method Installation Locations Under Consideration for the Constitution Pipeline in New York

Approximate Milepost[a]		Length (feet) [b]	Proposed Installation Method [c]	Township/ County	Reason for Trenchless Evaluation	Status	Preferred Alternative Crossing Method	Comment[c]
Begin	End							
101.36 (Baldwin Road)		570	DP	Summit/ Schoharie	Avoidance of Baldwin Road	Proposed	Open cut crossing	Conceptual design complete- awaiting site access for geotechnical evaluations.
101.48	101.57							
115.70		N/A	HDD	Schoharie/ Schoharie	Avoidance of Arrowhead Lane, Schoharie Creek	N/A	N/A	Avoided by route alterations.
N/A	N/A							
117.00		N/A	HDD	Schoharie/ Schoharie	Avoidance of Fox Creek	N/A	N/A	Avoided by route alterations.
N/A	N/A							
119.70 (Schoharie Creek)		744	DP	Schoharie/ Schoharie	Avoidance of Smith Road, Holiday Way and Waterbody: SC-1Q-S289	Proposed	Dry crossing (Waterbodies)	Conceptual design and feasibility study complete. Direct Pipe® is judged feasible. Final design pending geotechnical exploration and laboratory work.
119.81	119. 95							

Table 3.4-1 Potential Trenchless Construction Method Installation Locations Under Consideration for the Constitution Pipeline in New York

Approximate Milepost[a]		Length (feet) [b]	Proposed Installation Method [c]	Township/ County	Reason for Trenchless Evaluation	Status	Preferred Alternative Crossing Method	Comment[c]
Begin	End							
122.30 (Alt. M)		N/A	HDD & DP	Wright/ Schoharie	Avoidance of Smith Road, Schoharie Creek	N/A	N/A	Avoided by route alterations.
N/A	N/A							

This table has been entirely updated since the August 2013 submittal

a: The MP locations of sites with a designated status of "N/A" do not correspond with the current MP locations for the proposed supplemental updated Primary Route.

b: Subject to field verification

c: HDD: Horizontal Directional Drilling

CB: Conventional Bore

DP: Direct Pipe®

TBD: To be determined

Project locations identified as "avoided by route alterations" are no longer crossed by the proposed Primary Route. Avoidance of these locations is a result of incorporation of minor or major route modifications, such that the constraints identified at the specific historic crossing are no longer crossed, or are now crossed at locations which allow for conventional installation methods. Locations awaiting site access are pending landowner agreements for site access or permission to conduct boring operations. Locations not approved for survey are areas where survey access permission could not be obtained. These crossing locations have been modified or abandoned and are no longer associated with the Project.

Constitution has developed a HDD Contingency Plan for the Project that establishes procedures for addressing potential impacts associated with an inadvertent release of drilling fluid during a HDD installation if utilized. ~~Additionally, this document will establish the criteria by which Constitution and the applicable regulatory agencies will determine when a HDD is unsuccessful and must be abandoned in favor of the approved alternate crossing method.~~ Additionally, this HDD Contingency Plan establishes the criteria by which Constitution will determine when a trenchless crossing method is unsuccessful and must be abandoned in favor of an approved alternative crossing method (i.e., dry crossing waterbody and conventional wetland crossing methods). A copy of this plan is located within the ECP provided as part of this application.

3.4.5 Direct Pipe Method

Direct Pipe® is another trenchless method that combines the advantage of established pipeline installation methods of microtunnelling and HDD. A single continuous working operation allows the trenchless laying of pre-fabricated pipeline and the simultaneous development of the required bore hole. Earth excavation is performed by means of a microtunnelling machine (equipped with a cutting head) which is navigable and uses a flushing circuit (pipes) method to transport the earthen materials to the surface. Modern and proven controlled pipejacking techniques ensure accurate measurement of the current pipe position along the intended route. The axial force that is necessary for the boring process is transferred along the pipeline from the pipe thruster or hydraulic jacking system at the entry bore hole to the cutterhead.

Direct pipe installations may be much shorter and shallower than HDD installations because the excavation is continuously cased, reducing the risk of hole collapse and subsequent settlement. Additionally the external fluid pressures of the excavation slurry system and bentonite lubrication system are much lower than a typical HDD thereby reducing the relative risk of hydraulic fracture and inadvertent returns. The length limitation for the Direct Pipe technology (for a 30 inch pipe) is approximately 900 feet due to the requirements of the hydraulic motors in the smaller diameter tunneling machines. Soils with abundant, strong, and/or abrasive boulders or other large obstructions present risk to the Direct Pipe method. Direct Pipe can be more sensitive to soil conditions than HDD, as it cannot go through rocky terrain that the cutting head cannot sufficiently grind and pulverize. Direct Pipe also requires sending people into the pipe to monitor and adjust settings underground. This requires a specialized team of individuals to always be on-site in the event that an incident occurs. While Direct Pipe has been used overseas, the United States has very little experience with this type of machinery. Also, Direct Pipe is used for much larger pipe or tunneling applications, 42-inch diameter bores and larger. The equipment has been scaled down to be used for smaller diameter bore holes (30 inches) but this diameter was not common with use of Direct Pipe overseas. Specific locations being evaluated for a direct pipe method crossing are provided in Table 3.4-1.

3.4.6 Summary of Feasibility Issues with Trenchless Installation Methods

In the absence of environmental or construction concerns requiring the use of other crossing methods, the conventional open cut method is the most efficient and economical option for crossing wetlands and waterbodies. Circumstances such as landslide incidence, wetlands that make open cut installation impossible due to workspace restrictions and water quality/aquatic resource concerns are among the reasons that trenchless crossing methods would be considered for feasibility. While a successful

trenchless installation has certain environmental benefits, frequently the overall impacts can be greater, particularly if the stream is small and can be crossed using dry crossing methods in a short period of time (i.e., 24 to 48 hours). Also, trenchless crossings may not be feasible at all locations because of suboptimal substrate or geologic conditions. For these reasons, Constitution proposes to use conventional construction methods for most of the waterbodies crossed by the Project.

Constitution is currently evaluating the feasibility of incorporating a trenchless construction method for several waterbody and wetland crossings associated with the Project. Geotechnical investigations are ongoing to determine if the subsurface geologic conditions along the path of a trenchless installation are likely to support the proposed construction method. When a final determination has been made regarding crossing methods, Constitution will submit this information to the NYSDEC and USACE for review as supplemental information to this application.

Constitution's HDD Contingency Plan establishes the criteria by which Constitution will determine when a trenchless crossing method is unsuccessful and must be abandoned in favor of an approved alternative crossing method (i.e., dry crossing waterbody and conventional wetland crossing methods). Constitution has designed and incorporated alternative crossing method impacts and drawings for each proposed trenchless construction location into the HDD Contingency Plan for the Project. This alternative design will be implemented in the event that ongoing geotechnical site investigations reveal subsurface conditions that do not support a trenchless installation method or where trenchless crossing method failure were to arise during drilling or installation operations, resulting in abandonment of the trenchless operation. The alternative crossing method contingency plans for the proposed trenchless crossings are provided in Attachment E. Impacts associated with the alternative waterbody and wetland crossings contingency methods are summarized in Tables 3.4-2 and 3.4-3.

Table 3.4-2 Waterbody Impacts Associated with Trenchless Crossing Alternative Crossing Method Contingency Plans

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Latitude	Longitude	Town / County	Quadrangle	Type[d]	Crossing Length (feet)[e]	Stream Disturbance (acres)	Water Quality Standard[f]	Fishery Classification[g]	State Fishery Construction Window[h]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[i]
CH-1C-S010B	Bennettsville Creek	47.65	42.260456	-75.462942	Bainbridge/ Chenango	Sidney	I	48	0.04	C(T)	(T)	May 15 - Oct 15 (Contingency)	Yes	II
CH-1C-S010C	Bennettsville Creek	47.68	42.260761	-75.462453	Bainbridge/ Chenango	Sidney	I	165	0.22	C(T)	(T)	May 15 - Oct 15 (Contingency)	Yes	II
CH-1A-S010	Bennettsville Creek	47.71	42.261052	-75.462051	Bainbridge/ Chenango	Sidney	P	144	0.23	C(T)	(T)	May 15 - Oct 15 (Contingency)	Yes	II
CH-1A-S010D	Bennettsville Creek	47.75	42.261408	-75.461558	Bainbridge/ Chenango	Sidney	P	85	0.11	C(T)	(T)	May 15 - Oct 15 (Contingency)	Yes	II
CH-1A-S010E	Bennettsville Creek	47.75	42.261408	-75.461558	Bainbridge/ Chenango	Sidney	P	0	0.02	C(T)	(T)	May 15 - Oct 15 (Contingency)	Yes	II
DE-1H-S013	UNT to Susquehanna River (Collar Brook)	54.49	42.290996	-75.345867	Sidney/ Delaware	Unadilla	P	150	0.20	AA	N/A	N/A	Yes	II
DE-1M-S075	UNT to Susquehanna River	55.11	42.292979	-75.334246	Sidney/ Delaware	Unadilla	E	3	0.01	C	N/A	N/A	No	II
DE-1C-S051A	UNT to Middle Brook	87.82	42.467475	-74.794558	Davenport/ Delaware	Davenport	P	10	0.03	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1T-S051	Middle Brook	87.87	42.467900	-74.793658	Davenport/ Delaware	Davenport	P	64	0.11	C(TS)	(TS)	June 1 - Sep 30	Yes	II
DE-1T-S052	UNT to Middle Brook	88.06	42.469261	-74.790592	Davenport/ Delaware	Davenport	P	15	0.05	C(TS)	(TS)	June 1 - Sep 30	Yes	II
SC-1Q-S289	Schoharie Creek	119.75	42.702126	-74.317183	Schoharie/ Schoharie	Schoharie	P	248	0.27	C	N/A	Jul 16 - Feb 28	Yes (Navigable River)	II

Table 3.4-2 Waterbody Impacts Associated with Trenchless Crossing Alternative Crossing Method Contingency Plans

Waterbody ID[a]	Waterbody Name[b]	Approximate Milepost[c]	Latitude	Longitude	Town / County	Quadrangle	Type[d]	Crossing Length (feet)[e]	Stream Disturbance (acres)	Water Quality Standard[f]	Fishery Classification[g]	State Fishery Construction Window[h]	NYSDEC Protected Waterbody (Yes or No)	Crossing Method[i]

Note: This table is entirely new since the August 2013 submittal.

