

NEXUS GAS TRANSMISSION PROJECT

RESOURCE REPORT 1

General Project Description

FERC Docket No. PF15-10-000

January 2015



NOTE TO PUBLIC STAKEHOLDER REVIEWERS

This draft of Resource Report 1 for the NEXUS Gas Transmission Project is being filed as part of the Federal Energy Regulatory Commission's (FERC's) Pre-filing process. The pre-filing process allows FERC staff to become involved with scoping of environmental issues before NEXUS files its Application (pursuant to Section 7c of the Natural Gas Act) with FERC. Therefore, NEXUS' planning process will overlap, and will be combined with, the FERC's regulatory review process.

This initial filing of Resource Report 1 is one of the first steps in the FERC's Pre-filing process and is intended to provide an introduction of the Project in its early stages of development. You will notice there are references in this Report to other Resource Reports (12 Resource Reports will be filed with NEXUS' Application to FERC), Appendices, and design drawings (shaded in grey) that have not yet been filed. These documents will be filed with later versions of Resource Report 1 in accordance with FERC guidelines. We have included these references as a means of sharing with the public what will submitted in future versions of this report.



TABLE OF CONTENTS

1.0 RESOURCE REPORT 1 - GENERAL PROJECT DESCRIPTION	
1.1 Introduction	1-1
1.1.1 Pipeline Facilities	
1.1.2 Aboveground Facilities	
1.1.3 Additional Mainline Capacity	
1.2 Purpose and Need.	
1.3 ENVIRONMENTAL REPORT ORGANIZATION	
1.3.1 Project Maps and Drawings	
1.3.2 Changes to the ER and Project Maps	
1.4 LOCATION AND DESCRIPTION OF PIPELINE FACILITIES	
1.5 LOCATION AND DESCRIPTION OF ABOVEGROUND FACILITIES	
1.5.1 New Compressor Stations	
1.5.1.1 Compressor Station 1	
1.5.1.2 Compressor Station 2	
1.5.1.3 Compressor Station 3	
1.5.1.4 Compressor Station 4	
1.5.2 New Meter Stations	
1.5.3 Additional Aboveground Facilities	
1.6 LAND REQUIREMENTS	
1.6.1 Pipeline Construction ROW	
1.6.1.1 Collocation with Existing Utility Corridors	
1.6.2 Aboveground Facilities	
1.6.3 Access Roads	
1.6.4 Contractor Ware Yards	
1.7 Construction Procedures	
1.7.1 Pipeline Facilities	
1.7.1.1 Standard Construction and Restoration Techniques	
1.7.1.2 Waterbody Construction Methods	
1.7.1.3 Wetland Construction Methods	
1.7.1.4 Residential Areas	
1.7.1.5 Rugged Topography	
1.7.1.6 Active Agricultural Land	
1.7.1.7 Road Crossings	
1.7.1.8 Rock Removal and Blasting	
1.7.2 Aboveground Facilities	
1.7.2.1 Compressor Stations	
1.8 ENVIRONMENTAL TRAINING FOR CONSTRUCTION	
1.10 OPERATION AND MAINTENANCE	
1.10.1 Erosion Control	
1.10.2 Pipeline and ROW Patrols	
1.11 FUTURE PLANS AND ABANDONMENT	
1.12 PUBLIC-LANDOWNER/AGENCY CONSULTATION	
1.12.1 Public Officials Contacts	
1.12.2 Landowner Contacts	
1.12.3 Agency Consultations	
1.13 PERMITS AND APPROVALS	
1.14 Status of Field Surveys	
1.14.1 Biological Field Surveys	
1.14.2 Cultural Field Surveys	
1.15 Non-Jurisdictional Facilities	
1.16 CUMULATIVE IMPACTS	
1.17 References	1-31



LIST OF TABLES

Table 1.1-1	Summary of the NEXUS Project Pipeline Facilities
Table 1.1-2	Proposed NEXUS Project Aboveground Facilities
Table 1.6-1	Land Requirements for NEXUS Pipeline Facilities
Table 1.6-2	Land Requirements for NEXUS Aboveground Facilities
Table 1.6-3	Proposed Temporary and Permanent Access Roads along the NEXUS Project [not
	included with this filing]
Table 1.6-4	NEXUS Pipe Contractor Ware Yards in Ohio and Michigan [not included with this
	filing]
Table 1.9-1	NEXUS Preliminary Construction Schedule
Table 1.13-1	Anticipated Environmental Permit, Review and Consultations for NEXUS Project
Table 1.16-1	Projects with Potential Cumulative Impacts on Resources in the General Area of the
	NEXUS Project

LIST OF FIGURES

- Figure 1.1-1 NEXUS Project Location Map
- Figure 1.1-2 NEXUS Systems Overview Map

LIST OF APPENDICES

APPENDIX 1A – Project Drawings and Maps (located in Volume II-B and Volume IV)

Volume II-B

- 1. Aerial Alignment Sheets [not included with this filing]
- 2. Full Size United States Geological Survey ("USGS") Quadrangle Maps [not included with this filing]
- 3. Other Aboveground Facility Plot Plan Drawings [not included with this filing]
- 4. Typical Right-of Way Configurations [not included with this filing]
- 5. Full Size National Wetland Inventory ("NWI") Maps [not included with this filing]
- 6. 8½" x 11" USGS Quadrangle Excerpts

Volume IV - Critical Energy Infrastructure Information (bound separately)

- 1. Proposed Compressor Station Plot Plan Drawings [not included with this filing]
- APPENDIX 1B1 Erosion and Sediment Control Plan
 - 1B2 Spill Prevention Control and Countermeasure Plan
 - 1B3 Blasting Plan [Blasting Plan [not included with this filing]
- APPENDIX 1C1 –. Non-Landowner, Federal, State and Local Agency Contacts List
 - 1C2 Agency Correspondence
 - 1C3 Public and Agency Participation Plan
- APPENDIX 1D-Table 1D-1: Recently Completed, Current and Proposed Projects within the NEXUS Project Counties [not included with this filing]
- APPENDIX 1E Privileged and Confidential Information (located in Volume III)

Volume III - Privileged and Confidential (bound separately)

- 1. Project Line List of Affected Landowners Along the Pipeline
- 2. List of Abutters Within ½ Mile of the Proposed Compressor Stations
- 4. Cultural Resources Information [not included with this filing]



RESOURCE REPORT 1—GENERAL PROJECT DESCRIPTION		
	Filing Requirement	Location in Environmental Report
X	Provide a detailed description and location map of the project facilities (§ 380.12(c)(1)).	•
	• Include all pipeline and aboveground facilities.	Sections 1.1, 1.4, 1.5 Figures 1.1-1, 1.1-2
	♦ Include support areas for construction or operation.	Appendix 1A
	◆ Identify facilities to be abandoned.	
X	Describe any non-jurisdictional facilities that would be built in association with the project. (§ 380.12(c)(2)).	
	♦ Include auxiliary facilities (See § 2.55(a)).	
	• Describe the relationship to the jurisdictional facilities.	
	◆ Include ownership, land requirements, gas consumption, megawatt size, construction status, and an update of the latest status of Federal, state, and local permits/approvals.	Section 1.15
	• Include the length and diameter of any interconnecting pipeline.	
	♦ Apply the four-factor test to each facility (see § 380.12(c)(2)(ii)).	
X	Provide current, original United States Geological Survey (USGS) 7.5-minute series topographic maps with mileposts showing the project facilities (§ 380.12(c)(3)).	Appendix 1A
	♦ Maps of equivalent details are acceptable if legible (check with staff).	(8.5 x 11-inch)
	♦ Show locations of all linear project elements, and label them.	
	♦ Show locations of all significant aboveground facilities, and label them.	
	Provide aerial images or photographs or alignment sheets based on these sources with mileposts showing the project facilities. (§ 380.12(c)(3)). No more than 1-year old	[will be filed with next version of RR1]
	♦ Scale no smaller than 1:6,000	
	Provide plot/site plans of compressor stations showing the location of the nearest noise-sensitive areas (NSA) within 1 mile. (§ 380.12(c)(3,4)).	[will be filed with
	♦ Scale no smaller than 1:3,600	next version of RR1]
	• Show reference to topographic maps and aerial alignments provided above.	
X	Describe construction and restoration methods. (§ 380.12(c)(6)).	Section 1.7
X	Identify the permits required for construction across surface waters. (§ 380.12(c)(9)).	Section 1.12
	 ◆ Include the status of all permits. ◆ For construction in the Federal offshore area be sure to include consultation with the MMS. File with the MMS for rights-of-way grants at the same time or before you file with the FERC. 	Section 1.13, Appendix 1C, Table 1.13-1



	RESOURCE REPORT 1—GENERAL PROJECT DESCRIPTION		
	Filing Requirement	Location in Environmental Report	
X	Provide the names and addresses of all affected landowners as required and certify that all affected landowners will be notified;	V 1 III	
	◆ Affected landowners are defined in § 157.6(d)(2)	Volume III Appendix 1E	
	• Provide an electronic copy directly to the environmental staff.		
Add	itional Information		
X	Describe all authorizations required to complete the proposed action and the status of applications for such authorizations	Section 1.13 and Table 1.13-1	
	Provide plot/site plans of all other aboveground facilities that are not completely within the right-of-way.	[will be filed with next version of RR1]	
	Provide detailed typical construction right-of-way cross-section diagrams showing information such as widths and relative locations of existing rights-of-way, new	Section 1.7 and Appendix 1A	
	permanent rights-of-way, and temporary construction rights-of-way. See Resource Report 8 – Land Use, Recreation, and Aesthetics.	[will be filed with next version of RR1]	
	Summarize the total acreage of land affected by construction and operation of the project.	Section 1.6	
		[will be filed with next version of RR1]	
	If Resource Report 5 - Socioeconomics is not provided, provide the start and end dates of construction, the number of pipeline spreads that would be used, and the workforce per spread.	Resource Report 5 [will be included with next FERC filing]	
	Send two (2) additional copies of topographic maps and aerial images/photographs directly to the environmental staff of the Office of Energy Projects (OEP).	[will be submitted with Application]	



ACRONYMS AND ABBREVIATIONS

API American Petroleum Institute
ATWS additional temporary workspace

Bcf/d billion cubic feet per day

CEII Critical Energy Infrastructure Information

Certificate Certificate of Public Convenience and Necessity, FERC Certificate

DTE Detroit Energy Company
Dth/d dekatherms per day

E&SCP Erosion and Sediment Control Plan

ER Environmental Report
ESA Endangered Species Act
ESD emergency shutdown

FERC Federal Energy Regulatory Commission

FERC's Plan Upland Erosion Control, Revegetation, and Maintenance Plan
FERC's Procedures Wetland and Waterbody Construction and Mitigation Procedures

HDD horizontal directional drill

hp horsepower

ISO Independent System Operator or International Organization for

Standardization

kv kilovolt

MAOP maximum allowable operating pressure

MLV mainline valves

MP milepost

M&R metering and regulation station

NEMA National Electrical Manufacturers Association

MPSC

NGA Natural Gas Act

NEPA National Environmental Policy Act

NPDES National Pollutant Discharge Elimination System
NRHP National Register of Historic Places, National Register

O&M Operation and Maintenance

Pre-filing ER Draft Environmental Resource Reports, Pre-filing Environmental Report
Project NEXUS Gas Transmission Project, NEXUS Transmission, LLC

psig pounds per square inch gauge

ROW right-of-way

SHPO State Historic Preservation Officer or Office

SPCCP Spill, Prevention, Control and Countermeasure Plan

Spectra or Spectra Energy Spectra Energy Corporation
TAR temporary access road
TGP Tennessee Gas Pipeline

THPO Tribal Historic Preservation Officer

U.S. United States

USACE
U.S. Army Corps of Engineers
USDOT or DOT
USEPA or EPA
U.S. Department of Transportation
U.S. Environmental Protection Agency

USFWS or FWS U.S. Fish and Wildlife Service



1.0 RESOURCE REPORT 1 - GENERAL PROJECT DESCRIPTION

1.1 Introduction

Spectra Energy Partners, LP ("Spectra" or "Spectra Energy") and DTE Energy Company ("DTE" or "DTE Energy"), lead developers of the NEXUS Gas Transmission, LLC ("NEXUS") project, are seeking a Certificate of Public Convenience and Necessity ("Certificate") from the Federal Energy Regulatory Commission ("FERC") pursuant to Section 7(c) of the Natural Gas Act ("NGA") authorizing the construction and operation of the NEXUS Gas Transmission Project ("NEXUS Project" or "Project") located in Ohio and Michigan. The Project is designed to transport 1.5 billion cubic feet per day ("Bcf/d") of Appalachian Basin shale gas, including Utica and Marcellus shale gas production, to Ohio, Michigan, and Chicago market centers in the United States (U.S.) and to the Dawn Hub in Ontario, Canada.

As proposed, the Project includes both greenfield pipeline construction and, to minimize environmental disruption and optimize project efficiencies, the contracting of firm capacity on existing and expanded pipeline systems. The new greenfield pipeline will be constructed, owned and operated by NEXUS and will extend from Kensington, Ohio to the DTE Gas transportation system west of Detroit in Willow Run, Michigan. See Figure 1.1-1 for a NEXUS Project Location Map (Figures Section of this report). The Project will also comprise contracted firm capacity existing on, and created by: (1) the expansion of the Texas Eastern Transmission, LP ("Texas Eastern") system in Ohio, West Virginia, and Pennsylvania to allow shippers to access gas supplies south of Kensington, Ohio where the NEXUS Project commences; (2) the expansion of the DTE Gas Transportation ("DTE Gas") system in eastern Michigan and extending to the U.S./Canada border; and (3) the possible expansion of the Vector Pipeline ("Vector") system in southern and eastern Michigan, northern Indiana, eastern Illinois and western Ontario. In this way, the Project will provide a connection between Appalachian shale gas supplies and markets in the U.S. Midwest (including Ohio, Michigan and Chicago, Illinois) and to the Dawn Hub, in Ontario, Canada. See Figure 1.1-2 for a Systems Overview Map.

NEXUS understands that Texas Eastern will file its own certificate application with the Commission for approval of its expansion project. NEXUS further understands that Vector, if required, will file its own certificate application with the Commission for approval of its possible expansion project. The DTE Gas expansion project will be subject to the jurisdiction of the Michigan Public Service Commission ("MPSC"), as DTE Gas is a state-regulated gas utility. While each project will have separate certificate applications before FERC or the MPSC, NEXUS understands that the Commission may consider their environmental impacts in an environmental impact statement for the Project.

The NEXUS Gas Transmission Project will consist of the following proposed facilities:

1.1.1 Pipeline Facilities

The Project includes construction of approximately 250 miles of new, up to 42-inch diameter natural gas transmission mainline pipeline in Ohio and Michigan; and approximately 1.4 miles of new interconnecting pipeline to Texas Eastern and Tennessee Gas Pipeline (TGP), as described below and shown in Figure 1.1-1. The majority of the proposed pipeline route (approximately 60 percent) is colocated with existing overhead electric transmission line, pipeline, or railroad utility corridors. The remainder of the route is considered greenfield. A summary of the Project's proposed pipeline facilities is provided in Table 1.1-1 (see Tables section at the end of this report). The NEXUS Project Location Map is provided as Figure 1.1-1 (see Figures section).

- <u>Mainline Route</u> Originates at the Kensington Processing Plant in Columbiana County, Ohio and extends through Ohio and Michigan to connect with DTE Gas in Willow Run, Michigan. The proposed mainline route includes:
 - o approximately 200 miles of new pipeline in Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton Counties, Ohio



- o approximately 50 miles of new pipeline in Lenawee, Monroe, and Washtenaw Counties, Michigan
- <u>Interconnecting Pipeline to Texas Eastern</u> approximately 1,050 feet of new 30-inch diameter pipeline connecting the existing Kensington Processing Plant to the Texas Eastern mainline extension Booster Station
- <u>Interconnecting Pipeline to TGP</u> approximately 1.2 miles of new 42-inch diameter pipeline connecting the proposed metering and regulating ("M&R") at the Kensington Processing Plant to the TGP mainline

1.1.2 Aboveground Facilities

The Project includes the installation of up to four (4) new gas turbine compressor stations and four (4) new M&R stations, and four (4) new launcher and receiver facilities:

• Compressor Stations

- o Compressor Station 1 in Columbiana County, Ohio
- o Compressor Station 2 in Medina County, Ohio
- o Compressor Station 3 in Erie County, Ohio
- o Compressor Station 4 in Lucas County, Ohio

Pending the completion of customer commitments following the ongoing supplemental open season and the associated engineering, total compression strength is currently planned to be up to 52,000 horsepower (HP)¹ at the station in Columbiana County, up to 26,000 HP at the station in Medina County, up to 26,000 HP at the station in Erie County and up to 26,000 HP at the station in Lucas County.

M&R Stations

- o NEXUS/Kensington M&R Station located at the Kensington Processing Plant in Columbiana County, Ohio
- o NEXUS/Texas Eastern M&R Station located at the tie-in with the interconnecting pipeline with the Texas Eastern mainline extension in Columbiana County, Ohio
- o NEXUS/TGP M&R Station located at the tie-in with the interconnecting pipeline with the TGP mainline in Columbiana County, Ohio
- o NEXUS/Willow Run delivery M&R Station located at the greenfield project terminus in Washtenaw County, Michigan

• Launcher and Receiver Facilities

- o launcher facility for the mainline and receiver for the TGP line will be located at the Kensington Processing Plant
- o launcher and receiver facilities located at the new compressor stations located in Medina County, Ohio and Lucas County, Ohio
- o receiver facility at the terminus of the pipeline within the NEXUS/Willow Run M&R Station
- o launcher facility at the TGP Interconnecting pipeline tie-in to the TGP mainline

• Other Aboveground Facilities

Mainline Valves – Mainline valves ("MLVs") will also be included as part of the Project.
 NEXUS is currently evaluating the design of Remote Control Valves (RCV) that would
 be located along the Mainline Route in Ohio and Michigan. The design and siting of
 these aboveground MLV facilities is ongoing. Details for proposed MLVs will be

¹ The horsepower ratings provided are NEMA ratings.



- included in the next filing of Resource Report 1 following completion of the FERC scoping period.
- O Communications Towers The Project will include construction and operation of approximately eight microwave communications towers located along the pipeline route. Four of these towers will be located at each of the four proposed compressor station sites. The remaining four towers will be sited along the route based on engineering and communications siting criteria. These communications towers will provide NEXUS a secure microwave link required to integrate the operations of Project facilities to the company's Houston Gas Control, Supervisory Control and Data Acquisition ("SCADA"), measurement, telephone, and computer network systems. The design and siting for these communications towers is ongoing. Additional tower design details and proposed locations will be included in the next filing of Resource Report 1.

Details of the Project's aboveground facilities are summarized in Table 1.1-2 (see Tables Section). Proposed compressor station locations are shown on Figure 1.1-1. Additional details and associated site plans for aboveground facilities will be included with the next filing for Resource Report 1.

1.1.3 Additional Mainline Capacity

In addition to the greenfield pipeline and related facilities, the Project also comprises mainline capacity purchased on existing facilities including:

- <u>Texas Eastern Capacity</u>. Capacity on Texas Eastern from certain receipt points located between Berne, Ohio and Braden Run, Pennsylvania to a delivery point at a new interconnection between Texas Eastern and NEXUS at Kensington, Ohio. The facilities associated with this capacity are part of the Texas Eastern Appalachian Lease project which has filed to participate in the FERC pre-filing process in Docket No. PF-15-11-000.
- <u>DTE Gas Capacity.</u> Capacity on the DTE Gas system from Willow Run to the Vector-Highland junction interconnect (Milford Meter Station) between DTE Gas and Vector, as well as capacity on DTE Gas system to the U.S./Canada border.
- <u>Vector Capacity</u>. Capacity on Vector extending from Vector's Milford Meter Station, Michigan to the Union Gas Limited Dawn Hub in Ontario, Canada. Note that final arrangements for transportation beyond the U.S./Canada border to Dawn, Ontario will depend on final commercial arrangements. If additional facilities are required on the Vector system, it is our understanding that Vector will submit a request to FERC to participate in the Pre-filing Process and that such a determination would be made in the near future.

This Resource Report identifies the Purpose and Need for the proposed Project (Section 1.2), the organization of the Environmental Report (Section 1.3), the locations and descriptions of Project facilities (Section 1.4 and 1.5), and the land requirements associated with facility construction and operation (Section 1.6). This Resource Report also discusses the proposed construction procedures (Section 1.7 and 1.8), construction schedule and work force (Section 1.9), operation and maintenance procedures (Section 1.10), potential plans for future expansion or abandonment of the proposed facilities (Section 1.11), agency consultation and landowner notification (Section 1.12), permits and approvals required to construct and operate the Project (Section 1.13), status of field surveys (Section 1.14), anticipated non-jurisdictional facilities (Section 1.15), and cumulative impacts (Section 1.16). A checklist showing the status of the FERC filing requirements for Resource Report 1 is included as front matter to this Resource Report following the table of contents.

1.2 Purpose and Need

The NEXUS Project will provide a seamless gas transportation path for Marcellus and Utica shale gas to supply the growing markets in Ohio, Michigan, Chicago, Illinois; and the Dawn Hub in Ontario, Canada.



In order to provide interested bidders an opportunity to obtain capacity in NEXUS, an open season was held from October 15, 2012 to November 30, 2012. A second, supplemental open season, was held from July 23, 2014 to August 21, 2014, and another supplemental open season has commenced to provide additional service offerings and is scheduled to run from January 14 to February 12, 2015. As a result of these open seasons, NEXUS is proposing to construct facilities to provide 1.5 Bcf/d of additional transportation service on NEXUS by November 1, 2017. NEXUS has signed precedent agreements for the majority of the capacity to be created by the Project. Executed agreements for these shippers will be included in NEXUS' certificate application. Placing the Project facilities in service by the scheduled inservice date of November 1, 2017 is required to meet the firm transportation service requirements of the Project shippers.

The NEXUS Project is both a supply push and market pull pipeline project, meaning the Project targets transportation needs of both producers and end-use customers. The Project will provide critical access to emerging natural gas supplies from the Marcellus and Utica shale gas producing area and will provide energy consumers in the region with affordable, cleaner-burning and domestically-abundant natural gas to help meet the growing environmental need for cleaner power generation and home heating in the region. This increased access will provide reliable, cost-effective supplies of natural gas to serve local distribution companies, industrial users and natural gas-fired power generators in the Ohio, Michigan, Chicago, Illinois; and Ontario markets.

One of the key gas supply sources for the Great Lakes region has been Western Canadian supply. However, since 2006 or earlier, the amount of gas supply exported from Alberta to these markets has declined, largely due to increased consumption in Western Canada. According to the Energy Resources Conservation Board, Alberta exports have declined nearly 4 Bcf/d with an additional 2 Bcf/d decline forecasted through 2022. In addition, recent proposals to convert existing natural gas pipelines to crude oil transmission, including Energy Transfer's Trunkline and TransCanada's Energy East Project, have the potential to impact gas supply to the Project area. The impact of these conversion projects is that a combined 1.9 Bcf/d of capacity (Trunkline 0.6 Bcf/d in 2015 and TCPL 1.3 Bcf/d in 2018) from Gulf Coast and Western Canada supply basins will be unavailable to serve the Great Lakes region markets. Per the ICF International Q4 2014 forecast, Marcellus and Utica supply will average approximately 30 Bcf/d by 2025. The NEXUS project serves to mitigate the reduction in supply from traditional Western Canada sources by connecting the Great Lakes region to this abundant Appalachia supply.

According to the Wood Mackenzie 2H 2014 forecast, overall gas demand growth in the Great Lakes region (e.g., Ohio, Michigan, Illinois, Indiana, Ontario and Wisconsin) is projected at approximately 2 Bcf/d for the period 2014 through 2025. Specifically, the gas demand growth forecast for Ohio and Michigan is 0.7 Bcf/d, for the same period. This gas demand growth is largely driven by the power and industrial sectors. Both DTE Electric ("DTE Electric") and Consumers Energy ("CMS") have announced plans to retire coal-fired generating capacity in Michigan. Natural gas (along with renewables) would be available to fill the approximately 6,000 MW gap for new generation expected by DTE and CMS by 2025.

In Ohio, plans are underway to construct at least three natural gas-fired generation facilities, totaling nearly 2,000 MW in incremental capacity. These projects include Carroll County Energy LLC's plans to build an \$800 million, 700-megawatt natural gas-fired power plant in Carroll County scheduled to be in operation by May 2017. In Cleveland, NRG Energy, Inc. is converting its old 753-megawatt power plant to run on natural gas in order to meet more stringent regulatory standards set forth by the federal government. In southwest Ohio in Butler County, near Cincinnati, NTE Energy LLC plans to build a baseload \$500 million natural gas-fired power plant in Middletown. This 500-megawatt power plant is scheduled to begin construction midway through 2015 and open in 2018 (Downing 2014).

Clean Energy Future announced in January 2015 that it is seeking expedited approval of the 800 MW gasfired combined cycle plant in Lordstown, Ohio with anticipated in-service date of mid-2018. The Oregon



Clean Energy Center, an 800 MW natural gas fired plant is expected to be online in May 2017. The proposed location of the NEXUS Project is critical to accommodating this anticipated market demand.

NEXUS is in various stages of discussions/negotiations with markets in Ohio such as power generators and local distribution companies which are interested in up to a total of 0.4 Bcf/d of gas transportation or an interconnect on the proposed NEXUS Project system.

NEXUS is also responding to requests for interconnects (taps) on the NEXUS Project system for local industrial parks under development. The markets are located in close proximity to Lake Erie, either directly adjacent to the lake or to the south traversing Wood, Lucas, Lorain, Medina and Trumbull Counties in Ohio. In order to serve the gas needs of these Ohio markets and minimize environmental impacts, NEXUS has chosen the proposed pipeline route reflected in this Resource Report.

The Project's total investment is currently estimated in the range of approximately \$2 billion, depending on final market demand and Project scope, and will deliver additional local and regional benefits by creating significant jobs during the construction phase and ongoing tax revenue as well as permanent jobs to support operation of the pipeline system.

In addition, Ohio's Alternative Energy Portfolio Standard ("AEPS") encourages use of natural gas, which requires electric distribution utilities and electric services companies to secure a portion of their electricity supplies from alternative energy resources (ORC, 2013). By the year 2025, electric service companies may generate as much as 12.5 percent of their energy from "any new, retrofitted, refueled, or repowered generating facility located in Ohio, including a simple or combined-cycle natural gas generating facility..." (ORC Section 4928.01(A)(34)(h)) to compensate for shortfalls in energy required to be generated from renewable sources. Thus, the Ohio marketplace has a need for local, accessible and affordable natural gas to meet Ohio's AEPS. There are 16 coal-fired power plants in Ohio that have been announced for retirement with over 4,000 megawatts ("MW") of capacity that will need to be replaced (SourceWatch.gov website. 2013). Some of these generators may be converted to natural gas, which would increase further the demand for natural gas in the region.

The NEXUS Project also supports President Obama's Climate Action Plan. On June 28, 2013, President Obama outlined a series of executive branch actions to address climate change. The Climate Action Plan builds on previous commitments to reduce U.S. Green House Gas emissions by 17 percent below 2005 levels by 2020, and is founded on three "pillars":

- Reduce carbon emissions (with an emphasis on emissions from power plants);
- Mitigate domestic impacts of climate change; and
- Lead international efforts to address climate change.

President Obama's remarks and a white paper on his Climate Action Plan frame natural gas as a cleaner domestic energy source that can help in the transition to a lower carbon economy, while ensuring America's national security and supporting the economy and job creation. The Climate Action Plan encourages investment in building and upgrading natural gas pipelines to help further reduce methane emissions — acknowledging investment as a source of jobs and stimulus for the economy (WhiteHouse.gov website. 2013).

In addition to the environmental benefits associated with increased natural gas usage, the economic benefits of this development are being felt across the region and the nation through more affordable energy prices and robust economic activity. Numerous studies have looked at the economic benefits of developing American oil and natural gas. A study completed in February 2012 by Black & Veatch (Black & Veatch, 2012) for the Interstate Natural Gas Association of America ("INGAA") Foundation Inc., was one of the first to highlight the economic benefits – jobs, labor income, value added, economic output and federal, state and local tax generation – of constructing, operating and maintaining the midstream infrastructure needed to transport domestic energy.



These large investments in natural gas, natural gas liquids and crude oil midstream infrastructure will result in significant benefits for the U.S. economy in the near term and long run. Total economic impacts through 2035 arising from the \$200 billion in midstream infrastructure plus nearly \$29 billion spent operating the new midstream facilities during the evaluation period are estimated to include:

- The support of over 125,000 jobs on average each year from 2012 through 2035;
- Over \$171 billion in labor income;
- Approximately \$260 billion in value added;
- More than \$511 billion in total output; and
- Federal, state and local tax revenue of nearly \$57 billion.

Another study completed in March of 2014, by ICF International (ICF International 2014) for the INGAA Foundation, Inc., was prepared to evaluate midstream infrastructure and its ability to will keep pace with increasing supplies of natural gas and crude oil its economic benefits. This study states that insufficient infrastructure can constrain market growth and strand supplies, potentially leading to increased price volatility and reduced economic activity. It also indicates that robust levels of midstream infrastructure will create many positive economic effects. As part of this study, an economic impact analysis was prepared using IMPLAN, a widely recognized economic modeling platform. Based on that analysis, the economic benefits resulting from the base case which assumes that both natural gas supply and demand will increase for the projection period (2014 through 2035) and that gas prices will remain sufficiently high to encourage production but not high enough to limit market growth, the following economic benefits are projected:

- The projected investment of \$641 billion for midstream infrastructure yields an annual average of roughly 432,000 jobs across the United States and Canada throughout the projection period.²
- The cumulative 2014 through 2035 midstream investments are estimated to create \$588 billion in labor income (including wages and benefits) at an average of roughly \$61,800 per job across all affected industries.³
- The cumulative 2014 through 2035 midstream investments across the United States and Canada are estimated to contribute roughly \$885 billion in value added. Value added for a company is its sales revenue less the costs of goods and services purchased. The sum of the value added in all industries is the gross domestic product (GDP), or the total value of all final goods and services produced in the nation.
- From 2014 through 2035, total state/provincial and local taxes generated from midstream development will be roughly \$146 billion, and total federal tax revenues will be roughly \$156 billion across the United States and Canada.

1.3 Environmental Report Organization

The Environmental Report ("ER") that will be filed with NEXUS' Application will be comprised of 12 separate Resource Reports and will be prepared in accordance with FERC Order No. 603 and 18 CFR

² The jobs discussed here include those necessary to manufacture and construct infrastructure, and the indirect and induced jobs linked to that process. They do not include jobs that would be necessary to operate and maintain the new infrastructure because operation and maintenance costs were not considered in the infrastructure analysis presented in the report.

³ Labor income includes all forms of employment income, including employee compensation (wages and benefits) and proprietor income.



380.12, which govern the filing of applications for Certificates of Public Convenience and Necessity authorizing the construction and operation of facilities to provide service under Section 7 of the NGA.

NEXUS' application and accompanying ER will be organized into separate volumes, in compliance with FERC's document control requirements for Public and Privileged & Confidential, and Critical Energy Infrastructure Information ("CEII") classes of information. For this initial filing, only the Affected Land Owners List is considered Privileged & Confidential and therefore has been filed under separate cover from Resource Reports 1 and 10.

1.3.1 Project Maps and Drawings

Appendix 1A (bound separately in Volumes II-B and II-C [not included in this filing]) includes drawings and maps for all proposed Project facilities. Appendix 1A also contains typical drawings for the various right-of-way ("ROW") configurations, compressor stations, and other aboveground facilities (e.g. mainline valves and launcher/receiver facilities) as well as drawings showing the Project components on USGS 7.5 minute series topographic quadrangle maps. USGS Quadrangle excerpts are located in Appendix 1E. Detailed plot plans for the compressor stations are included in Appendix 1A (bound separately in Vol. II-C).

1.3.2 Changes to the ER and Project Maps

As part of the Certificate application process, NEXUS is utilizing the FERC's National Environmental Policy Act ("NEPA") Pre-Filing Process, which provides all stakeholders (including federal, state and local agencies, landowners and local citizens) the opportunity for early cooperation and involvement to identify, evaluate and attempt to resolve issues and concerns prior to NEXUS' submission of a formal application to the FERC. This initial filing of draft Resource Report 1 is part of the Pre-filing process and reflects the early stages of engineering design and siting of facilities. As more information is obtained from Project stakeholders, the Project will become more refined and an updated Project Description and mapping will be submitted to FERC in subsequent NEXUS filings. These changes to the Project will be detailed in subsequent filings so that FERC and Project stakeholders understand how the Project has changed and evolved over time.

1.4 Location and Description of Pipeline Facilities

The proposed NEXUS pipeline facilities consist of approximately 250 miles of new mainline pipeline, up to 42-inch diameter, and one new 42-inch diameter interconnecting pipeline with TGP and one new 30-inch interconnecting pipeline with Texas Eastern. NEXUS' primary goal is to align, as much as practical, the new pipeline parallel to existing ROWs and to utilize already disturbed and cleared ROWs to the extent practicable. Deviations from these alignments were made where potential residential impacts, screening, environmental or construction issues exist. A summary of the NEXUS pipeline facilities is provided in Table 1.1-1. For greenfield segments of new pipeline, NEXUS has sited the route to avoid environmental and stakeholder impacts where feasible, and where impacts are unavoidable, impacts have been minimized to the extent practicable.

1.5 Location and Description of Aboveground Facilities

The proposed NEXUS Project includes aboveground facilities located in Ohio and Michigan including up to four new compressor stations in the Towns of Hanover, Guilford, Groton, and Waterville, Ohio.

A summary of proposed NEXUS aboveground facilities is provided in Table 1.1-3 (see Resource Report 1). Site plans of the new compressor stations at a 1" = 200' scale with an aerial photo background and other proposed aboveground facilities will be included in Appendix 1A in the next filing of Resource Report 1. Drawings of proposed compressor stations showing the location of the nearest noise sensitive areas within one mile of each facility are included in Resource Report 9, Appendix 9B and 9C [not included with this filing].



NEXUS will work with individual landowners, local community and state agency representatives where aboveground facilities are proposed in order to assess the need for visual screening. Outdoor lighting needs for aboveground facilities will be minimal and limited to what is necessary for safety and security. Compressor stations will be designed to meet applicable FERC and state noise regulations. Individual station layouts were configured to help reduce the noise levels beyond the site boundaries.

A description of the existing conditions and access to the proposed compressor stations is provided in the following sections.

1.5.1 New Compressor Stations

The proposed NEXUS Project includes construction and operation of up to four (4) new compressor stations in Ohio, as shown on Figure 1.1-1 (Figures Section). Engineering designs for proposed compressor stations are in the very early stages of development. Pending the completion of final engineering design, compression strength is currently planned to be up to 52,000 HP at the Columbiana station, up to 26,000 HP at the Medina station, up to 26,000 HP at the Erie station and up to 26,000 HP at the Lucas station. Details regarding the final siting and engineering design for the compressor stations will be included in the next filing of Resource Report 1:

1.5.1.1 Compressor Station 1

Compressor Station 1 is proposed in the Town of Hanover, Columbiana County, Ohio at approximate MP 1.2 on the mainline pipeline. The total compression strength is currently planned to be up to 26,000 HP at this station. Engineering designs for proposed compressor stations are in the very early stages of development. Details about the engineering design, construction footprint, and environmental constraints on, and adjacent to, the Compressor Station 1 site will be included with the next filing of Resource Report 1.

1.5.1.2 Compressor Station 2

Compressor Station 2 is proposed in the Town of Guilford, Medina County, Ohio at approximate MP 60.1 on the mainline pipeline. The total compression strength is currently planned to be up to 26,000 HP at this station. Details about the engineering design, construction footprint, and environmental constraints on, and adjacent to, the Compressor Station 2 site will be included with the next filing of Resource Report 1.

1.5.1.3 Compressor Station 3

Compressor Station 3 is proposed in the Town of Groton, Erie County, Ohio at approximate MP 124.3 on the mainline pipeline. The total compression strength is currently planned to be up to 26,000 HP at this station. Details about the engineering design, construction footprint, and environmental constraints on, and adjacent to, the Compressor Station 3 site will be included with the next filing of Resource Report 1.

1.5.1.4 Compressor Station 4

Compressor Station 4 is proposed in the Town of Waterville, Lucas County, Ohio at approximate MP 177.7 on the mainline pipeline. The total compression strength is currently planned to be up to 52,000 HP at this station. Details about the engineering design, construction footprint, and environmental constraints on, and adjacent to, the Compressor Station 4 site will be included with the next filing of Resource Report 1.

1.5.2 New Meter Stations

NEXUS will construct four new M&R stations (see Table 1.1-2). Three of the new M&R stations will be constructed in Columbiana County, Ohio; and the fourth will be construction in Washtenaw County, Michigan.



Once engineering designs have been completed, locations of proposed M&R stations will be shown on the USGS Quadrangle excerpts and will be submitted in future filings of Resource Report 1.

1.5.3 Additional Aboveground Facilities

Additional aboveground facilities will include pig launcher/receivers and mainline valves.

Pig Launcher/Receivers

Launcher and receiver facilities are proposed at the M&R station at the Kensington Processing Plant in Columbiana, County, Ohio; at Compressor Station 2 in Medina County, Ohio; and, at Compressor Station 4 in Lucas County, Ohio. One (1) launcher facility is proposed at the TGP interconnection MLV and one (1) receiver facility is proposed at Willow Run. A pipeline "pig" is a device to clean or inspect the pipeline. A pig launcher/receiver is an aboveground facility where "smart" pigs are inserted or retrieved from the pipeline.

• Mainline Valves

NEXUS is proposing construction of MLVs as part of the Project (see Table 1.1-2). These MLV will be installed within areas already disturbed by pipeline construction and the permanent operational ROW.

The locations of the pig launcher/receiver facilities and MLVs will be shown on the USGS Quadrangle excerpts once engineering designs are completed.

• Communication Towers

The NEXUS Project will require construction and operation of approximately eight microwave communications towers located along the pipeline route. Four of these towers will be located at each of the four proposed compressor station sites; the remaining four towers will be sited along the route based on engineering and communications siting criteria. Details of the tower design and proposed locations will be included in the next filing of Resource Report 1.

1.6 Land Requirements

The proposed NEXUS Project will result in temporary disturbance to existing land use during construction of proposed facilities and, to a lesser degree, in the future during operation and maintenance ("O&M") of the facilities. Pipeline land requirements are discussed in Section 1.6.1 and land requirements for the aboveground facilities are discussed in Section 1.6.2. Access roads and pipe yards and contractor ware yards are discussed in Sections 1.6.3 and 1.6.4, respectively. Current land uses of all areas affected by the Project will be described in future filings of Resource Report 8 – Land Use, Recreation and Aesthetics [not included in this draft].

1.6.1 Pipeline Construction ROW

NEXUS will require a minimum 100-foot wide construction ROW based on a detailed evaluation of a variety of conditions experienced during the construction and installation of other pipeline systems across the State of Ohio and Michigan. The size of the equipment necessary to safely install an up to 42-inch diameter pipeline, with concrete coating where required, the trench width required and room needed for temporary trench spoil storage, and associated pipeline support facilities were factors used to determine the minimum 100-foot-wide construction ROW width. The only exception to the 100-foot-wide minimum construction ROW width is within wetlands where the construction ROW is reduced to 75 feet wide, which conforms to the FERC Wetland and Waterbody Construction and Mitigation Procedures, May 2013 version ("FERC Procedures").

Many other conditions must be taken into consideration when determining the amount of construction workspace needed to build the pipeline including agricultural land, drainage tiles, proximity to existing residences, roads, railroads, transmission line structures and wires, topography, soils, bedrock and



wetlands and waterbodies. As a result, in many locations additional temporary workspace ("ATWS") will be needed outside the nominal 100-foot corridor to manage these conditions. To accommodate this varying workspace width, a typical study corridor of 300 feet in width was employed for biological and cultural resource field surveys, with the study area expanded as needed to evaluate potential visual impacts on historic structures.

Table 1.6-1 identifies the estimated land requirements for pipeline construction and O&M. Figures that illustrate the typical right of way configurations will be appended to the end of this Resource Report [not included with this filing].

New ROW

The creation of new ROW is required for segments of the Project pipeline route that cannot be located adjacent or parallel to existing ROWs. In these areas, the nominal ROW width will be 100 feet wide, which includes the 50-foot wide permanent easement. The construction working side of the ROW will be 65 feet wide (40 feet in wetlands) from the center of the ditch to accommodate trench excavation, trench bank sloping, topsoil segregation and safe equipment mobility. The non-working or trench spoil side of the construction ROW will be 35 feet wide from the center of the ditch and will be used to store spoil and rock generated from trench excavation. This does not include ATWS necessary for site-specific construction needs. The typical cross section configuration of the ROW will appended to the next filing of this Resource Report.