N/A = Not Applicable

a: UNT: Unnamed Tributary. UNT name was identified based on review of USGS topographical mapping.

c: MP provided for access roads indicate the point at which the access road meets the proposed pipeline.

d: P = perennial; I = intermittent; POW = open water; E = Ephemeral.

e: 0.0 = waterbody is not crossed but is in workspace. For minor waterbodies less than 3 feet in width delineated in the survey area and shown as a single line feature on the Project alignment sheets, an assumed 3 foot width has been used for this analysis. For USGS NHD waterbody data used to identify waterbodies on no-access parcels and shown as a single line feature on the Project alignment sheets, an assumed 3 foot width has been used for this analysis. Where tree canopy cover allowed for suitable analysis, scaled aerial photography was used to estimate crossing length for these NHD stream features.

f: NY Water Quality Standards Definition: Water quality standards based on the classification and best use of waterbody as determined by NYSDEC (6 NYCRR Parts 815, 879, 931).

g: N/A = Not applicable, no state fishery classification; NY Fishery Classifications: T = Trout; TS = Trout Spawning (6 NYCRR 701.25).

h: Construction Windows for cold water fisheries are a based on correspondence from P. Desnoyers of NYSDEC to Secretary K. Bose of FERC dated May 28, 2013, which include NYSDEC's Best Management Practices (BMPs) for Gas Transmission Line Construction Projects (dated May 16, 2013). Section 3.0 includes Stream and Wetland Protection Procedures. Potential timing restrictions reflect dates during which construction activities may occur. Streams with no construction timing restrictions, shown as "N/A" on the Table, do not have timing restrictions for construction based on NYSDEC regulations and consultations. Waterbody-specific assignment of construction window based on in-field consultation with the NYSDEC.

i: II = Dry Crossing Method, including Flume or Dam and Pump, Cofferdam, or Dry Open Cut for waterbodies that are dry at the time of crossing;

Table 3.4-3 Wetland Impacts Associated with Trenchless Crossing Alternative Crossing Method Contingency Plans

Wetland ID[a]	Milepost	Latitude	Longitude	Town	County	Wetland Class[b]	Crossing Length (feet)[c]	Wetland Impact (acres)[d]						Adjacent Area Impact (acres)	State Wetland Classification[e]	NYSDEC Regulated Wetland (Yes or No)	Crossing Method[f]
								Construction			Operation						
								PFO	PSS	PEM	PFO	PSS	PEM				
CH-1A-W063	47.81	42.262040	-75.460652	Bainbridge	Chenango	PFO	17	0.02			0.01				N/A	No	II
DE-1X-W158	54.32	42.290363	-75.349297	Sidney	Delaware	PFO/PEM	2,003	2.22		0.14	0.64				N/A	No	II
DE-1F-W075	55.09	42.292926	-75.334601	Sidney	Delaware	PFO/PEM	188	0.34			0.13				N/A	No	II
DE-1N-W156A	85.87	42.456437	-74.828142	Davenport	Delaware	PFO	319	0.58			0.23			1.19	D-11, Class II	Yes	II
DE-1P-W052	87.82	42.467479	-74.794627	Davenport	Delaware	PFO/PSS	266	0.01	0.43		0.01	0.06			N/A	No	II
DE-1T-W053	87.94	42.468402	-74.792592	Davenport	Delaware	PEM	85			0.20					N/A	No	II
DE-1T-W055	88.04	42.469110	-74.790904	Davenport	Delaware	PSS	205		0.37			0.05			N/A	No	II
SC-1A-W422	101.45	42.570097	-74.591430	Summit	Schoharie	PFO, PEM	0	0.03		0.16					N/A	No	II
						Total	**3,083**	**3.20**	**3.20**	**0.80**	**0.50**	**1.02**	**0.11**	**1.19**			

Note: This is an entirely new table since the August 2013 submittal.

N/A = Not Applicable – for wetland class with N/A it indicates that the wetland is not classified by the NYSDEC

a: No wetlands were identified in the Westfall Road M&R Station site during field surveys in 2012 including pig receiver area. Wetlands associated with MLVs included in the corresponding pipeline segment.

b: Wetland classification according to Cowardin et al. 1979: PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland.

c: 0.0 ft Crossing Length = wetland is not crossed by the pipeline but is within the workspace.

d: Construction Acreage = all workspace during construction activities (temporary & ATWS plus permanent); Operation Acreage = 10-foot wide corridor permanently maintained in herbaceous vegetated cover through PSS wetlands, and 30-foot wide corridor permanently maintained through PFO wetlands where trees taller than 15 feet will be selectively cut and removed. The permanently maintained corridors represent a change in cover type from PFO to PSS and PEM or PSS to PEM; there is no operation impact on PEM wetlands, since there is no change in the pre- and post-construction vegetation cover type. Construction impacts were calculated using a proposed construction footprint surface area and existing land use based on field surveys or desktop analysis, including NWI data, in those areas where permission has not been granted to conduct field surveys. Surface area of operational maintenance corridor as described above were used to calculate acres of operation impact to each pre-construction wetland vegetation cover type for each wetland included in the table. The ROW width at all wetland crossings is 75 feet, except for those wetlands described in Table 3.3-4.

e: New York classifies wetlands as Class I, II, III, IV (6 NYCRR Chapter X Part 664).

f: Crossing Methods for wetlands are; II = Conventional Crossing.

4.0 FISHERIES AND WILDLIFE RESOURCES

This section discusses fishery resources and fish species of special concern (SOSC) in the Project area, assesses potential construction and operational impacts to these resources, and identifies measures proposed to avoid, minimize, and/or mitigate for such impacts. Constitution has consulted with the NYSDEC regarding game, non-game, and commercial fishery inventories as well as fishery classifications for waterbodies along the proposed pipeline. The NYSDEC is responsible for protecting and managing fisheries and/or responsible for protecting the recreational use of aquatic resources within their jurisdictions.

4.1 FISHERIES OF SPECIAL CONCERN

Waterbodies with fisheries of special concern include those that have fisheries of exceptional recreational value, such as those that support coldwater fisheries, those that provide habitat for protected species, or those that are assigned special state fishery management regulations. Waterbodies that are associated with fish stocking programs or those that may support trout populations or trout spawning are considered "sensitive" fisheries and therefore, are included in this section as fisheries of special concern. State and federal agencies may regulate these waterbodies by imposing timing restrictions for in-stream construction and/or specialized construction techniques. In addition to publicly available information from federal and state agencies, Constitution also utilized correspondence received from state agencies to determine if the Project crosses waterbodies containing fisheries of special concern.

4.2 NEW YORK STATE PROGRAMS

In New York, waterbodies are assigned classifications and standards under the New York State Water Quality Standards Program (6 NYCRR Part 701 et seq.). Standards can include (T) or (TS) designations that classify waters as trout waters and trout spawning waters, respectively. Data on waterbody standards, including fishery type and presence of sensitive fisheries for each waterbody crossed by the Project alignment in New York were determined through review of the NYS Water Quality Classifications GIS data layer as well as through consultation with NYSDEC Bureau of Fisheries staff in both Region 4 and Region 7 (Bishop 2012; Fraine 2012; Van Maaren 2013, Lemon 2013a, Lemon 2013b, Lemon 2013c, Lemon 2013d). Correspondence received from the NYSDEC Bureau of Fisheries and review of available GIS data identified waterbodies crossed by the Project that have the habitat to support sensitive fisheries (Bishop 2012, Fraine 2012, VanMaaren 2013, Lemon 2013a, Lemon 2013b, Lemon2013c). Table 3.2-4 in Section 3.2.3.1 lists waterbodies along the pipeline that have been identified by NYSDEC as supporting sensitive fisheries in New York.

4.2.1 Trout Waters

Waterbodies with classifications of A, B, and C may also have a standard of (T) or (TS) indicating that they may support trout populations, or trout spawning, respectively. These waterbodies are regulated by the NYSDEC with an allowable in-stream construction work window policy that limits activities such that they may occur between June 1 and September 30 based on the Recommended Best Management Practices for Gas Transmission Line Construction Projects (NYSDEC 2013a). Table 3.2-4 in

Section 3.2.3.1 lists waterbodies along the pipeline that have been identified by NYSDEC as trout waters in New York.

4.2.2 Construction and Operation Impacts and Mitigation

Impacts to aquatic communities from construction and operation of the Project will depend upon the physical characteristics of the streams (e.g., flow, bottom substrate, channel configuration, and gradient), construction technique utilized, time of year of the crossing, and presence of game fish and state-listed or federal-listed species.

Construction and operation of the proposed Project may include temporary impacts on waterbodies and fisheries crossed by the pipeline alignment or located within the associated workspace. Temporary impacts on fisheries include disturbance of stream banks, removal of bank vegetation, and, in some instances, modification of flow during dry-crossing construction. For waterbodies with no discernible flow at the time of crossing, the dry open cut method will be used. In cases where continuous standing water is present across the work area, but there is no discernible flow, a dry crossing (flume crossing, dam and pump or cofferdam) method will be implemented in the field to allow for excavation and installation of the pipe under dry conditions while maintaining stream flow. Field determinations will be made at the time of crossing. The necessary equipment to perform dry crossings under these circumstances will be available on-site during construction. Temporary impacts from this crossing technique could include disruption to food resources, increased sedimentation and water turbidity downstream from the construction workspace and downstream scour if pumps are utilized. It is also possible that fish passage may be temporarily restricted during pipe installation, but passage would be restored after backfilling and waterbody restoration is complete and water flow bypass measures have been removed. Constitution will minimize impacts resulting from construction through adherence to Constitution's ECP.

Temporary habitat alteration at the right-of-way (ROW) crossing location and increased suspended solids concentrations and sedimentation downstream from the ROW crossing may temporarily degrade fish spawning and nursery areas, resulting in a temporary reduction in reproductive potential. These impacts typically are temporary in nature, because the sediments are flushed during subsequent storm events, and aquatic communities subsequently re-colonize the affected area.

Removal of streamside trees and vegetation at the pipeline crossing may reduce shading of a stream temporarily, eliminate escape cover, and potentially result in a locally elevated water temperature. Elevated water temperature can lead to a reduction in levels of dissolved oxygen and influence fish survival and fitness. Once installation activities for the pipeline are complete, disturbed areas will be restored to pre-construction conditions and stabilized to prevent erosion of exposed soils and sedimentation to on- and off-site resource areas. Constitution's ECP has been developed to incorporate best management practices (BMPs). Approved BMPs will be implemented during installation of the pipeline to avoid, minimize, and mitigate for potential direct and indirect impacts during wetland and waterbody construction crossings.

Constitution has sited the proposed meter stations, and appurtenant minor aboveground facilities, including, main line valves (MLVs) and pig launcher and receiver facilities, outside of wetlands and waterbodies. Therefore, no direct impacts to wetlands or waterbodies or waterbodies containing fishery resources are expected to result from construction and operation of the Project. Construction of or improvements to access roads may result in temporary impacts on fisheries habitat through increased

sediment loading in the stream, changing the stream channel morphology, destabilizing stream banks, and restricting fish passage. Impacts will be avoided and minimized by using existing roads and locating access roads in agricultural and open lands to the extent practicable. Subsequent to construction, temporary access roads will be restored to their pre-construction condition or allowed to remain in place in accordance with individual landowner agreements. Constitution is assessing access road stream crossings and designing road culverts per applicable regulations and guidelines.

Post-construction or operational impacts to fisheries are expected to be minimal. Following construction of the Project pipeline and restoration/stabilization of the ROW, Constitution will allow a riparian strip at least 25 feet wide, as measured from a waterbodies mean high water mark, to permanently revegetate with native plant species across the entire construction ROW. Within wetlands and across waterbodies, Constitution will limit the maintenance of the permanent ROW to a 10-foot-wide corridor centered over the proposed pipeline alignment. In addition, trees located within 15 feet of the pipeline that are greater than 15 feet in height may be selectively cut and removed from the permanent ROW. Additionally, this practice will allow for the re-establishment of woody and herbaceous vegetation species along the stream banks. This vegetation will provide needed shading and crucial cover habitat to sufficiently maintain necessary coldwater fisheries habitat characteristics.

4.2.3 Minimization of Impacts

Constitution has adjusted their proposed construction schedule to allow for instream work for trout (T) and trout spawning (TS) streams will occur during the construction window from June 1st through September 30th. Constitution will install the pipeline at least 5 feet below the streambed using conventional construction techniques.

Waterbodies crossed by the Project or within the construction workspace will be protected by adherence to Constitution's ECP, and applicable requirements. The ECP contains measures to protect and minimize potential adverse impacts to streams, including:

- expediting construction and limiting the amount of equipment and activities in waterbodies;
- coordinating construction activities to avoid high flow and spawning periods;
- installing erosion controls to prevent sediment and siltation from entering streams;
- constructing waterbody crossings as perpendicular to the axis of the waterbody channel as engineering and routing conditions allow;
- maintaining ambient downstream flow rates;
- installing temporary construction bridging over waterbodies not directly crossed by the pipeline to facilitate equipment movement and avoid impacts to the waterbody;
- removing construction material and structures from the waterbody after construction;
- restoring stream channels and bottoms to their original configurations and contours;
- permanently stabilizing stream banks and adjacent upland areas after construction;
- inspecting ROWs regularly during and after construction and repairing any erosion controls and/or performing restoration, as needed, in a timely manner; and
- reducing clearing and maintaining existing vegetation in place on stream banks to the extent practicable.

To minimize potential Project-related impacts on fisheries, Constitution is attempting to schedule its construction activities within the in-stream work window recommended for waterbodies containing fisheries. The use of a dry crossing method, together with the proposed timing restrictions and restoration methods is anticipated to minimize the extent and duration of potential impacts to fisheries and associated habitat. Additionally, should compliance with timing restrictions not be feasible, Constitution is evaluating alternative construction techniques (including trenchless methods) that may be employed to avoid direct alteration of the waterbodies. Constitution will continue to coordinate with the applicable regulatory agencies regarding crossing methods and fishery restrictions. Field visits with agency staff are currently in progress to evaluate site-specific conditions at individual waterbodies. Additional correspondence with applicable agencies will be provided to the USACE and NYSDEC as supplemental information.

4.3 THREATENED AND ENDANGERED SPECIES

Section 7 of the Endangered Species Act (ESA) (16 United States Code Annotated [U.S.C.A.] §§ 1531-1543, P.L. 93-205) requires each federal agency to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of federal-listed threatened or endangered species or result in the destruction or adverse modification of the designated critical habitat for any federal-listed threatened or endangered species. In New York, threatened and endangered species are protected under ECL Article 11, Title 5 (or Section 11-0535 et seq.) and its implementing regulations at Parts 182 and 193.3 6 NYCRR of Title 6 of the New York State Codes, Rules and Regulations, which are administered by NYSDEC. This section discusses the presence of federal and state-listed rare plant and animal species potentially occurring within or near the Project area.

Constitution has initiated informal consultations with the United States Fish and Wildlife Service (USFWS) New York Field Office, National Oceanic Atmospheric Administration (NOAA) – National Marine Fisheries Service (NMFS), and NYSDEC New York Natural Heritage Program (NYNHP) with regard to federal and state-listed rare, threatened, endangered, and special concern species (Attachment F). Based on the information received from these agencies, Constitution has identified areas of the Project alignment where the potential exists for occurrence of federal- and/or state-listed T&E species (Colligan 2013, Conrad 2012 and 2013, Crocker 2012, Damon-Randall 2012, Herzog 2012, Pietrusiak 2012, Stilwell 2012, VanArsdale 2013). Further, Constitution has worked cooperatively with the regulatory agencies in developing approved field survey protocols to identify and document occurrences of federal and state-listed rare species along the Project alignment, workspaces, meter stations and access roads.

Initial field surveys were conducted by qualified biologists and botanists during the summer and fall of 2012 and are ongoing in 2013 for tracts where landowner survey access permission has been granted. No federal or state-listed endangered, threatened, or rare species were observed in the survey area during the 2012 and 2013 field surveys. Results of specialized surveys conducted to date are summarized below and completed survey reports are provided in Attachments M and N. Habitat assessment and presence/absence surveys for the dwarf wedgemussel (*Alasmidonta heterodon)* have been completed, and no individuals were documented within any of the waterbodies assessed within the Delaware River watershed that are crossed by the Project. A survey report detailing the results of these surveys will be provided to the USFWS NYFO and NYSDEC as soon as it is completed. Supplemental reports for any additional areas surveyed will be submitted to FERC with copies provided to USFWS and NYSDEC,

following conclusion of field surveys in 2013 as privileged and confidential information. Any additional or continued correspondence with the USFWS and state agencies relative to rare species will be forwarded to the NYSDEC as privileged and confidential information as supplemental information.

Federal- and State-listed species potentially occurring within the Project area are detailed below in Table 4.3-1. In addition to the USFWS, Constitution consulted with the NYSDEC who have specifically reviewed shapefiles or maps of the currently proposed Project (including the pipeline route, access roads, and aboveground facilities) with the following exceptions:

- Access Roads – Three proposed access roads have not currently been reviewed by the agencies, including access roads located at Milepost 44.2 (PAR 34), 108.5 (PAR 69), and 120.5 (PAR 73a).
- Contractor Yards - Proposed contractor yards in New York (Spread 2 Yard, Spread 3 Yard, and Spread 4a Yard) have not been submitted to the above-mentioned agencies for review.

First quarter 2014 GIS shapefiles of the proposed route will be submitted to the applicable agencies in January 2014, and subsequent agency responses and information will be submitted.

Although the bald eagle is no longer a federal-listed endangered or threatened species, it still is protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). Constitution conducted helicopter surveys within 0.25 miles of the Project area in 2013 and submitted a Bald Eagle Nest Survey Report to the USFWS and NYSDEC for review and concurrence in June 2013. Based on field surveys, no bald eagle nests were observed within the 0.25 mile survey area; therefore federal setback requirements per the BGEPA will be maintained. However, two nests are known to be located approximately 0.33 and 0.38 miles from the proposed construction area. Constitution is assessing soil conditions to determine whether blasting activities may be required for installation of the pipeline within 0.50 miles of known nest sites. Constitution will continue to consult with the USFWS and NYSDEC to determine if any blasting within 0.5 miles of the Project would present a significant disturbance to bald eagle reproductive activities.