Generally, the construction working side of the ROW will be 65 feet wide (40 feet in wetlands) from the center of the ditch to accommodate trench excavation, trench bank sloping and safe equipment mobility. The non-working side or spoil side of the construction ROW will be 35 feet wide from the center of the ditch and will be used to store spoil generated from trench excavation.

Pipeline Adjacent to Powerline ROWs

In areas where the proposed pipeline is parallel and adjacent to an existing electric transmission line, the construction ROW will have the same dimensions as new ROW with the outside edge of the non-working or trench spoil side offset from the centerline of the nearest conductor generally by 30 to 60 feet depending on the voltage of the transmission line. As a result, when parallel to a transmission line, the Project takes advantage of any existing clearing beyond the offset from the nearest conductor but in any case does not create an additional ROW edge. In these areas, the construction ROW width will be the nominal 100 feet, which includes the permanent easement. Generally, the construction working side of the ROW will be 65 feet wide (40 feet in wetlands) from the center of the ditch and the side used for spoil storage will be 35 feet wide from the center of the ditch. In general, the 50-foot-wide permanent easement will be 35 feet from the center of the pipe on what was the working side of the construction ROW and 15 feet from the center of the pipe on the spoil side. This does not include possible ATWS needed for site-specific circumstances.

1.6.1.1 Collocation with Existing Utility Corridors

As previously noted, the majority of the proposed pipeline (approximately 60 percent) is located within or adjacent to existing pipeline, electric transmission line, or railroad ROWs (see Section 8.4.4 of Resource Report 8)[not included with this filing]. The following is a preliminary list of the other utilities currently crossed by the NEXUS project. This list will continue to be refined as the engineering design progresses and will be updated with the next filing of Resource Report 1:

- Access Midstream (49)/M3 Midstream (30)/EV Energy (21)
- Access Midstream/TOTAL E&P USA/EnerVest Energy
- AEP Ohio
- American Electric Power Company, Inc.



- ANR Pipeline Company
- Atlas Energy
- BP
- Buckeye Partners, LP
- Caiman Energy II/Dominion
- CMS Energy
- Dominion
- Dominion East Ohio Gas
- DTE Energy
- Electrical Corridor
- Enbridge Inc.
- EnerVest Energy Partners
- First Energy
- Integrys Energy Group, Inc.
- ITC Holdings Corporation
- Kinder Morgan
- Magellan Midstream Partners/Poet
- Marathon Petroleum Company, LLC
- NiSource Inc.
- Northeast Ohio Natural Gas Corporation
- Ohio Edison
- PJM
- Somerset Gas Transmission Company, LLC
- Southern Union Company (Energy Transfer Partners, LP)
- Sunoco, Inc. (Energy Transfer Partners, LP)
- Toledo Edison
- TransCanada
- Wolverine Pipeline Company

The remainder of the pipeline that is not co-located within existing ROWs is considered greenfield pipeline. Overall, the length of the proposed pipeline that deviates from existing ROWs is a total of approximately 100 miles or approximately 40 percent of the total length of new pipeline.

NEXUS has identified ATWS and staging areas that are required to construct the pipeline in a safe and environmentally responsible manner. The locations of the ATWS and staging areas will be depicted on Alignment Sheets in Appendix 1A [not included in this filing].

The ATWS is typically required when any of the following conditions are encountered:

- Agricultural land/drainage tiles;
- Power line crossovers and existing pipeline crossovers;
- Wetland crossings;



- River/Stream crossings;
- Topsoil segregation;
- Side slope;
- Extra depth trench required;
- Shallow bedrock along location of trench;
- Road crossings;
- Parking areas;
- Disposal of excess blast rock;
- Storage and burning of tree stumps;
- Spread move-arounds; and
- Other site-specific constraints.

The extent of ATWS is determined on a site-specific basis. The additional work area is restricted to the minimum size necessary to safely construct the pipeline. In the case of wetlands and waterbodies, NEXUS will attempt to locate ATWS in accordance with the setback requirements contained in the FERC Wetland and Waterbody Construction and Mitigation Procedures ("FERC Procedures"). In certain instances, the setbacks cannot be maintained due to construction limitations, such as slope and road crossing requirements. In those cases, NEXUS will request a variance from the FERC Procedures. Resource Report 2 identifies the locations where these variances are required as well as the justification for such variances.

1.6.2 Aboveground Facilities

Table 1.6-2 summarizes the land requirements for new aboveground facilities.

1.6.3 Access Roads

Existing public and private road crossings along the proposed pipeline facilities will be quantified in future filings. For the purposes of this draft the various road numbers have been left blank. To the extent feasible, existing public and private road crossings along the proposed pipeline facilities will be used as the primary means of accessing the ROW. NEXUS will also use existing public roads near proposed compressor and regulator stations. In addition to the existing access available by the use of public roads, NEXUS has identified ____ access roads (____ of which are existing roads) on private lands that are proposed for use during construction. Of this amount, ___ access roads will be used along the mainline pipeline and ____ access roads will be used along the interconnecting pipelines. [___] access roads are proposed at the proposed new compressor station sites.

_____ of the ____ roads proposed to access the ROW during construction _____ are also proposed for permanent use for ongoing O&M following construction. _____ access roads will be utilized along the pipeline routes and [__] will be constructed as permanent access to the new compressor stations. Any improvements made to these roads will be maintained by NEXUS' operations personnel to provide continuing access to the ROW in these locations.

Table 1.6-3 identifies the locations of new and existing access roads associated with the NEXUS Project.

1.6.4 Contractor Ware Yards

Table 1.6-4 presents the land requirements for currently identified contractor ware yards proposed for temporary use during construction. Additional contractor staging areas from those shown on the Alignment Sheets may be required. NEXUS will identify contractor ware yards in the next draft of this



Resource Report. These contractor ware yards will be shown on USGS Quadrangle excerpts located in Appendix 1A.

1.7 Construction Procedures

1.7.1 Pipeline Facilities

1.7.1.1 Standard Construction and Restoration Techniques

The NEXUS Project will be constructed in compliance with applicable Federal regulations and guidelines, and the specific requirements of necessary permits (see Section 12, Permits and Approvals). Key Federal requirements and guidelines include:

- 18 CFR Part 380.15 Siting and Maintenance Requirements;
- 18 CFR Part 380 Guidelines to be Followed by Natural Gas Pipeline Companies in the Planning, Clearing and Maintenance of Right-of-Way and the Construction of Aboveground Facilities:
- 49 CFR Part 192 Transportation of Natural Gas and Other Gas by Pipeline: Minimum Federal Safety Standards;
- The Federal Energy Regulatory Commission *Upland Erosion Control, Revegetation, and Maintenance Plan* ("FERC's Plan", May 2013 version) and *Wetland and Waterbody Construction and Mitigation Procedures* ("FERC's Procedures", May 2013 version); and
- NEXUS Project, Erosion and Sediment Control Plan ("E&SCP"), provided in Appendix 1B1.

The Project facilities will be constructed and maintained in accordance with the FERC Plan and Procedures. The following sections identify the general construction procedures for routine pipeline construction, as well as the specific construction techniques that will be utilized in environmentally sensitive areas for the NEXUS Project.

- Clearing operations;
- ROW and temporary construction workspace grading;
- Trench excavation;
- Blasting (where required);
- Stringing;
- Bending;
- Welding;
- Nondestructive weld inspection;
- Weld repair;
- Coating inspection and repair;
- Lowering-in;
- Tie-ins;
- Backfilling;
- Cleaning:
- Hydrostatic testing; and



• Restoration and revegetation.

Clearing Operations

Clearing will be required for construction of pipeline facilities that traverse forested habitats. Initial clearing operations will include the removal of vegetation adjacent to the existing powerline ROWs, within the pipeline ROW, and the temporary construction workspace either by mechanical or hand cutting. The limits of clearing will be identified and flagged in the field prior to any clearing operations.

In wetlands, trees and brush will either be cut with rubber-tired and/or tracked equipment, or hand-cut. Unless grading is required for safety reasons, wetland vegetation will be cut off at ground level, leaving existing root systems intact, and the aboveground vegetation removed from the wetlands for chipping or disposal. In uplands, tree stumps and rootstock will be left in the temporary workspace wherever possible to encourage natural revegetation. Stumps will be removed from the ROW to approved disposal locations or made available to landowners upon request. Timber will be removed from the ROW to approved locations and sold for lumber or pulp, or chipped on the ROW. Brush and tree limbs will be chipped and removed from the ROW for approved disposal. Wood chips will be sold as fuel or other marketable products, spread in approved locations and used as mulch, or hauled off site for disposal.

The cleared width within the ROW and temporary construction workspace will be kept to the minimum that will allow for spoil storage, staging, assembly of materials, and all other activities required to safely construct the pipeline. Closely following clearing and before grading activities, erosion controls will be installed at the required locations as outlined in the NEXUS E&SCP (Appendix 1B1).

ROW and Temporary Construction Workspace Grading

The entire width of the construction ROW, including the temporary construction workspace, will be rough graded as necessary to allow for safe passage of equipment and to prepare a work surface for pipeline installation activities. However, as stated above, tree stumps and rootstock in upland areas will be left in the temporary workspace wherever possible to encourage natural revegetation and, unless grading is required for safety reasons, wetland vegetation will be cut off at ground level, leaving existing root systems intact. Typically, the grading of the ROW will be completed with bulldozers. Backhoes will be used in conjunction with bulldozers in areas where boulders and tree stumps require removal. A travel lane or traffic control will be maintained to allow for the passage of daily traffic.

In agricultural and residential areas, topsoil will be stripped and stockpiled separately from the subsoil during grading. There may be some areas where the construction ROW is limited and topsoil will need to be stockpiled offsite. Topsoil will be replaced with appropriate imported material as required. The mixing of topsoil with subsoil will be minimized by using topsoil segregation construction methods in wetlands (except when standing water or saturated soils are present). Rock will be removed from all actively cultivated or rotated agricultural land. The size, density and distribution of rock left in construction work areas should be similar to adjacent areas not disturbed by construction, unless otherwise approved in writing by the landowner.

Trench Excavation

A trench will be excavated to the proper depth to allow for the burial of the pipe. In general, the trench will be deep enough (approximately seven feet) to provide a minimum of three feet of cover over the pipelines and comply with the requirements of 49 CFR Part 192 of the U.S. Department of Transportation ("USDOT") regulations. Deeper burial is required in specific areas. The excavated material will be placed next to the trench so as to avoid unnecessary movement of machinery across the terrain. Should it become necessary to remove water from the trench, it will be pumped to an off-ROW, stable, vegetated upland area (where practicable) and/or filtered through a filter bag or siltation barrier. The trench will be dug by a backhoe or ditching machine.



Blasting

Geological and soils information contained in Resource Reports 6 and 7 [not included with this filing], respectively, identify the areas where shallow bedrock may be encountered at anticipated trench depths in the Project area. NEXUS anticipates that blasting may be required along segments of the proposed pipeline. In the event that un-rippable subsurface rock is encountered, blasting for ditch excavation will be necessary. In these areas, care will be taken to prevent damage to underground structures (e.g., cables, conduits, septic systems, and electric transmission tower foundations etc.) or to aboveground structures (e.g., homes, electric transmission towers, etc.) springs, water wells, or other water sources.

Blasting mats or soil cover will be used as necessary to prevent the scattering of loose rock. NEXUS will comply with all federal, state, and local regulations applying to blasting and blast vibration limits with regard to structures and underground utilities.

Stringing

Once the trench is excavated, the next process in constructing a pipeline is stringing the pipe along the trench. Stringing involves initially hauling the pipe by tractor-trailer, generally in 40-foot lengths from the pipe storage yard, onto the ROW. The pipe will be off-loaded from trucks and placed next to the trench using a sideboom tractor. The pipe joints are lined up end-to-end to allow for welding into continuous lengths known as strings.

Bending

Once the sections of pipe have been placed on the ROW, the pipe is bent as necessary so the pipe fits the horizontal and vertical contours of the excavated trench. The Bending Engineer will survey the trench to determine the location and amount of each field bend. This information is marked on each segment of pipe so the Bending Foreman can make the appropriate pipe bends. Pipe is usually bent with a hydraulic pipe-bending machine. Pipe bends will be relatively long and gradual, which must be considered when the trench is dug.

Welding

All welding is performed in accordance with American Petroleum Institute ("API") Standard No. 1104 and NEXUS specifications. The individual joints of pipe are welded together in two steps. The front-end welding crew, or pipe gang, will perform the first step. This crew will clean and align the pipe bevels in preparation for welding and place at least the first two passes in the welding process. The firing line, or back-end welders, perform the second step, completing the welds started by the front-end welders. The pipe is welded into long strings to minimize the number of welds that have to be made in the trench (tie-in welds). Gaps in the pipe welding process are often left by the welding crews at water/wetland crossings, road crossings, and other locations where access across the work area is required or when the pipe will be installed later in the construction process.

Nondestructive Weld Inspection

After welding, each weld is inspected to ensure its structural integrity is consistent with 49 CFR Part 192 of the USDOT's regulations. Radiographs or ultrasonic images are taken and processed on site for virtually instantaneous results. Those welds that do not meet the requirements established by the API Standard 1104 and NEXUS's specifications are marked for repair or replacement.

Weld Repair

The contractor may establish a weld repair crew, usually one welder and helper working independently, to follow the radiography crew to make any weld repairs that are required. All repaired and replaced welds are inspected to ensure proper repair and integrity.



Coating Inspection and Repair

The pipeline is coated to prevent corrosion. The pipe lengths will be coated (usually with a heat-applied epoxy) at a coating mill prior to being delivered to the Project. The ends of each piece are left bare to allow for welding. Once welds have been inspected and accepted, the weld area is field coated by the coating crew. Because pipeline coatings are electrically insulating, the coating is inspected using equipment that emits an electric charge to ensure there are no locations on the pipeline where there is a defect in the coating.

Lowering-In

After a pipe string has been coated and inspected, the trench is prepared for the installation of the pipeline. The trench is cleared of loose rock and debris. If water exists in the trench, the water is pumped out into a well-vegetated upland area and/or into an approved filter with the exception of wetland areas where the "push pull" installation may be required. In sandy soils, the trench is shaped to support the pipe. In areas where the trench contains bedrock, a sand bedding is placed on the bottom of the trench, and/or pads made of sandbags and/or clay are placed at regular intervals along the trench bottom to support the pipe. The lowering-in crew places the pipeline in the trench. Lowering-in is usually done with sideboom tractors.

Tie-Ins

Once the sections of pipe are lowered-in, the tie-in crew makes the final welds in the trench. Additional excavations as needed, lowering in, lining up, welding, weld nondestructive inspection and coating the final welds are accomplished by this crew.

Backfilling

All suitable material excavated during trenching will be replaced in the trench. In areas where excavated material is unsuitable for backfilling, additional select fill may be required. If the soil is rocky, the pipe is padded with relatively rock-free material placed immediately around the pipe. This material may be obtained from commercial borrow areas in the region. Where suitable, the subsoil may be mechanically screened to produce suitable padding material. Padding of the pipe is usually performed with backhoes. If padding is obtained from an offsite source, it is normally placed in the trench by front-end loaders. In no case will topsoil be used as padding material. Once the pipe is padded, the trench is then backfilled with suitable excavated subsoil material. The top of the trench may be slightly crowned to compensate for settling except for paved areas, where standard compaction methods will be employed. The topsoil is then spread across the graded construction ROW when applicable. The soil will be inspected for compaction, and scarified as necessary.

Cleaning

Once the pipeline tie-ins are completed, it is internally cleaned with pipeline "pigs." A manifold is installed on one end of the long pipeline section and a pig is propelled by compressed air through the pipeline into an open pig receiver. The purpose is to remove any dirt, water or debris that was inadvertently collected within the pipeline during installation.

Hydrostatic Testing

After cleaning, the pipeline will be pressure tested in accordance with NEXUS' requirements to ensure its integrity for the intended service and operating pressures. The pipeline is hydrostatically tested with water. The water is normally obtained from water sources crossed by the pipeline, including available municipal supply lines. It is pumped from the water source into the pipeline. The water propels a pig through the pipeline in a manner that fills the pipeline with water. Test pressure is obtained by adding water to the test section with a high-pressure pump. At the completion of the hydrostatic test, the pressure is removed from the section and the water is released from the test section by propelling the pig with air,



which forces the water from the pipeline. Additional "drying" pig runs are made, if necessary, to remove any residual water from the pipeline.

Restoration and Revegetation

The cleanup crew completes restoration and revegetation of the ROW and temporary construction workspace. In general, every effort will be made, weather and soil conditions permitting, to complete final cleanup (including final grading) and installation of permanent erosion control measures within 20 days after the trench is backfilled. These restoration activities will be completed in residential areas within 10 days of backfilling. Specific restoration requirements defined by regulatory agencies will be utilized within 100 feet of waterbodies. In conjunction with backfilling operations, any woody material and construction debris will be removed from the ROW. The ROW will be fine-graded to prepare for restoration. Permanent slope breakers or diversion berms will be constructed and maintained in accordance with the FERC Plan. Fences and stone walls will be restored or repaired as necessary.

Revegetation will be completed in accordance with permit requirements and written recommendations on seeding mixes, rates, and dates obtained from the local soil conservation authority or other duly authorized agency and in accordance with the NEXUS Gas Transmission Project E&SCP. The ROW will be seeded within six (6) working days following final grading, weather and soil conditions permitting. Alternative seed mixes specifically requested by the landowner or required by agencies may be used. Any soil disturbance that occurs outside the permanent seeding season or any bare soil left unstabilized by vegetation will be mulched in accordance with the FERC Plan and the NEXUS E&SCP.

1.7.1.2 Waterbody Construction Methods

To minimize potential impacts, waterbodies, streams and rivers will be crossed as quickly and as safely as possible. Adherence to the FERC's Procedures will ensure stream flow will be maintained throughout construction. Most stream crossings will be completed using conventional backhoe type equipment and dry crossing techniques. The open-cut crossing may be used in some instances. Proposed waterbody crossing methods for each waterbody crossed by the proposed pipeline will be provided in Resource Report 2 [not included with this filing] and is described in more detail in NEXUS' E&SCP.

Unless dry at the time of crossing, minor streams (those less than 10 feet wide) containing cold water or significant warmwater fisheries will be crossed using a dry crossing method. The dry crossing method will involve installation of a flume pipe(s) and/or dam and pump prior to trenching to divert the stream flow over the construction area and allow trenching of the stream crossing in drier conditions isolated from the stream flow. Spoil removed during the trenching will be stored away from the water's edge and protected by sediment containment structures. Pipe strings will be fabricated on one bank and either pulled across the stream bottom to the opposite bank, floated across the isolated portion of the stream, or carried into place and lowered into the trench. Where these methods are employed, ATWS areas will be required for assembly of the pipe strings and spoil storage areas. Fisheries resources along the route will be discussed in Resource Report 3[not included with this filing].

The open-cut crossing method will involve excavation of the pipeline trench across the waterbody, installation of the pipeline, and backfilling of the trench with no effort to isolate flow from construction activities. Excavation and backfilling of the trench will be accomplished using backhoes or other excavation equipment working from the banks of the waterbody. Trench spoil will be stored at least 10 feet from the banks (topographic conditions permitting). A section of pipe long enough to span the entire crossing will be fabricated on one bank and either pulled across the bottom to the opposite bank, floated across the stream, or carried into place and submerged into the trench. The trench will then be backfilled and the bottom of the watercourse and banks restored and stabilized. Sediment barriers, such as silt fencing, staked straw bales, or trench plugs will be installed to prevent spoil and sediment-laden water from entering the waterbody from adjacent upland areas.



Except where reasonable alternative access is available, temporary construction equipment crossings will be installed across all waterbodies to gain access along the ROW for construction operations. Equipment crossings will be carefully installed after clearing to minimize streambed disturbance and downstream siltation. Where culverts are used, devices will also be placed at the outlet to prevent scouring of the stream bottom. After such equipment crossings are established, construction equipment will not be permitted to drive through the waterbody for access, and the equipment crossings will be removed once access in the area is no longer needed. Only the equipment necessary to construct the crossing and install the pipe will be allowed to work in the waterbody. After clearing activities, construction equipment must cross waterbodies on bridges consisting of one of the following devices:

- Clean rock fill and culverts;
- Equipment pads, wooden mats, and/or culverts; or
- Flexi-float or portable bridge.

To facilitate pipeline construction across waterbodies, ATWS may be needed adjacent to the waterbody to assemble and fabricate the length of pipe necessary to complete the crossing. This work area is in addition to the standard construction ROW and will be located at least 50 feet away from the stream banks in cleared areas (except in actively cultivated or rotated agricultural lands and other disturbed areas) and, as required by regulatory agencies, at least 100 feet away from the stream banks in forested areas, topographic conditions permitting. If topographic conditions do not permit (e.g., a 50- or 100-foot setback), then these areas will be located at least 10 feet away from the water's edge. In several instances the setbacks could not be maintained due to construction limitations, such as slope and road crossing requirements. In these cases, NEXUS is requesting variances from the FERC Procedures. Table 2.4-2 in Resource Report 2[not included with this filing] identifies the locations where variances are required.

Vegetation will not be cleared between the ATWS area and the waterbody. The work area will be limited in size to the minimum area necessary to safely construct the waterbody crossing and accommodate any stockpile of excavated material from the trench and the prefabricated pipeline crossing section.

Typically, for extra workspace on minor and intermediate stream crossings, 50 feet of additional width may be used for a length of 100 feet on either side of the waterbody starting at the edge of the 50-foot setback. However, the size of ATWS areas can vary based on site-specific conditions and length of the pipe section for the crossing.

Horizontal Directional Drill

NEXUS is currently performing geotechnical investigations to support the engineering design of potential horizontal direction drill ("HDD") crossings of certain sensitive water resources located along the proposed pipeline route.

The HDD method involves boring a pilot hole beneath the waterbody to the opposite side of the resource and then enlarging the hole with one or more passes of a reamer until the hole is the necessary diameter. A prefabricated pipe segment is then pulled through the hole to complete the crossing. A successful drill generally results in no impact on the stream bed or banks of the waterbody being crossed.

NEXUS is in the process of evaluating site specific conditions along with geotechnical information to design the best crossing method for each required resource crossing. If the HDD crossing method is selected, detailed engineering drawings will be prepared in addition to contingency plans outlining procedures to be implemented in the case of drill failure or the inadvertent release of drilling fluid. NEXUS will submit these plans with its next filing of Resource Report 1.

1.7.1.3 Wetland Construction Methods

Construction across wetlands will be performed in accordance with the FERC Procedures and the NEXUS Project E&SCP, unless an approved variance is obtained. Construction methods will minimize the extent and time that construction equipment operates in wetland areas. When wetland soils are



inundated or saturated to the surface, the pipeline trench will be excavated across the wetland by equipment supported on wooden swamp mats to minimize the disturbance to wetland soils. In wetlands that have firm substrates, and are unsaturated and not frozen, the top 12 inches of wetland soil over the trenchline will be segregated. Trench spoil will be temporarily piled in a ridge along 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 excavated, where practicable the pipeline will be assembled in a staging area located in an upland area. If dry conditions exist within the wetland, the pipe fabrication will occur in the wetland. For inundated or saturated wetland conditions, pipe strings will be fabricated on one bank and either pulled across the excavated trench in the wetland, floated across the wetland, or carried into place and submerged into the trench. After the pipeline is lowered into the trench, wide track bulldozers or backhoes supported on swamp mats will be used for backfill, grading, and final cleanup. This method will minimize the amount of equipment and travel in wetland areas. If conditions allow, such as low flow or unsaturated soils, normal cross-country construction practices will be used in wetlands. A complete description of construction methods can be found in the NEXUS Project E&SCP, included as Appendix 1B.

ATWS may be needed adjacent to specific wetlands to facilitate the pipeline crossing. The staging areas are in addition to the typical construction ROW and may be used for the assembly and fabrication of the pipe section that will cross the wetland area. These work areas will be located at least 50 feet away from the wetland edge, topographic and other site specific conditions permitting. If topographic conditions do not permit a 50-foot setback, these areas will be located at least 10 feet away from the wetland. In these instances, the setbacks could not be maintained due to construction limitations, such as slope and road crossing requirements. In those cases, NEXUS is requesting variances from the FERC Procedures. Resource Report 2[not included with this filing] identifies the locations where ATWS wetland setback variances are required.

The size of ATWS required at wetland crossings is based on the wetland size, water content of wetland soils (or presence of standing water), and other construction constraints. Under no circumstances will vegetation be cleared between the work areas and the wetland. The work area will be limited to the minimum size necessary to safely construct the wetland crossing. Restricting the work area in this manner will minimize wetland impacts associated with pipeline construction.

NEXUS has prepared a Spill, Prevention, Control and Countermeasure Plan ("SPCC Plan") to address the handling of construction fuel and other materials. The SPCC Plan provides a set of minimum requirements to be used by the contractor in developing their own Project-specific SPCC Plan. NEXUS' SPCC Plan is included in the NEXUS Gas Transmission Project E&SCP (see Appendix 1B1). Except in circumstances specified in the SPCC Plan, potential impacts to water quality will be avoided while work is being performed in wetlands and other waterbodies by implementing the following measures:

- Construction materials, fuels, etc. will not be stored within wetlands or within 100 feet of any stream or wetland system, except under limited, highly controlled circumstances;
- Construction equipment will not be refueled within wetlands or within 100 feet of any stream or wetland system, except under limited, highly controlled circumstances and under direct supervision of the Environmental Inspector;
- Construction equipment will not be washed in any wetland or watercourse; and
- Equipment will be well maintained and checked daily for leaks.

1.7.1.4 Residential Areas

Residences within 50 feet of construction work areas are identified in Resource Report 8 [not included with this filing]. Special care will be taken in residential areas to minimize neighborhood and traffic disruption and to control noise and dust to the extent practicable.



In general, the following measures will be taken in residential areas:

- Fence the boundary of the construction work area to ensure construction equipment, materials and spoil remain within the construction ROW;
- Preserve all mature trees and landscaping where practical, consistent with construction safety;
- Ensure pipe is welded and installed as quickly as reasonably possible consistent with prudent pipeline construction practices to minimize construction time affecting neighborhoods;
- Backfill the trench as soon as the pipe is laid or temporarily steel plate the trench; and
- Complete final cleanup (including final grading) and installation of permanent erosion control measures within 10 days after the trench is backfilled, weather conditions permitting.

Site-specific construction plans will be developed where residential dwellings are within 25 feet of construction workspace and filed prior to construction. These plans will show the construction area to be disturbed and safety measures that will be implemented, such as construction fencing, access provisions and use of steel plates. Special attention paid to these areas will ensure the safety and convenience of residences in the Project area. Additional details regarding the construction techniques to be used in residential areas will be provided in Resource Report 8 [not included with this filing].

1.7.1.5 Rugged Topography

Permanent trench breakers consisting of sandbags, gravel, cement, or cement-filled sacks will be installed in the trench over and around the pipe in areas where sloping terrain presents erosion potential. Temporary trench plugs, usually composed of compacted earth or other suitable material with low permeability, will be used to protect waterbodies and wetlands and to minimize channeling of groundwater along the ditch line during construction.

If side slopes requiring special construction are encountered, the following techniques will be used. During grading, the upslope side of the pipeline ROW will be cut. The material removed from the cut will be used to fill the downslope edge of the ROW in order to provide a safe and level surface from which to operate the heavy equipment (two-tone construction). Side hills may require additional temporary workspace downslope in order to accommodate the fill material. During grade restoration, the spoil will be placed back in the cut and compacted. Springs or seeps encountered during excavations along sidehills will be carried downslope through appropriately sized conduits (i.e., PVC pipe and/or gravel French drains). These conduits will be installed as part of restoration.

1.7.1.6 Active Agricultural Land

Topsoil will be segregated in agriculturally cultivated or rotated agricultural lands and pasturelands. In these areas, topsoil will be stripped and placed separate from subsoil when excavating the trench. Excess rock will be removed from at least the top 12 inches of soil to the extent practical. The size, density and distribution of rock left in construction work areas should be similar to adjacent areas not disturbed by construction, unless otherwise approved in writing by the landowner. Additional temporary workspace may be required when topsoil segregation is required. After the pipe has been lowered into the ditch, subsoil is used for backfilling and topsoil is then spread across the graded ROW. Equipment traffic will be strictly controlled within agricultural land to minimize rutting or compaction. Soil compaction will be treated, as necessary, in conjunction with the FERC Plan.

1.7.1.7 Road Crossings

Constructing the NEXUS Project across public and private roadways, using either conventional open cut or road bore methods, will be based on site conditions and road opening permit requirements. Public road crossings associated with the Project are identified in Resource Report 8. Roadway opening permits will be obtained from applicable state and local agencies. Permit conditions will ultimately dictate the day-to-day construction activities at road crossings.



Prior to construction, the "Call Before You Dig" or "One Call" system, or state or local utility operators, will be contacted so they can mark their facilities that may intersect, or be in close proximity to, the proposed pipeline. The contractor may elect to excavate the utilities to confirm their location.

Construction will be scheduled for work within roadways and specific crossings so as to avoid commuter traffic and schedules for school buses to the greatest extent practical. Appropriate traffic management and signage will be set up and necessary safety measures will be developed in compliance with applicable permits for work in the public roadway. Arrangements will be made with local officials to have traffic safety personnel on hand during periods of construction. Provisions will be made for detours or otherwise to permit traffic flow.

Roadway crossing construction will generally occur using one of the following methods:

Open Cut – This method is used on driveways and roads with low traffic densities where pipeline installation activities will not adversely impact the general public. The first step is to install the proper traffic control devices. Traffic will have to be detoured around the open trench during the installation process. For driveways and small roads, a temporary bypass roadway may be constructed. Multi-lane roads may require the closure of one lane at a time with traffic diverted to the other lane(s). The pipeline crossing is installed one lane at a time. As the pipe is installed, successive lanes are alternately taken out of service for pipe installation until the crossing is completed. Another option is to detour traffic around the work area through the use of adjacent roadways.

If the roadway surface is paved, pavement over the proposed trench is cut, removed, and properly disposed of. The trench is excavated using a backhoe and the pipe is installed (welded, radiographed and coated). The trench is then backfilled. A 15:1 sand to concrete mix called flowable fill, or Controlled Density Fill, may be used. The backfill must be compacted properly to reduce stresses on the pipeline and to ensure the roadway supports the traffic load without settling. The existing trench subsoil may be used in the backfill if it can be compacted properly and is authorized by the permitting agency. In most cases, backfill material will be obtained from an outside source and hauled in. The material used and methods of placement will comply with the requirements of the permitting agency. If the roadway surface was paved, the paving will be properly restored in accordance with the permit requirements.

- <u>Bored</u> On roads with higher traffic densities and for railroads where service must be maintained, the pipeline may be installed by boring a hole under the road or railway. Specialized boring equipment is used. The soil and or rock are bored by a drill that contains a cutting head which cuts through the soil. Dummy casing which is slightly larger in diameter than the pipeline, is installed immediately behind the cutting head. An auger is placed inside the pipe to remove the cuttings. When completed, the bored hole is slightly larger than the outside diameter of the pipeline to be installed. Once the bore is completed, the pipeline section is welded to the boring pipe and pulled into place and the boring pipe is removed. Any voids between the pipeline and the subsoil are filled with grout (a sand-cement mix) to prevent settlement of the roadway surface or railroad track. This method allows the road or railroad to remain in service while the installation process takes place and eliminates the potential for trench settlement.
- Cased The procedure for a cased crossing is similar to a bored crossing with one exception. A section of steel casing pipe, which is several inches in diameter greater than the pipeline, is bored into place. Casing sections are welded together to ensure water does not enter the casing. Once the casing pipe has been installed, the pipeline is pulled through the casing. To prevent potential corrosion of the pipeline due to contact between the pipeline and the casing, the pipeline is insulated from the casing pipe, either through the use of plastic insulators spaced along the pipeline or the pipeline is coated with a layer of concrete. To prevent water from entering the casing, the ends of the casing are sealed with rubber or polyethylene seals. The space between the casing and the pipeline is vented to the atmosphere through the use of sections of small



diameter pipe (vent pipe), which are welded to the casing ends and run from the casing to several feet above the surface of the ground.

- Casing pipe is installed when required by permit or when there is a likelihood of
 encountering rock during the boring. Generally, crossings of major state highways and
 certain railroads are installed with casings.
- <u>Hammer technique</u> In addition to the boring techniques described above, pipeline contractors have been using another technique to complete road crossings. This technique consists of driving casing pipe that is slightly larger in diameter than the proposed pipeline under the roadway with a horizontal air operated reciprocating hammer. The casing pipe is placed against the end of the trench near the edge of the roadway and driven under the paved road. Once in place, the material inside the casing is augured out and the pipe is installed through the casing. The casing pipe is then removed while grout is placed around the pipeline. Where required, the casing pipe may be left in place as casing.

Expanded workspace at road crossings will be based on the size of the road crossing and other construction constraints.

Crossings of private roadways will be coordinated with residents to minimize access impacts. In those areas where the excavation of a longer length of trench will not pose a safety problem, the pipeline will be installed using the standard open trench method. Open trenches will either be fenced or covered with steel plates during all non-working hours. Steel plates will be kept on site at each crossing so that a temporary platform can be made across the trench as required (e.g., emergency vehicles).

All roadway surfaces will be quickly restored to the specifications of the local Department of Public Works or the Ohio and Michigan Departments of Transportation as outlined in the permit requirements. Roadway markings and striping will be added as necessary.

1.7.1.8 Rock Removal and Blasting

Based on NEXUS' experience, field reconnaissance and review of soils and geologic maps of the Project area, shallow bedrock (less than 5 feet from the surface) may be encountered at various locations along the Project alignment.

Rock encountered during trenching will be removed using one of the following techniques. The technique selected is dependent on the relative hardness, fracture susceptibility, and expected volume of the material. Techniques include:

- Conventional excavation with a backhoe:
- Ripping with a dozer followed by backhoe excavation;
- Hammering with a pointed backhoe attachment followed by backhoe excavation;
- Blasting followed by backhoe excavation; or
- Blasting surface rock prior to excavation.

The NEXUS Project Blasting Plan [to be filed with next version of RR 1] will identify the impact avoidance and minimization measures employed by NEXUS if blasting is determined necessary and will contain special provisions that will be taken to monitor and assess blasting within 150 feet of private or public water supply wells, should that situation arise.

Large rock not suitable for use as backfill material will either be windrowed along the edge of the ROW, with permission from the landowner, used to construct ATV barriers across the ROW, or buried on the ROW. NEXUS will negotiate with landowners and will obtain permission to permanently store rock along, over, through or across the ROW. Otherwise the excess rock will be hauled off-site and disposed of in an appropriate manner. NEXUS is evaluating the need for specifying blast rock disposal areas in the



Project vicinity. Any remaining rock will be used to backfill the trench to the top of the existing bedrock profiles.

1.7.2 Aboveground Facilities

The Project aboveground facilities will be constructed in compliance with the same federal regulations and guidelines as the pipeline facilities, and in accordance with the specific requirements of applicable federal and state approvals. The construction and restoration methods and procedures in the FERC Plan and Procedures and the Project E&SCP will be followed, as applicable, for the aboveground facilities as well. Generally, aboveground facilities are sited to avoid cultural and natural resource impacts to the greatest extent feasible. Following is a brief description of the typical construction sequence for the new compressor stations.

1.7.2.1 Compressor Stations

A natural gas compressor station is similar to a pump station on a water line or other liquid system in that it provides the pressure in the pipeline to move the gas. The general construction procedures consist of clearing and grading the site, installation of foundations, installation of the piping, installation of the structures and machinery, start-up, testing and final clean up and stabilization of the site. Construction of the compressor stations is expected to begin in the first quarter of 2017 and extend into the fourth quarter of 2017.

Clearing and Grading

The first activity to take place at a new compressor station site is to clear the existing vegetation and establish a rough access road to the site. Only those areas required to install the structures, piping and roads, including sufficient workspaces, will be cleared. Some clearing will also be needed to install the perimeter security fencing. Stumps will be removed and either disposed of appropriately on site or hauled to an approved off-site disposal location. Commercial power and telephone will be established at the site as soon as possible. The cleared areas of the site will then be graded, if necessary, to provide level surfaces for the building foundations and work areas. The permanent site roadways and parking areas will be graded at this time as well. Large rocks dislodged during grading or other excavation will be properly disposed of on site or hauled off site for disposal in an approved area. Installation of various erosion and sedimentation controls will begin during the initial clearing of the site. These may take many forms and will be installed and maintained in accordance with the FERC Plan and Procedures and the NEXUS Project E&SCP.

Foundations

Once the building sites have been cleared and graded, excavation will begin for the installation of building foundations and pipe supports. Generally, the foundation for the compressor building requires a significant mass of reinforced concrete to provide a stable support for the operating machinery. The area for the foundations must be excavated below the prevalent frost line for the site, adequate forms and reinforcing bars are installed and high strength concrete is poured to the appropriate levels. Rigid controls on concrete quality and installation procedures ensure that a suitable foundation is obtained. Blasting may be required at some compressor station locations to install foundations and underground piping.

Piping

Installation of the various piping systems will begin at about the same time as the foundation work. Trenches will be dug for the underground portions of the piping. The pipe will be welded, x-rayed, coated, and placed in the trench and backfilled. Some portions of the station piping will occur aboveground. Any aboveground piping will be installed on concrete or metal pipe supports and painted. Acoustic insulation may be installed on some of the piping for noise control. Some of the piping, valves and fittings are typically fabricated off-site at a fabrication shop and then transported to the site. As major



parts of the piping are completed, each will be hydrostatically tested to ensure its integrity. Test water is usually trucked to the site for the testing and will be discharged to the stormwater detention system at each site. Dewatering is performed with proper erosion and sedimentation controls as set forth in the FERC Plan and Procedures and the NEXUS Project E&SCP. Electrical conduit systems will be installed during this period as well as domestic water and septic systems.

Structures and Machinery

Once the foundations have been completed and cured sufficiently, installation of the buildings and machinery for the station may begin. This is a highly coordinated activity as the machinery, buildings and piping are all installed during the same time period. Various piping and electrical conduit systems are connected once the machinery is set. Electrical wiring is installed for power and instrumentation. Domestic water and septic systems will be connected to the buildings as they are completed.

Start-up and Testing

As the various systems and subsystems are completed, they will be tested and calibrated for proper operation. Use of new computerized systems will allow much of the testing to proceed before gas is received at the site. Actual start-up of the compressor units will commence once the new facilities are tested and tied into the existing pipeline.

Final Clean up and Stabilization

Clean up and stabilization of the station yards will be an ongoing process throughout construction. Sections of the compressor station yards will be final graded, fertilized, seeded and mulched as work is completed and as provided in the FERC Plan and Procedures and the Project E&SCP. Permanent erosion controls will be installed on a similar basis. It is anticipated that most of final stabilization will be complete prior to final testing and start-up of the compressors.

1.8 Environmental Training for Construction

Consistent with FERC guidelines, environmental training will be given to NEXUS' personnel and to contractor personnel whose activities may impact the environment during pipeline construction (training protocol and content are outlined in the Project E&SCP, Appendix 1B1). The level of training will be commensurate with the type of duties of the personnel. All construction personnel from the chief inspector, environmental inspector, craft inspectors, and contractor job superintendent to loggers, welders, equipment operators, and laborers will be given the appropriate level of environmental training. The training will be given prior to the start of construction and throughout the construction process, as needed. The training program will cover the FERC Plan and Procedures, Project-specific permit conditions, company policies, cultural resource procedures, threatened and endangered species restrictions, the Project E&SCP, the SPCC Plan, National Pollutant Discharge Elimination System ("NPDES") Stormwater Plan, and any other pertinent information related to the Project. In addition to the environmental inspectors, all other construction personnel are expected to play an important role in maintaining strict compliance with all permit conditions to protect the environment during construction.

1.9 Construction Schedule and Work Force

The projected in-service date for the NEXUS Project is November 1, 2017. Construction of Project facilities is expected to start in the winter of 2016 and will be completed in November of 2017. Table 1.9-1 provides a preliminary construction schedule.

1.10 Operation and Maintenance

NEXUS will operate and maintain the newly constructed pipeline facilities in the same manner as it currently operates and maintains its existing system. The pipeline will be patrolled on a routine basis and personnel well-qualified to perform both emergency and routine maintenance on interstate pipeline facilities will handle emergencies and maintenance.



The following sections provide specific detail on standard O&M procedures for cleared areas, erosion control and periodic pipeline and ROW patrols.

1.10.1 Erosion Control

Evidence of post-construction soil erosion or sedimentation on the pipeline ROW will be reported to the local operations supervisor. These reports may originate from NEXUS personnel performing routine patrols or from landowners. Prompt corrective measures will be performed as needed in accordance with the Project E&SCP.

1.10.2 Pipeline and ROW Patrols

During periodic pipeline and ROW patrols, all permanent erosion control devices installed during construction will be inspected to ensure that they are functioning properly. In addition, attention will be given to:

- Erosion and wash-outs along the ROW;
- Performance of water control devices such as diversions;
- Condition of banks at stream and river crossings;
- Fallen timber or other threats to the pipeline;
- General health of shrubs and other vegetation planted during construction; and
- Any other conditions that could endanger the pipeline.

The local operations supervisor will be notified of any conditions that need attention. Significant conditions will be reported to the pipeline owners. Corrective measures will be performed as needed.

1.11 Future Plans and Abandonment

At this time, NEXUS has not identified any specific plans for future expansion or abandonment of the facilities proposed in this docket. If additional demand for natural gas requires future expansion, NEXUS will seek the appropriate authorizations from FERC. When and if an application is filed, the environmental impact of the new proposed facilities would be examined.

1.12 Public-Landowner/Agency Consultation

NEXUS began advising potential stakeholders, government officials, and other interested persons about the Project in September 2014 through letters and individual meetings. NEXUS has contacted officials at the federal, state, and local governments, including congressional delegations, state legislators, county commissioners, and local elected officials. As further described in the following sections, NEXUS has also met with members of the public through voluntary public outreach efforts.

A list of the other potential stakeholders that NEXUS has identified and a list of government officials contacted is included as Appendix E of the Public and Agency Participation Plan (Appendix 1C1). NEXUS will continue its ongoing efforts to identify and contact other potential stakeholders and interested persons, and updates to Appendix 1C1 will be submitted to Commission Staff, accordingly.

1.12.1 Public Officials Contacts

NEXUS representatives initially contacted federal, state and local public officials in September 2014 regarding the proposed Project. Additionally, NEXUS has held face to face meetings with public officials along the route and attended various county commission meetings to provide updates.

1.12.2 Landowner Contacts

Proposed new Project facilities will affect portions of 11 counties in Ohio and three counties in Michigan. The proposed Project's 600-foot study corridor will affect approximately 3,479 tracts along the pipeline



portion of the Project. To date, these landowners have been contacted, or multiple attempts have been made at making contacts by NEXUS. These communications have included a Project introduction letter, a letter requesting survey permission, individual discussions with NEXUS's representatives, and site visits.

NEXUS began communicating with landowners within the 600-foot study corridor in August 2014, and landowner notification letters and survey permission letters were mailed to all identified affected landowners. To date, NEXUS has been granted survey permission on 2,552 tracts, which constitute 73 percent of the proposed Project right-of-way required to be surveyed. Multiple locations for each of NEXUS's four new Compressor Stations are currently being vetted. Once preferred sites have been identified, affected landowners at these locations will be contacted about the proposed facilities.

NEXUS hosted a total of seven voluntary informational meetings for stakeholders in the vicinity of the proposed Project in Ohio in October 2014. Two additional voluntary informational meetings were held in the vicinity of the proposed Project in Michigan in November 2014. Landowners affected by the survey study corridor were sent invitations to attend the respective meetings. The voluntary informational meetings were set up similar to open house meetings, with subject matter experts available in the areas of surveying, construction, environmental impacts, regulatory affairs, state and federal relations, and right-of-way activities. Aerial imagery mapping identifying impacted tracts by landowner were available to allow for site specific discussion between the project team and interested stakeholders.

Attendees were encouraged to ask general questions about the Project scope, schedule, noise levels, and safety and tract-specific questions around Project impacts. All questions were addressed during the informational meetings to the extent possible and any follow-up actions were tracked. To maximize landowner participation, all landowner Informational Meetings were held from 5:00 p.m. to 7:30 p.m. The dates and locations of the Informational Meetings are summarized below:

•	October 7, 2014	Firelands Elementary School, Oberlin, Ohio (Lorain County)
•	October 8, 2014	Stark State College, North Canton, Ohio (Columbiana, Stark, Summit, & Carroll Counties)
•	October 9, 2014	Medina Community Rec. Center, Medina, Ohio (Medina & Wayne Counties)
•	October 13, 2014	Swanton High School, Swanton, Ohio (Fulton & Lucas Counties)
•	October 14, 2014	Margaretta Elementary School, Castalia, Ohio (Erie County)
•	October 15, 2014	Terra Community College, Fremont, Ohio (Sandusky County)
•	October 16, 2014	Owens Community College, Perrysburg, Ohio (Wood County)
•	November 12, 2014	Lincoln High School, Ypsilanti, Michigan (Washtenaw County)
•	November 13, 2014	Adrian High School, Adrian, Michigan (Lenawee County)

1.12.3 Agency Consultations

In addition to its public outreach efforts with landowners and local officials, NEXUS has been conducting an extensive planning and consultation process with Federal, state and local regulatory agencies, resource agencies and other groups having a stake in the Project. The consultation process involved briefings, meetings, letter requests for resource information, and telephone discussions and emails. This section provides a brief description of the more significant agency and stakeholder consultations that have occurred to date.

Threatened and Endangered Species Consultations

As required under Section 7 of the U.S. Endangered Species Act ("ESA") and the Endangered Species Acts of Ohio and Michigan, NEXUS has initiated informal consultations with Federal and state resource



agencies to update the known locations of federal- or state-listed threatened or endangered species and species of special concern, if any, that could potentially be affected by construction or operation of the Project. In most cases, responses have been received and follow-up consultations, meetings and field visits have occurred. Copies of agency correspondence received to date is provided in Appendix 1C1. NEUXS is in the process of preparing species-specific survey protocols for agency review and comments prior to implementation in the spring/summer of 2015.

Interagency and Other Review/Resource Agency Meetings

NEXUS has conducted eight agency meetings to date to introduce the Project to agency representatives and to initiate communications regarding upcoming field surveys. NEXUS also informed agencies of its intent to use the FERC's pre-filing process and discussed the anticipated timeline and filing requirements for various permit applications and how they relate to the FERC's NEPA compliance process. The following agency introductory meetings have been conducted to date:

•	USFWS, Columbus Ohio Field Office	October 7, 2014
•	Michigan State Historic Preservation Office	October 8, 2014
•	Ohio Department of Natural Resources	October 14, 2014
•	Ohio State Historic Preservation Office	October 16, 20 14
•	Michigan Department of Natural Resources	November 3, 2014
•	USFWS Michigan Field Office	November 12, 2014
•	Ohio Environmental Protection Agency	December 17, 2014
•	U.S. Army Corps of Engineers; Buffalo, Huntington,	January 14, 2015
	Pittsburg Districts and Michigan Department of	

NEUXS expects that agency coordination will be ongoing throughout the development process. NEXUS will be including a list of those agencies that have agreed to be participants in the FERC NEPA Pre-Filing Process into the next filing of Resource Report 1.

1.13 Permits and Approvals

Environmental Quality

Construction contractor(s) engaged by NEXUS will be required to observe and comply with all applicable Federal, state and local laws, ordinances, and regulations that apply to the conduct of the work. During the performance of the work, contractors will be required to comply with the Minimum Federal Safety Standards adopted by the USDOT under the Natural Gas Pipeline Safety Act of 1968, as amended, Occupation Safety and Health Administration ("OSHA") guidelines, and NEXUS' own internal standards.

Other safety construction codes and regulations may be enacted or adopted by duly constituted government agencies and bodies having jurisdiction over the locations where the work is to be performed. The contractor(s) will be required to observe and abide by all provisions that are applicable.

Notwithstanding anything to the contrary set forth in this section, nothing stated herein shall be construed to indicate that any state, regional, or local agency referred to has the power to impose any requirement inconsistent with federal law or to refuse to issue or to unreasonably delay the issuance or processing of any state, regional, or local permit, license, certificate, approval, review, or other requirement; nor shall this document be construed to limit NEXUS' legal rights under the NGA (15 U.S.C. § 717, et seq.), Pipeline Safety Improvement Act (49 U.S.C. §§ 60101, et seq.), or the United States Constitution, including, but not limited to, the Supremacy Clause and the Commerce Clause.

The construction, operation, and maintenance of the Project will require multiple permits and regulatory approvals from various federal, state, and local agencies, as well as consultations with Native American tribes and other interested parties. Consultations have been initiated with the several agencies as discussed in Section 1.12.3. Consultations with these and other agencies will continue throughout the



Project review and permitting process. The applicable federal, state, and local permits and approvals, responsible agencies, filing status, and schedule for these permits and approvals are summarized in Table 1.13-1.

1.14 Status of Field Surveys

NEXUS has completed required wetland and waterbody field surveys on approximately 62 percent of the proposed pipeline route and cultural resource surveys have been completed on approximately 53 percent of the proposed route. In addition, all four of the proposed compressor station sites have been field surveyed for cultural and biological resources. Field surveys will continue when weather permits in the spring of 2015. NEXUS will also continue to engage Federal and state resource agencies to identify known locations of federal- or state-listed threatened or endangered species and species of special concern that could potentially be affected by construction or operation of the Project. A summary of the field survey status is presented below.

1.14.1 Biological Field Surveys

NEXUS is conducting wetland and waterbody field surveys within a 300-foot-wide study corridor centered on the proposed pipeline centerline and along access roads and aboveground facilities located outside of the pipeline study corridor. Approximately 62 percent of the total Project route has been surveyed for wetland and waterbodies and a total of 220 waterbody and 160 wetland crossings have been identified to date. Currently, NEXUS is performing geotechnical investigations and is evaluating the engineering feasibility of implementing the HDD crossing method for a number of waterbody crossings along the route.

Based on consultations with the U.S. Fish and Wildlife Service ("USFWS"), Ohio Department of Natural Resources ("ODNR"), Michigan Department of Natural Resources ("MDNR"), Michigan Natural Features Inventory ("MNFI") the Project lies within the range of the Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*). Indiana bat is a state- and federally-listed endangered species, and the northern long-eared bat is a candidate for Federal listing as endangered and is likely to be formally listed prior to construction of the NEXUS project in 2017. NEXUS, in consultation with USFWS, ODNR, MDNR, and MNFI, and is preparing a detailed, Project-specific field survey protocol that will be submitted to applicable state and Federal agencies for review and approval prior to implementation in the spring of 2015. It is anticipated that surveys will be completed in accordance with the approved protocols for the entire Project area by August 2015.

Consultations with USFWS, ODNR, MDNR, and MNFI are ongoing, and it is likely spring 2015 field surveys will include habitat assessments for a number of additional species identified by agencies.

1.14.2 Cultural Field Surveys

Preliminary cultural resources background research and literature file reviews were performed at the Ohio and Michigan State Historic Preservation Offices ("SHPOs") during the summer and fall of 2014 and approximately 115.2 miles (53 percent) of identification-level field investigations have been completed to date for the NEXUS Project.

According to the available data reviewed to date, there are 729 archaeological sites recorded within one mile of the proposed centerline of the Nexus Project pipeline corridor. Field surveys for archaeological resources have been completed within a 300-foot-wide study corridor along approximately 53 percent of the proposed pipeline route. Preliminary reconnaissance has also been completed for the proposed compressor station sites and compressor station alternative sites. A total of 60 sites have been identified within the Project study corridor and compressor station alternative sites. Fifty-seven of these sites will not be recommended as eligible for listing in the National Register of Historic Places ("NRHP"). Three sites are potentially NRHP eligible and recommended for avoidance or further evaluation. The architectural survey of the Project route will be begin in spring 2015; consequently no architectural resources have yet to be recorded or revisited within the visual area of potential effect.



1.15 Non-Jurisdictional Facilities

Non-jurisdictional facilities are those facilities related to the Project that are constructed, owned, and operated by others that are not subject to FERC jurisdiction. Non-jurisdictional facilities associated with the Project include the proposed construction and operation of new compressor units at two existing DTE compressor station facilities in Michigan. All permitting for the construction and operation of these facilities will be the responsibility of DTE.

In addition, the M&R stations and mainline valves proposed for the NEXUS Project will require connection to the local electrical distribution grid. The facilities will be sited near existing public roads with electric distribution lines. Therefore, short connections to existing electrical distribution lines will be required.

In order to determine whether non-jurisdictional components or facilities associated with a proposed project require environmental review by FERC, a four factor test is applied using the criteria specified in 18 C.F.R. §380.12(c)(2)(ii).⁴ In short, these criteria are intended to determine whether there is sufficient federal control and responsibility over the subject component or facility as a whole to warrant environmental analysis. These factors to be considered include:

- i. Whether the regulated activity comprises "merely a link" in a corridor type project, e.g., a transportation or utility transmission project;
- ii. Whether there are aspects of the non-jurisdictional facility in the immediate vicinity of the regulated activity that affect the location and configuration of the regulated activity;
- iii. The extent to which the entire project would be within FERC's jurisdiction; and
- iv. The extent of cumulative federal control and responsibility.

NEXUS has evaluated the four factors to be considered by FERC to determine whether an environmental analysis of the non-jurisdictional facilities by FERC is warranted. NEXUS has concluded that the proposed construction and operation of the new compressor units at two existing DTE compressor station facilities in Michigan should not be included as part of FERC's environmental analysis solely on the basis of the four factor test. The regulated activity is merely a link in a corridor type project, and the new compressors do not determine the location and configuration of the NEXUS facilities, are not within FERC's jurisdiction, and have no other federal control and responsibility to warrant federal review of an otherwise private action. NEXUS has also concluded that the remaining non-jurisdictional facilities. namely the electrical hook-ups for the M&R stations and mainline valves, while related to the Project, do not warrant FERC review because: (i) mere links in corridor-type projects (as in this case) do not justify review of non-jurisdictional facilities; (ii) the non-jurisdictional facilities in the immediate vicinity of the Project facilities did not affect the configuration and location of the Project; (iii) the non-jurisdictional electric distribution facilities are regulated by the Public Utility Commission of Ohio and Michigan Public Service Commission and are not regulated by the Commission; and (iv) the non-jurisdictional facilities will not be federally controlled or regulated, nor are any federal permits required for construction of those facilities.

Given the geographic proximity between the NEXUS project and the non-jurisdictional facilities (specifically, the expanded DTE compression stations and the electrical hook-ups for M&R stations and mainline valves), these non-jurisdictional facilities may be considered for potential cumulative impacts with the NEXUS Project as a whole.

⁴ See also Revisions to Regulations Governing Authorizations for Construction of Natural Gas Pipeline Facilities, 56 Fed. Reg. 52,330, p. 52,344 (Oct. 18, 1991).



1.16 Cumulative Impacts

NEXUS determined reasonably foreseeable future projects from a review of its Project alignment sheets and topographic maps; field reconnaissance; and internet research. Projects included in this cumulative impact analysis are those located within the same municipalities directly affected by construction of the Project. Table 1.16-1 lists future reasonably foreseeable projects that may cumulatively or additively impact resources that would be affected by the construction and operation of the NEXUS Project.

Wetlands

Each proponent for the projects listed in Table 1.16-1 will be required by the terms and conditions of their respective Section 404 permits to provide compensatory mitigation for unavoidable wetland impacts. The construction and operation of the NEXUS Project, along with the other potential projects, could result in a cumulative reduction in the amount and/or type of wetland within the respective municipalities and watersheds. NEXUS will work with regulatory agencies to identify appropriate mitigation should compensation for unavoidable impacts be deemed appropriate.

Vegetation and Wildlife

When projects are constructed at or near the same time, the combination of construction activities could have a cumulative impact on vegetation and wildlife in the immediate area. Clearing and grading and other construction activities associated with the projects will result in the removal of vegetation, alteration of wildlife habitat, displacement of wildlife, and other secondary effects such as forest fragmentation and establishment of invasive plant species.

It is expected that each project's permit conditions, will require mitigation measures that will be implemented to minimize the potential for erosion, ensure re-vegetation of disturbed areas, increase the stabilization of site conditions, and control the spread of invasive species, and therefore minimize the degree and duration of the cumulative impact on vegetation and terrestrial wildlife from these projects.

Cultural Resources

Past disturbances to cultural resources in the project area are typically related to accidental disturbances, intentional destruction or vandalism, lack of awareness of the historic value, and construction and maintenance operations associated with existing roads, railroads, utility lines, and electrical transmission line ROWs.

Federally regulated projects will include mitigation measures designed to avoid or minimize additional direct impacts on cultural resources. Non-federal actions will need to comply with any identification procedures and mitigation measures required by the States of Ohio and Michigan. NEXUS has developed project-specific plans to address unanticipated discoveries of cultural resources and human remains in the event they are discovered during construction.

Socioeconomics

The NEXUS Project and the projects listed in Table 1.16-1 (see Tables Section) will generate temporary construction jobs. Many of the workers may reside locally. The influx of non-local laborers could represent an increase in the percent of the total population in the project area (assuming half the construction workers are non-local); however, the potentially vacant rental units available in the project area will offer enough housing for non-local workers. In addition, the NEXUS Project counties have the necessary infrastructure to provide public services and utilities to support the projects.

There will be positive cumulative economic benefits from these projects. Taxes generated from operation of the projects will result in an annual tax revenue increase. Permanent employment will also increase as a result of the operation of these projects, with the cumulative benefit of potentially lowering local unemployment rates.



Land Use

Where the NEXUS pipeline will be collocated with existing utility ROWs most land uses, except forest habitat located over the permanent easement, will be allowed to revert to pre-construction uses following construction. Some land uses will be restricted or prohibited on the new permanent pipeline ROW, such as construction of aboveground structures. The construction work areas will be restored, as near as possible, to pre-construction contours and revegetated. As the Project design becomes more refined, NEXUS will prepare detailed land use impact calculations that will be submitted in Resource Report 8 [not included in this filing] in subsequent filings with FERC.

1.17 References

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TABLES

	TABLE 1.1-1									
	Summary	of the NEXUS	Project Pipel	ine Facilities						
State Facility Name	Pipe Diameter (inches)	Milepost Begin <u>a</u> /	Milepost End <u>a</u> /	Length (miles) b/	Location [Municipality, Length (miles) c/					
County										
Ohio <u>New Mainline Pipeline</u>										
Columbiana	42	0.0	12.2	12.2	Hanover Township, 4.0 West Township, 5.8 Knox Township, 2.4					
Stark	42	12.2	32.6	20.4	Washington Township, 7.0 Nimishillen Township, 1.4 Marlboro Township, 5.6 Lake Township, 6.4					
Summit	42	32.6	47.9	15.3	Green City, 7.3 New Franklin City, 8.0					
Wayne	42	47.9	54.1	6.2	Chippewa Township, 5.7 Doylestown City, 0.5					
Medina	42	54.1	77.0	22.9	Wadsworth Township, 2.5 Guilford Township, 6.1 Montville Township, 1.6 Lafayette Township, 6.2 York Township, 4.8 Litchfield Township, 1.7					
Lorain	42	77.0	97.8	20.8	Grafton Township, 5.8 LaGrange Township, 5.2 New Russia Township, 3.0 Oberlin City, 0.2 Pittsfield Township, 2.4 Henrietta Township, 4.2					
Erie	42	97.8	126.9	29.1	Florence Township, 7.3 Berlin Township, 5.1 Berlin Heights City, 0.6 Milan Township, 5.2 Oxford Township, 5.4 Groton Township, 5.5					
Sandusky	42	126.9	158.4	31.5	Townsend Township, 5.9 Riley Township, 6.4 Sandusky Township, 6.3 Washington Township, 6.3 Woodville Township, 6.6					
Wood	42	158.4	175.8	17.4	Troy Township, 6.6 Webster Township, 3.0 Haskins City, 0.3 Middleton Township, 7.5					
Lucas	42	175.8	183.8	8.0	Waterville City, 1.1 Waterville Township, 3.6 Providence Township, 3.3					
Fulton	42	183.8	200.4	16.6	Swan Creek Township, 7.2 Fulton Township, 4.9 Amboy Township, 4.0 Metamora City, 0.5					
	Ohio New I	Mainline Pipeli	ne Subtotal:	200.4	•					

		TABI	LE 1.1-1	-	
	Summary	of the NEXUS	S Project Pipelir	ne Facilities	
State Facility Name County	Pipe Diameter (inches)	Milepost Begin <u>a</u> /	Milepost End <u>a</u> /	Length (miles) b/	Location [Municipality, Length (miles) c/]
Michigan					
New Mainline Pipeline					
Lenawee	42	200.4	222.4	22.0	Ogden Township, 7.0 Palmyra Township, 4.3 Blissfield Township, 3.5 Deerfield Township, 1.3 Ridgeway Township, 5.6 Macon Township, 0.3
Monroe	42	222.4	228.7	6.3	Milan City, 0.2 Milan Township, 6.1
Washtenaw	42	228.7	246.7	18.0	York Township, 4.6 Augusta Township, 7.0 Ypsilanti Township, 6.4
	Michigan N	lew Pipeline F	acilities Total:	46.3	
PROJECT NEV	W MAINLINE PIPEL	INE FACILIT	TIES TOTAL:	246.7	
Ohio					
TGP New Interconnecting	<u> Pipeline</u>				
Columbiana d/	42	0.0	0.7	0.7	Hanover Township, 0.7
Carroll	42	0.7	0.9	0.2	East Township, 0.2
Columbiana d/	42	0.9	1.2	0.3	Franklin Township, 0.3
Texas Eastern New Interc	connecting Pipeline				
Columbiana	30	0.0	0.2	0.2	Hanover Township, 0.2
	Ohio New Intercon	necting Pipeli	ine Subtotal:	1.4	

 $[\]underline{a\prime}$ Approximate milepost along the proposed pipeline rounded to the nearest tenth mile.

b/ Crossing length within county.

 $[\]underline{\text{c}/}$ Crossing length within municipality.

d/ Pipeline crosses Columbiana County line in two locations – total crossing distance in Columbiana County is 1.0 mile.

		TABLE 1.1-2	
	Proposed NEXUS	Project Above	ground Facilities
Facility Name		MP <u>a</u> /	Location (Municipality; County, State)
New Compressor Stations	ISO Rated up to Horsepower (HP)		
Compressor Station 1	52,000	1.2	Hanover, Columbiana County, OH
Compressor Station 2	26,000	60.1	Guilford, Medina County, OH
Compressor Station 3	26,000	124.3	Groton, Erie County, OH
Compressor Station 4	26,000	177.7	Waterville, Lucas County, OH
Total New Horsepower	130,000		
New M&R Stations <u>b/</u>			
M&R Station 1 at Kensington		0.0	Hanover Township, Columbiana County, OH
M&R Station 2 at Kensington		0.0	Hanover Township, Columbiana County, OH
M&R Station 3 at TGP Interc	onnection	TGP 1.2	Hanover Township, Columbiana County, OH
M&R Station 4 at Will Run c/		246.6	Ypsilanti Township, Washtenaw County, MI
Over-pressure Regulation Inst	allation (Mainline Valve	e Stations) <u>d</u> /	
TBD		-	-
Launcher and Receiver Facilit	ies		
Launcher (TGP Interconnecti	on)	TGP 1.2	Hanover Township, Columbiana County, OH
Launcher/Receiver at Kensin	gton-	0.0	Hanover Township, Columbiana County, OH
Launcher/Receiver at CS 2		60.1	Guilford Township, Medina County, OH
Launcher/Receiver at CS 4		177.7	Waterville Township, Lucas County, OH
Receiver at Willow Run		246.6	Ypsilanti Township, Washtenaw County, MI
1			

 $[\]underline{a\prime}$ Approximate milepost along the Proposed Pipeline rounded to the nearest tenth of a mile.

b/ Compressor Station and M&R station (as based on primary options) locations are subject to change due to continued evaluation.

c/ The M&R Station location at Will Run is based on preliminary design and specifications; subject to change as more data becomes available.

<u>d/</u> The number of Mainline Valve Stations (MLVs) and locations are yet to be determined based on ongoing pipeline class location study and field verification. Preliminary designs indicate the requirement for 26 MLVs with approximately 21 in Ohio and 5 in Michigan; this data will be updated as it becomes available.

TABLE 1.6-1

Land Requirements for NEXUS Pipeline Facilities
[will be completed in next filing]

<u>State/Facility Name</u> County	Length (miles) <u>a/</u>	Nominal Const. ROW Width (feet)	Perm. ROW Width (feet)	Land Affected Temporarily During Construction (Acres) <u>b</u> /	New Land Affected Permanently For O&M (Acres) <u>c</u> /
Ohio/New Mainline Pipeline					
Columbiana	12.2	100	50	TBD	TBD
Stark	20.5	100	50	TBD	TBD
Summit	15.3	100	50	TBD	TBD
Wayne	6.1	100	50	TBD	TBD
Medina	22.8	100	50	TBD	TBD
Lorain	20.8	100	50	TBD	TBD
Erie	29.1	100	50	TBD	TBD
Sandusky	31.6	100	50	TBD	TBD
Wood	17.4	100	50	TBD	TBD
Lucus	8.1	100	50	TBD	TBD
Fulton	16.6	100	50	TBD	TBD
Michigan/New Mainline Pipeline					
Lenewee	22.0	100	50	TBD	TBD
Monroe	6.3	100	50	TBD	TBD
Washtenaw	18.1	100	50	TBD	TBD
Subtotal Mainline Pipeline	246.7				
Ohio/Interconnecting Pipelines					
TGP					
Columbiana	1.0	TBD	TBD	TBD	TBD
Carroll	0.2	TBD	TBD	TBD	TBD
Texas Eastern					
Columbiana	0.2	TBD	TBD	TBD	TBD
Subtotal Interconnecting Pipeline	1.4				
PROJECT TOTAL	248.1	(varies)	(varies)	TBD	TBD

<u>a/</u> Mileage is calculated based on actual geometry and is rounded to the nearest tenth, which may result in small rounding differences when adding or subtracting various pipeline segments.

b/Land affected temporarily during construction includes the total of 50 feet of new permanent pipeline ROW, an additional 50 feet of pipeline construction ROW (for a total nominal pipeline construction ROW width of 100 feet.) Note – this is a preliminary assessment and does not include additional temporary workspace, staging areas, or temporary access roads. This data will be provided and updated as additional detail becomes available through the pre-filing process.

c/ Land affected permanently for O&M includes permanent pipeline ROW required for the pipeline where the vegetation will be permanently removed or maintained as part of pipeline operations.

TABLE 1.6-2

Land Requirements for NEXUS Aboveground Facilities a/
[will be completed in next filing]

Facility Name, County, State	MP <u>b</u> /	Land Affected Temporarily During Construction (Acres) c/	Land Affected Permanently For O&M (Acres) <u>d</u> /
Compressor Stations			
Compressor Station 1, Columbiana County, OH	1.2	TBD	TBD
Compressor Station 2, Medina County, OH	60.1	TBD	TBD
Compressor Station 3, Sandusky County, OH	124.3	TBD	TBD
Compressor Station 4, Lucas County, OH	177.7	TBD	TBD
M&R Stations			
M&R Station 1 at Kensington, Columbiana County, OH	0.0	TBD	TBD
M&R Station 2 at Kensington, Columbiana County, OH	0.0	TBD	TBD
M&R Station 3 (TGP Interconnection), Columbiana County, OH	TGP 1.2	TBD	TBD
M&R Station 4 at Willow Run, Washtenaw County, MI	246.6	TBD	TBD
<u>Launcher and Receiver Stations</u>			
Launcher - TGP Interconnecting Pipeline	TGP 1.2	TBD	TBD
Launcher and Receiver at Kensington	0.0	TBD	TBD
Launcher and Receiver at CS 2	60.1	TBD	TBD
Launcher and Receiver at CS 4	177.7	TBD	TBD
Receiver at Willow Run	246.6	TBD	TBD
PROJECT TOTAL	S ₋	TBD	TBD

<u>a/</u> This table does not include valves that will be constructed on the segments since the land requirements for the valves coincide within the land requirements for the pipeline facilities shown in Table 1-4.

b/ Compressor station milepost locations are the closest milepost along the Route to the compressor station site.

 $[\]underline{c\prime}$ Acreage includes new land that will also be permanently affected by O&M.

<u>d/</u> Acreage includes new permanent access roads and all areas where vegetation is maintained such as station yard areas and suction discharge piping.

				TABLE	1.6-3				
		Proposed	Temporary and I	Permanent Acc	cess Roads along	the NEXUS Projec	et <u>a/</u>		
[will be completed in next filing]									
STATE	Approx.	Municipality,	Use (Permanent	Existing	Ownership/M anagement	Approx. Length From Public			
<u>Facility</u>	MP of Intersect	County	or Temporary)	Surface	(Public or Private)	Way to Project (feet)	Proposed Improvements & Comments		
Road ID			Temporary)		1 iivate)	(leet)			
OHIO <u>Mainline Pipeline</u>									
EXAMPLE (made up):									
TAR-OH-001-1	1.0	Hanover, Columbiana	Temporary	Gravel	Private	400	Replace culvert over ditch by main road; cover cattle grate at second ditch crossing with fabric and boards to prevent debris from entering ditch.		
Interconnecting Pipelin	es						3		
TGP									
Texas Eastern									
New Compressor Station	ons								
Compressor Station 1									
Compressor Station 2									
Compressor Station 3 TBD									
Compressor Station 4									
MICHIGAN <u>Mainline Pipeline</u> TBD									
<u>a/</u> The NEXUS Project team landowner and project ne				lity. Additional a	access road data wi	II be provided throu	ghout the pre-filing process as additional land use,		

TABLE 1.6-4 NEXUS Pipe Contractor Ware Yards in OH and MI [to be completed with next filing] Facility, County Size Location Yard (acres) (Municipality) Land Use Mainline Pipeline Columbiana

Total

TABLE 1.9-1
Preliminary Construction Schedule and Work Force Requirements

				Construction			
State Facility	MP Begin <u>a</u> /	MP End	Length (miles)	Month/Year Begin	Personnel		
Ohio							
Mainline Pipeline	0.0	200.4	200.4	Feb-Oct 2017	TBD		
Interconnecting Pipelines:							
TGP	0.0	1.2	1.2	Feb-Oct 2017	TBD		
Texas Eastern	0.0	0.2	0.2	Feb-Oct 2017	TBD		
Compressor Stations:							
CS1	1.2	-	-	Feb-Nov 2017	TBD		
CS2	60.1	-	-	Feb-Nov 2017	TBD		
CS3	124.3	-	-	Feb-Nov 2017	TBD		
CS4	177.7	-	-	Feb-Nov 2017	TBD		
M&R Stations:							
M&R Station 1	0.0	-	-	Feb-Oct 2017	TBD		
M&R Station 2	0.0	-	-	Feb-Oct 2017	TBD		
M&R Station 3	TGP 1.2	-	-	Feb-Oct 2017	TBD		
Launcher and Receiver Stations:							
Launcher - TGP Interconnecting Pipeline	TGP 1.2	-	-	Feb-Oct 2017	TBD		
Launcher and Receiver at Kensington	0.0	-	-	Feb-Oct 2017	TBD		
Launcher and Receiver at CS 2	60.1	-	-	Feb-Oct 2017	TBD		
Launcher and Receiver at CS 4	177.7	-	-	Feb-Oct 2017	TBD		
Michigan							
Mainline Pipeline	200.4	246.7	46.3	Feb-Oct 2017	TBD		
Meter Stations:							
Receiver at Willow Run	246.6	-	-	Feb-Oct 2017	TBD		
M&R Stations:							
M&R Station 4	246.6	-	-	Feb-Oct 2017	TBD		

- = Not applicable.

		TABLE 1.	13-1						
Anticipated Environmental Permit, Review and Consultation List									
Agency	Permit/Approval/ Consultation	Contact	Consultation Initiated a/	Report/ Application Submitted a/	Approval/ Permit Received a/	Status			
FEDERAL									
Federal Energy Regulatory Commission	Certificate of Public Convenience and Necessity - Section 7(c) of the Natural Gas Act requires preparation of an ER (consisting of 12 Resource Reports) to be included with the Section 7(c) application. NEXUS is using FERC's Pre-filing Process which will involve conducting public open houses, preparation of responses to comments received on the Project, and preparation of draft and final Resource Reports. Following submittal of the ER, support activities include responding to FERC staff data requests, reviewing FERC's EIS and preparing the Implementation Plan.	Joanne Wachholder, FERC Project Manager	17 Dec 14 introductory meeting						
U.S. Army Corps of Engineers ("USACE"): Buffalo, Pittsburgh, Huntington, and Detroit Districts	Dredge and Fill Permit under Section 10 of the Rivers and Harbors Act of 1899 (33 USC § 403) Dredge and Fill Permit under Section 404 of the Clean Water Act (33 USC § 1344)	Shawn Blohm, Buffalo District NEXUS designated point of contact Matt Mason, Pittsburgh District Regulatory Branch Mark Taylor, Huntington District Chief, Energy Resources Stanley F. Cowton, Jr., Detroit District Regulatory Project Manager	31 Oct 14 introductory letter 14 Jan 15 introductory meeting						

		TABLE 1	.13-1								
	Anticipated Environmental Permit, Review and Consultation List										
Agency	Permit/Approval/ Consultation	Contact	Consultation Initiated a/	Report/ Application Submitted a/	Approval/ Permit Received a/	Status					
United States Department of the Interior, U.S. Fish and Wildlife Service, Midwest Region 3 (Columbus, OH and East Lansing, MI Field offices)	Consultation under Section 7 of the Endangered Species Act Coordination per the Migratory Bird Treaty Act; and the Fish and Wildlife Coordination Act (16 USC §§ 661 et seq.)	Chris Mensing, Fish and Wildlife Biologist Burr Fisher, Wildlife Biologist Angela Boyer, Endangered Species Coordinator	18 Sept 14 introductory letter 07 Oct 15 Columbus Ohio Field Office introductory meeting 12 Nov 14 East Lansing Field Office introductory meeting								
U.S. Department of the Interior, National Park Service	Wild and Scenic Rivers Act Section 7(a) Determination	Mark Weekly, Deputy Regional Director	31 Oct 14 introductory letter								
U. S. Environmental Protection Agency ("EPA"), Region 3	Spill Prevention, Control and Countermeasures Plan (33 USC § 1321(j) and 40 CFR § 112)	Kenneth A. Westlake, Chief	31 Oct 14 introductory letter								
	Section 404 of the CWA (USEPA review of wetland permits issued by the USACE)										
	Determination of General Conformity Applicability										
National Marine Fisheries Service ("NMFS")	Federal Endangered Species Act	Donna Wieting, Director, Office of Protected Resources	31 Oct 14 introductory letter								
	Magnuson-Stevens Fishery Conservation and Management Act										
U.S. Department of Agriculture Natural Resources Conservation Service ("NRCS")	Restoration Consultation and potential Agricultural Impact Mitigation Agreement	TBD									

		TABLE 1.	.13-1							
Anticipated Environmental Permit, Review and Consultation List										
Agency	Permit/Approval/ Consultation	Contact	Consultation Initiated a/	Report/ Application Submitted a/	Approval/ Permit Received a/	Status				
Advisory Council on Historic Preservation and Consultation with Native American Tribes	Section 106 Consultation, National Historic Preservation Act ("NHPA") - Section 106 Consultation	Mark Epstein, Department Head, Resource Protection and Review Brian D. Conway, State Historic Preservation Officer ("SHPO")	5 Nov 14 Ohio SHPO introductory letter 4 Dec 14 Michigan SHPO introductory letter							
<u>STATE</u>										
Ohio										
Ohio Power Siting Board ("OPSB")	Consultation and Intervener Status in FERC Process	TBD								
Ohio Environmental Protection Agency ("OEPA")	Section 401 Water Quality Certification	Mike Mansour, Central	9, 10 and 17 Dec 14 introductory meetings							
	Clean Air Act, Air Permit-to- Install-and-Operate	Dave Morehart, Central								
	Storm Water Discharge from Construction Activities	Ed Fasko, Northeast								
	NPDES Hydrostatic Test	Jana Gannon, Northeast								

		TABLE 1.	13-1						
Anticipated Environmental Permit, Review and Consultation List									
Agency	Permit/Approval/ Consultation	Contact	Consultation Initiated a/	Report/ Application Submitted a/	Approval/ Permit Received a/	Status			
		Kevin Fortune, Northeast							
		Sean Vadas, Akron Regional							
		Kelly Kanoza, Akron Regional							
		Duane LaClair Akron Regional							
		Matt Stanfield, Toledo							
Ohio Department of Natural Resources ("ODNR")	Consultation on Threatened and Endangered Species	John Kessler, P.E. Assistant Chief	18 Sep 14 introductory letter						
	Water Withdrawal Facility Registration (>100,000 gallons per day)	Steve Holland, MPA Federal	2 Dec 14 introductory email and phone call						
	Coastal Management Zone Determination	Consistency Administrator							
Ohio Historic Preservation Office	Section 106 NHPA Consultation	Mark Epstein, Department Head, Resource Protection and Review	5 Nov 14 Ohio SHPO introductory letter						
Ohio – County Flood Plain Administrator	Permit for construction within 100 year Flood Plain	TBD							
Ohio Department of Transportation ("ODOT")	State road, highway, or interstate crossing permits	TBD							

	TABLE 1.13-1									
Anticipated Environmental Permit, Review and Consultation List										
Agency	Permit/Approval/ Consultation	Contact	Consultation Initiated a/	Report/ Application Submitted a/	Approval/ Permit Received a/	Status				
Michigan										
Michigan Department of Natural Resources ("MDNR"), Wildlife Division	State listed species consultation	Lori Sargent, Wildlife Division	22 Sep 14 introductory letter							
	Public Lands consultation, Permit to Use State Lands									
Michigan Department of Environmental Quality ("MDEQ"), Water Resources Division	MDEQ/USACE Joint Permit for impacts to wetlands, inland lakes, streams and floodplains NPDES Permit for Storm Water Discharge from Construction Activities Water Withdrawal Authorization	Katherine David, Jackson District Office	18 Dec 14 introductory letter							
	Possible permit to install for facility meter station air emissions									
Michigan Natural Resources Inventory ("MNRI")	State-listed threatened and endangered species consultations	Michael A. Sanders, Rare Species Review Specialist	23 Sep 14 introductory letter							
Michigan State Housing and Development Authority ("MSHDA") – Michigan Office of Historic Preservation	Section 106 NHPA Consultation	Brian D. Conway, SHPO	4 Dec 14 Michigan SHPO introductory letter							
Michigan Department of Transportation ("MDOT")	State road, highway, or interstate crossing permits	TBD								
LOCAL										
Lenawee County, MI	County Drain ROW Permits, Soil Erosion & Sedimentation Control Permit	TBD								

Anticipated Environmental Permit, Review and Consultation List						
Agency	Permit/Approval/ Consultation	Contact	Consultation Initiated a/	Report/ Application Submitted a/	Approval/ Permit Received a/	Status
Monroe County, MI	County Drain ROW Permits, Soil Erosion & Sedimentation Control Permit	TBD				
Washtenaw County, MI	County Drain ROW Permits, Soil Erosion & Sedimentation Control Permit	TBD				
Washtenaw County Historic Preservation	Section 106 NHPA Consultation	Melissa Milton- Pung, Historic Preservation Planner	27 Oct 14 introductory letter			
Muskingum Watershed Conservancy District	Consultation	Boris E. Slogar, P.E., M.P.M. Chief Engineer				

TABLE 1.16-1

Recently Completed, Current and Proposed Projects within the NEXUS Project Vicinity