Correspondence with applicable federal and state agencies only identified the yellow lampmussel (*Lampsilis cariosa*) as a species known to occur in the immediate vicinity of the Project area (Conrad 2012, 2013; Pietrusiak 2012; Stilwell 2012, Tomasik 2013b). This species is not listed by New York State as endangered, threatened, or special concern but is of conservation concern to the State and considered rare by the New York Natural Heritage Program (NYNHP). As supported by geotechnical investigation results, Constitution is planning to conduct a Direct Pipe® (i.e., trenchless) crossing method to avoid disturbance of the waterbody beds and banks where this species is known to occur, thereby avoiding any direct impact to yellow lampmussel populations or their habitat. Constitution has initiated consultation with the NYSDEC regarding this primary avoidance measure to prevent impacts to the yellow lampmussel, and will continue to work with the NYSDEC relative to survey requirements and applicable mitigation measures in the event that the Direct Pipe® method cannot be completed and an open cut crossing method is required.

Table 4.3-1 Federal- and State-listed Protected Species Potentially Occurring Within the Project Area and Survey Results

Species Common Name	Scientific Name	Federal Status[a]	State Status[a]	Habitat Type	Surveys Conducted (Yes/No)	Documented within Project ROW (Yes/No)	Potential Effect Determination [c]
Bald Eagle [b]	*Haliaeetus leucocephalus*	D	T	Associated with riparian and lacustrine habitats (forested areas along rivers and lakes), especially during the breeding season. Important year-round habitat includes wetlands, major waterbodies, spring spawning streams, ungulate winter ranges, and open water areas. Wintering habitat may include upland sites. Nesting site selection is dependent upon maximum local food availability and minimum disturbance from human activity.	Yes	No	No effect
Indiana Bat	*Myotis sodalis*	E	E	Fall/winter hibernacula located within limestone caverns and abandoned mines; summer roosting in loose bark of trees. While Indiana bats were known to winter in Albany County, the USFWS now believes they are likely extirpated or in such small numbers that it is unlikely they would be present and impacted by any specific proposed projects in Schoharie County. Further, correspondence with NYSDEC detailed that species-specific surveys for Indiana bat would not be required (Herzog 2012).	Yes	No	No effect

Table 4.3-1 Federal- and State-listed Protected Species Potentially Occurring Within the Project Area and Survey Results

Species Common Name	Scientific Name	Federal Status[a]	State Status[a]	Habitat Type	Surveys Conducted (Yes/No)	Documented within Project ROW (Yes/No)	Potential Effect Determination [c]
Northern Monkshood	*Aconitum noveboracense*	T	T	Found along streams on sandstone in cool ravines shaded by hemlock and hardwoods and on cliffside seeps. Flowers July-August and fruits from August-October Found in Delaware County, NY	Yes~~— additional sites scheduled for survey in Summer 2013~~	None identified to date	TBD-additional sites scheduled for survey in 2014 pending landowner survey access permission
Hooker's orchid	*Platanthera hookeri*	-	E	Dry to moist coniferous and deciduous forests with an open understory, and successional forests-flowers mid-May-early August	Yes~~— additional sites scheduled for survey in Summer 2013~~	None identified to date	~~TBD~~ No effect
Northern wild comfrey	*Cynoglossum virginianum*	-	E	Along borders of deciduous woods and thickets or along paths or trails in sandy or rocky, dry circumneutral or calcareous soils-flowers ~~mid May~~mid-May-July, fruits-mid June-mid October.	~~No — surveys scheduled for Summer 2013~~Yes	~~Surveys pending~~ None identified to date	~~TBD~~ No effect

Table 4.3-1 Federal- and State-listed Protected Species Potentially Occurring Within the Project Area and Survey Results

Species Common Name	Scientific Name	Federal Status[a]	State Status[a]	Habitat Type	Surveys Conducted (Yes/No)	Documented within Project ROW (Yes/No)	Potential Effect Determination [c]
Dwarf Wedgemussel	*Alasmidonta heterodon*	E	E	Inhabits creek and river areas with slow to moderate current and a sandy, gravel, or muddy bottom. Known populations occur in the upper Delaware River in Sullivan and Delaware counties and one major downstream tributary, the lower Neversink River in Orange County.	~~No – Surveys scheduled for August 2013~~Yes	~~Surveys pending~~ No	TBD – three additional sites scheduled for survey in 2014 pending landowner survey access permission
Yellow lampmussel	*Lampsilis cariosa*	-	Unlisted	Inhabits small to large rivers with sandy substrates. This species identified as occurring in Schoharie Creek.	No – ~~Surveys scheduled for August 2013~~Survey could not be completed due water conditions.	No Surveys ~~pending~~ completed	~~TBD~~-Direct impact avoided through implementation of trenchless construction method

This table has been updated since the August 2013 filing

Source: Species list is based on informal consultations with the USFWS, review of the USFWS New York Field Office website, and consultations with NYNHP (Conrad 2012 and 2013, Herzog 2012; Niver 2012; Pietrusiak 2012; Stilwell 2012; USFWS 2012b; VanArsdale 2013).

a: Status Key: D = Delisted; E = Endangered; T = Threatened

b: The bald eagle is no longer a federal-listed endangered or threatened species, but is protected under the BGEPA and the MBTA. See Section 3.4.1.1.1 for further information.

c: Concurrence on effect determinations is pending final consultation with the USFWS New York Field Office and NYSDEC. A preliminary "No effect" determination by Constitution is due to the completion of survey with no documented occurrence of the species or its habitat in the Project Area. TBD-Effect determination to be determined once habitat assessment or presence/absence surveys has been completed.

5.0 NEW YORK STATE LANDS

The proposed Project would cross two state forests owned by the State of New York and managed by the NYSDEC as outlined below in Table 5.0-1.

Table 5.0-1 New York State Lands Crossed by the Constitution Project

From Milepost	To Milepost	Habitat Type/Name	Administering Agency	Length Crossed (feet)	Existing Habitat Type	Acreage Affected During	
						Construction (acres) [a]	Operation (acres) [b]
42.46	42.52	Melondy Hill State Forest	NYSDEC	307	Upland Forest	0.86	0.39
Total Melondy Hill State Forest						0.86	0.39
97.02	97.08	Clapper Hollow State Forest	NYSDEC	333	Upland Forest, Open Land, Wetland (PFO, PEM)	1.36	0.47
Total Clapper Hollow State Forest						1.36	0.47

Note: This table has been entirely updated since the August submittal

Source: USGS 2012.

a: Construction Acreage = workspace utilized during construction activities (temporary plus permanent);

b: Operation Acreage = 50-foot width permanently maintained easement through upland areas; 10-foot wide corridor permanently maintained in herbaceous vegetated cover through PSS wetlands, and 30-foot wide corridor permanently maintained through PFO wetlands where trees within 15 feet of the pipeline with roots that could potentially compromise the pipeline coating will be selectively cut and removed. The permanently maintained corridors represent a change in cover type from PFO to PSS and PEM or PSS to PEM; there is no operation impact on PEM wetlands, since there is no change in the pre- and post-construction vegetation cover type.

5.1 MELONDY HILL STATE FOREST

Consultation with the NYSDEC identified Melondy Hill State Forest in the Project area (Bishop 2012). The Melondy Hill State Forest is comprised of 5,417 acres of contiguous forest in southeastern Chenango County, New York. The proposed pipeline crosses Melondy Hill State Forest in the town of Afton, Chenango County. The forest is managed by the NYSDEC and contains a mixture of both planted and natural forest stands. Planted forest stands within the state forest consist of various species, such as red pine (*Pinus resinosa*), Eastern white pine, Scotch pine (*Pinus sylvestris*) and Norway spruce (*Picea abies*). Natural forest stands consists of mostly red maple, American beech (*Fagus grandifolia*), sugar maple (*Acer saccahrum*), red oak (*Quercus rubra*), black cherry (*Prunus serotina*), white ash (*Fraxinus americana*), Eastern white pine and Eastern hemlock. Forest management objectives are to maintain a variety of habitats, from young forests to old forests and evergreens to hardwoods. The public's use of the state forest includes hunting, hiking, and other passive recreational uses such as snowmobiling and

wildlife viewing/photography. Important wildlife habitats of the state forest include varied habitats for populations of wild turkey (*Meleagris gallopavo*), white-tailed deer (*Odocoileus virginianus*), squirrels, ruffed grouse (*Bonasa umbellus*), numerous song birds, vertebrates, and invertebrates.

To minimize impacts, Constitution has incorporated a route modification through the state forest which reduces the overall crossing length through the state-owned property. Site Specific Crossing Plans for this area are included in Attachment L. Constitution will continue to coordinate with NYSDEC regarding the proposed crossing of this state forest.

5.2 CLAPPER HOLLOW STATE FOREST

The proposed pipeline crosses the NYSDEC-owned Clapper Hollow State Forest in the town of Jefferson in Schoharie County. Clapper Hollow State Forest is a NYSDEC reforestation area comprised of 820 acres. The forest is comprised of species such as Norway spruce and red pine. The state forest provides recreational opportunities, including an extensive cross-country ski trail system, and is specifically managed for the snowshoe hare (*Lepus americanus*).