Project, County <u>a</u> /	Description	Anticipated Date of Construction / Project Status	Approximate Distance from NEXUS (mi)	Source <u>b</u> /
оню				
Columbia Pipeline Group Leach XPress Project, Outside of NEXUS counties; located in Monroe, Noble, Muskingum, Morgan, Perry, Fairfield, Hocking, and Vinton Counties	The proposed Leach XPress project involves construction of approximately 160 miles of natural gas pipeline and compression facilities in southeastern Ohio and West Virginia's northern panhandle.	Construction is planned to begin in late 2016, with a targeted in- service date during the second half of 2017.	70	Columbia Pipeline Group website. 2015a
TransCanada ANR East Pipeline Project, Clarington, OH, through Cadiz and Leesville, OH, to an interconnection with ANR's existing system at Defiance		Targeted in-service for third quarter of 2017.	23.7	TransCanada website. 2014
Energy Transfer Rover Pipeline Project, Carroll, Stark, Wayne, Wood, Fulton, Lucas Counties	Rover Pipeline LLC (Rover) is a new interstate natural gas pipeline company being designed to transport natural gas from processing facilities located in the prolific Marcellus and Utica Shale areas to market regions in the United States and Canada.	Construction is planned to begin in January 2016 with an in-service date of June 2017.	25	Energy Transfer website. 2015
Utica/Point Pleasant Shale Horizontal Wells, Columbiana County townships: Knox, West, Hanover Medina County townships: Harrisville Stark County townships: Marlboro, Osnaburg, Washington, Bethlehem, Sandy, Paris, Pike Wayne County townships: East Union	122 horizontal drilling permits issued and 81 wells have been drilled and/or are producing in counties within the NEXUS Project area.	Data from Ohio Department of Natural Resources ("ODNR") through Dec. 27, 2014.	Varies	Oilandgas.ohiodnr.gov website. 2015
Ohio Pipeline Energy Network (OPEN) Project, Columbiana County	The OPEN project consists of approximately 76 miles of new 30-inch diameter mainline pipeline and associated pipeline support facilities in Ohio, including a new compressor station in Colerain Township and reverse flow modifications at existing compressor stations along Texas Eastern's existing mainline in Ohio, Kentucky, Mississippi and Louisiana.	Construction is scheduled for 2015 with a planned in-service date of November 2015.	0	Spectra Energy website. 2015
State Route 14F, Columbiana County	Construct new four lane limited access highway from US Route 62 in Columbiana County to SR 11 in Mahoning County.	Ongoing 2005 to 2025.	10	Dot.state.oh.us website. 2014a
US Route 62 (Hubbard Arterial) Highway, Columbiana County	Construct new four lane arterial from US Route 62F to Interstate 80.	Ongoing 2016-2030.	10	Dot.state.oh.us website. 2014b

TABLE 1.16-1

Recently Completed, Current and Proposed Projects within the NEXUS Project Vicinity

Project, County <u>a</u> /	Description	Anticipated Date of Construction / Project Status	Approximate Distance from NEXUS (mi)	Source <u>b</u> /
US Route 30 Highway Work, Columbiana County	Construct new four-lane limited access highway from State Route 44 to State Route 9.	Ongoing 2011-2030.	0	Dot.state.oh.us website. 2014c
FirstEnergy Transmission Line from Beaver County, Pennsylvania to Glenwillow, Ohio, Columbiana County	This project involves building 114.5 miles of new 345 kV transmission line through Trumbull, Columbiana, Mahoning, Portage, Summit and Cuyahoga counties in Ohio and Beaver County in Pennsylvania. A new substation will be constructed in the Cleveland, Ohio suburb of Glenwillow.	Construction starts Spring 2013 with an In- Service Date of June 1, 2015	8	firstenergycorp.com website. 2014
FirstEnergy Harmon-Toronto Transmission Line Project, Stark County	This project involves constructing approximately 60 miles of new 345 kV transmission line to connect two new substations, the Harmon and Toronto Substations. The new transmission line will be located in Stark, Carroll and Jefferson counties in Ohio. The Harmon Substation will be located in Stark County and the Toronto Substation will be located in Jefferson County.	Construction starts Dec 2013 with an In-Service Date of June 2017	13	firstenergycorp.com website. 2014
FirstEnergy Harmon-Star Transmission Line Project, Stark County	This project involves constructing approximately 25 miles of new 345 kV transmission line from the new Harmon Substation in Stark County to the existing Star Substation in Medina County.	Construction starts Dec 2013 with an In-Service Date for Summer 2015	0	firstenergycorp.com website. 2014
Columbia Pipeline Group Pipeline Improvement Project, Lorain County	Columbia Gas is replacing more than 16,000 feet of gas pipeline.	Project starts in Summer 2014 and ends by the end of 2014	1	Columbia Pipeline Group website. 2015b
Widen and rehab SR 57 between the Ohio Turnpike and I-90 in the city of Elyria, Lorain County	Widening and rehabilitation of SR 57 to occur between the Ohio Turnpike and I-90 in the city of Elyria. The project will also include reconfiguration of the SR 57 and I-90 interchange and removal of the 49th St. bridge. Two lanes will be maintained on SR 57 during construction; however, 49th Street will be closed indefinitely. Midway Mall Boulevard and Griswold Road will be closed during construction.	Construction starts May 2014 and ends Summer 2016	5	Dot.state.oh.us website. 2014b

TABLE 1.16-1

Recently Completed, Current and Proposed Projects within the NEXUS Project Vicinity

Project, County <u>a</u> /	Description	Anticipated Date of Construction / Project Status	Approximate Distance from NEXUS (mi)	Source <u>b</u> /
Widen and rehab SR 611 bridge over I-90 in the City of Avon, Lorain County	The project includes widening and rehabilitation of the existing SR 611 bridge over I-90 in the City of Avon. The project includes widening for a bike lane and sidewalk on both sides, new bridge deck and resurfacing a portion of SR 611. This area has seen an extreme growth in recent years and is becoming heavily congested. SR 611 is reduced to one lane of traffic and I-90 to two narrowed lanes in each direction.	Construction starts in August 2013 and ends in June 2015	15	Dot.state.oh.us website. 2014b
FirstEnergy Proposed Hayes-West Fremont Transmission Line Project, Erie County	This Project involves building approximately 30 miles of new 138 kV transmission line that will extend from a new substation (Hayes Substation) in Erie County to an existing West Fremont Substation in Sandusky County.	Construction starts in mid-2017 with an In- Service Date of August 31, 2018	0.5	firstenergycorp.com website. 2014
2014 Construction Projects on I-90, Sandusky County	Projects will involve base pavement replacement from Milepost 101.2 to 107.3. Pavement resurfacing will occur in both east and westbound lanes.	Construction completed in 2014	0	Ohioturnpike.com website. 2014
FirstEnergy Dowling Substation and Transmission Line Project, Wood County	This project includes extending an existing transmission line by 150 feet and constructing a new substation (Dowling Substation) in Wood County.	Construction started 1st Quarter 2014 with an In- Service Date of June 1, 2015	5	firstenergycorp.com website. 2014
Jefferson Street Improvement Project, Wood County: City of Perrysburg/Perrysburg Township	Widen and reconstruct 1,848 feet of pavement and construct 492 feet of new pavement on Jefferson Street, install curbs and gutters, major drainage improvements, culvert crossing of Kohl Ditch, sidewalks, extend waterline and sanitary sewer, extend left turn lane on State Route 25, widen corner radii at Waters Edge Drive/Williams Road intersection.	Phase A to be completed in 2014; Phase B to be performed and completed in 2015	5	Wood County Commissioners website. 2015
Ohio DOT Road Construction Projects, Lucas County	The Project involves reconstructing over 3 miles of pavement from Dorr Street to Central Avenue in downtown Toledo.	Starts June 2013 and ends July 2016	11	Dot.state.oh.us website. 2014b

TABLE 1.16-1

Recently Completed, Current and Proposed Projects within the NEXUS Project Vicinity

Project, County <u>a</u> /	Description	Anticipated Date of Construction / Project Status	Approximate Distance from NEXUS (mi)	Source <u>b</u> /
Ohio DOT Road Construction Projects, Lucas County	The Project involves building an underpass at the Norfolk Southern railroad and constructing a roundabout at the intersection of McCord Road and North Mall Drive/Hill Street.	Starts in June 2014 and ends in November 2016	5	Dot.state.oh.us website. 2014b
Ohio DOT Road Construction Projects, Lucas County	This safety project will improve movements at the I-475/U.S. 23 systems interchange, including adding through lanes from southbound U.S. 23 to I-475 and correcting weave movement from eastbound I-475 to southbound U.S. 23 and Central Avenue.	Starts in July 2014 and ends in November 2015	5	Dot.state.oh.us website. 2014b
Ohio DOT Road Construction Projects, Lucas County	The Anthony Wayne Bridge (SR 2) over the Maumee River in Downtown Toledo is closed through September 2015 for bridge reconstruction. Work includes re-decking the bridge, replacing existing truss spans, substructure improvements, new street lighting and rebuilding sidewalks, railings and fencing.	Starts in July 2014 and ends in November 2015	11	Dot.state.oh.us website. 2014b
Ohio DOT Road Construction Projects, Lucas County	Replace and widen three bridges on I-475. Bridges are located on I-475 over Wolf Creek, Norfolk Southern Railroad tracks and Angola Road.	Starts in June 2014 and ends in November 2015	4	Dot.state.oh.us website. 2014b
2014 Culvert Project, Lucas County	Lucas County will replace culverts in the following locations: 935 Jeffers Road, 989 Perry Road, and 1038 Manore Road.	LET Date April 9, 2014	1	Providence Township, Lucas County Engineer website. 2014
MICHIGAN				
Wabash Road Rehabilitation Project, Monroe County	Wabash Road Rehabilitation	Fall 2014	2	Monroe County Road Commission website. 2014
Bridge Replacement Project, Washtenaw County	The Project involves replacing Willow Road Bridge over Buck Creek, between Gooding Road and Hitchingham Road in Augusta Township.	Closed on October 20, 2014, to be replaced in the Spring of 2015	1	Washtenaw County Road Commission website. 2014a
Road resurfacing Project, Washtenaw County	Resurface roads from Oakville-Waltz Road to Willow Road in Augusta Township.	Upcoming	1	Washtenaw County Road Commission website. 2014b
Road resurfacing Project, Washtenaw County	Resurface roads from Golfside Road to Hewitt Road, and Hewitt Road in Ypsilanti Township.	Starting Fall 2014	1	Washtenaw County Road Commission website. 2014b

a/ Counties listed only if intersected by the NEXUS Project.

b/ Sources:

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FIGURES





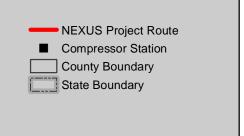
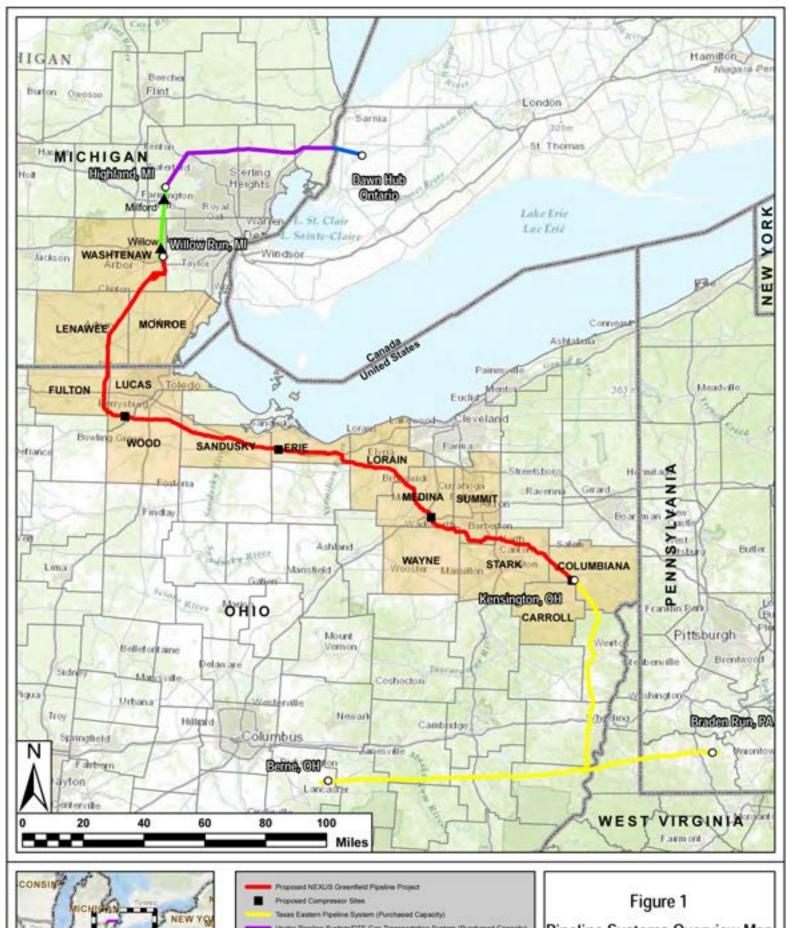


Figure 1.1-1 NEXUS Project Location Map



1/13/2015





Proposed NEXUS Greenfeld Pipeline Project
Proposed Compressor Sites
Proposed Compressor Sites
Texas Eastern Pipeline System (Purchased Capacity)
Vector Pipeline System/Other Canadian Pipeline System (Purchased Capacity)
OTE Gas Transportation System (Purchased Capacity)
County Boundary
State Boundary
Proposed DTE Gas Facility Upgrades

Pipeline Systems Overview Map



1/20/2015



APPENDIX 1A

Located in Volume II-B

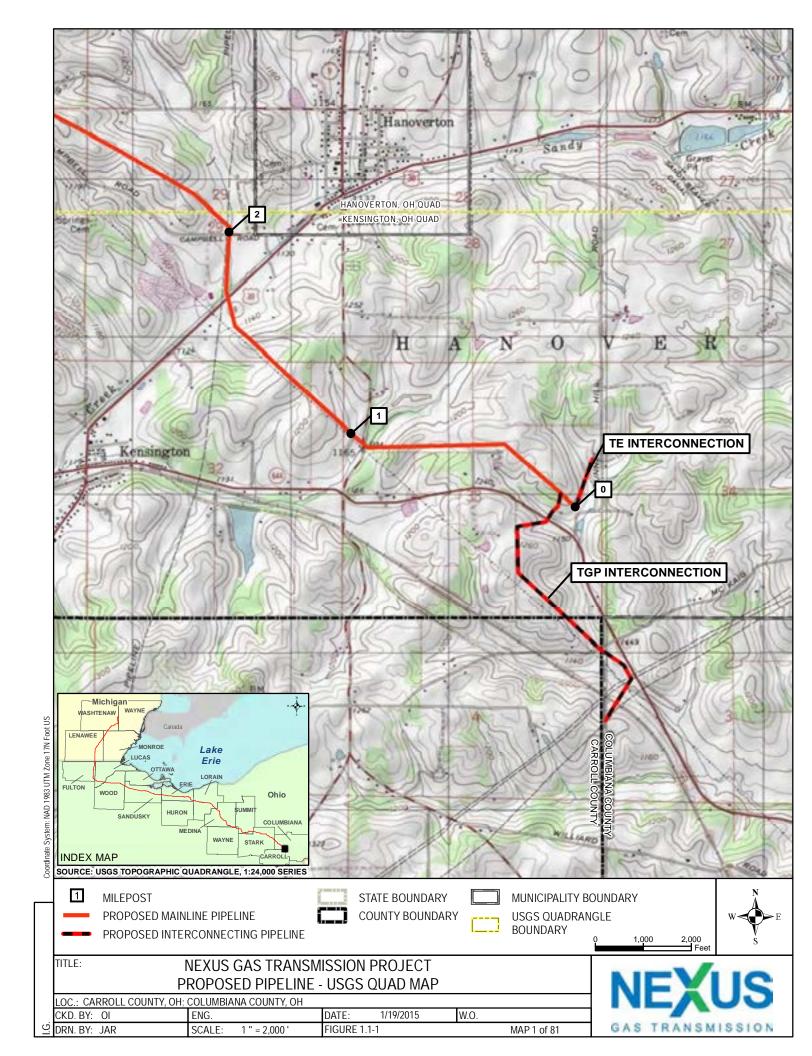
- ♦ Alignment Sheets [not included with this filing]
- Full Size USGS Quadrangle Maps [not included with this filing]
- Other aboveground Facility Plot Plan Drawings[not included with this filing]
- Typical Right-of-Way Configurations [not included in this filing]
- ◆ Full Size National Wetland Inventory (NWI) Maps [not included with this filing]
- ♦ 8.5- x 11-inch USGS Quadrangle Map Excerpts

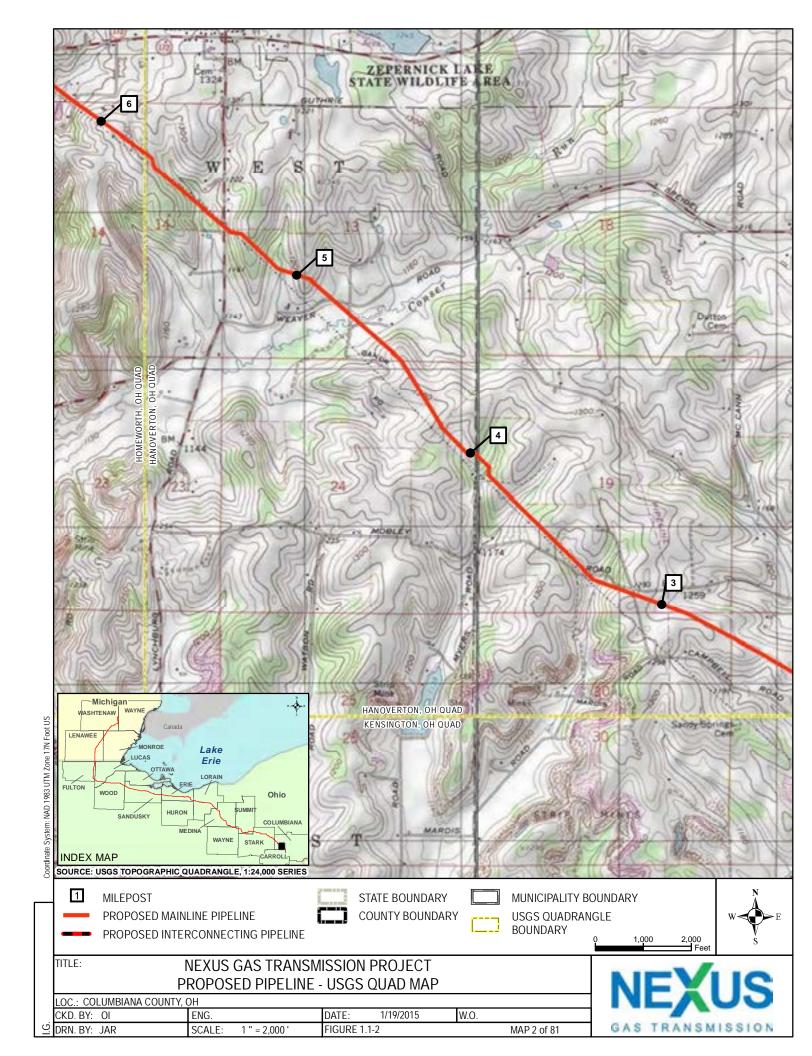
Located in Volume II-C (CEII Information)

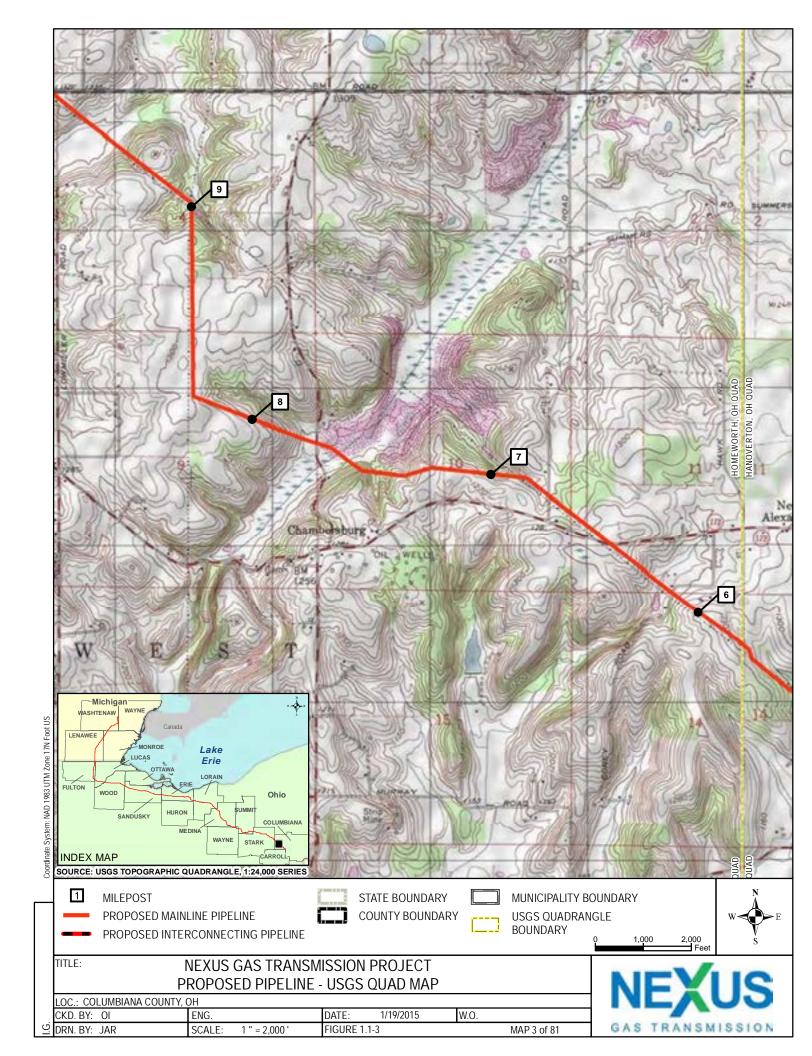
♦ Compressor Station Plot Plan Drawings[not included with this filing]

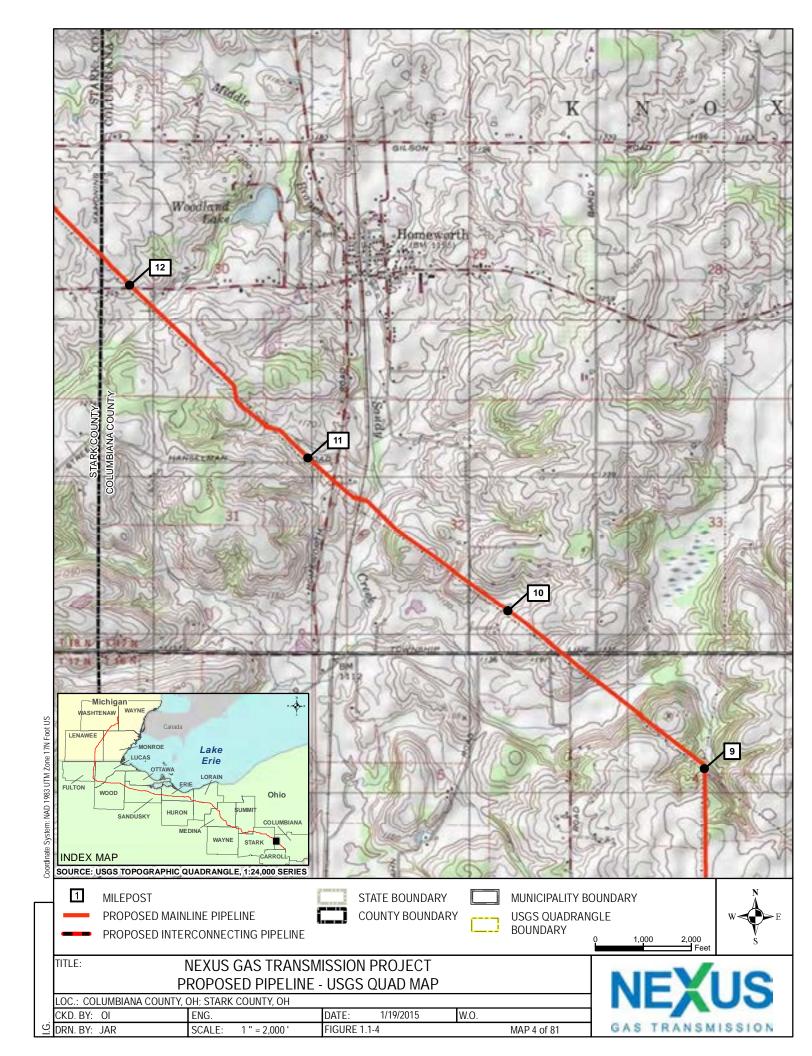
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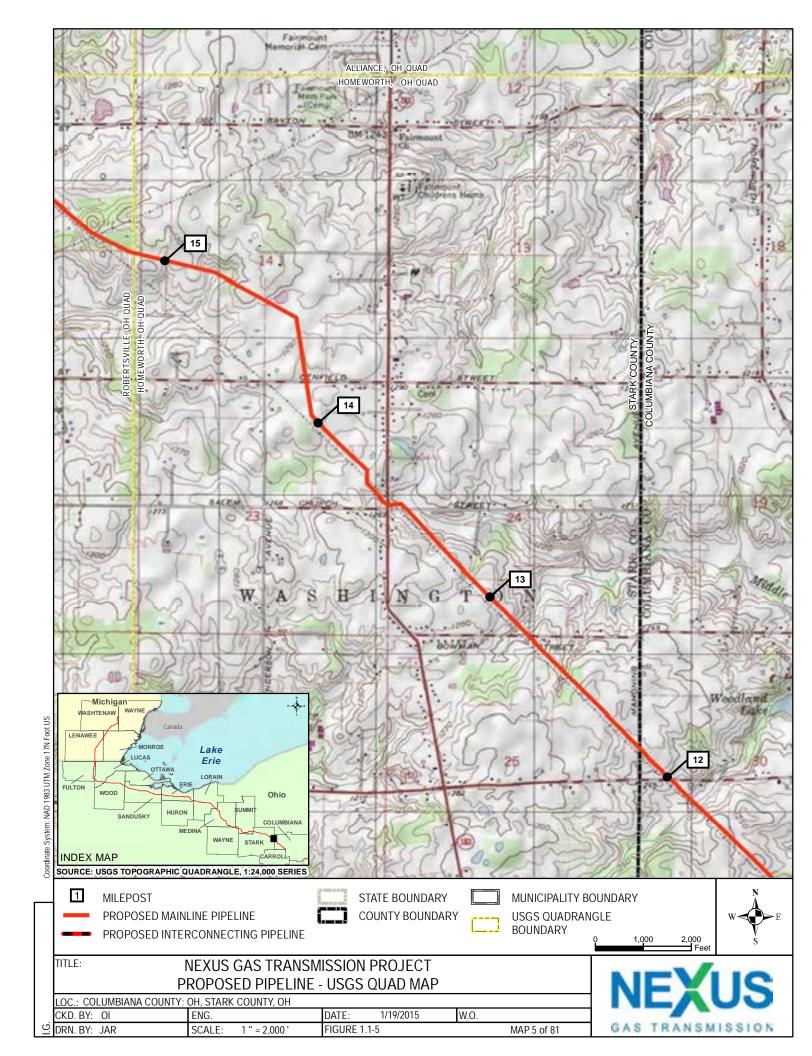
- ♦ Land Owner List
- ♦ List of Abutters Within ½ Mile of Proposed Compressor Stations
- ♦ Cultural Resources Information [not included with this filing]

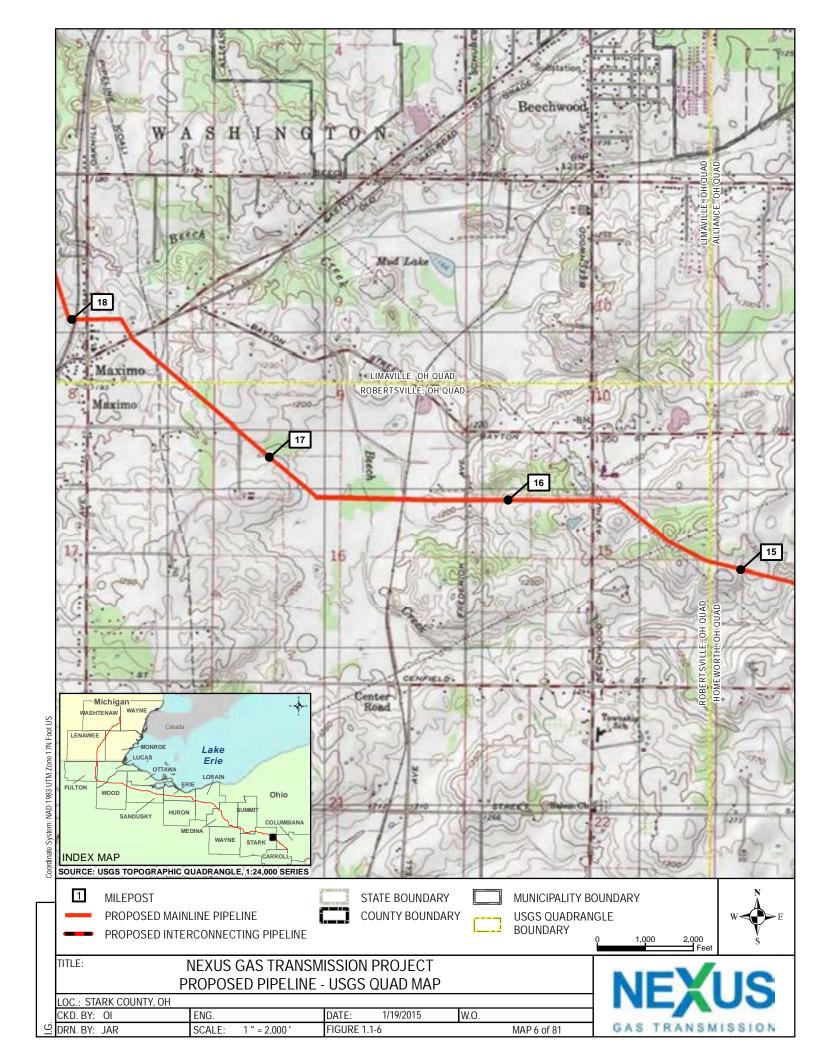


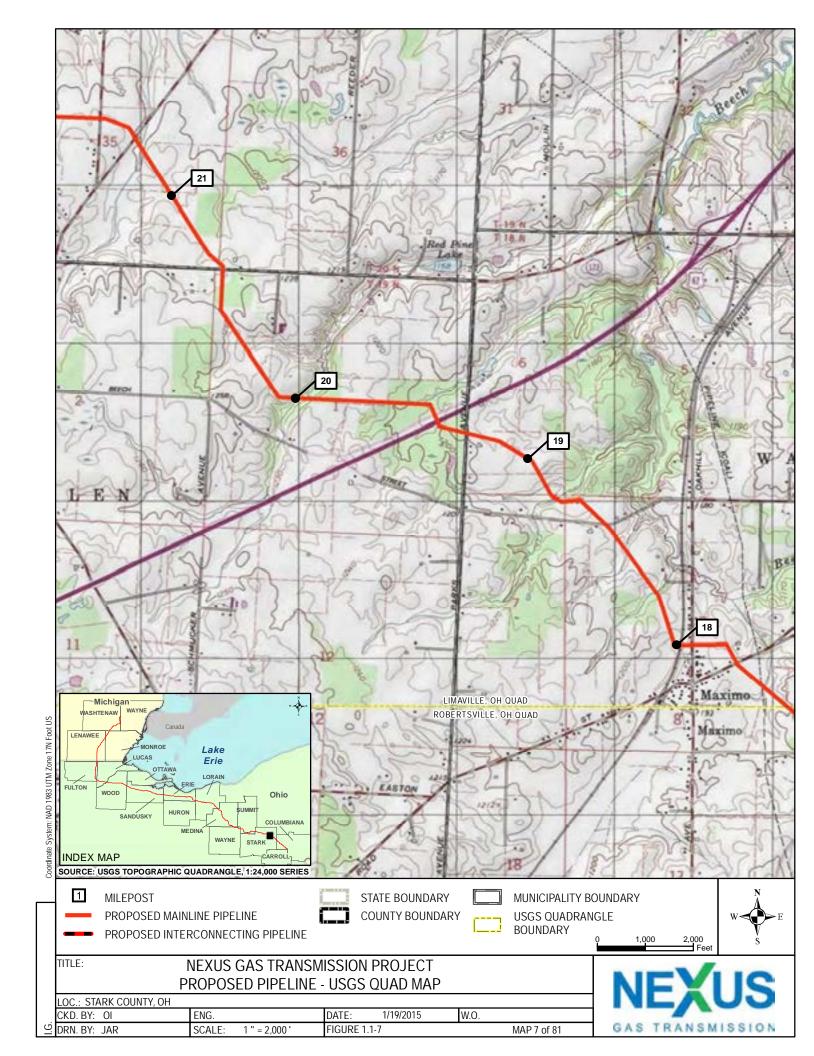


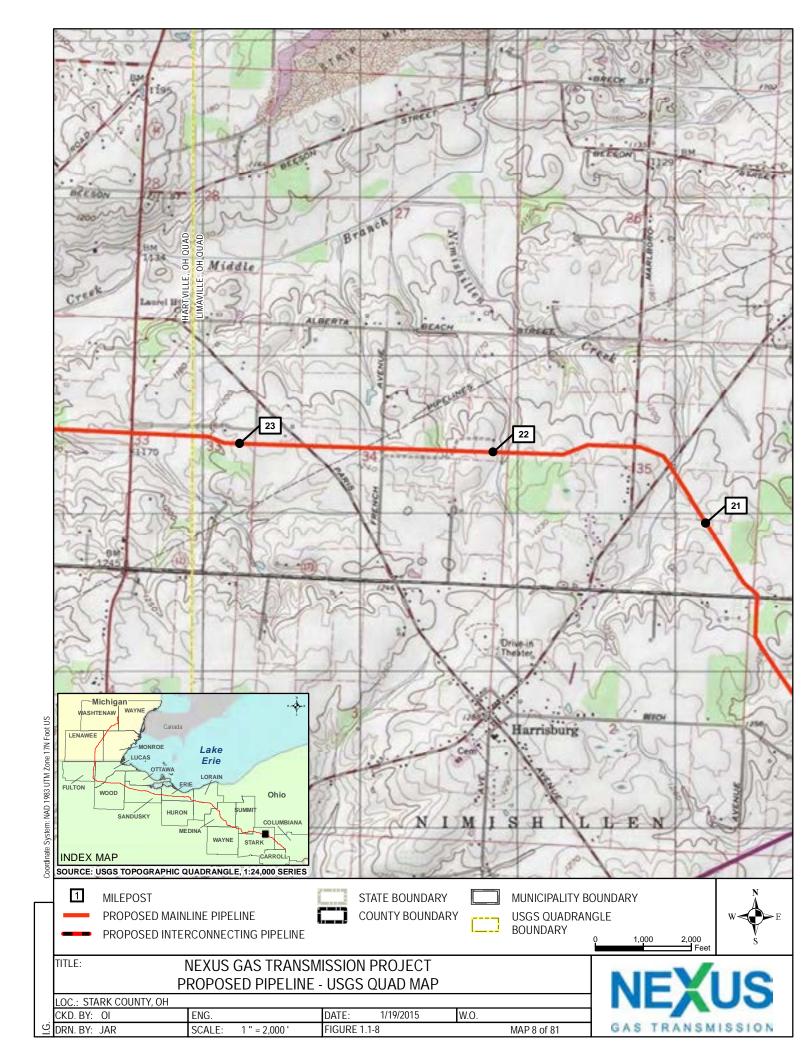


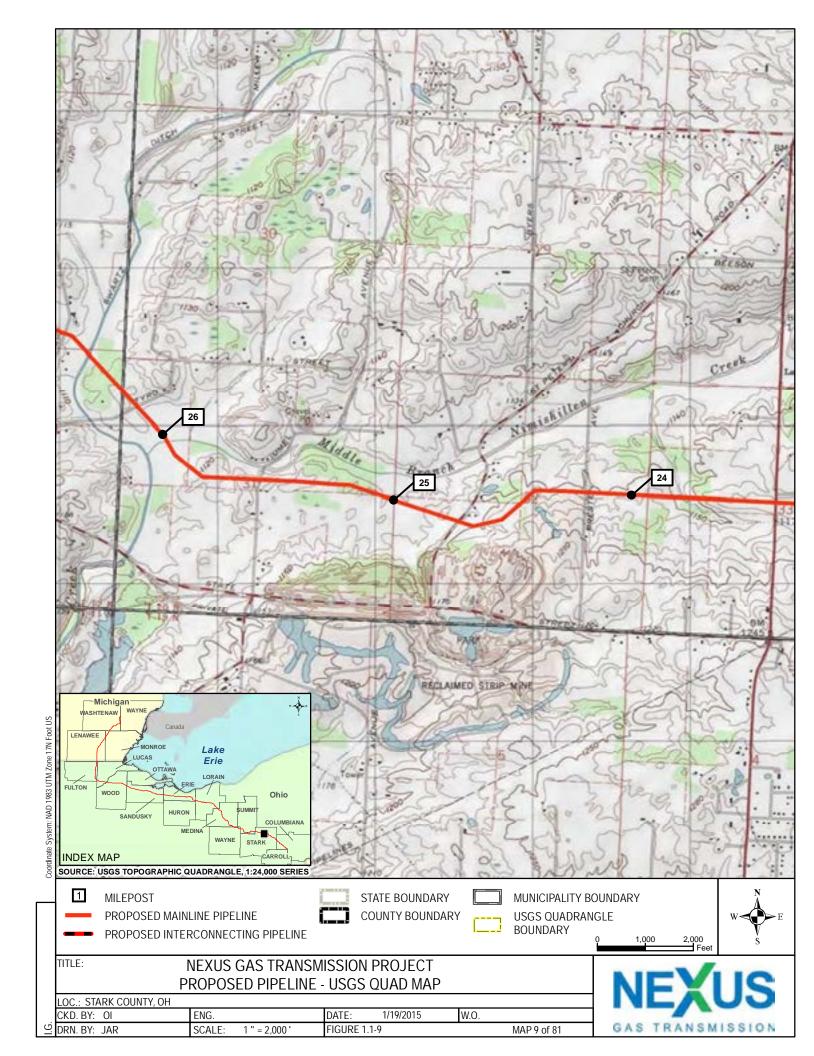


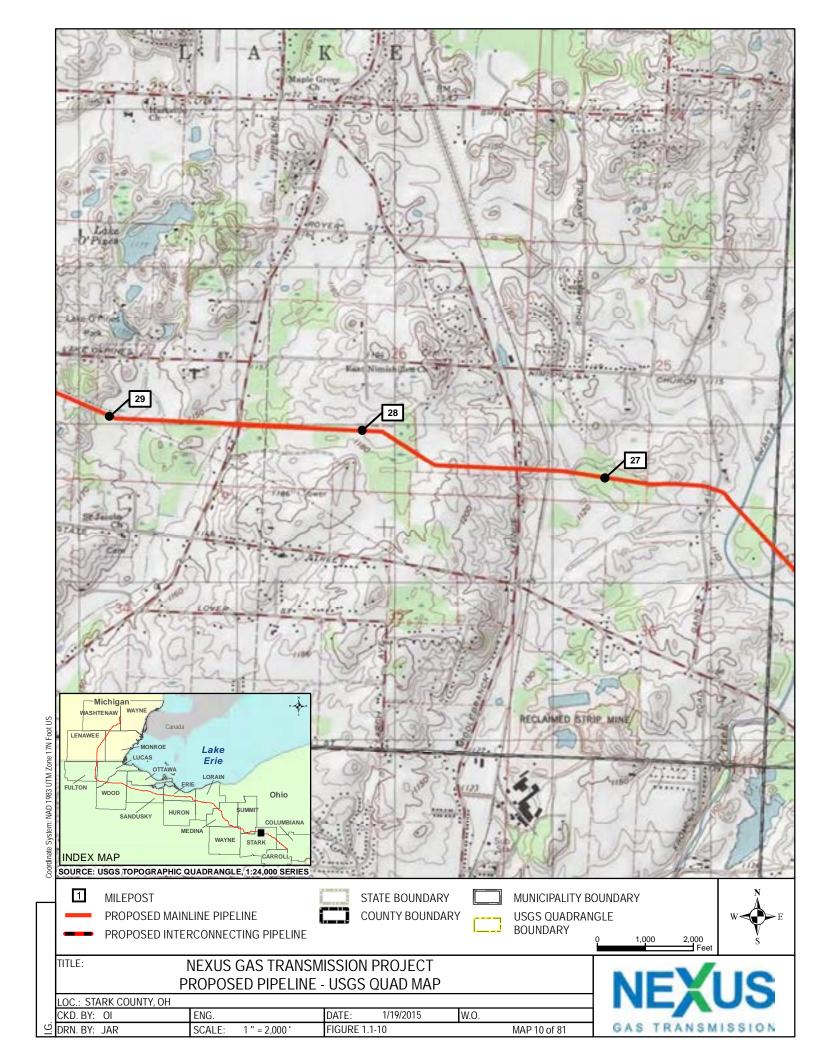


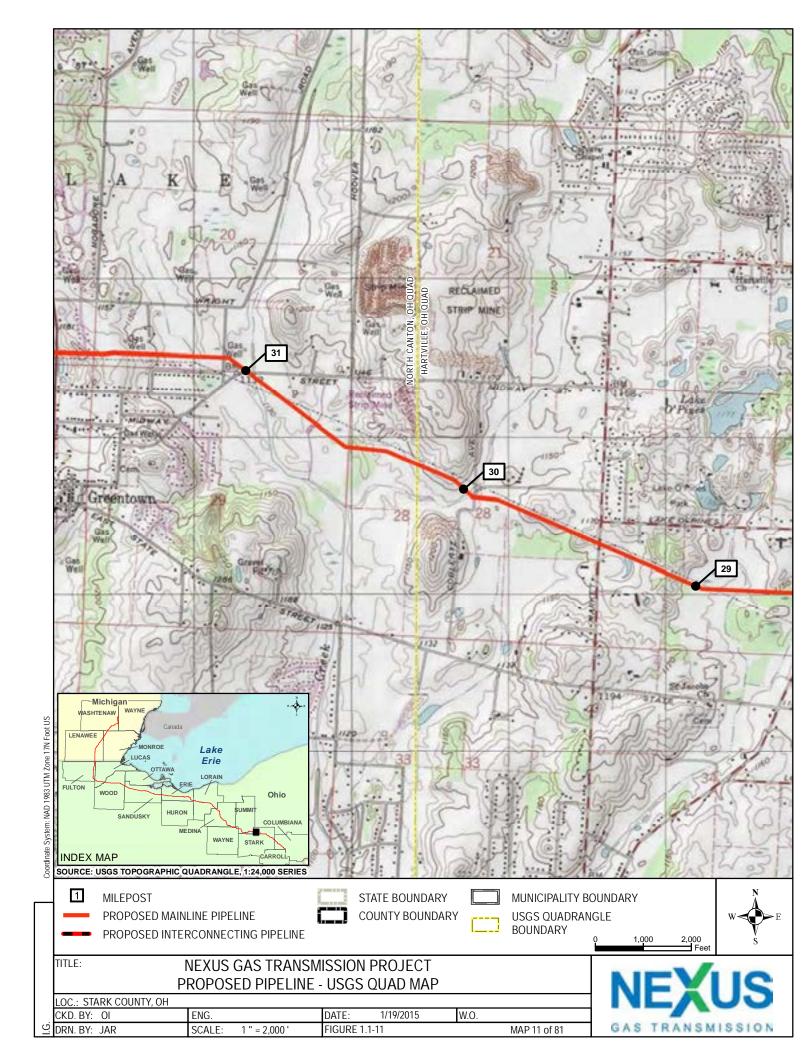


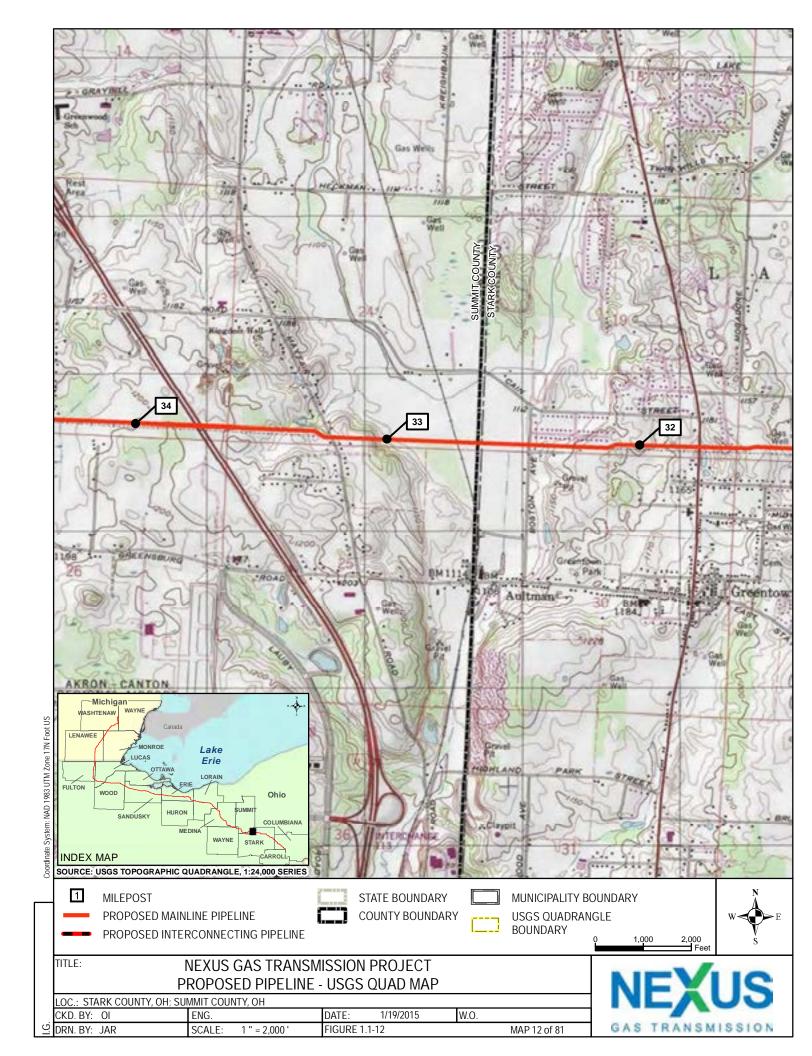


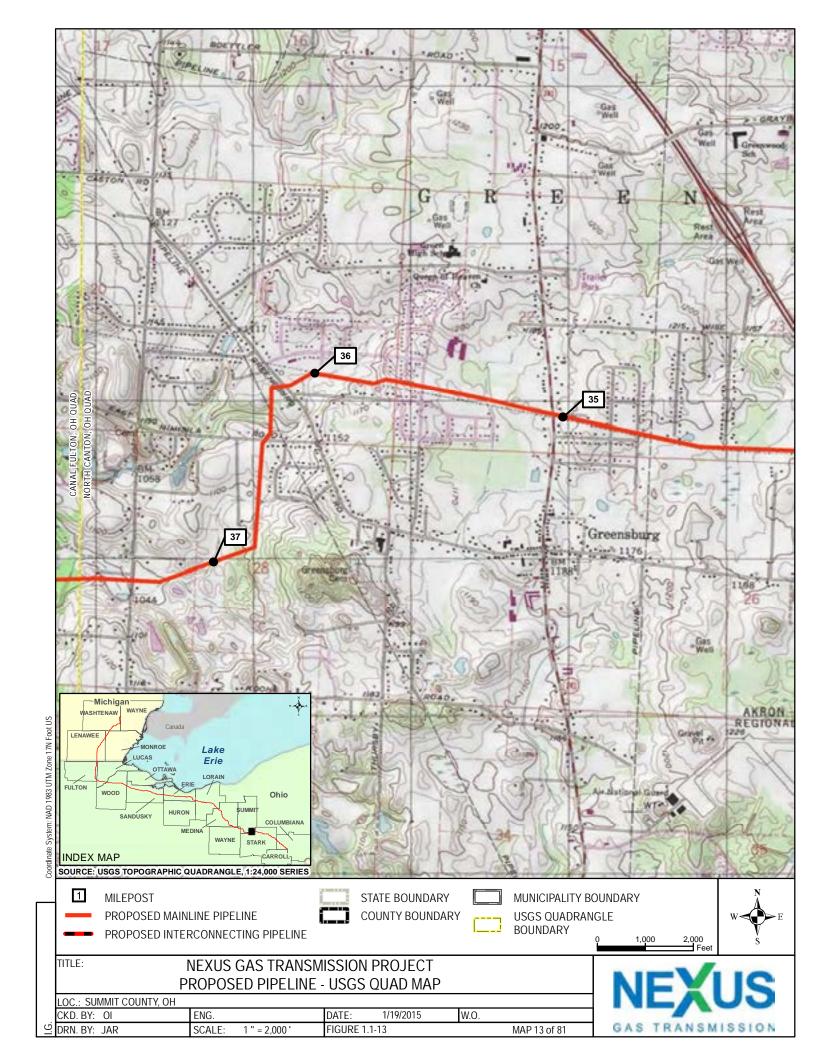


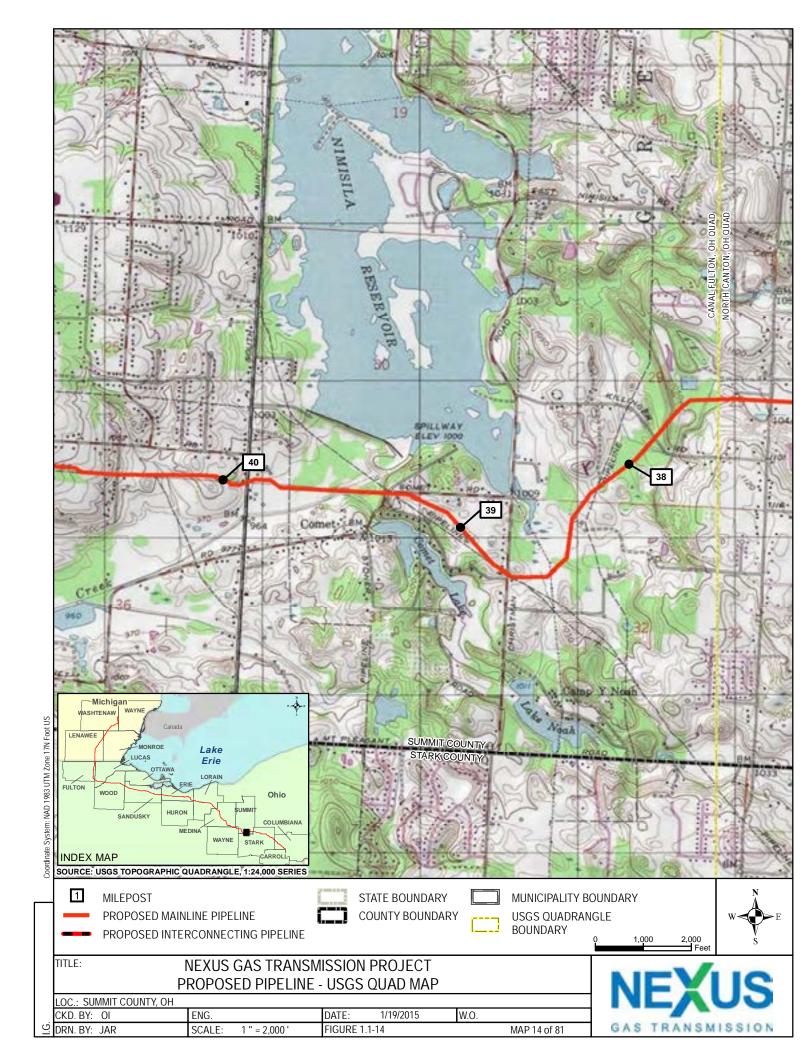


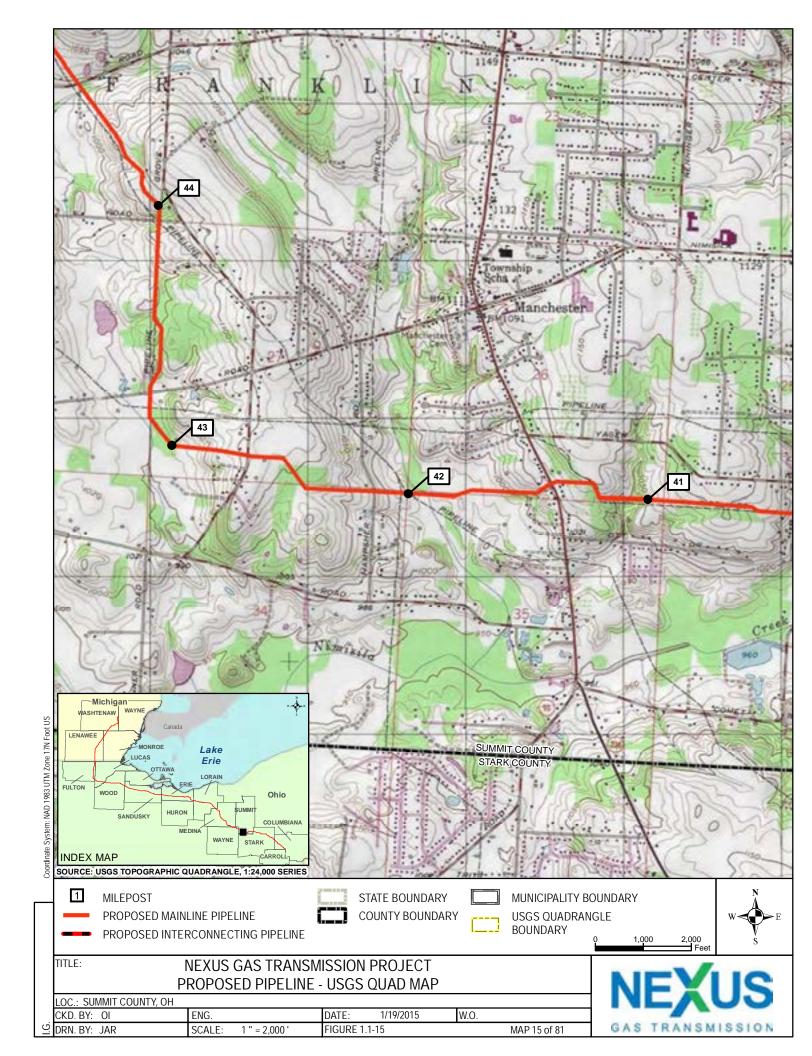


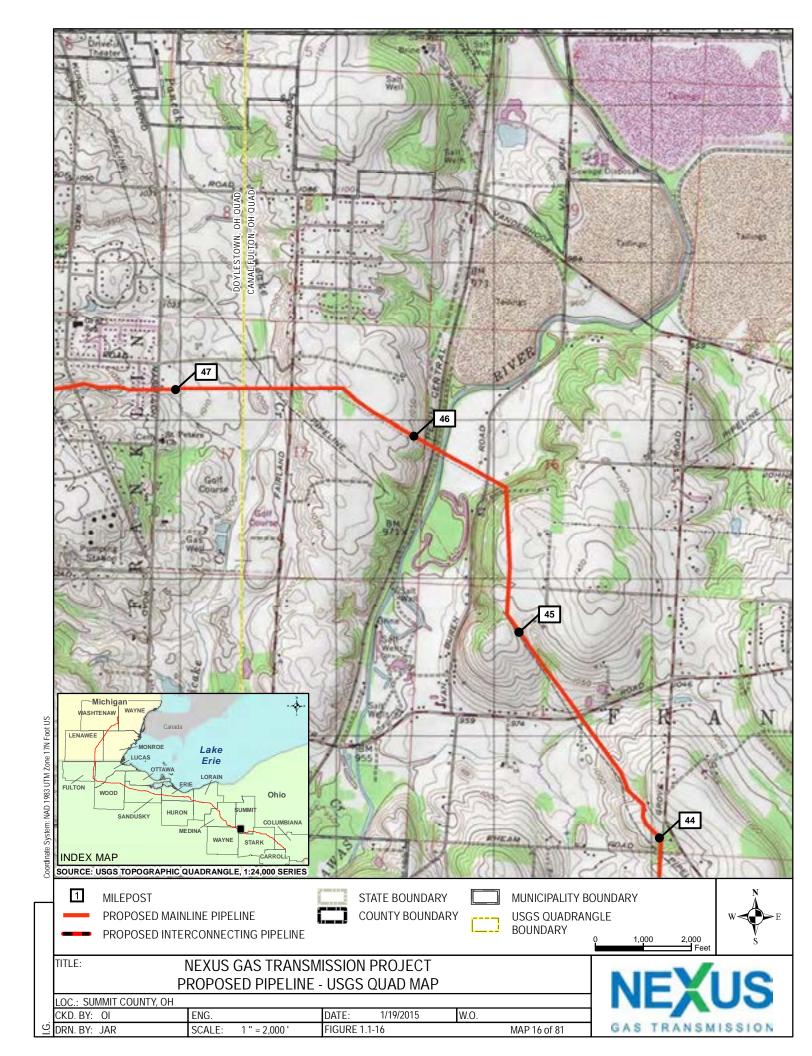


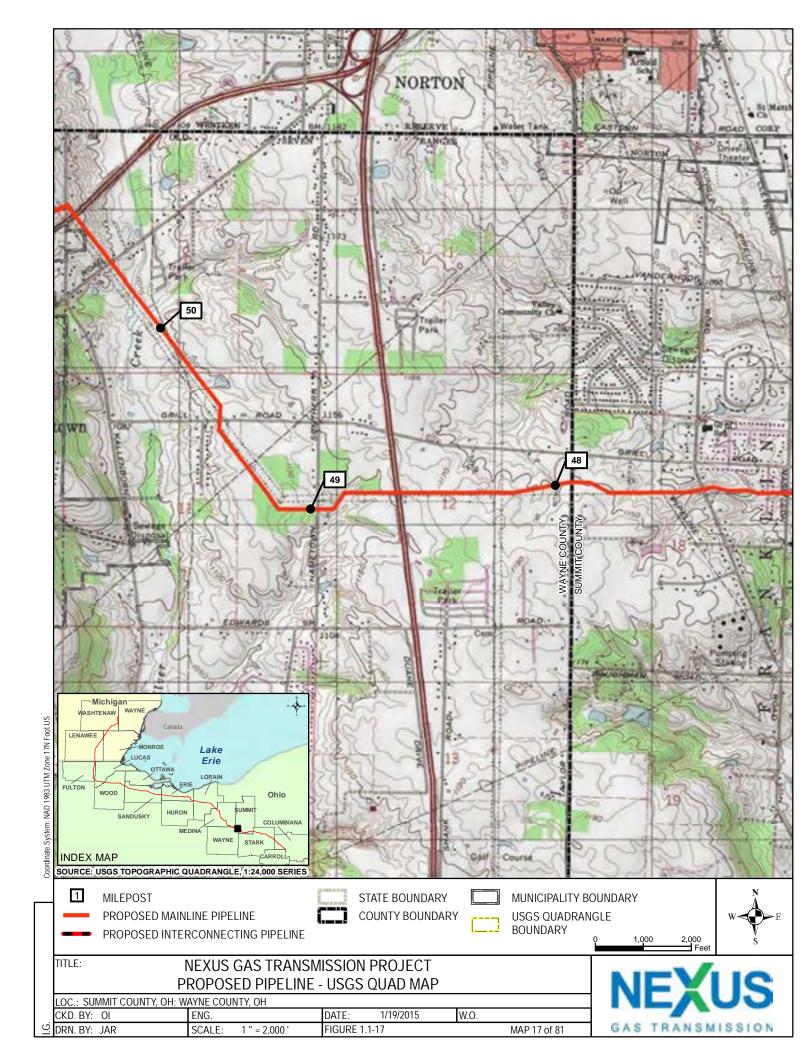


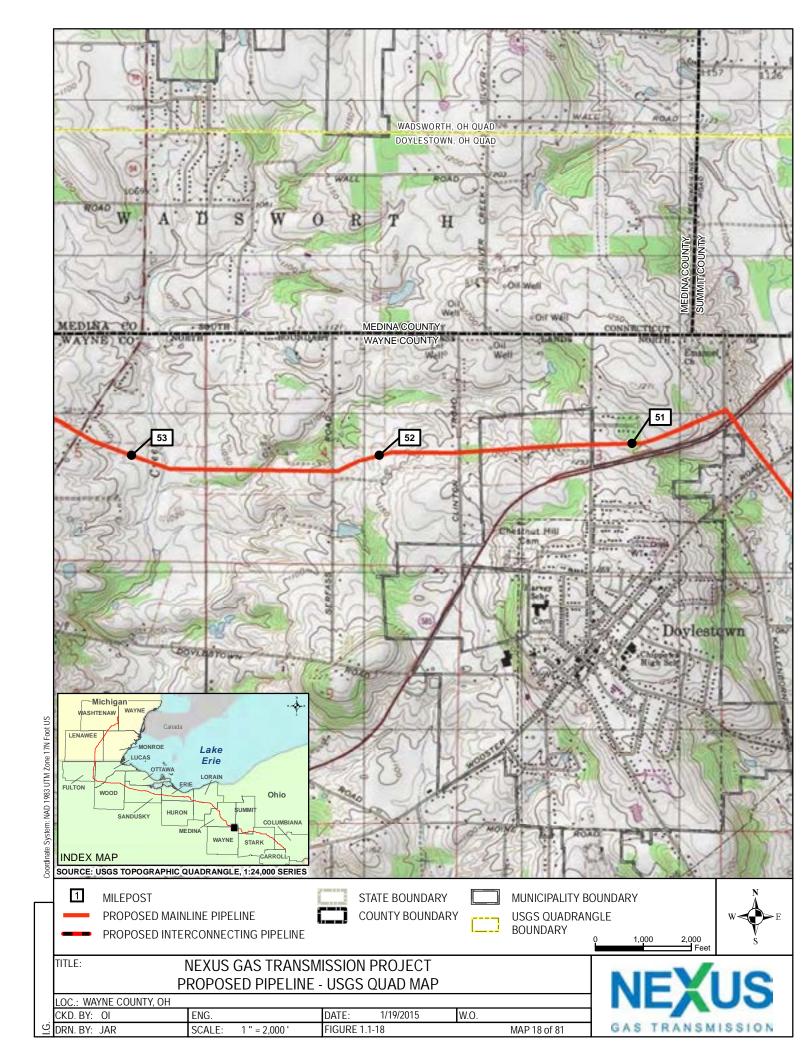


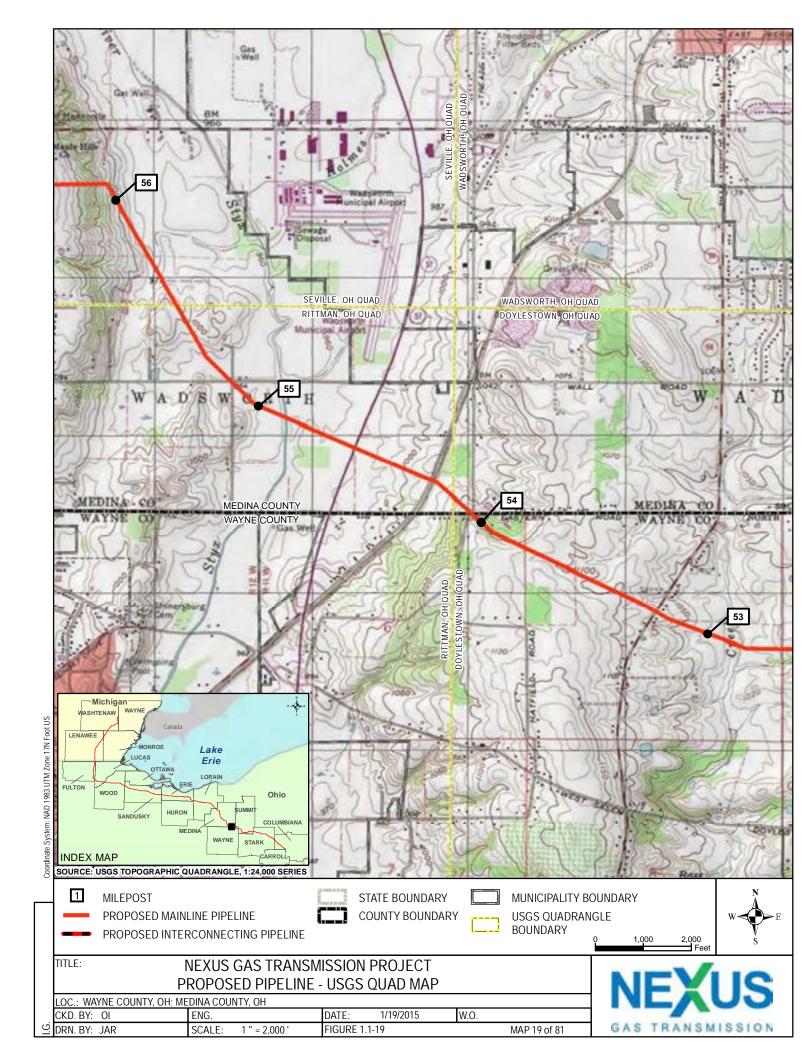


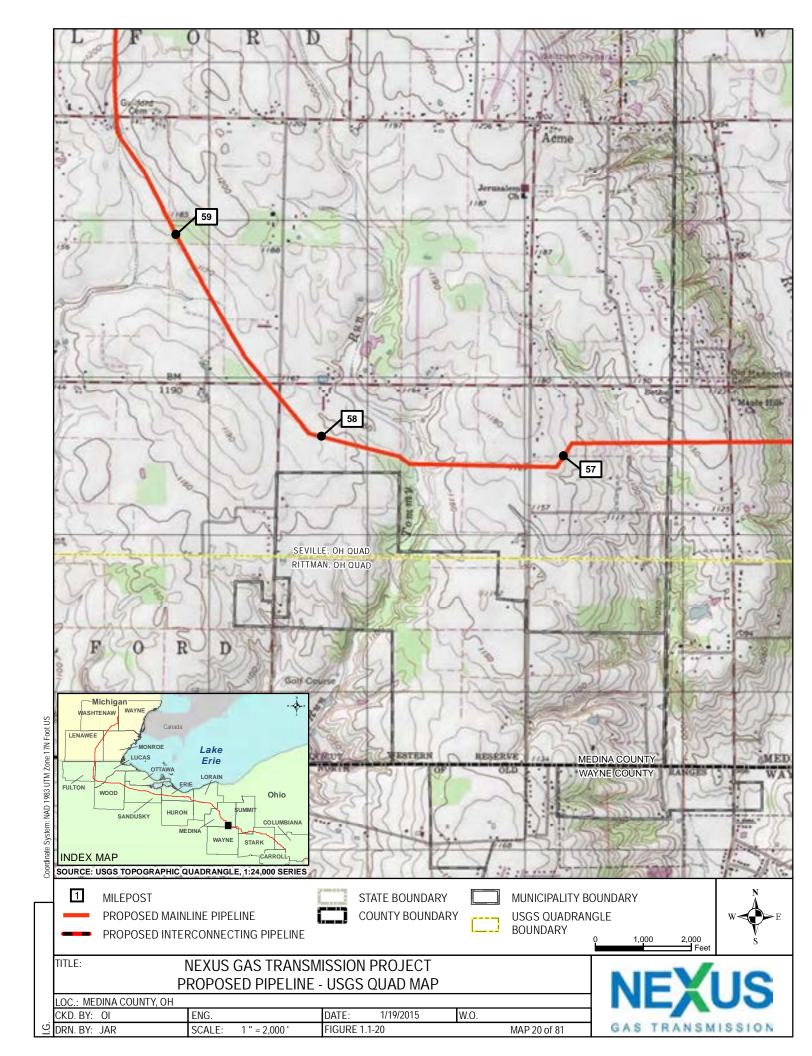


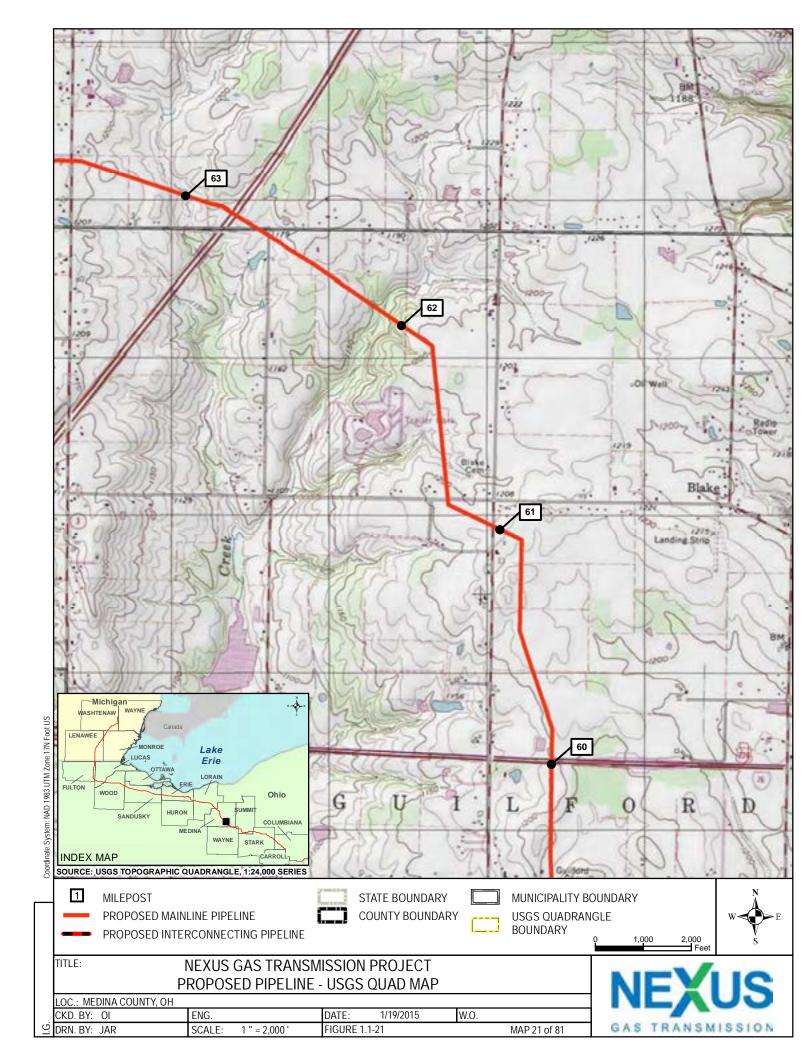