The major habitat types affected by the Project through this area are upland forest, open lands, and wetlands. To minimize impacts to the property, Constitution has incorporated an alternative route through the state forest which reduces the overall crossing length through this area. Site Specific Crossing Plans for this area are included in Attachment L. Additionally, Constitution will reduce its construction ROW to 75 feet along a portion of its crossing through Clapper Hollow State Forest due to the presence of a wetland crossing.

6.0 COMPLIANCE WITH REGULATORY STANDARDS

6.1 FEDERAL

Interstate natural gas transmission line projects are subject to exclusive federal jurisdiction under the Natural Gas Act (NGA [U.S.C. Sections 717-717w]). The FERC is the regulatory agency with authorization to approve or deny construction and operation of proposed natural gas projects under the NGA Sections 3 and 7. The FERC has responsibilities to assess the environmental impacts of proposed interstate natural gas transmission line projects pursuant to the National Environmental Policy Act of 1969 (NEPA) under its regulatory standards outlined in 18 CFR 380. Consequently, the FERC is the lead agency responsible for reviewing the proposed project, preparing an Environmental Impact Statement in compliance with the NEPA, and issuing or denying Constitution's application for a Certificate of Public Convenience and Necessity.

However, other agencies maintain statutory jurisdiction over certain regulated activities associated with interstate natural gas transmission projects. Specifically, the USACE maintains jurisdiction over regulated activities proposed within waters of the U.S. under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), and Section 404 of the Clean Water Act (33 U.S.C. 1344). The Project's compliance with the regulatory standards for issuance of an authorization under Section 404 of the CWA is discussed below.

6.1.1 Section 404 Clean Water Act

The Project will impact waters of the U.S. as defined under Section 404 of the Clean Water Act (33 U.S.C. 1344), including wetlands, and therefore requires authorization from the USACE. Under Section 404(e) of the Clean Water Act (CWA), the USACE has re-issued NWPs for certain activities in the state of New York that have minimal individual and cumulative adverse environmental effects.

6.1.1.1 Compliance with NWP 12 and NWP General and Regional Conditions

Based on Constitution's review of applicable regulations, the information provided herein demonstrates that the Project's crossings of individual Waters of the U.S. are single and complete crossings that do not result in more than minimal individual and cumulative effects. Therefore, the Project qualifies for coverage under NWP 12 for those waters of the U.S. crossings in New York. This application and supporting documentation serves as the pre-construction notification (PCN) to the USACE for the Project as required under the provisions for NWP 12.

Impacts to each single and complete crossing of waters of the U.S. associated with construction of the Project will be restored to pre-construction contours and elevations following installation of the pipeline. Temporary fills will be removed in their entirety and the affected areas will be restored.

NWP 12 allows for the construction of utility lines and associated facilities (including access roads) in waters of the U.S. provided the activity does not result in the "loss" of greater than 0.5-acre of waters of the U.S. for each single and complete linear crossing. Permanent impacts and associated losses of waters of the U.S. may be required for access road installation to facilitate construction and maintenance of the

Project. Any loss of waters of the U.S. associated with the access roads is anticipated not to exceed the 0.5 acre loss threshold for each single and complete crossing. Measures have been incorporated into the Project design, site selection, and construction methods to avoid, minimize, and mitigate impacts to wetlands and at each single and complete crossing. For permanent fill of waters of the U.S., Constitution has included a ~~Conceptual~~ Wetland Mitigation Plan to describe proposed mitigation measures that Constitution is currently developing to offset permanent impacts to waters of the U.S.

During construction across wetlands, wetland topsoil and subsoil will be separated and stored so that there is no mixing. Subsoil will be backfilled into the trench or pit, prior to the topsoil. After the subsoil has been backfilled the topsoil will be placed over the subsoil. Existing contours will be reestablished over the trench during the final grading process. BMPs will be implemented to ensure soil stability to prevent erosion. Trench plugs will be installed to ensure the installed pipeline does not drain wetlands.

Crossing of waterbodies that impact surface waters will disturb bed and banks. Constitution will establish preconstruction bed and bank contours immediately following pipe installations. It is anticipated that the majority of waterbodies will require 24 to 48 hours for pipe installation.

Constitution has performed thorough reviews and continues to research potential archeological, cultural and historic sites that may be located within the Project's Study Area. Constitution has avoided or will mitigate for regulated archeological, cultural and historic property sites that may be adversely impacted by the single and complete crossings. Constitution continues to consult with applicable federal and state agencies regarding Section 106 National Historic Preservation Act.

Constitution has performed thorough reviews and continues to investigate the presence of state and federal threatened and endangered species and their potential habitat. At this time, Constitution has avoided areas found to contain rare state species, has not observed federal protected species and has worked to minimize impacts to potential habitat.

Constitution anticipates that the Project will receive "no adverse effect" determination and the crossings will continue to have no effect from state and federal agencies following completion of necessary field surveys and further consultation regarding mitigation measures to prevent adverse impacts. Constitution will forward subsequent correspondence with agencies and survey reports to the FERC, USFWS, and NYSDEC as it becomes available.

Correspondence with the New York Department of State (DOS), related to Federal Consistency Review under the Coastal Zone Management Act, confirmed that the Project is not located within the coastal zone and it is not expected that an individual state coastal zone management consistency concurrence will be needed (NYDOS 2013).

In accordance with the USACE NWP General Regional Conditions (II.A) for use of construction BMPs the following measures will be implemented:

- Synthetic erosion control features (e.g., silt fencing, netting, mats), which are intended for temporary use during construction, shall be completely removed and properly disposed of after their initial purpose has been served. Only natural fiber materials, which will degrade over time, may be abandoned in place.

- Materials resulting from trench excavation for utility line installation or ditch reshaping activities which are temporarily sidecast or stockpiled into waters of the United States must be backfilled or removed to an upland area within 30 days of the date of deposition. Note: upland options shall be utilized prior to temporary placement within waters of the U.S., unless it can be demonstrated that it would not be practicable or if the impacts of complying with this upland option requirement would result in more adverse impacts to the aquatic environment.
- For trenching activities in wetlands the applicant shall install impermeable trench dams or trench breakers at the wetland boundaries and every 100 feet within wetland areas to prevent inadvertent drainage of wetlands or other waters of the United States.
- Dry stream crossing methods (e.g., dam and pump, flume, conventional bore) shall be utilized to reduce downstream impacts from turbidity and sedimentation. This may require piping or pumping the stream flow around the work area and the use of cofferdams.
- No in-stream work shall occur during periods of high flow, except for work that occurs in dewatered areas behind temporary diversions, cofferdams or causeways.
- Construction access shall be by means that avoid or minimize impacts to aquatic sites (e.g. upland access, floating barges, mats, etc.). Discharges of unconsolidated fill material associated with the construction of temporary access roads and work pads in wetlands shall be placed on filter fabric. Temporary fills shall be removed upon completion of the work and the disturbed area restored to pre-construction contours, elevations and wetland conditions.
- New stormwater management facilities shall be located outside of waters of the U.S. A waiver of this requirement may be requested with the submission of a PCN. Constitution is in the process of determining where stormwater management facilities are required for their temporary and permanent access roads. Should there be a need to include any stormwater management facilities within waters of the U.S., a PCN will be submitted to the USACE that includes justification which demonstrates that avoidance and minimization efforts have been met.
- To the maximum extent practicable, the placement of fill in wetlands must be designed to maintain pre-construction surface water flows/conditions between remaining on or off-site waters. This may require the use of culverts and/or other measures. Furthermore, the activity must not restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters). The activity may alter the pre-construction flows/conditions if it can be shown that it benefits the aquatic environment (i.e. wetland restoration and/or enhancement).
- To ensure compliance with NWP General Condition #2 (Aquatic Life Movement) and #9 (Management of Water Flows), new or replacement culverts shall be constructed/installed in accordance with the following:
  - Use of the following requirements and recommendations alone will not satisfy the need for proper engineering and design. In particular, appropriate engineering is required to ensure structures are sized and designed to provide adequate capacity (to pass various flood flows) and stability (bed, bed forms, footings and abutments).
  - Site specific information (i.e. stream bed slope, type and size of stream bed material, stream type, existing natural or manmade barriers, etc.) should be assessed to determine appropriate culvert design and to ensure management of water flows and aquatic life movement.
  - Before replacing a culvert or other crossing structure with a larger structure it is essential that the replacement be evaluated for its impacts on: downstream flooding, upstream and downstream habitat (in-stream habitat, wetlands), potential for erosion and headcutting, and stream stability.

- Measures should be included in culvert designs that will promote the safe passage of fish and other indigenous aquatic organisms.
- The dimension, pattern, and profile of the stream above and below the stream crossing should not be permanently modified by changing the width or depth of the stream channel.

6.1.2 Section 401 Water Quality Certification

The Project and proposed impacts are consistent with federal and state laws and regulations related to public health and welfare. The construction of interstate natural gas pipelines are licensed by FERC under the Natural Gas Act and the issuance of a Certificate of Public Convenience and Necessity from the FERC demonstrates a project's economic need and public benefit.

Under Section 401 of the CWA and the water quality standards (33 CFR Part 1341), an applicant for a Section 404 permit to discharge dredged or fill material into waters of the United States must first satisfy the requirements for obtaining a certification from the appropriate state agency that the proposed activity will comply with the state's water quality standards and criteria. In New York, the authority for water quality certification is delegated to the New York Department of Environmental Conservation (NYSDEC).