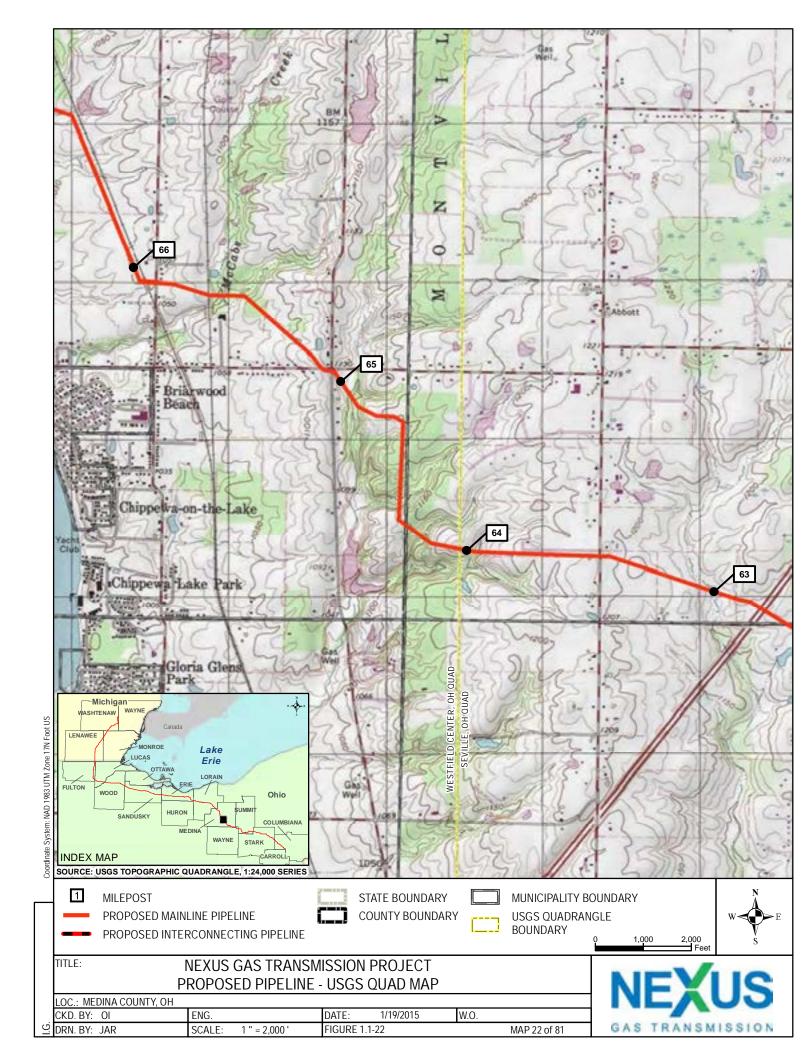


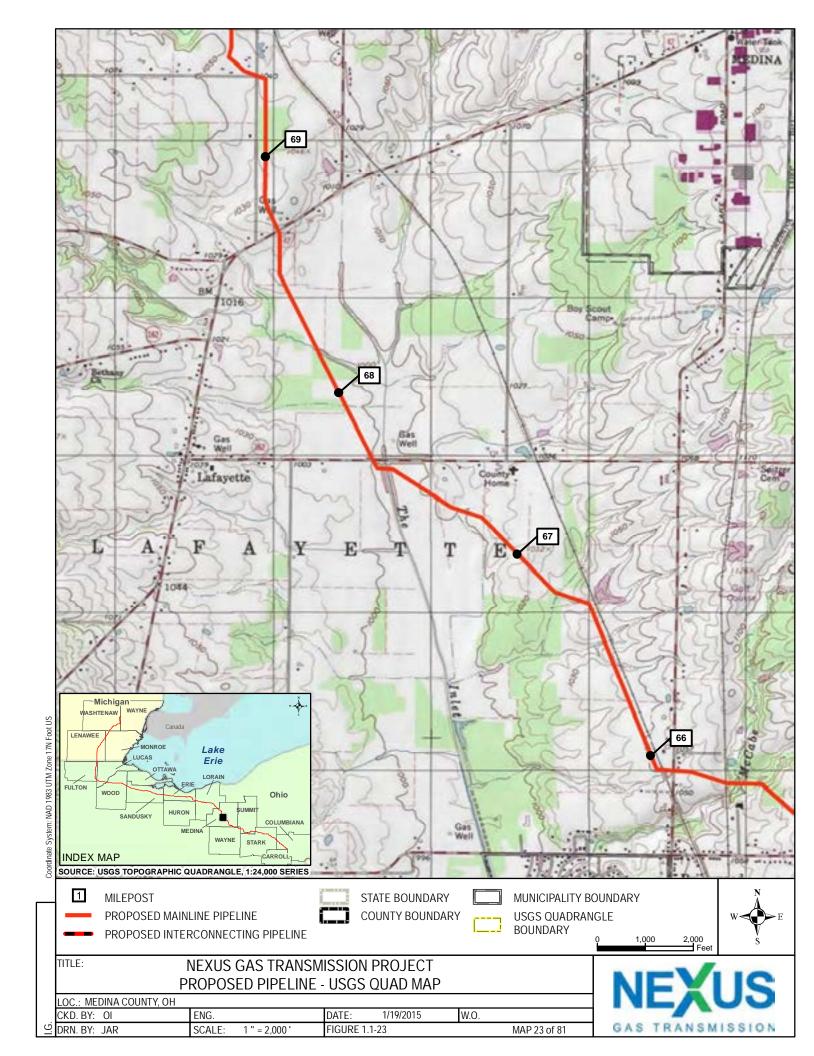


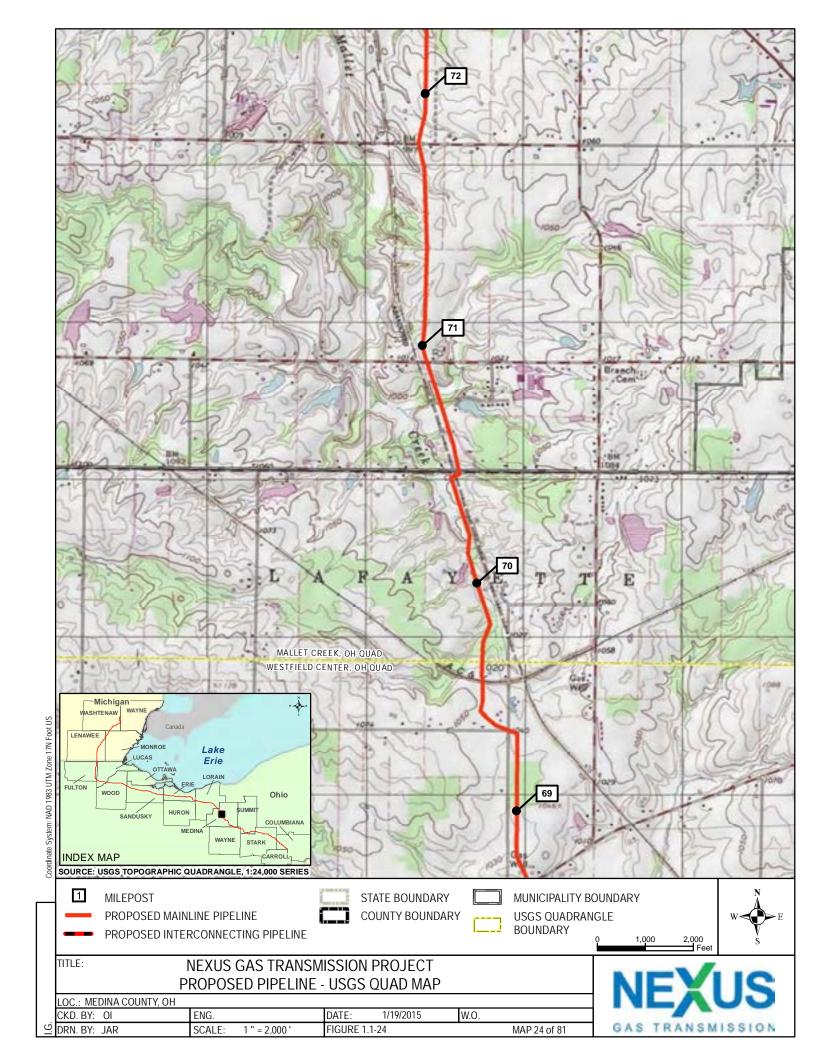


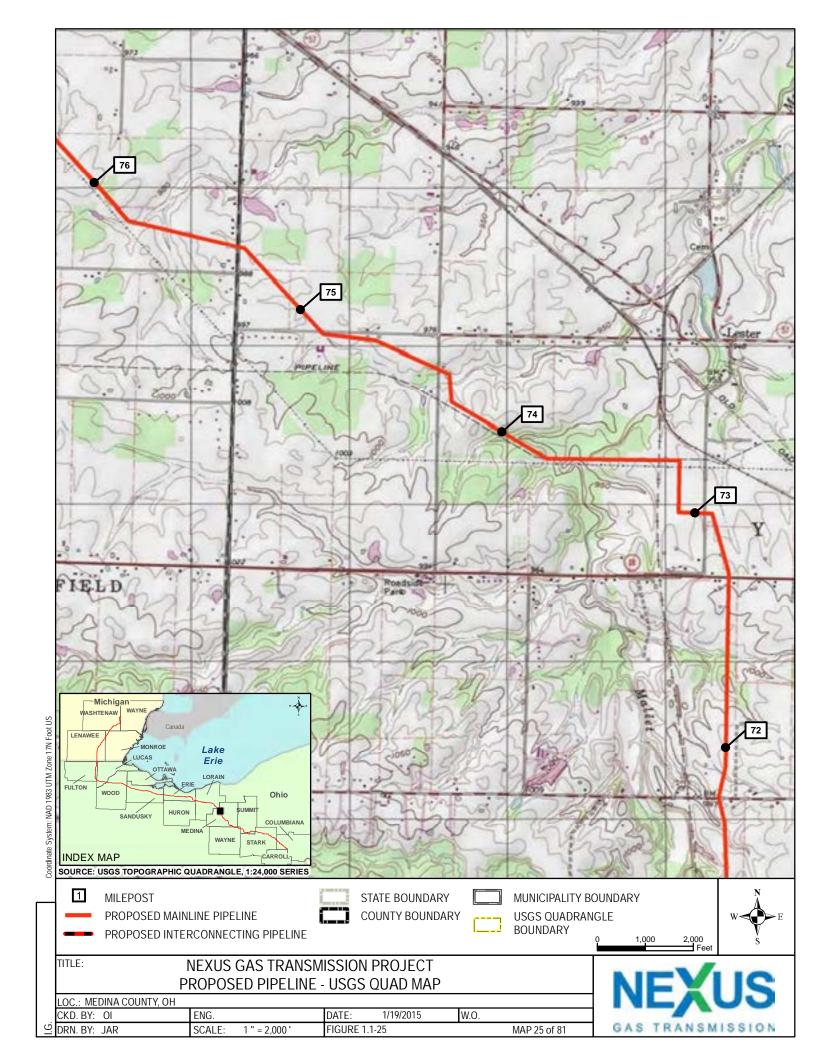


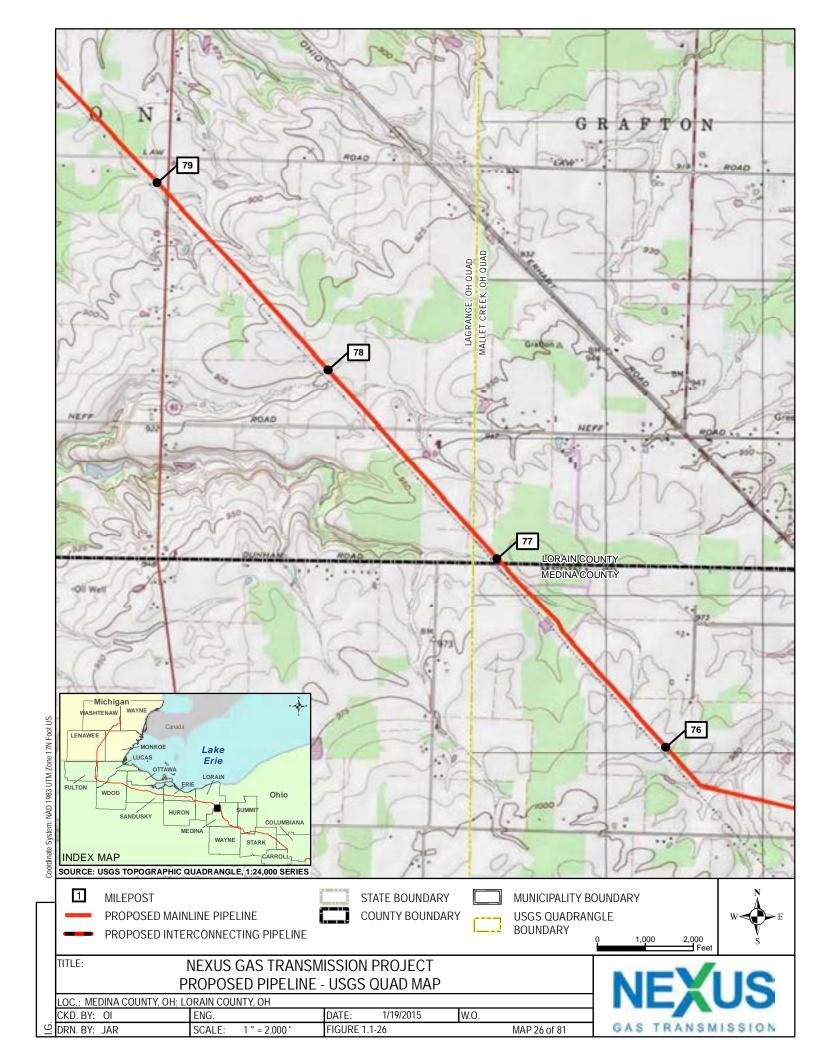


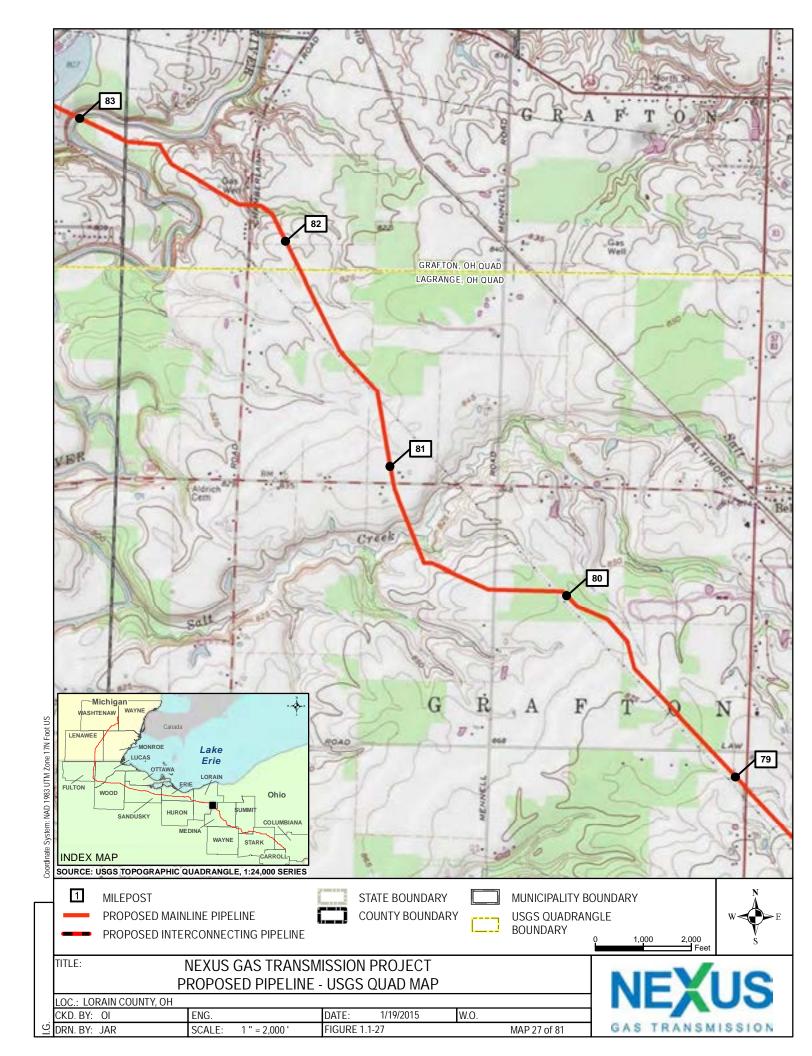


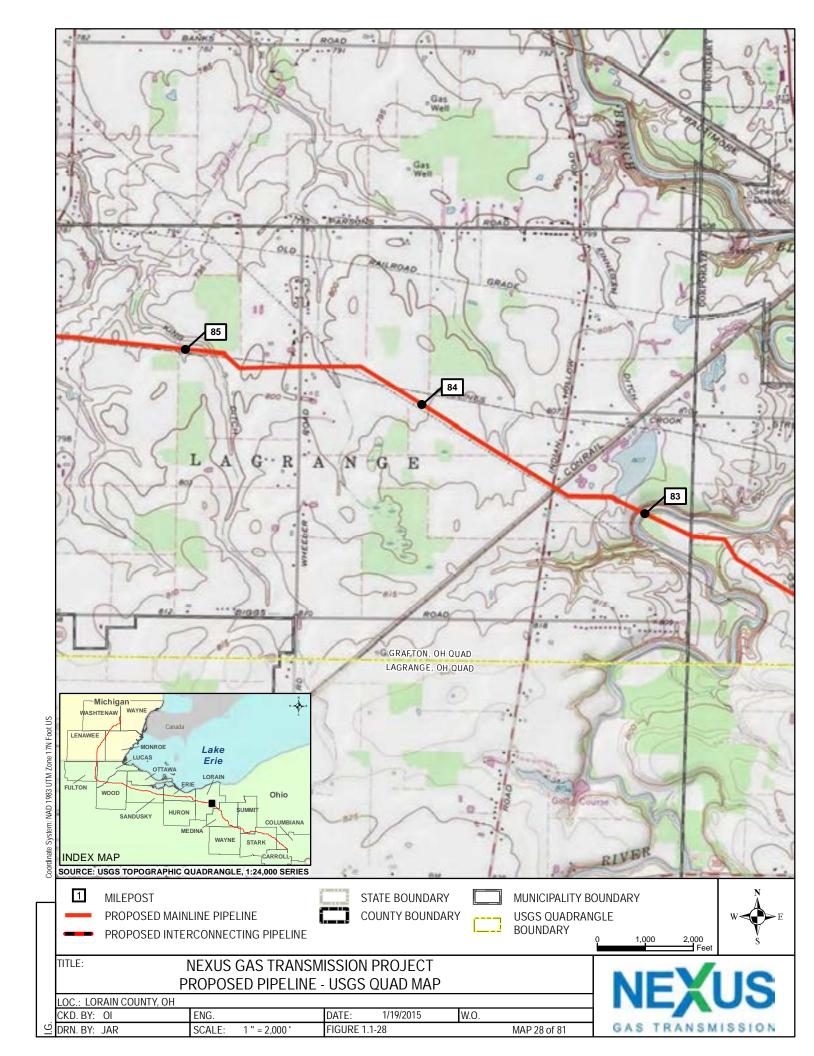


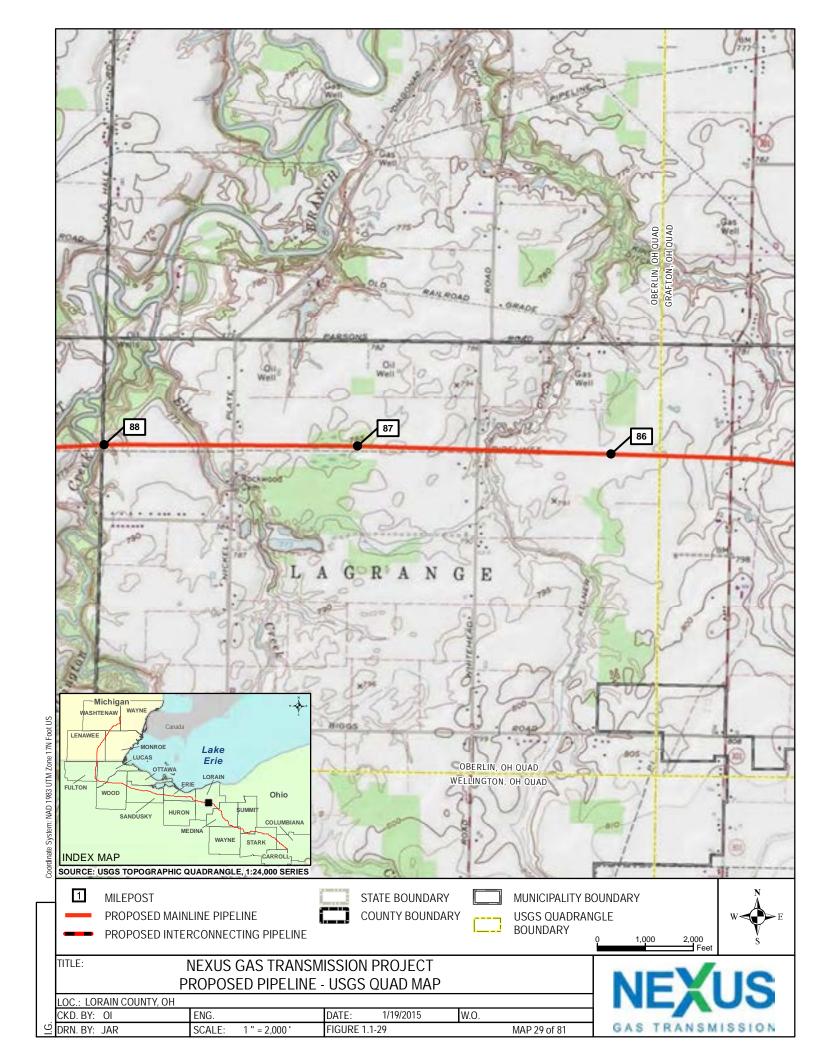


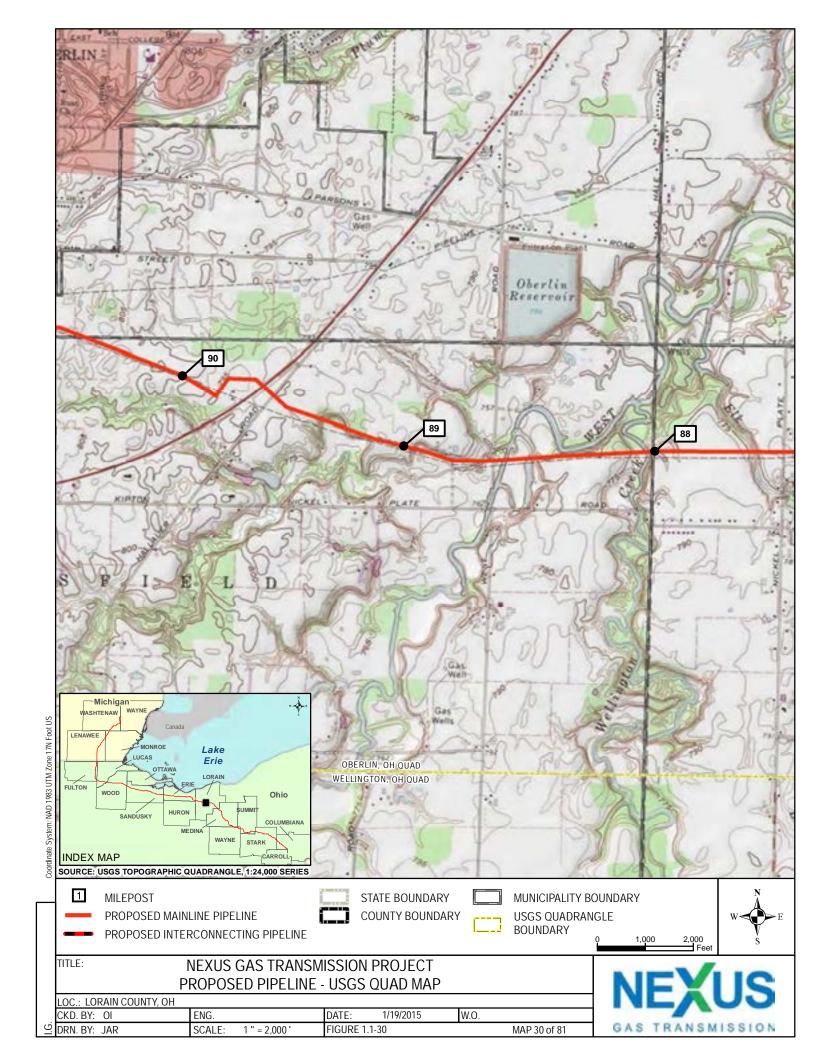


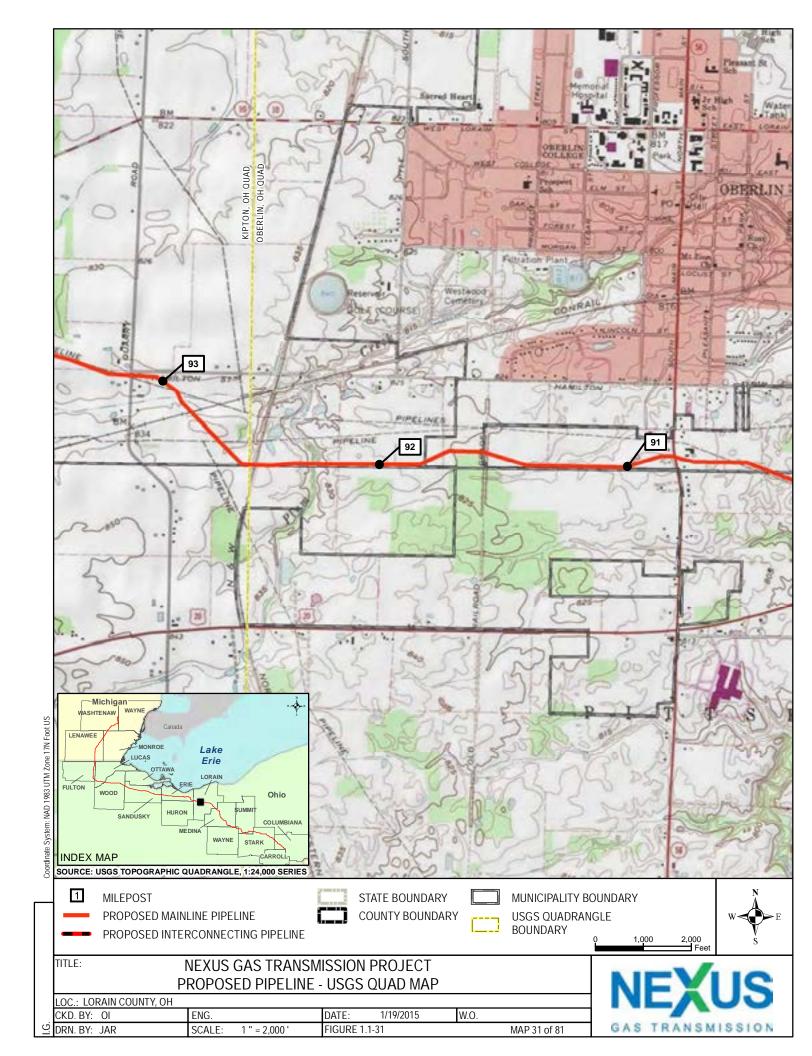


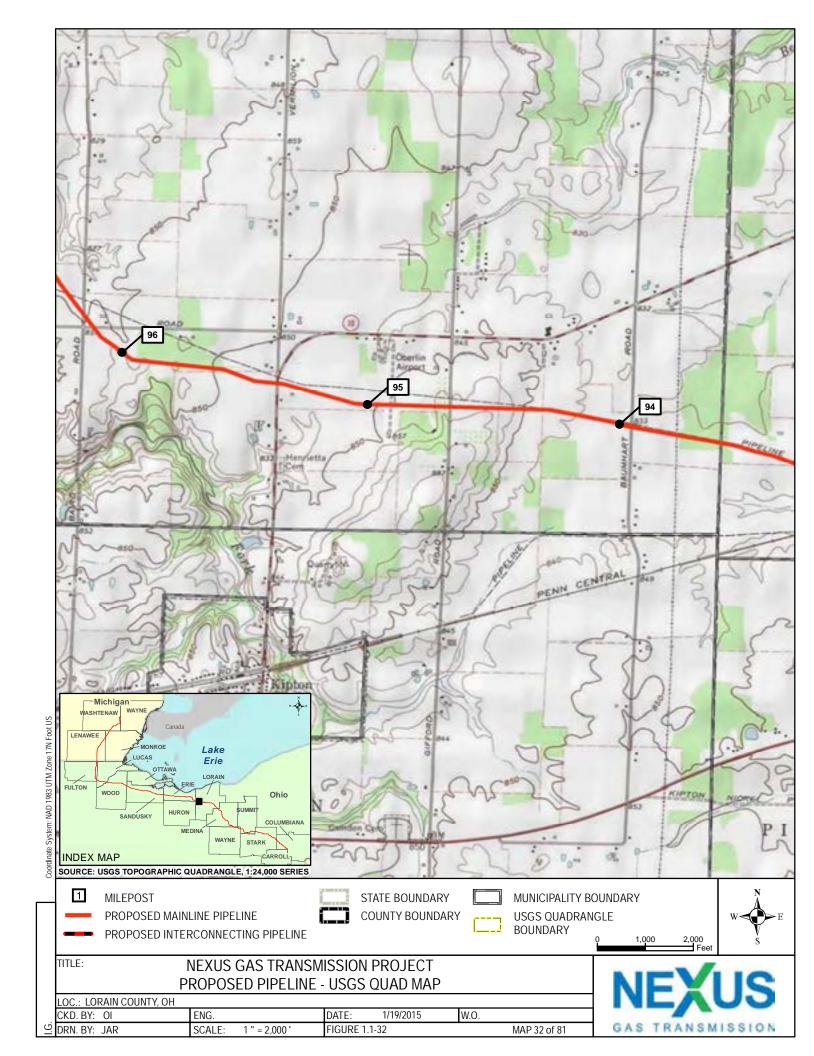


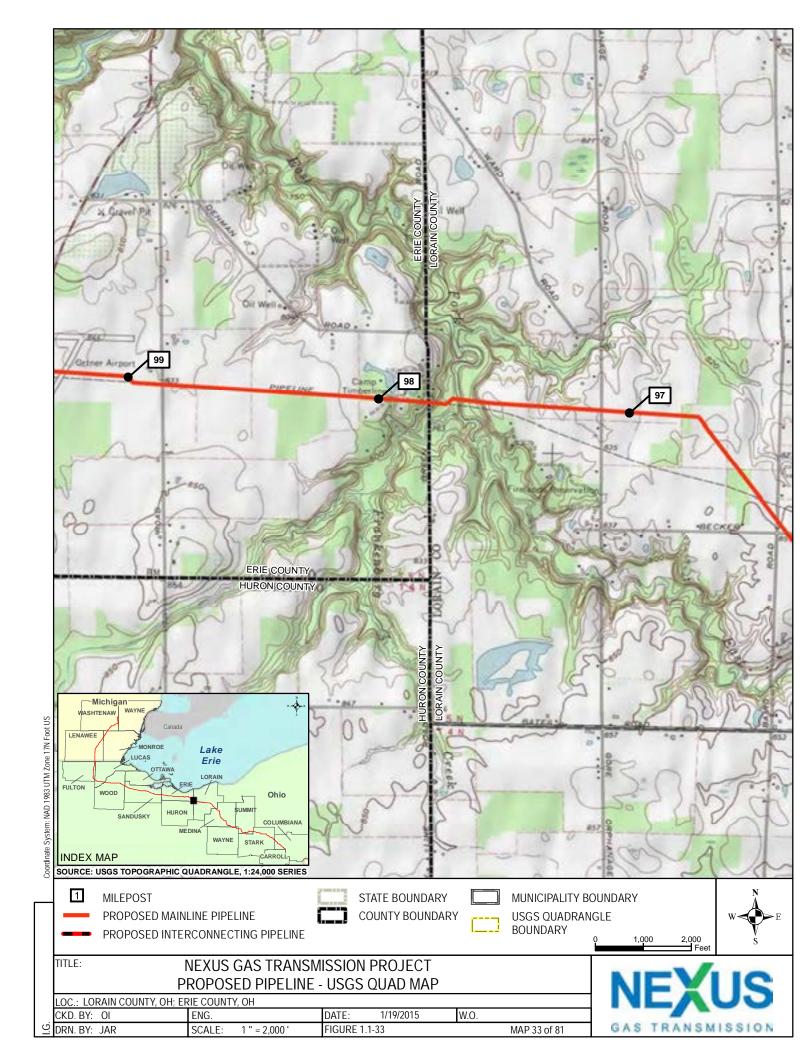


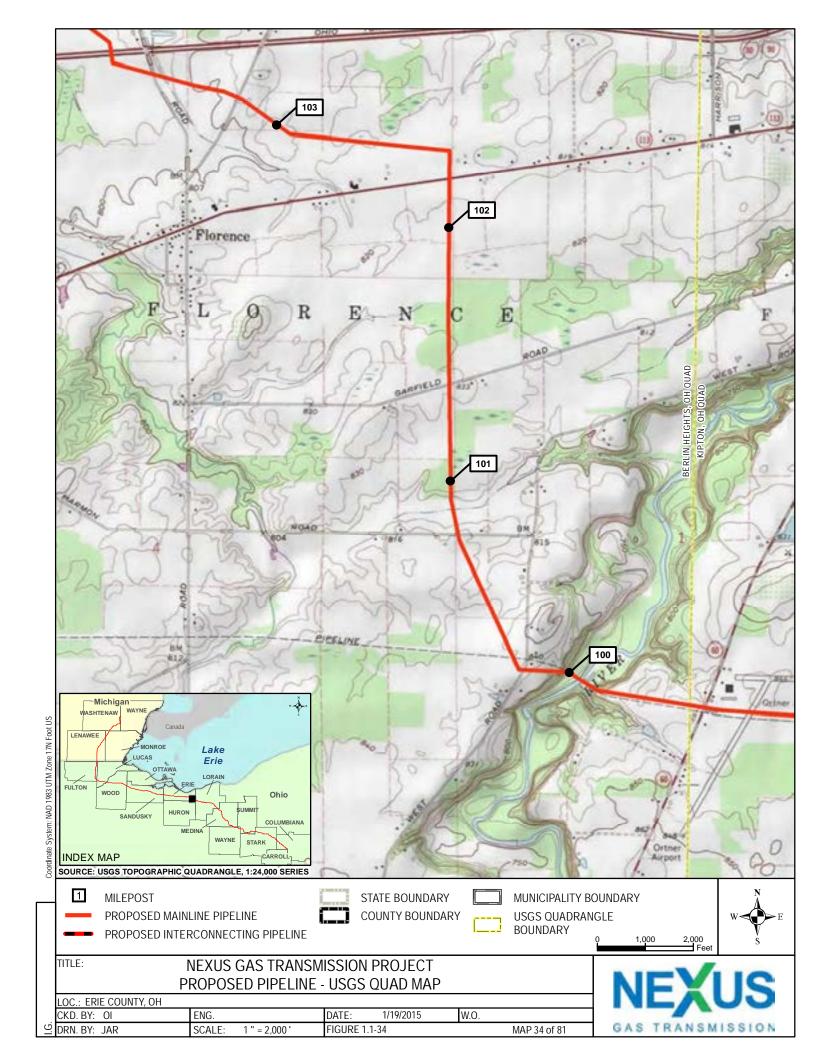


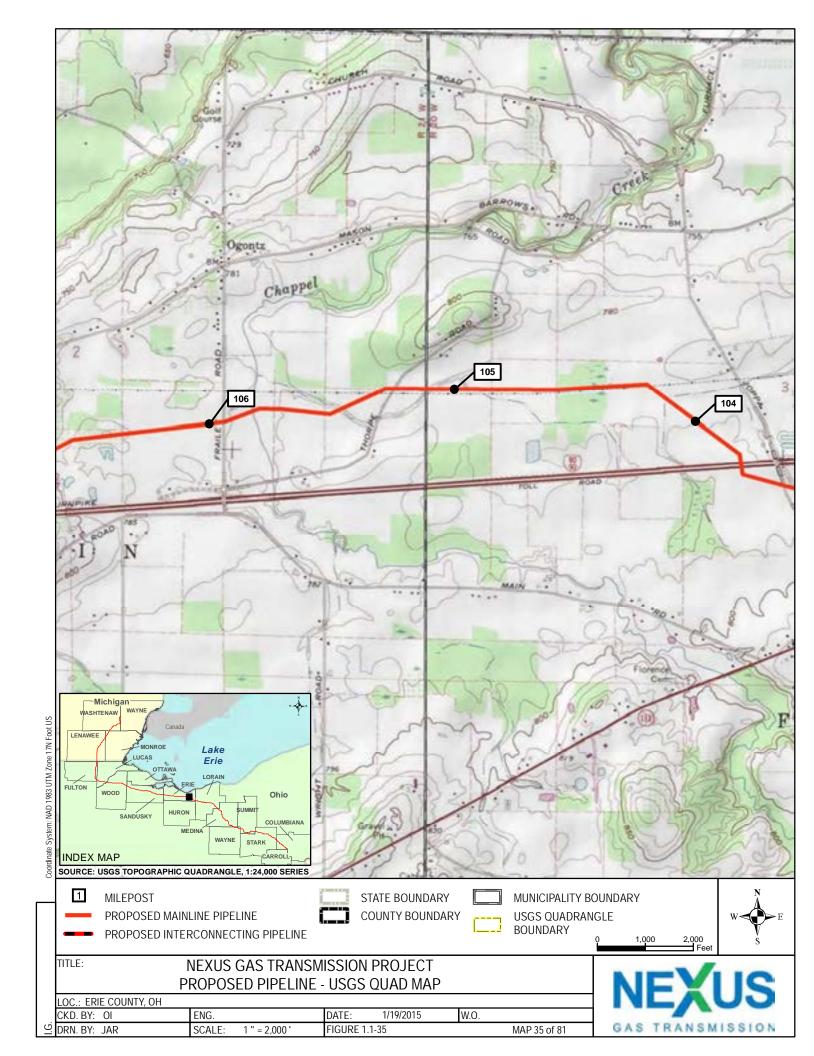


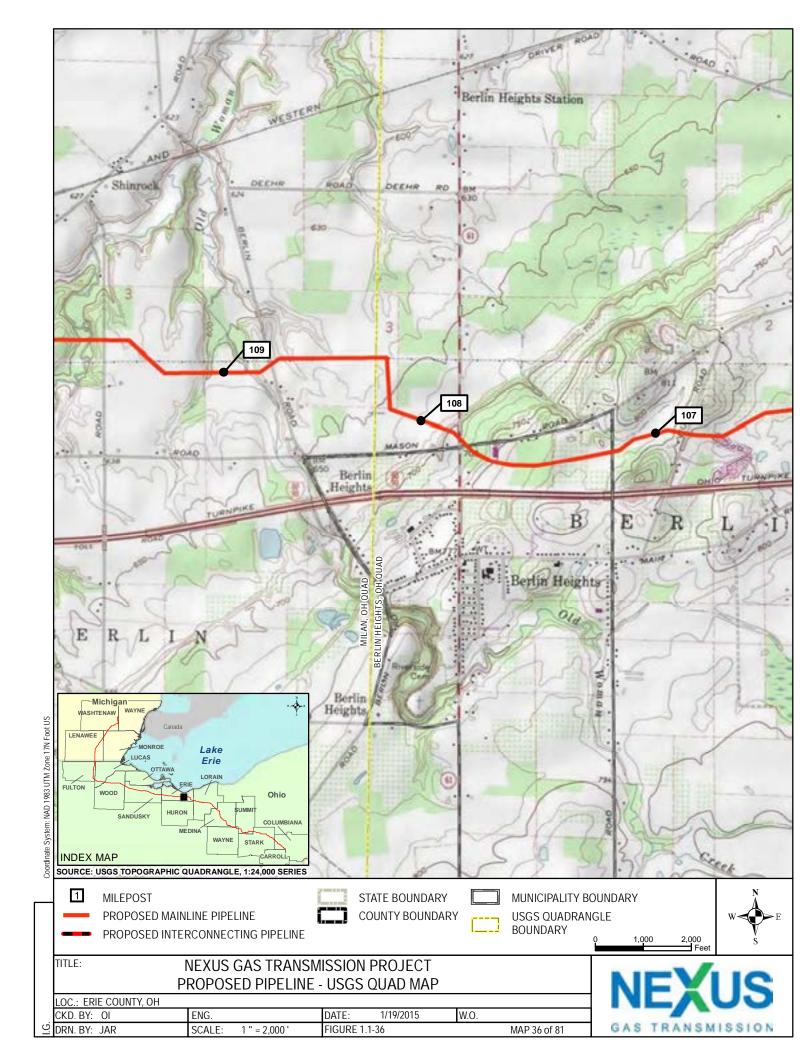


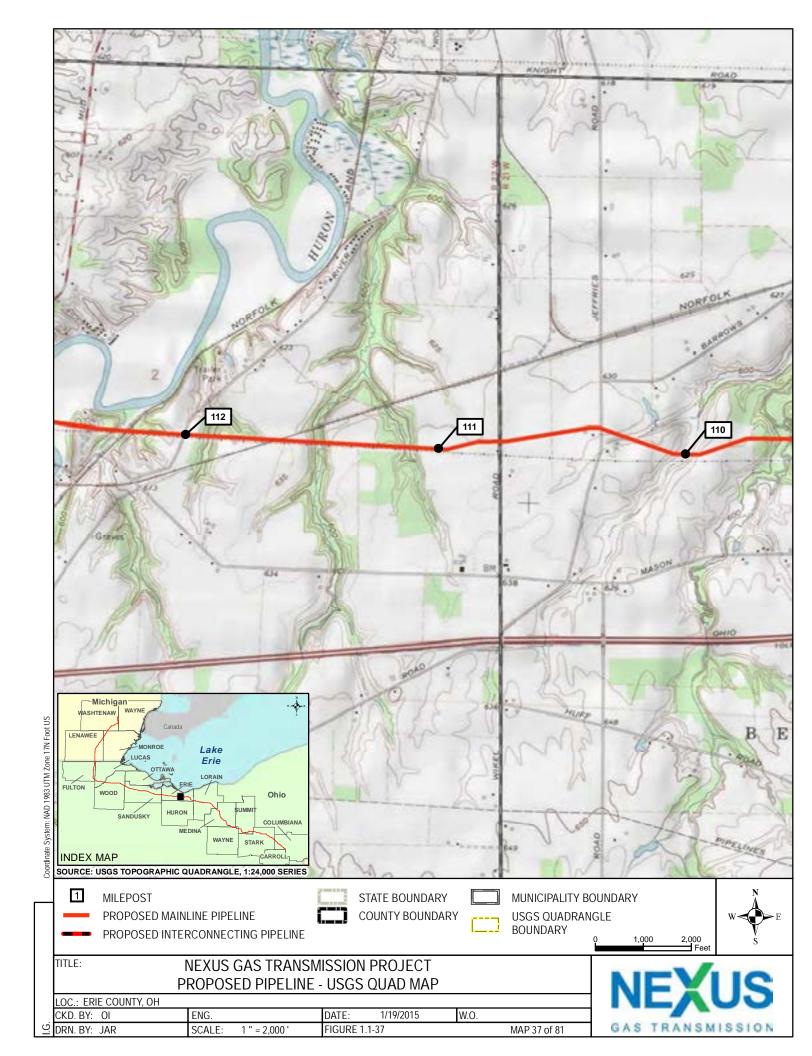


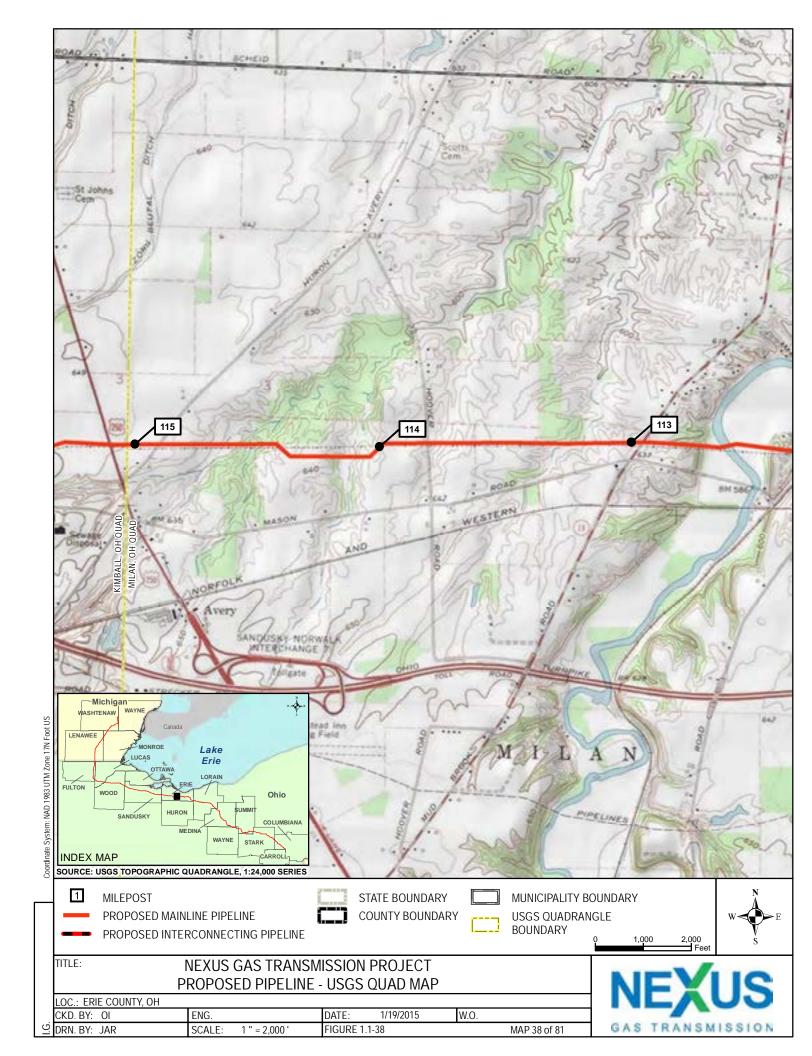