6.2 NEW YORK STATE

The Project is subject to exclusive federal jurisdiction under the NGA, and that the operations, maintenance, and safety of Constitution's facilities are also subject to exclusive federal jurisdiction under the re-codified Pipeline Safety Act (49 U.S.C. 60, 101 et seq.). The FERC encourages interstate pipelines to cooperate with the appropriate local and state entities whose interests and programs are related to the proposed project. However, that cooperation is undertaken with the understanding that (i) Constitution does not waive any of its federal rights; (ii) any state or local approvals are to be consistent with the FERC approval; and (iii) any state or local approvals do not prohibit or unreasonably delay the construction and operation of the facilities approved by the FERC.

For the purposes of review and coordination of New York State regulations, various state permits and approvals are related to this Project: Article 15 of the New York Environmental Conservation Law (NY ECL) (Protection of Waters) for crossing of waterbodies and NY ECL Article 24 (Freshwater Wetlands), and Section 401 of the Clean Water Act (CWA) for a State Water Quality Certification.

6.2.1 Protection of Waters

New York's ECL Article 15 statute, referred to as Protection of Waters, minimizes the disturbance of stream and waterbodies to prevent unreasonable erosion of soil, increased turbidity of the waters, irregular variations in velocity, temperature and level of waters, the loss of fish and aquatic wildlife, the destruction of natural habitat, and the danger of flood or pollution. Streams with water quality classifications and standards designated as C(T) or higher (i.e., C(TS), B, or A) under 6 NYCRR Part 700 et seq. are collectively referred to as "protected streams," and are subject to the stream protection provisions of the Protection of Waters regulations (6 NYCRR Part 608).

The Protection of Waters Permit Program regulates numerous categories of activities associated with the Project including:

- Disturbance of the Bed or Banks of a protected stream or other watercourse (Stream Disturbance);
- Excavation or Placement of Fill in navigable waters and their adjacent and contiguous wetlands; and
- Discharge to waters of the U.S. from the placement of fill (Section 401 Water Quality Certification).

The regulated activities in protected streams crossed by the Project include modifications or disturbance of the bed or banks, including temporary removal of stream bed substrates to install the pipeline. For this Project, the assumed vertical jurisdictional limit of the stream bed is assumed to be six feet below the depth of the stream bed. This assumption is based on a Memorandum by the NYSDEC dated November 3, 2011, for issues related to Horizontal Directional Drilling (HDD) (and presumably other trenchless construction methods) and determining jurisdiction of Article 15 and 24 of the NY ECL. The guidance memorandum stated a distance of six feet between the bottom of the stream channel and the top of the bore hole is protective of the stream and meets the standards in 6 NYCRR 608.8. The trenchless construction methods implemented for stream crossings as part the Project that maintains a depth of at least six feet between the bore hole and the stream bottom are not subject to jurisdiction under Article 15 (Attachment E). To further avoid and minimize the potential for impacts to protected streams during trenchless crossing installations, Constitution will implement their HDD Inadvertent Release Contingency Plan contained within their ECP.

For the purposes of a Protection of Waters Permit for excavation and fill in navigable waters below the mean high water level or in wetlands that are adjacent to and contiguous at any point to any of the navigable waters of the state, "navigable waters of the State" includes lakes, rivers, and other waterways and water bodies on which water vessels with a capacity of one or more persons are operated or can be operated (6 NYCRR Part 608.1(u)).

6.2.1.1 Standards for Permit Issuance

The New York State Standards for Protection of Waters Permit issuance (6 NYCRR Part 608.8) states the basis for the issuance of a permit will be a determination that the proposal is in the public interest, in that:

- the proposal is reasonable and necessary;
- the proposal will not endanger the health, safety or welfare of the people of the State of New York; and
- the proposal will not cause unreasonable, uncontrolled or unnecessary damage to the natural resources of the state including soil, forests, water, fish, and aquatic and land-related environment.

The NYSDEC must review and determine if proposed alterations to water resources of the state are consistent with standards contained in 6 NYCRR Part 608.8 and under 6 NYCRR Part 608.7(b) will consider such issues as:

- aquatic, wetland and terrestrial habitats; unique and significant habitats; rare, threatened and endangered species habitats;
    - water quality, including such criteria as temperature, dissolved oxygen, suspended solids;
    - hydrology, including such criteria as water velocity, depth, discharge volume, flooding potential; and
    - water course and waterbody integrity, including such criteria as erosion, turbidity, and sedimentation;
- the adequacy of design and construction techniques for structures;
- operational and maintenance characteristics;
- the safe commercial and recreational use of water resources;
- the water dependent nature of a use;
- the safeguarding of life and property; and
- natural resource management objectives and values.

The following information provided discusses how the Project meets the Article 15 Standards for Permit Issuance under 6 NYCRR 608.8:

- the proposal is reasonable and necessary.

  Upon its issuance, a Certificate of Public Convenience and Necessity from the FERC is a determination of economic need and public benefit for the Project. The pipeline construction is reasonable, as there are similar project types within New York that have been previously permitted.

- the proposal will not endanger the health, safety or welfare of the people of the State of New York.

  Constitution will comply with the safety standards imposed by the Pipeline and Hazardous Materials Safety Administration (PHMSA). Furthermore, Constitution is committed to maintaining the highest standards of safety. Interstate natural gas pipeline facilities are designed, constructed, operated, and maintained in accordance with the USDOT PHMSA safety standards codified under 49 CFR Part 192. These federal safety standards, together with pipeline integrity management programs and recent advances in pipeline manufacture, construction, and inspection techniques, significantly diminish the potential occurrence of hazardous conditions associated with high pressure natural gas pipelines. Williams Gas Pipeline Company, LLC (Williams) will provide the construction, operation and maintenance for the Project, and has over 60 years of experience constructing and operating natural gas pipeline facilities in the northeastern United States. Constitution will adopt Williams' safety, design, operations, maintenance, and integrity management programs and procedures.

- the proposal will not cause unreasonable, uncontrolled or unnecessary damage to the natural resources of the state including soil, forests, water, fish, and aquatic and land-related environment

  The Project will be constructed in a manner to limit the potential for unreasonable, uncontrolled, and unnecessary damage to natural resources. Waterbody and wetland impact minimization measures and other proposed BMPs detailed in this application and the ECP reduce and/or

mitigate potential impacts to sensitive environmental resources, including waterbodies, wetlands, and water quality parameters. Impacts to streambeds and banks associated with pipeline construction activities are expected to be temporary and will be restored to pre-construction contours and elevations after construction. Access roads will be designed according to applicable state and federal regulations and guidance.

To minimize potential Project-related impacts on fisheries for those waterbodies proposed to be crossed via conventional trenching methods, Constitution plans to schedule its construction activities and disturbances to streams containing fisheries during the in-stream work window recommended by the NYSDEC in their *Recommended Best Management Practices (BMP) for Gas Transmission Line Construction Projects (May 16, 2013)* and required in their blanket statewide Water Quality Certification for certain projects eligible for coverage under an USACE NWP authorization. The use of a dry crossing method, together with the proposed timing restrictions and restoration methods provided in the ECP is anticipated to minimize the extent and duration of potential impacts to fisheries and associated habitat.

The Project will have an insignificant effect on water quality. The measures provided in this application and Constitution's ECP will ensure the water quality classification and standards established at 6 NYCRR Parts 700 to 704 are maintained during construction as well as during pipeline operation. Adequate flow rates will be maintained to protect aquatic life and protect the interruption of existing downstream uses. Implementation of Constitution's Spill Prevention Plan included in their ECP will prevent chemical contamination of waters. Further, utilization of dry crossing methods for waterbodies and implementation of appropriate erosion and sediment control measures in wetlands and uplands will prevent impacts to water quality associated with turbidity and total suspended solids.

Water quality impacts relative to thermal standards are not anticipated to occur as a result of Project. To limit vegetation clearing in the vicinity of waterbodies and wetlands, and subsequent solar exposure of surface waters resources, Constitution has minimized workspaces at waterbody and wetland crossings to 75 feet wide to the extent practicable (See Table 3.3-4 for locations where this minimization measure could not be accommodated for specific justifications). Similarly, ATWS areas have been setback a minimum of 50 feet from waterbodies and wetlands except in certain locations (See Table 3.2-4). These measures have been incorporated to limit vegetation clearing in the vicinity of waterbodies and wetlands to minimize the potential for thermal impacts as a result of increased solar exposure of these features.

The Project is not anticipated to have an adverse effect on any federal- or state-listed rare, threatened, endangered, or special concern species or their critical habitat. Consultations with the USFWS and NYSDEC did not identify any known occurrences of any federal- or state-listed rare, threatened, endangered, or special concern species or their critical habitats on the Project site (Stilwell 2012, Pietrusiak 2012, Conrad 2012, and Conrad 2013). Additionally, no natural communities of special concern or significant natural communities were identified on the Project site by NYSDEC (Pietrusiak 2012, Conrad 2012, and Conrad 2013). Field surveys for the potential occurrence of federal- or state-listed rare, threatened, endangered, or special concern species were initiated in 2012 and are ongoing. Final surveys are not yet completed; however, based on preliminary field survey results from 2012 and 2013~~and surveys completed to date~~,

Constitution does not anticipate any adverse impacts to rare, threatened, endangered, or special concern species or their critical habitat as a result of the Project.

6.2.2 Freshwater Wetlands

New York's Freshwater Wetland Act (Article 24) and its implementing regulations 6 NYCRR Part 663 provides protection to NYSDEC state-regulated Freshwater Wetlands as previously discussed. New York classifies wetlands as Class I, II, III, IV (6 NYCRR Chapter X Part 664). Class II wetlands are located within the Project and will be impacted by the proposed construction activity.