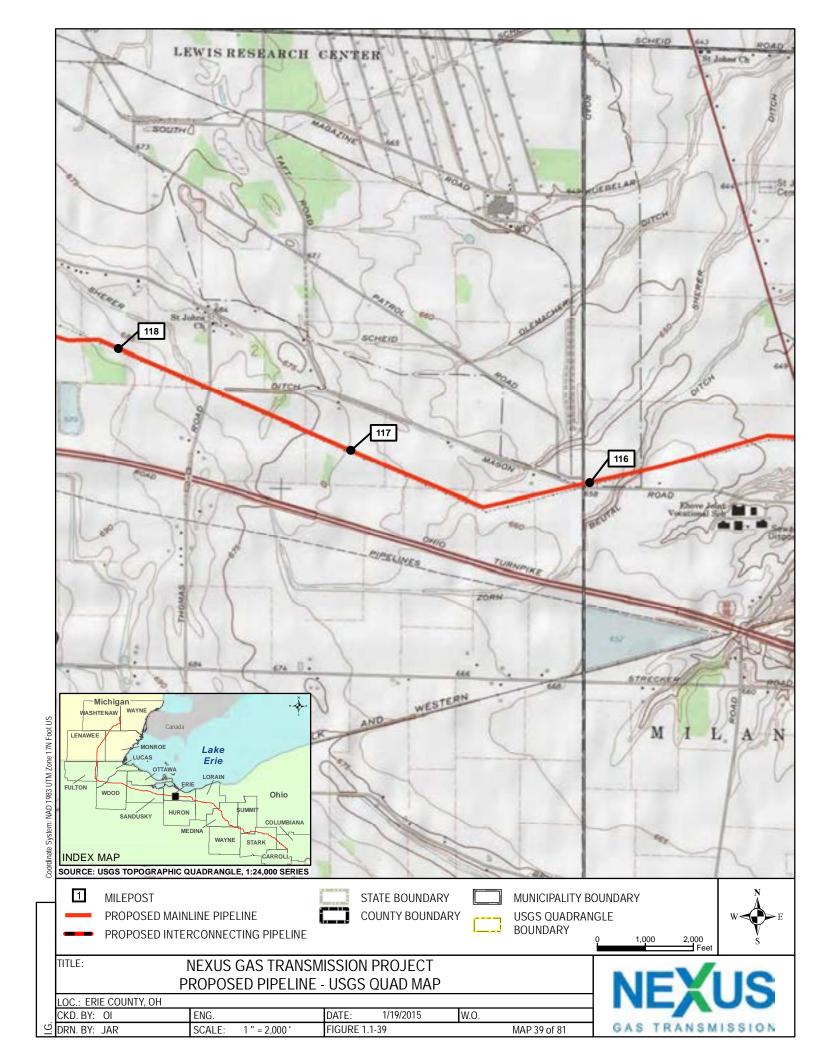


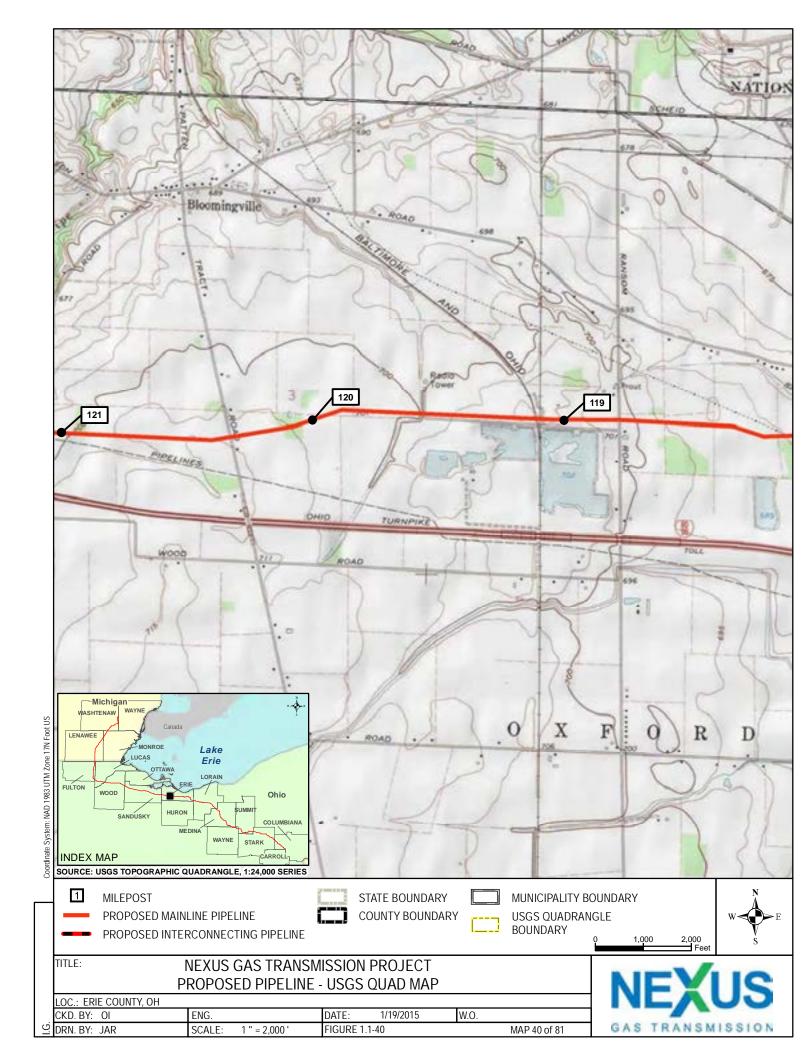


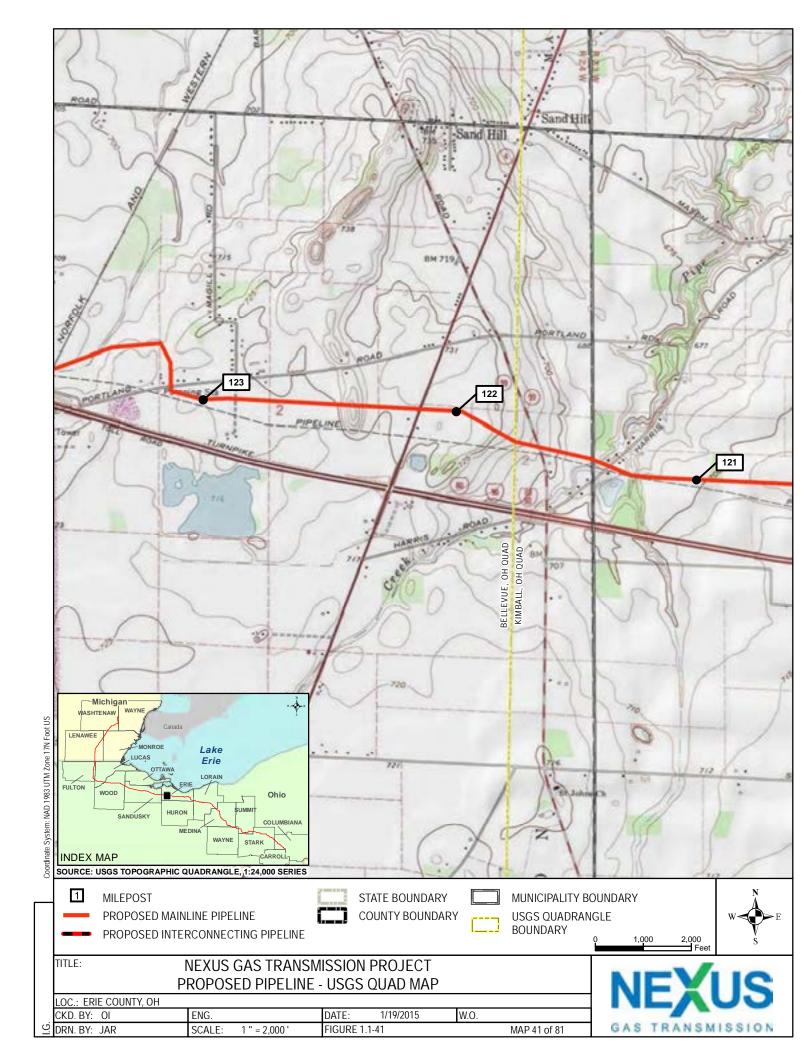


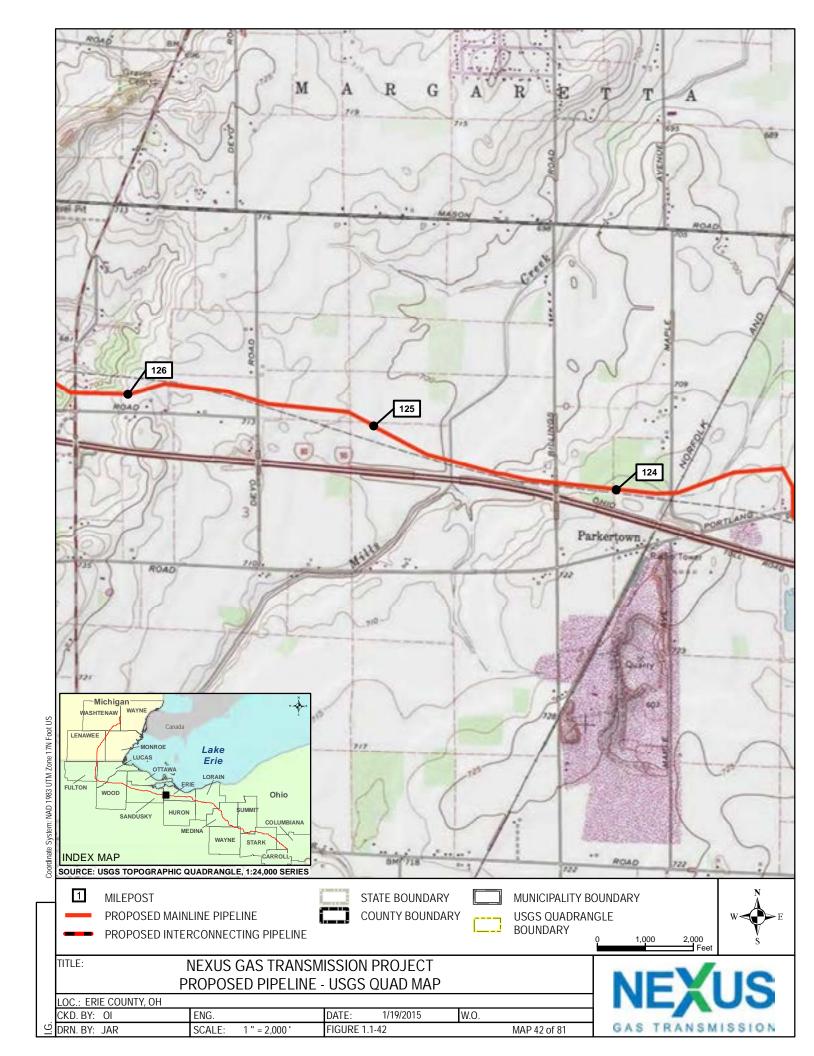


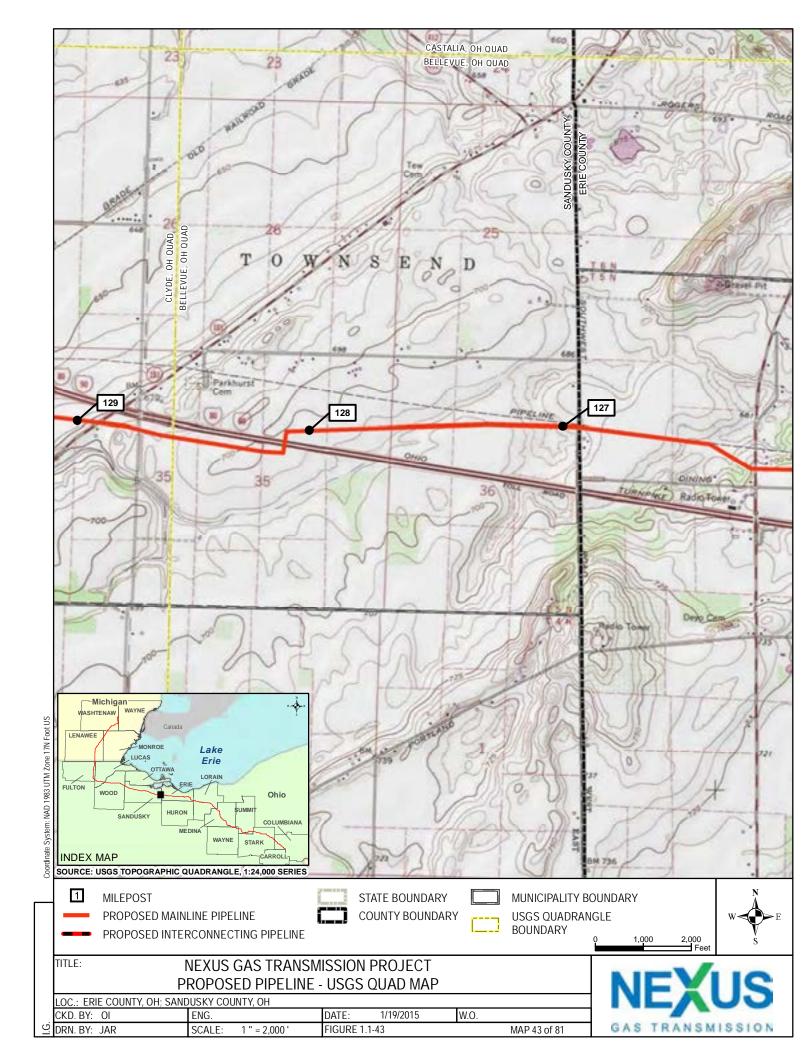


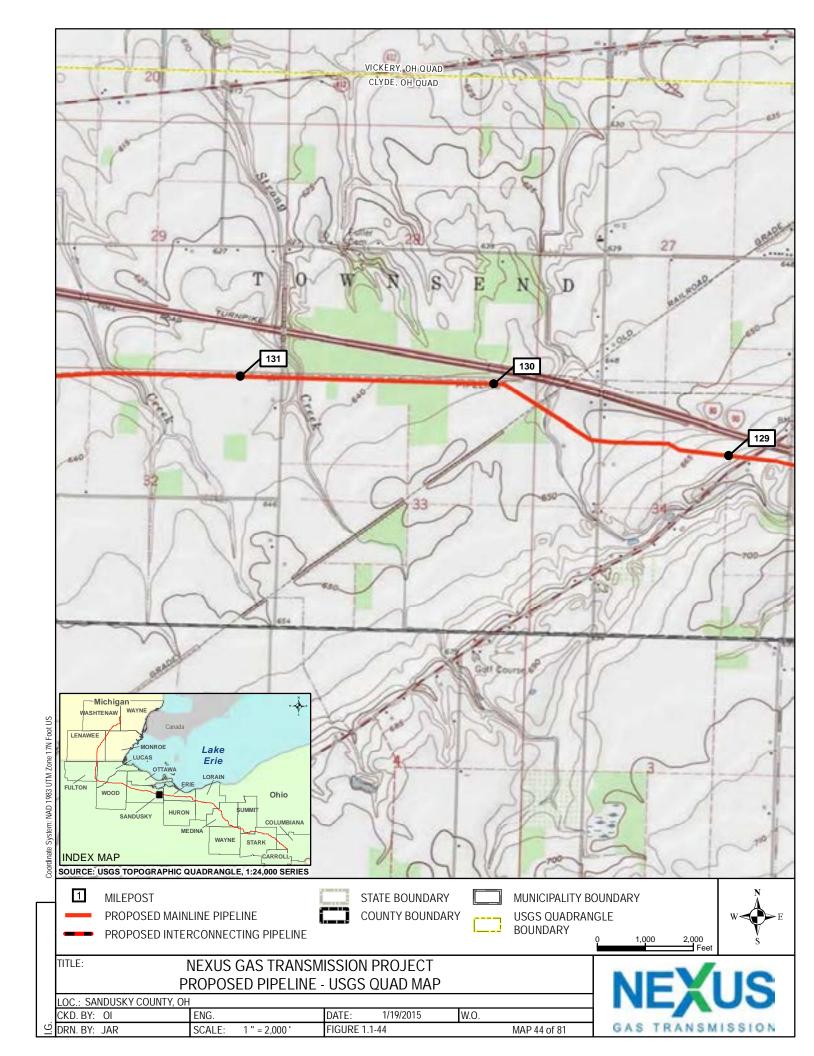


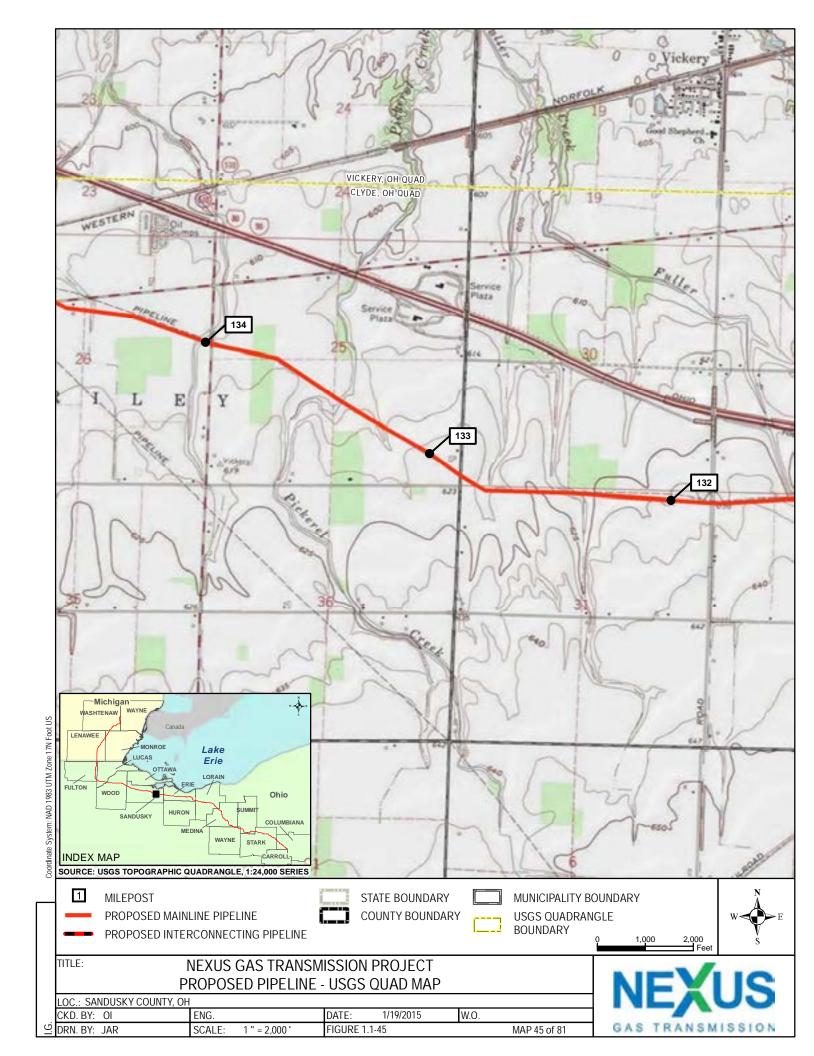


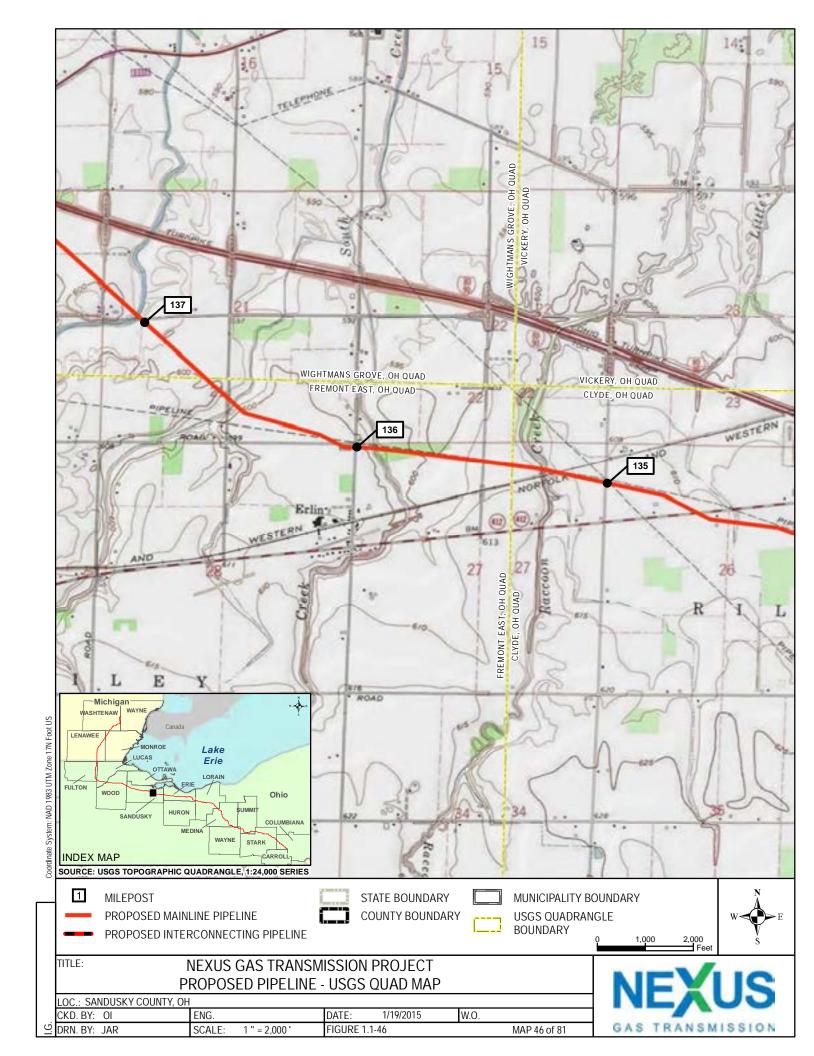


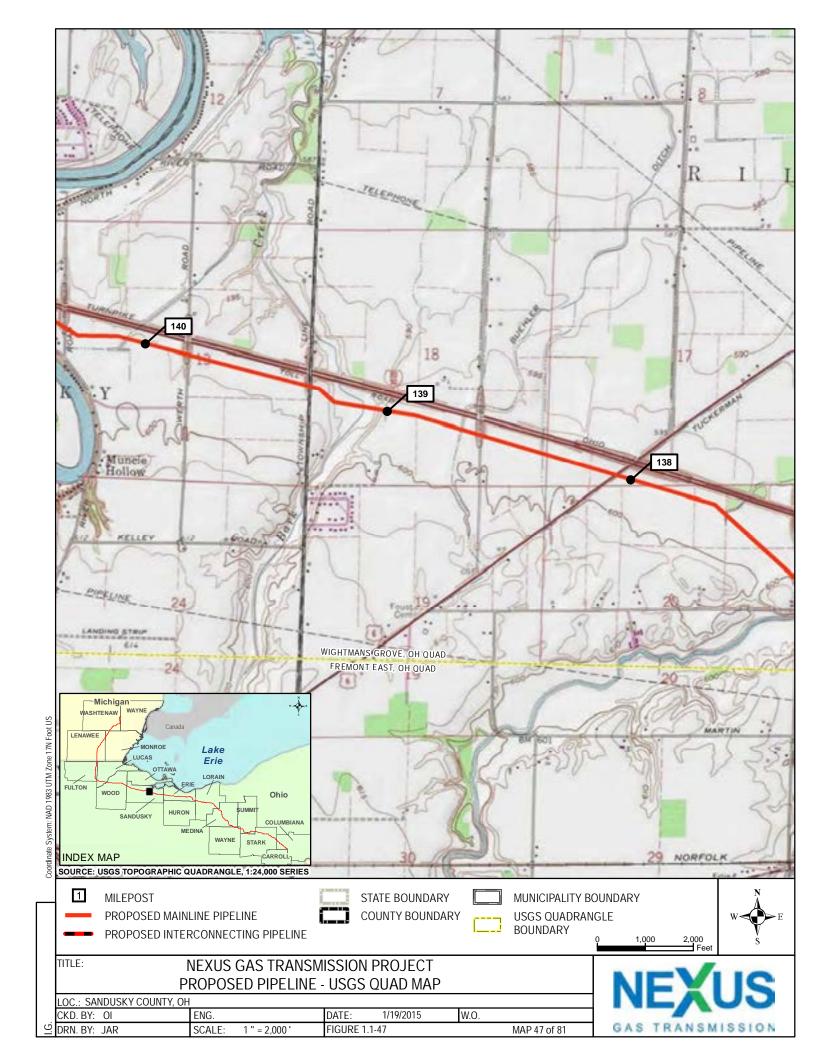


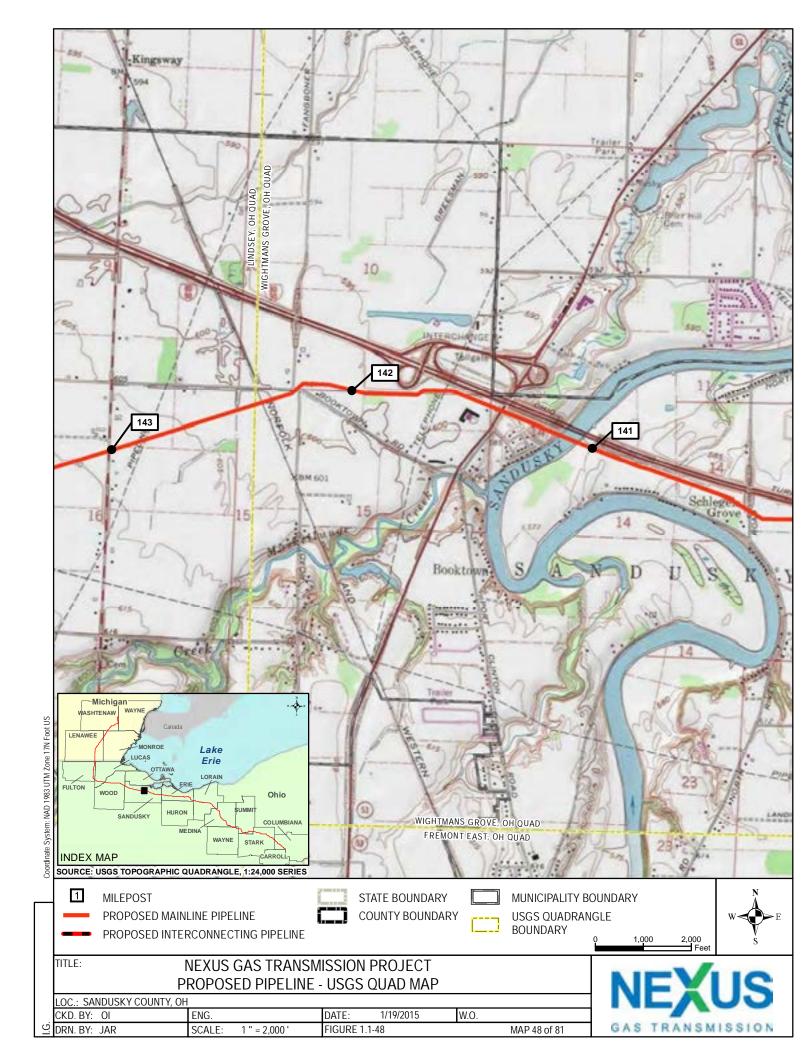


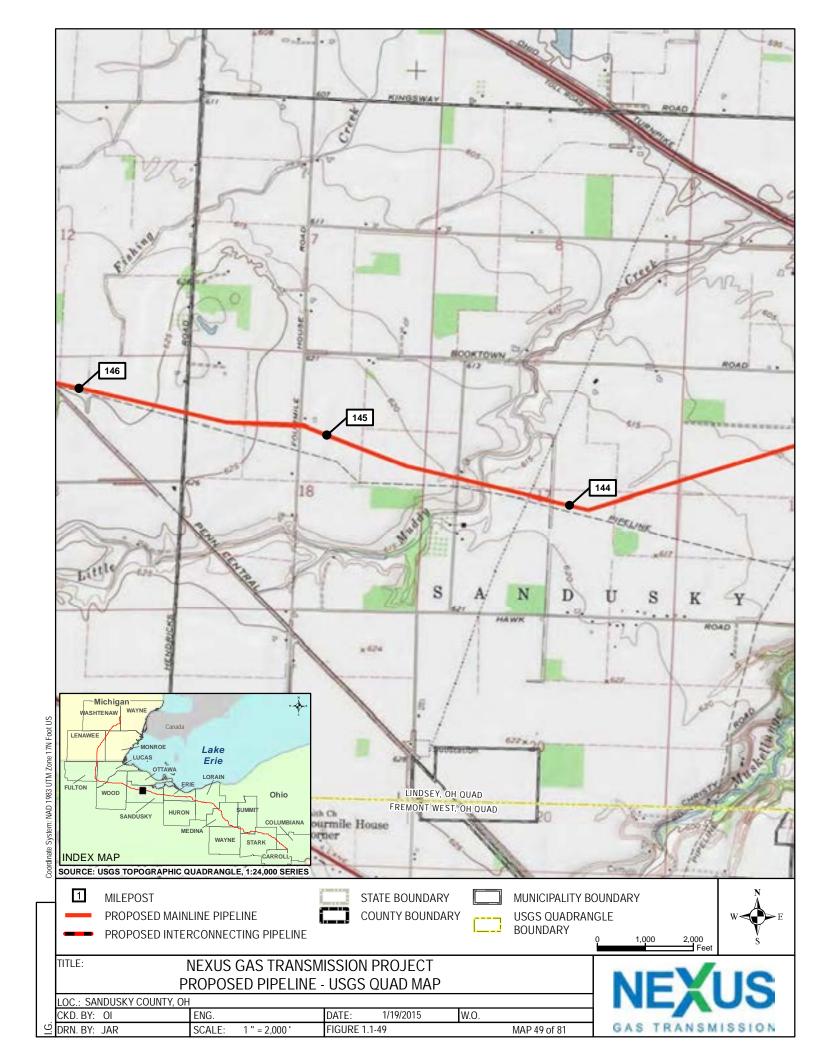


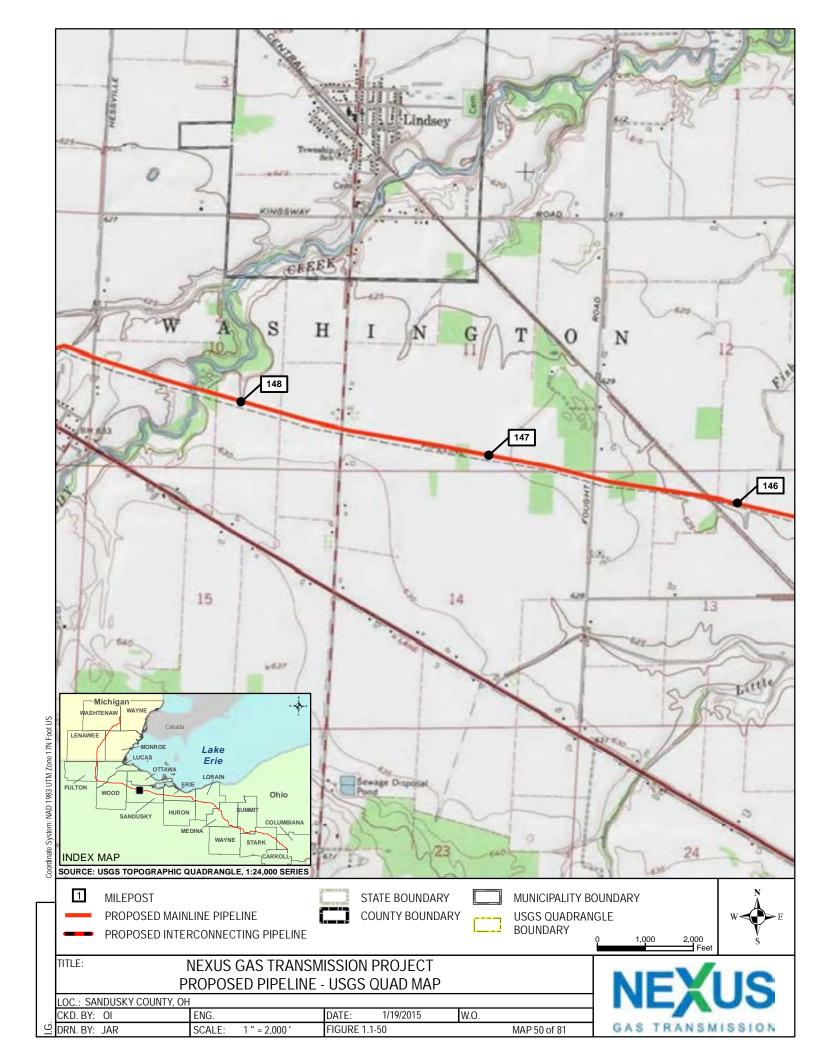


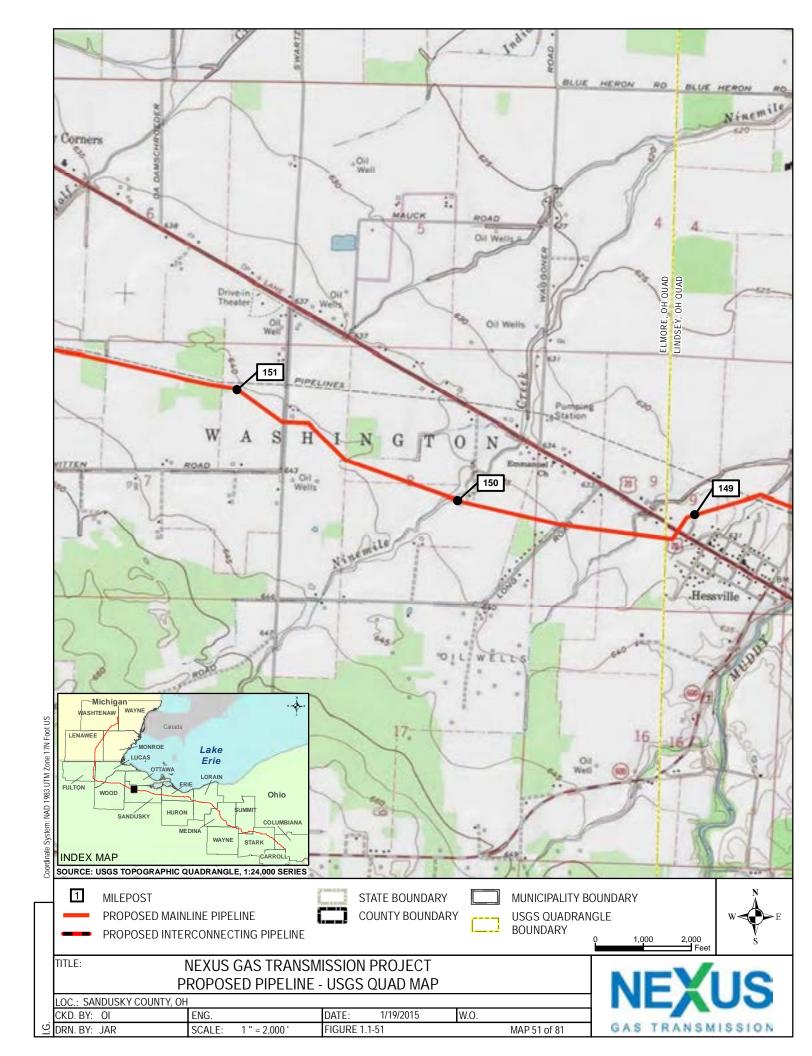


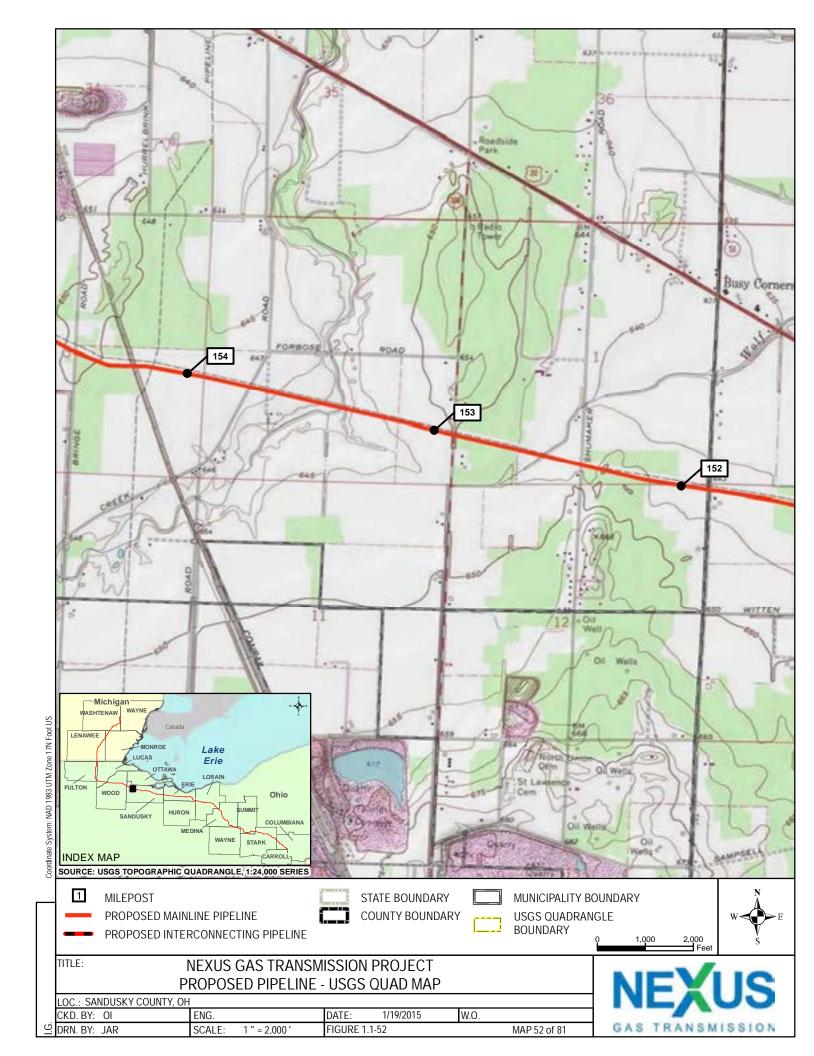


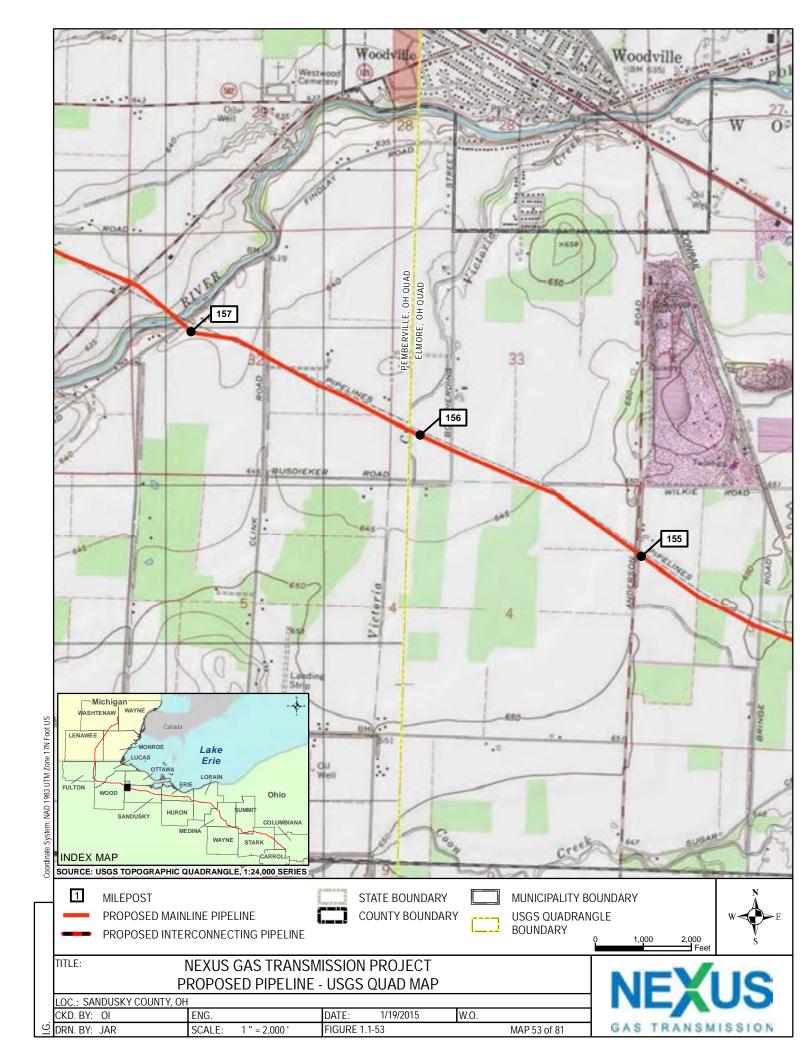


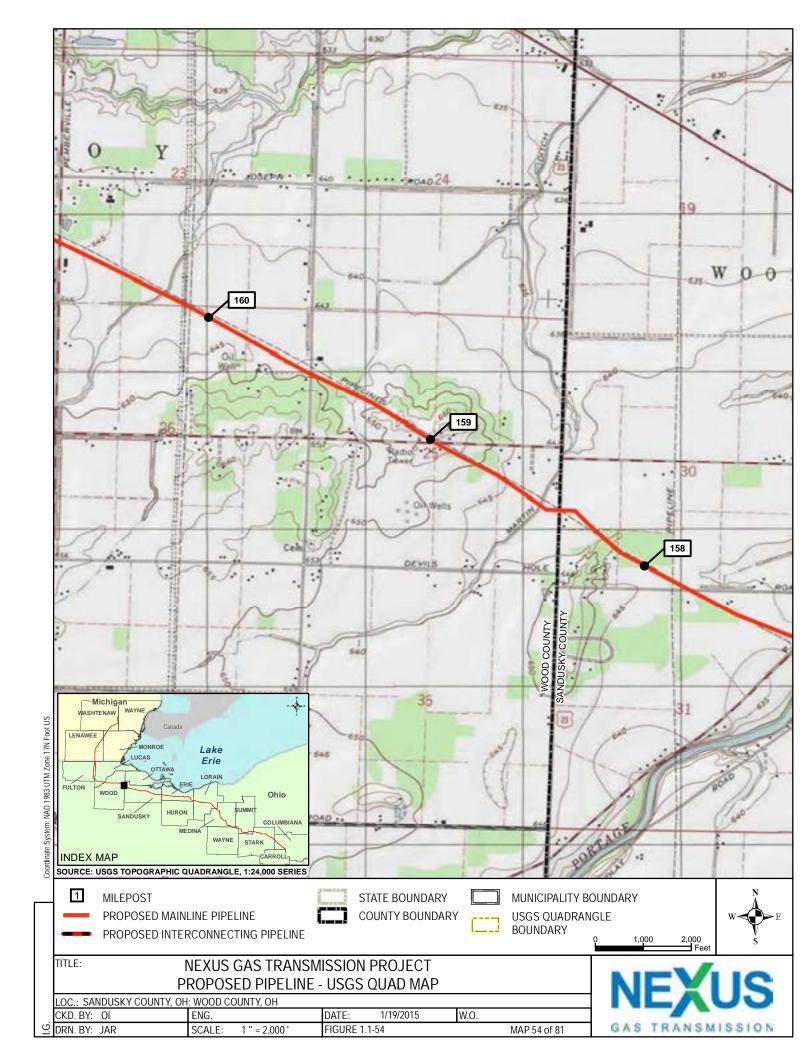