The Freshwater Wetlands regulations and the standards for permit issuance assign three different levels of "compatibility" for certain land-use activities and projects, depending on the type of project and how close to the wetland the projects occurs. These three levels are used to determine the compatibility of the activity identified in 6 NYCRR 663.4(d). If all three levels of compatibility are met at 6 NYCRR 663.5(e)(1), no other weighing standards need to be met. If the three levels of compatibility are not met or that activity has been assigned an incompatible designation, identified as an "X" in 6 NYCRR 663.4(d), than the weighing standards at 6 NYCRR 663.5(e)(2) must be applied for the classification of the wetland that would be affected by the proposed activity. According to 6 NYCRR 663.5(e), a permit shall be issued for impacts to Class II wetlands if its determined the proposed activity satisfies a pressing economic or social need that clearly outweighs the loss of or detriment to the benefits of the Class II wetland.

6.2.2.1 Compatibility Test

A three-part compatibility test must be used for regulated activities in NYSDEC state-regulated Freshwater Wetlands. The three tests of compatibility contained in the standards for permit issuance at 6 NYCRR 663.5(e) are described below:

1. The activity would be compatible with preservation, protection and conservation of the wetland and its benefits.
2. The activity would result in no more than insubstantial degradation to, or loss of, any part of the wetland.
3. The activity would be compatible with the public health and welfare.

The three compatibility categories shown in the regulated activity chart in 6 NYCRR 663.4(d) include:

- C – usually compatible; means that a regulated activity may be compatible with a wetland and its functions and benefits, although in some circumstances the proposed action may be incompatible.
- N – usually incompatible; means that a regulated activity is usually incompatible with a wetland and its functions and benefits, although in some cases the proposed action may be insignificant enough to be compatible.
- X – incompatible; means that a regulated activity is incompatible with a wetland and its functions and benefits.

Clearing of trees and other vegetation in NYSDEC Freshwater Wetlands and their Adjacent Area is considered an incompatible activity within state-regulated freshwater wetlands under 6 NYCRR 663.4(d).

Therefore, the weighing standards listed in 6 NYCRR 663.5(e) for that specific classification of wetland must be evaluated by the NYSDEC.

6.2.2.2 Weighing Standards

If a project is found not compatible with the compatibility test or it has substantial impacts on wetlands, a weighing standard is applied for the classification of wetland that would be affected by the proposed activity. A weighing of the project need against the wetland benefits lost are the criteria for decision-making and permit issuance. Weighing incorporates the consideration of the wetland class in determining whether a permit can be issued. Weighing considers alternatives; avoidance or reduction (minimization) in wetland impacts; economic and social need; and mitigation.

Pursuant to 6 NYCRR 663.5(e)(2), the weighing standards have been applied to this Project's activities for Class II wetlands. The factors used to select the Primary Route over the alternative routes and deviations were not strictly limited to wetland and waterbody crossings. The evaluation criteria had to incorporate FERC scoping information, landowner concerns, minimizing the number of affected landowners, minimizing adverse environmental impacts, ensuring constructability, promoting safety, and meeting Constitution's desire to minimize the extent of potential disruption to communities during construction.

The Freshwater Wetlands permit requirements and weighing standards for Class II wetlands contained in 6 NYCRR Part 663.5(e)(2) include the following:

- the proposed activity must be compatible with the public health and welfare,
- be the only practicable alternative that could accomplish the applicant's objectives and have no practicable alternative on a site that is not a freshwater wetland or adjacent area,
- the proposed activity must minimize degradation to, or loss of, any part of the wetland or its adjacent area, and
- must minimize any adverse impacts on the functions and benefits that the wetland provides.

The information below summarizes how the Constitution Pipeline meets the weighing standards for permit issuance pursuant to 6 NYCRR 663.5(e)(2):

- the proposed activity must be compatible with the public health and welfare

  The Project and proposed impacts are consistent with federal and state laws and regulations related to public health and welfare. The construction of interstate natural gas pipelines are licensed by FERC under the Natural Gas Act. Upon its issuance, a Certificate of Public Convenience and Necessity from the FERC is a determination of economic need and public benefit for the Project. Additionally, the Project will be constructed, operated and maintained in accordance with the requirements of the FERC guidance in 18 CFR 380.15, the USDOT's PHMSA safety regulations pursuant to 49 CFR Part 192, including routine monitoring of cathodic protection system to ensure proper and adequate corrosion protection, and patrols of the permanent easement. In addition, Constitution will be a participant in the "Dig Safe" system for utility companies in New York, as well as the national "Call Before You Dig" system.

- be the only practicable alternative that could accomplish the applicant's objectives and have no practicable alternative on a site that is not a freshwater wetland or adjacent area

  Due to the length of the interstate pipeline (approximately 99 miles in New York) and complexity siting the Project with regard to various other factors used during the FERC alternatives analysis process, there are no reasonably feasible alternative routes for the Project alignment where wetlands or adjacent areas could be entirely avoided. The pipeline was routed to avoid freshwater wetlands and adjacent areas to the extent practicable and in a manner that minimizes disturbance to wetlands. The Project evaluated potential impacts to natural resources including wetlands, waterbodies, wildlife, fisheries, and cultural resources, and numerous site features including existing public infrastructure, residential uses, commercial and industrial operations.

  Constitution evaluated pipeline routing and associated aboveground facility site options, based on existing infrastructure, regional topography, potential adverse environmental impacts, population density, existing land use, and construction safety and feasibility considerations. Constitution's primary objective in performing the alternatives analysis was to develop a constructible Project that would accomplish the Project goal, while ensuring safety and avoiding or minimizing potential adverse environmental impacts to the greatest extent practicable. Constitution examined routes that would avoid impacts to the practicable extent where feasible, and in response to specific landowner requests and feedback received throughout FERC's Pre-Filing Process. The decision criteria that Constitution used to develop a Primary Route weighed environmental impacts, constructability, technological and procedural constraints, and safety and operational issues.

  The factors used to select the Primary Route over the alternative routes and deviations focused on FERC scoping information, minimizing adverse environmental impacts, landowner concerns, minimizing the number of affected landowners, ensuring constructability, promoting safety, and meeting Constitution's desire to minimize the extent of potential disruption to communities during construction. Route Alternatives were based on information collected since June 2012 through consultation with stakeholders; civil, environmental, and cultural field surveys; assessments of construction feasibility and safety; and assessments of operational safety.

- the proposed activity must minimize degradation to, or loss of, any part of the wetland or its adjacent area

  The pipeline was designed and sited to minimize disturbance to wetlands to the extent practicable. There will be no permanent fill of jurisdictional wetlands or associated adjacent areas as construction-related impacts associated with construction of the pipeline will be temporary in nature. The applicant has incorporated numerous measures into the design of the Project to avoid and minimize impacts to freshwater wetlands and adjacent areas as well as restoration measures to re-establish surface contours and revegetate disturbed areas. The Project's ECP has been prepared to implement construction practices to reduce and/or mitigate potential impacts. These measures have been developed in consultation with federal and state agencies to reduce the level of disturbance to wetlands and their adjacent areas. Constitution will protect and minimize potential adverse impacts on wetlands and their adjacent areas by implementing BMPs and using wetland avoidance and minimization measures and construction procedures specified within this application.

- must minimize any adverse impacts on the functions and benefits that the wetland provides.

  The specific Class II Wetland standards at 6 NYCRR 663.5 state that Class II wetlands provide important wetland benefits, the loss of which is acceptable only in very limited circumstances. The pipeline was designed to minimize disturbance to wetlands to the maximum extent practicable. Constitution will protect and minimize potential adverse impacts on wetlands and their adjacent areas by implementing BMPs and using wetland avoidance and minimization measures and construction procedures. The ECP and this application discuss minimization measures that will be implemented as part of the Project. In addition, to compensate for benefits lost to existing Class II Wetlands from the proposed activities, the applicant proposes wetland mitigation to remediate any net loss of wetland benefits. Removal of vegetation during construction will be restored once pipe installation takes place. PEM Freshwater Wetlands will be restored and there pre-construction function and value will be re-established relatively quickly. Conversion of PFO to PEM or PSS or from PSS to PEM will take place. Change to the function and value of disturbed PFO and PSS Freshwater Wetlands is anticipated to be minimal as vegetation will be allowed re-establish itself once the pipeline is installed. Similarly the adjacent area will be allowed to revegetate and function as it had previously.

  Freshwater wetlands observed are characterized by a low diversity of wetland vegetation, limited flood storage, limited wildlife habitat, and reduced water retention times. Therefore, a change in cover type would not cause the function and value of the wetland to change and continues to provide functions such as groundwater recharge, sediment trapping, and nutrient cycling. Use of these wetlands for recreation, educational or scientific activities, or heritage and visual/aesthetic values is also limited to the general public due to access restrictions (i.e., private ownership). Wetlands that contribute the most functions and values were associated with watercourses and larger tracts of undeveloped forest.

6.2.2.3 Mitigation

Constitution will provide mitigation for unavoidable impacts to the NYSDEC state-regulated Freshwater Wetlands and other waters of the U.S. resulting from construction activities. Mitigation will be provided for wetland cover type conversion and associated loss of wetland function and value. Additionally, mitigation will be provided for the placement of fill for the construction of permanent access roads that results in a "loss" to waters of the U.S. regulated by the USACE or NYSDEC state-regulated Freshwater Wetlands.

To compensate for those wetland benefits lost from the Project activities associated with impacts to NYSDEC state-regulated Freshwater Wetlands, the proposed wetland mitigation plan will meet the following provisions as outlined in 6 NYCRR 663.5(g)(1)(i) through (iii), including:

a. The mitigation must occur on or in the immediate vicinity of the site of the proposed project;

b. The area affected by the proposed mitigation must be regulated by the Act and this Part after mitigation measures are completed; and

c. The mitigation must provide substantially the same or more benefits than will be lost through the proposed activity.

In accordance with the NWP General Condition 23(c), compensatory mitigation will be provided at a minimum one-for-one ratio for wetland losses. Constitution will propose mitigation that will result in no net loss of wetland area or functions; the goal is to, in fact, strive for a net gain in area and function. Constitution proposes to accomplish at least a 3:1 replacement ratio for permanent fill of forested wetlands, and at least 2:1 for shrub and herb-dominated wetlands. Constitution recognizes that the ratios will depend on many factors including the type of wetlands restored or established and the mitigation approach. For example, preservation typically requires ratios that are much higher than restoration and preservation alone, may not be appropriate because it does not address no-net-loss goals. Unavoidable conversion from forested to scrub-shrub and emergent wetlands will also occur as a result of Project construction. While conversion does not constitute a loss of wetland area, wetland structure and function are affected and this must be addressed as part of the Wetland Mitigation Plan. Constitution also recognizes temporal impacts (temporary loss of wetlands during construction) need to be addressed as part of the mitigation. Recognizing that it can achieve its mitigation ratio goals for PEM and PSS wetlands through onsite efforts, but not for forested wetlands, Constitution proposes that temporary impacts to PEM and PSS wetlands will be mitigated for entirely on-site through restoration of the construction workspace, whereas PFO wetlands impacted within the temporary workspace areas will be mitigated for at a proportional ratio to the temporary loss of functions and services. These temporary mitigation ratios are not adjusted to account for degraded wetland conditions noted during the functions and services assessment. Constitution has also made an effort to include buffer preservation and buffer establishment as part of the mitigation package. The proposed ratios are different for buffer establishment (*e.g.*, reforestation of an agricultural field) than for preservation (refer to ratios provided in Table 5.1 of the Wetland Mitigation Plan in Attachment K). Constitution will follow the specific guidance cited in the ~~Conceptual~~ Wetland Mitigation Plan, including ensuring that mitigation projects are in the same HUC-8 watersheds as unavoidable impacts and, as much as possible, achieve in-kind replacement or better of wetland resources.

Constitution's mitigation plan for impacts to wetlands ~~and watercourses~~ follows the requirements of 33 CFR Part 332 and in accordance with the 2008 Final Rule for Compensatory Mitigation for Losses of Aquatic Resources (Department of Defense and Environmental Protection Agency 2008). Constitution has included a ~~conceptual~~ wetland mitigation plan with this application (Attachment K) and anticipates working with both the USACE and NYSDEC prior to finalization of the mitigation plan to ensure suitability and acceptance of the proposed mitigation plan. As additional mitigation plans and measures are developed for the Project they will be provided to the agencies as supplemental information to this application.

The goal of the final mitigation plan will be to restore, establish (create), and/or enhance wetland hydrology, hydrophytic vegetation, and hydric soil conditions to adequately offset the loss of function and value to the jurisdictional wetlands resulting from Project implementation. Even with the minimization and avoidance measures in place, there will be some unavoidable impacts to wetlands; however, Constitution's multi- facetted approach will endeavor to design a mitigation package that will fully compensate for impacts to wetlands with no net loss of function or values as explained in the ~~Conceptual~~ Wetland Mitigation Plan. A Final Mitigation Plan, to be developed during the course of the USACE and NYSDEC permitting process, will take into account the site-specific cumulative loss of biological function provided by the impacted wetlands, as well as public value. The ~~conceptual~~ approach outlined in the ~~Conceptual~~ Wetland Mitigation Plan provides a framework for the development of an acceptable Mitigation Plan. This ~~Conceptual~~ Wetland Mitigation Plan has been developed based on current

knowledge of potential impacts and preferred mitigation strategies but will be amended or revised as needed to meet USACE needs. Constitution hopes this Plan will be used to continue discussions with the USACE on what potential techniques and projects will mitigate the functions and values unavoidably impacted by the proposed Project.

6.3 CONCLUSION

In June 2013, Constitution submitted an application to the FERC for a Certificate of Public Convenience and Necessity to construct and operate the Project. The FERC is the regulatory agency with authorization to approve or deny the proposed siting, construction and operation of proposed interstate natural gas projects under the NGA Section 7. The FERC has responsibilities to assess the environmental impacts of proposed interstate natural gas transmission line projects pursuant to the NEPA and is the lead agency responsible for reviewing the proposed Project, preparing an EIS in compliance with the NEPA, and providing a decision on Constitution's application for a Certificate of Public Convenience and Necessity. This Project is intended to comply with applicable with federal and state environmental regulations and policy to the extent that they are consistent with the FERC approval and do not prohibit or unreasonably delay the construction and operation of the facilities approved by FERC.

The Project will comply with Section 404 of the CWA and the general and regional conditions for NWP 12 in New York. Constitution asserts that each single and complete crossing of waters of the U.S., including wetlands, associated with the pipeline facilities and access roads is eligible for authorization under NWP 12. Constitution will provide mitigation for permanent impacts to waters of the U.S., such that the Project will not result in more than minimal individual and cumulative effects to the respective watersheds in which they occur. The Preamble to the NWP rule (56 FR 59118-59119) provides that mitigation can be used to reduce impacts to the minimal level, and the net impact concept regarding the determination of minimal impacts is consistent with NEPA, the Army/EPA Mitigation MOA and the Section 404(b)(1) Guidelines as they pertain to general permits.

Constitution believes that the project meets the standards set forth in Article 15 of the New York ECL and implementing regulations (6 NYCRR 608.8). If approved, issuance of a Certificate of Public Convenience and Necessity from the FERC demonstrates the Project's economic need and public benefit. The pipeline construction is reasonable, as there are numerous other similar types of pipelines within New York that have been previously authorized.

The Project will not endanger the health, safety or welfare of the people of the State of New York. Constitution is committed to maintaining the highest standards of safety for construction and operation of the Project facilities. Interstate natural gas pipeline facilities are designed, constructed, operated, and maintained in accordance with the USDOT PHMSA safety standards codified under 49 CFR Part 192. These federal safety standards, together with pipeline integrity management programs and recent advances in pipeline manufacture, construction, and inspection techniques, significantly diminish the potential occurrence of hazardous conditions associated with high pressure natural gas pipelines.

The Project will not cause unreasonable, uncontrolled or unnecessary damage to the natural resources of the state including soil, forests, water, fish, and aquatic and land-related environment. Constitution has sited the Project facilities to avoid and minimize impacts to jurisdictional areas to the extent practicable. The ECP for the Project has been developed to specify appropriate BMPs to be implemented during construction and operation of the Project facilities to ensure that the proposed activities will not result in

unreasonable, uncontrolled or unnecessary damage to natural resources. Specifically, waterbody and wetland construction methods and impact minimization measures reduce and/or mitigate potential impacts to sensitive environmental resources, including waterbodies, wetlands, and water quality parameters. Impacts to streambeds and banks associated with pipeline construction activities are temporary and will be restored to pre-construction contours and elevations after construction.

Constitution believes the Project meets the standards set forth in Article 24 of the NY ECL and implementing regulations at 6 NYCRR 663.5(e) for impacts to State-regulated Freshwater Wetlands designated as Class II, including that the Project activity satisfies a pressing economic or social need and meets each of the weighing standards listed in 6 NYCRR 663.5(e).

The proposed activity is compatible with the public health and welfare, and will be constructed, operated and maintained in accordance with the requirements of the FERC guidance in 18 CFR 380.15, the USDOT's PHMSA safety regulations pursuant to 49 CFR Part 192.

The pipeline was routed to avoid and minimize impact and disturbance to waters of the U.S. and NYS Freshwater Wetlands and their Adjacent Areas to the maximum extent practicable. Due to the length of the interstate pipeline (approximately 99 miles in New York) and complexity of locating the Project with regard to various other factors used during the FERC alternatives analysis process, there are no reasonably feasible alternative routes for the Project alignment where wetlands or adjacent areas could be entirely avoided. Additionally, a comprehensive alternatives analysis has been completed for the Project (Attachment P) to demonstrate that no other alternatives would have substantially less impacts to sensitive environmental resources, including waterbodies and wetlands.

The proposed activity minimizes degradation to, or loss of, any part of a wetland to the maximum extent practicable. Constitution has incorporated trenchless construction methods in the Project design where feasible to avoid impacts to wetlands and waterbodies. Workspace for construction of the Project in wetlands has been reduced to the minimum necessary to safely install the pipeline facilities. Constitution has specified best management practices in its ECP for construction and operation of the Project to further avoid and minimize impacts to wetlands and waterbodies, as well as restoration measures to re-establish surface contours and revegetate disturbed areas.

The Project was designed to minimize disturbance and impacts on the functions and values of waters of the U.S., including some of which are also State-regulated Freshwater Wetlands. Constitution will protect and minimize potential adverse impacts on waters of the U.S. by using avoidance and minimization measures implementing BMPs. Restored wetlands will provide substantially equivalent functions and values to pre-disturbed wetland conditions and permanent conversion of wetland cover types will be mitigated.

Constitution appreciates the efforts on the part of both the USACE and NYSDEC thus far in the pre-application process. Constitution is committed to continuing to work with the agencies through the application review process to further address agency concerns relative to the Project.

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