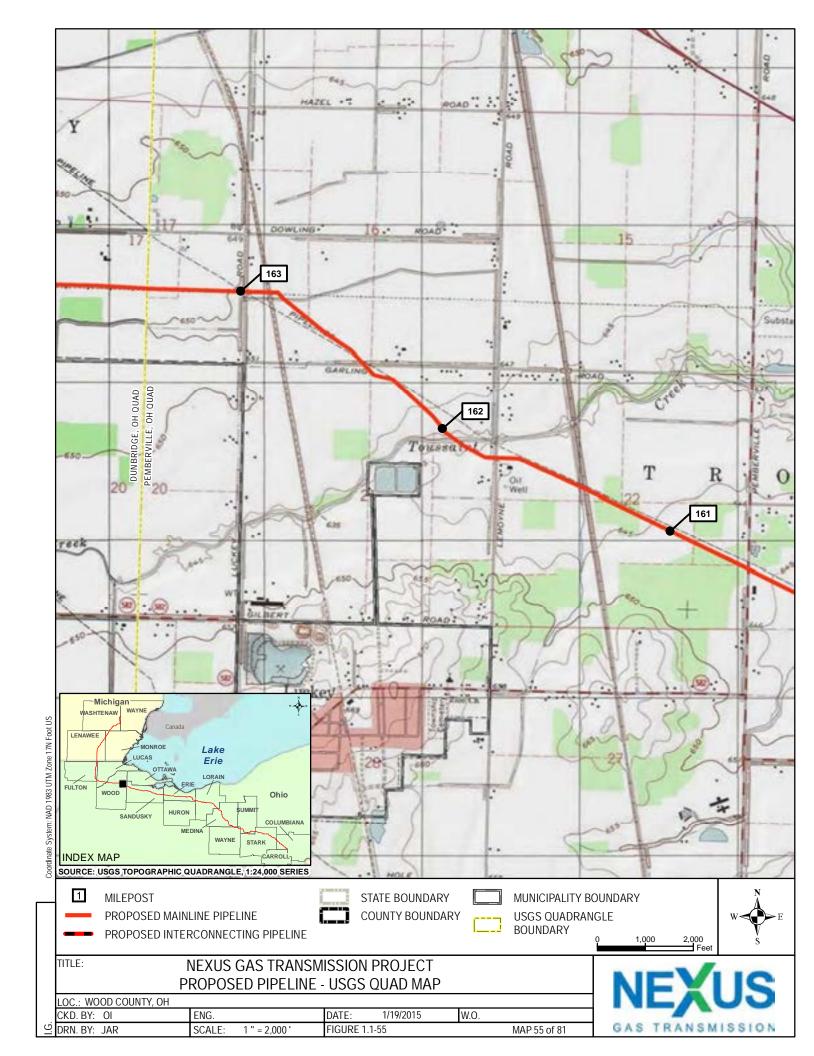


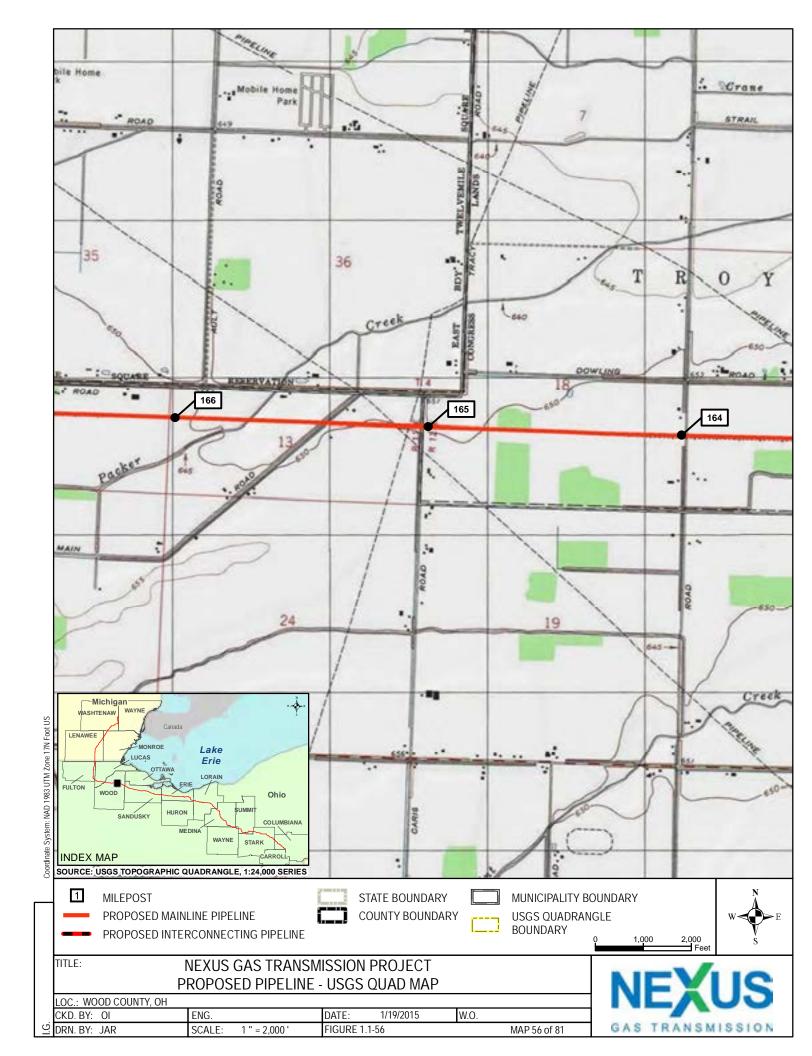


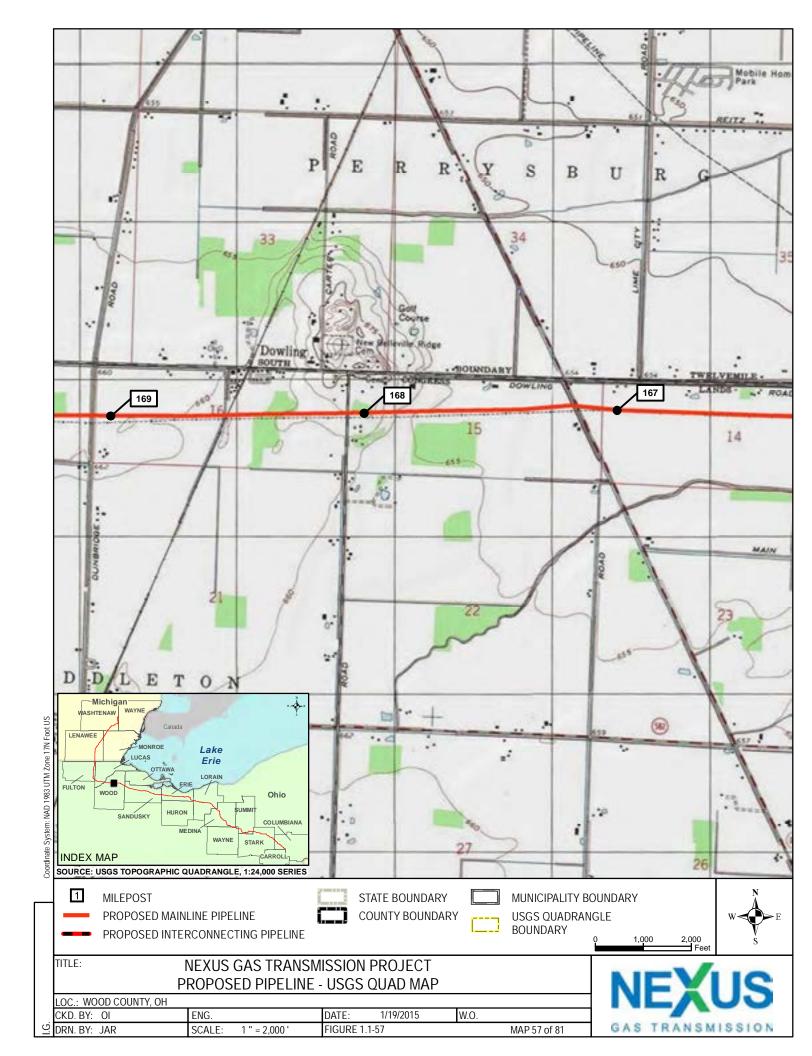




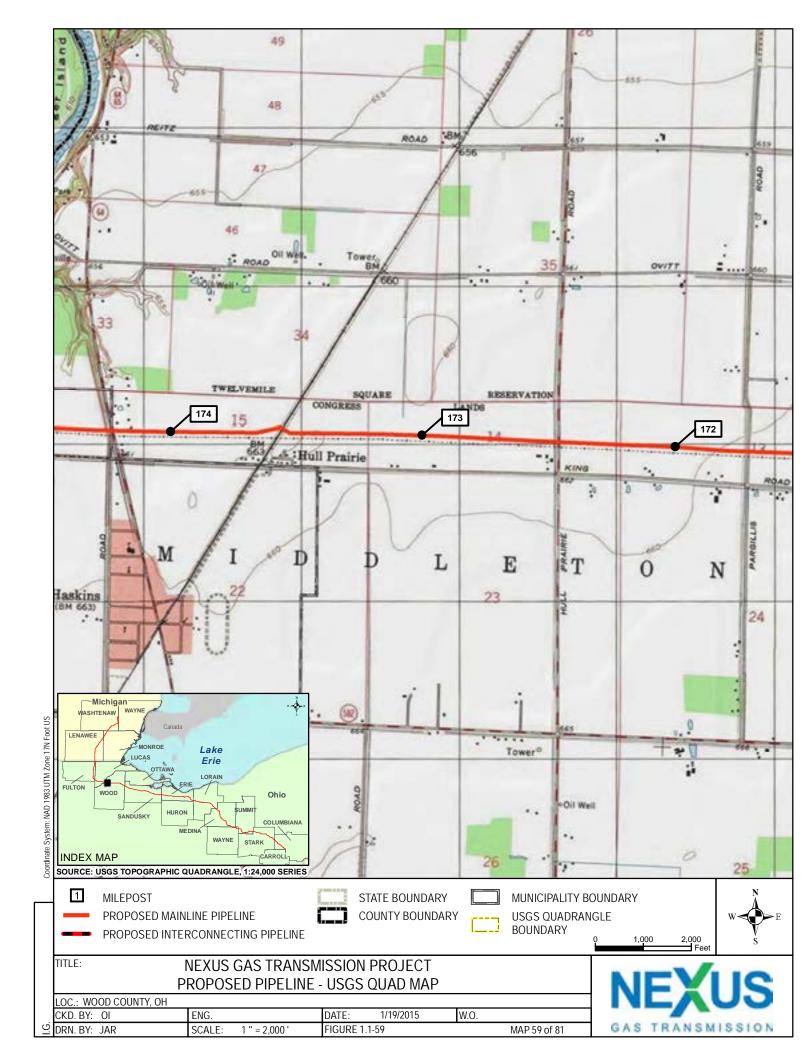


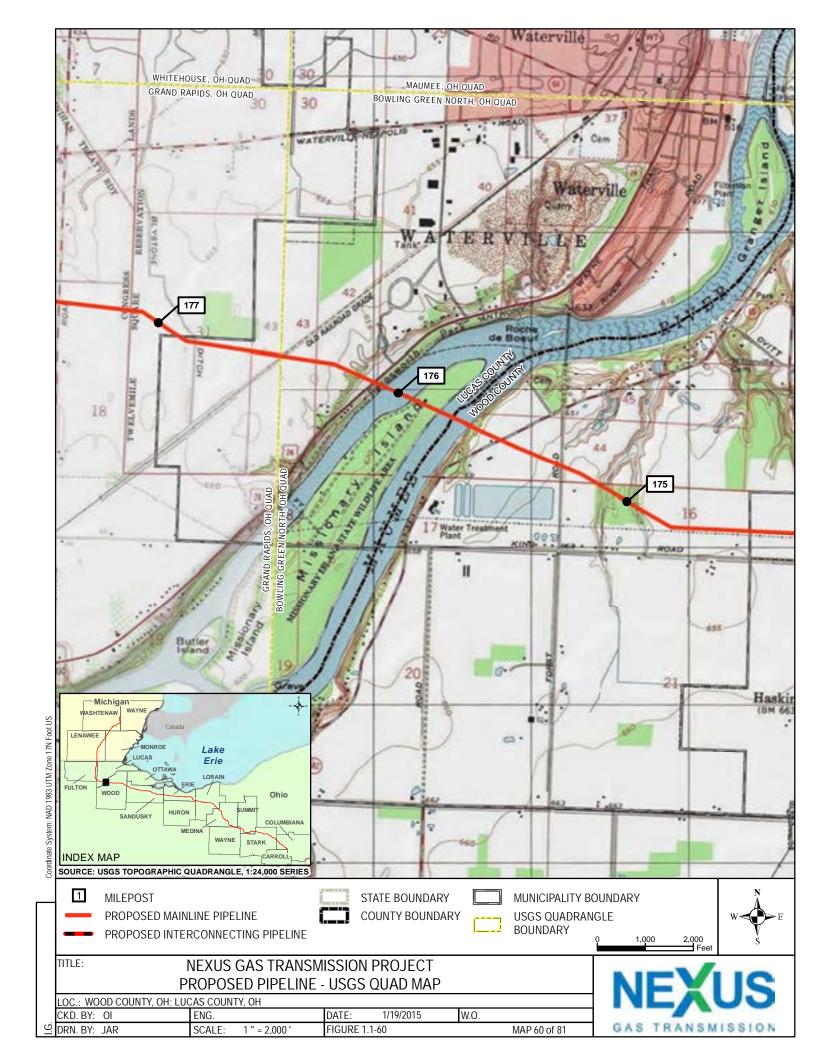


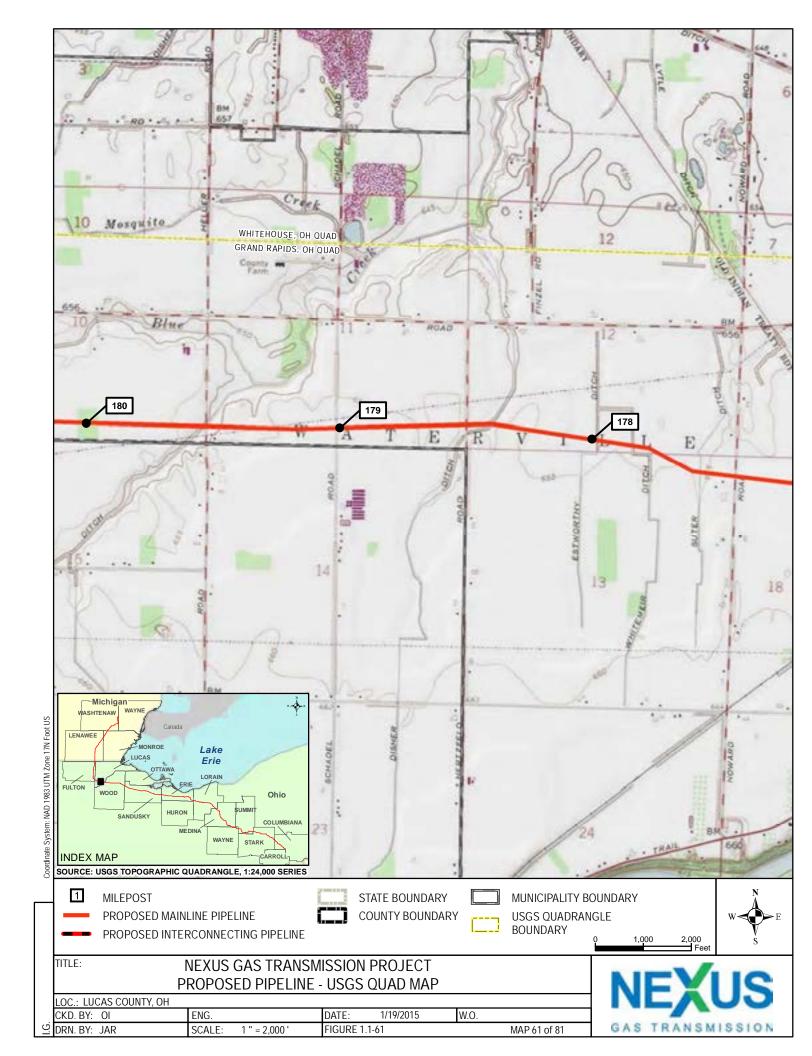


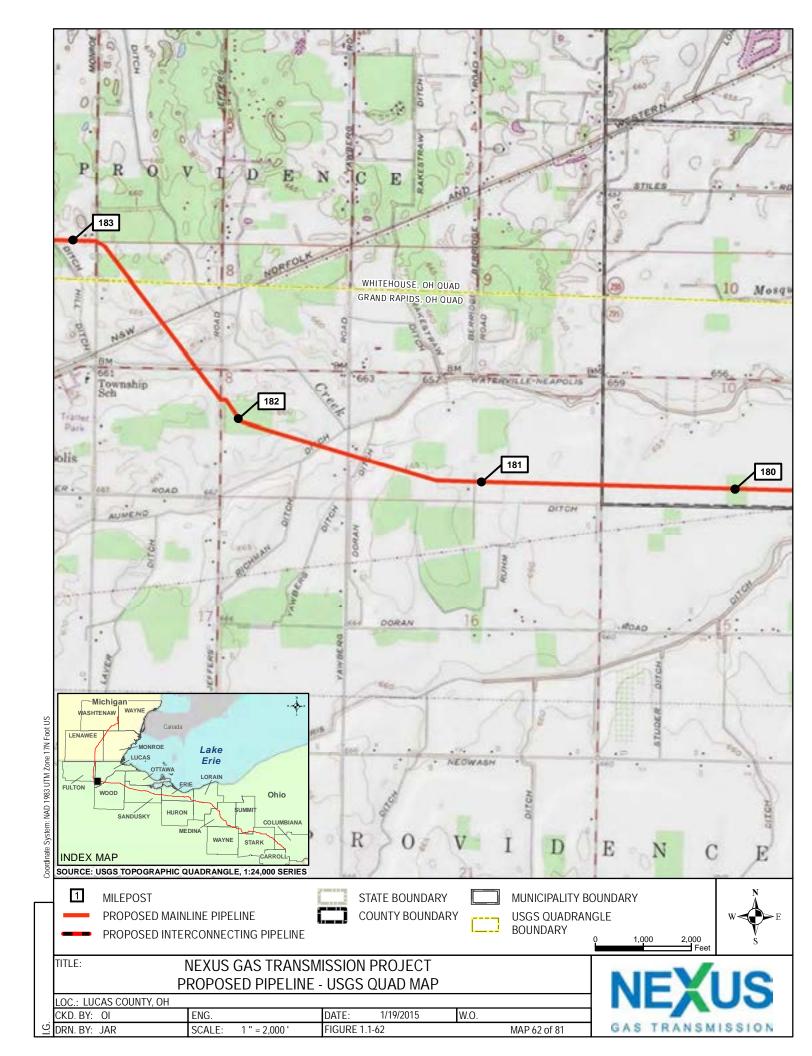


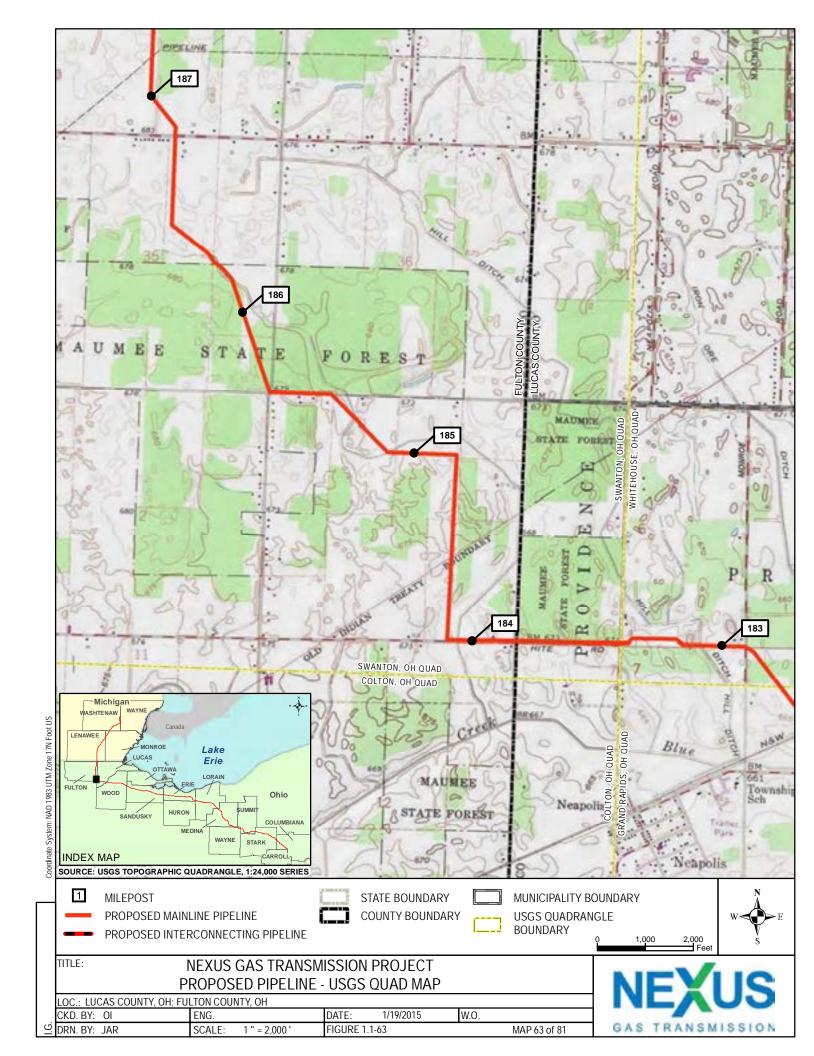


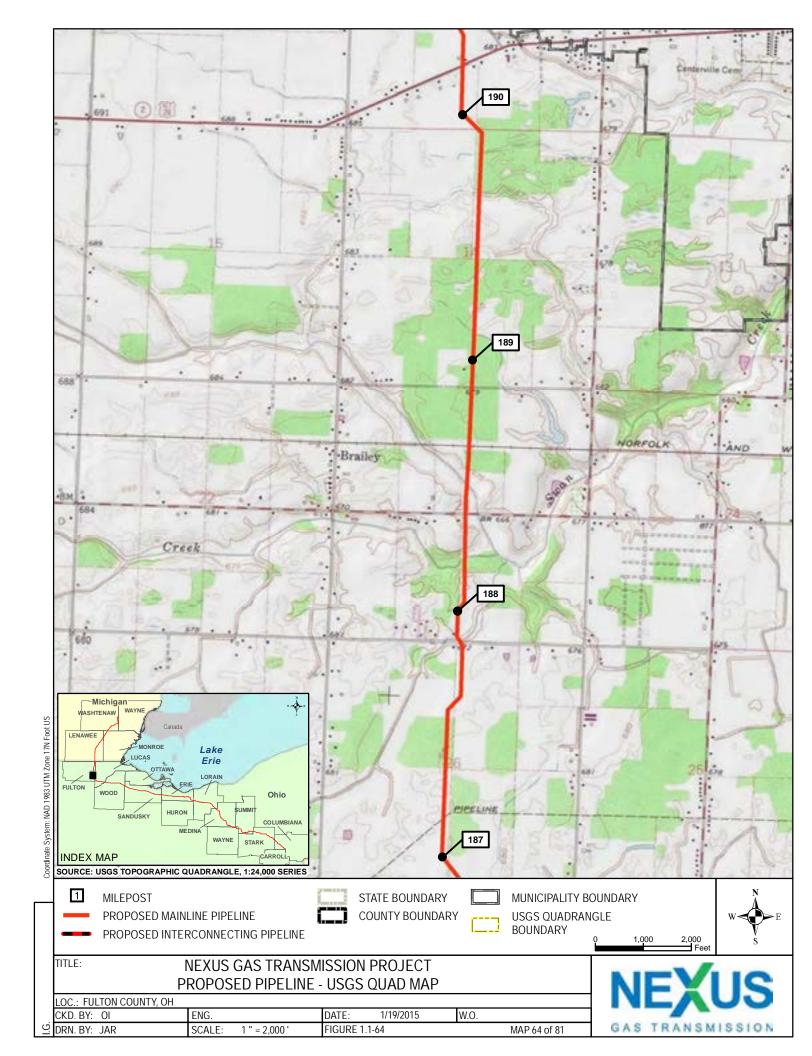


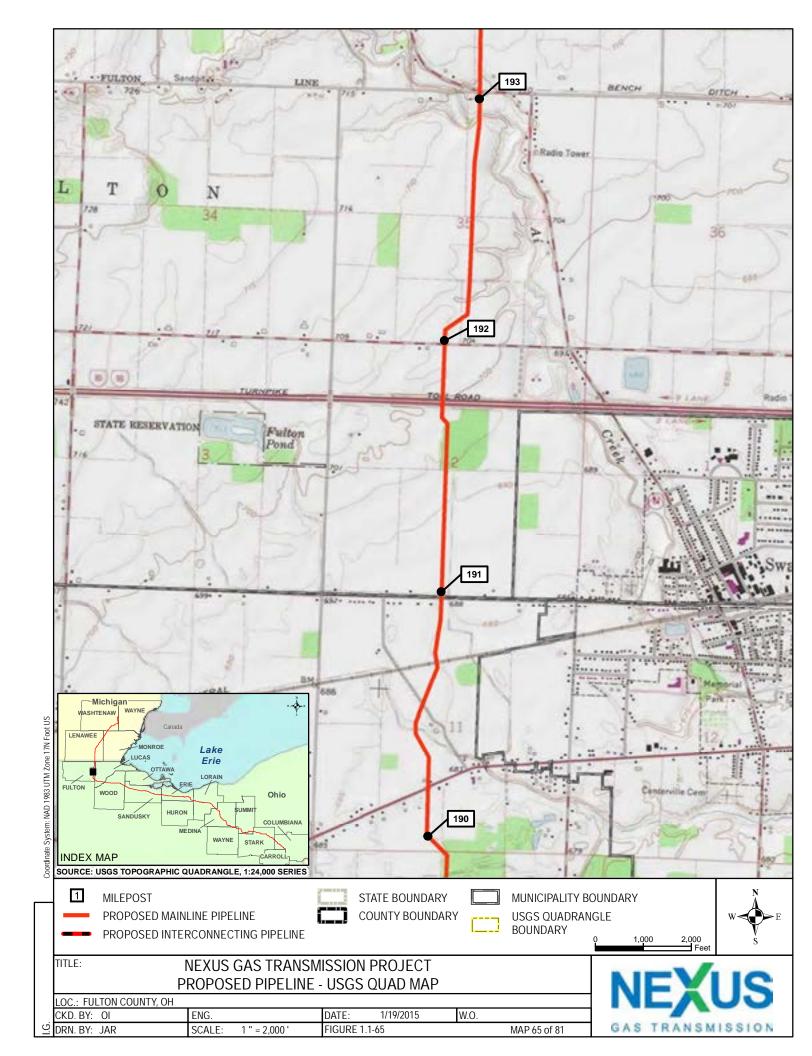


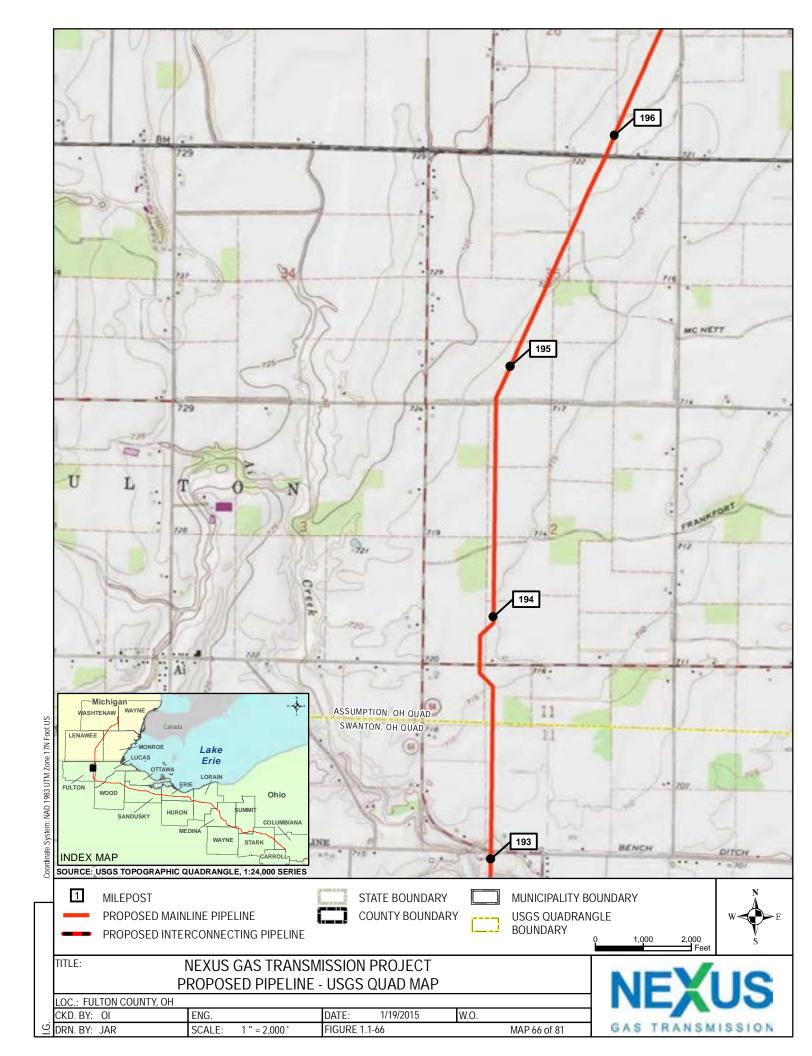


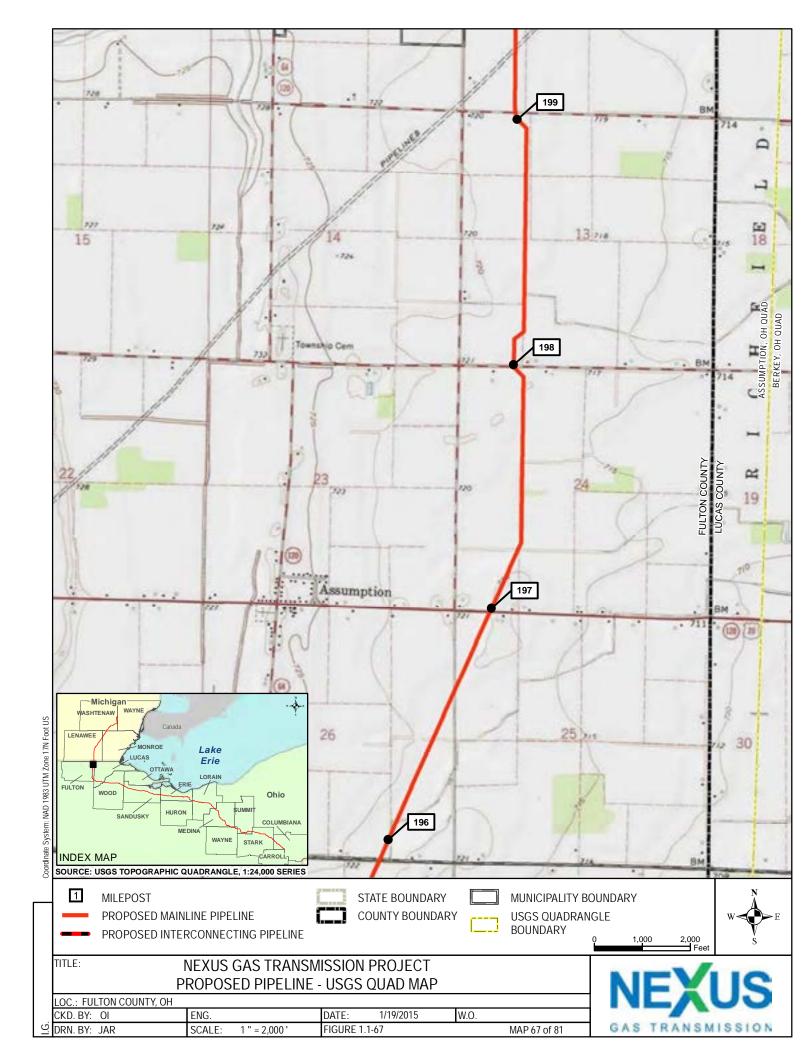


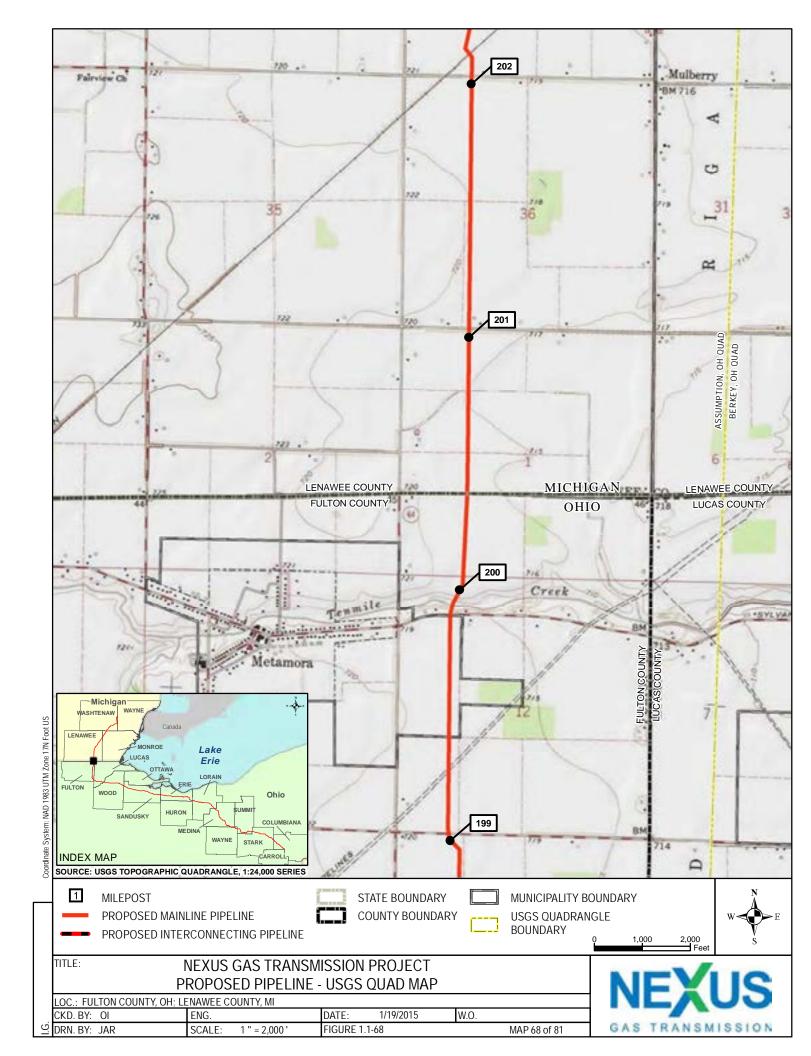


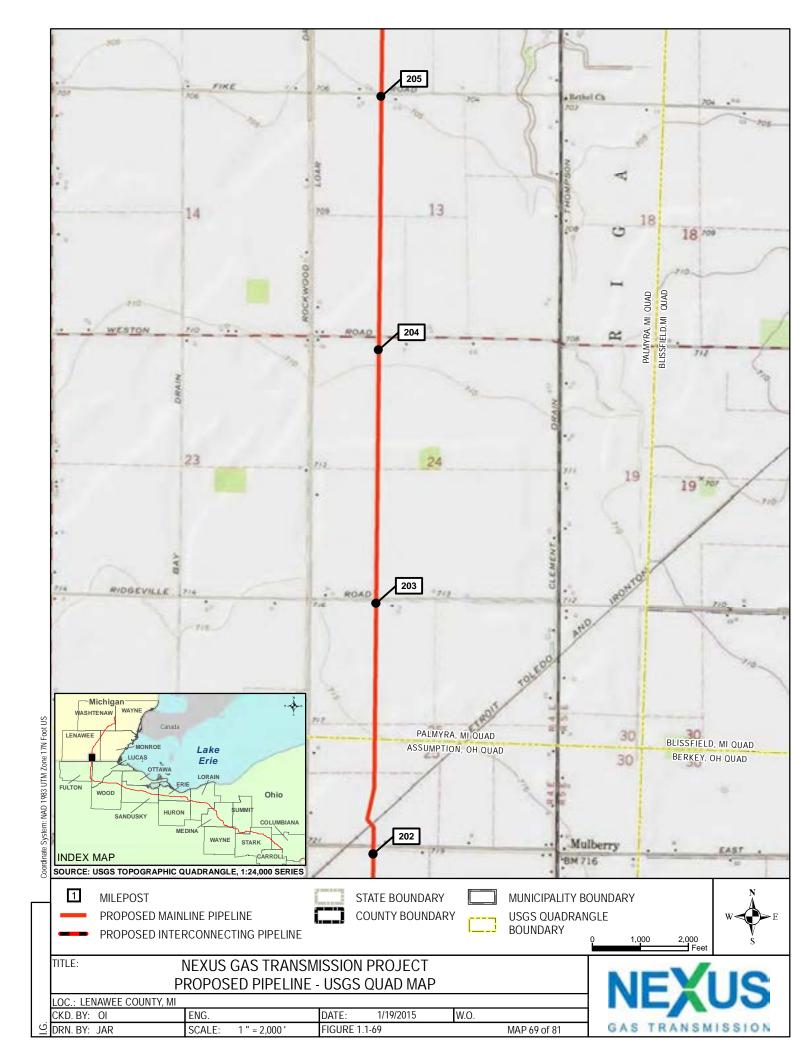


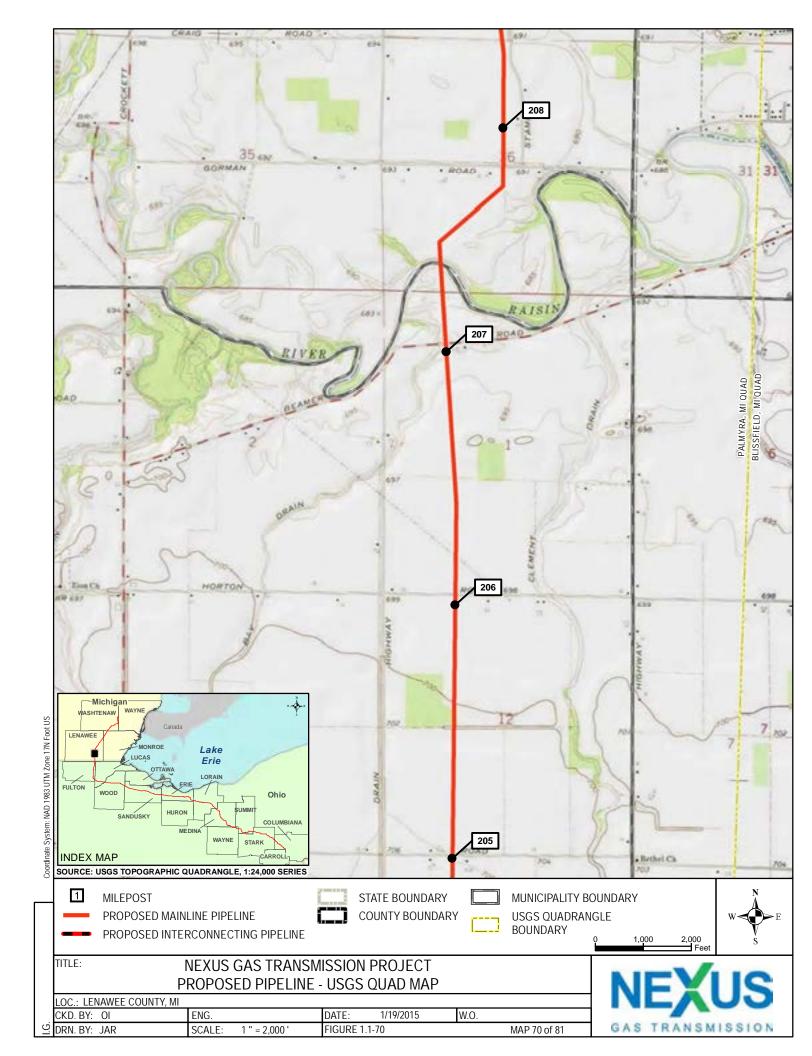


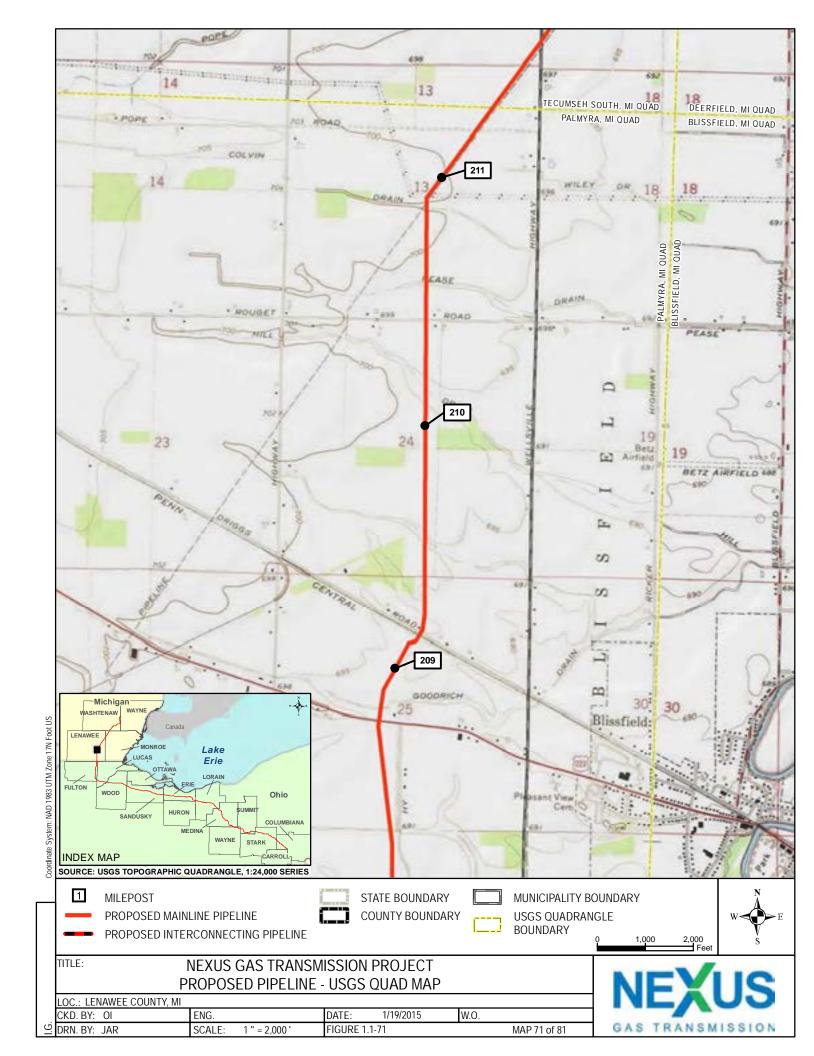




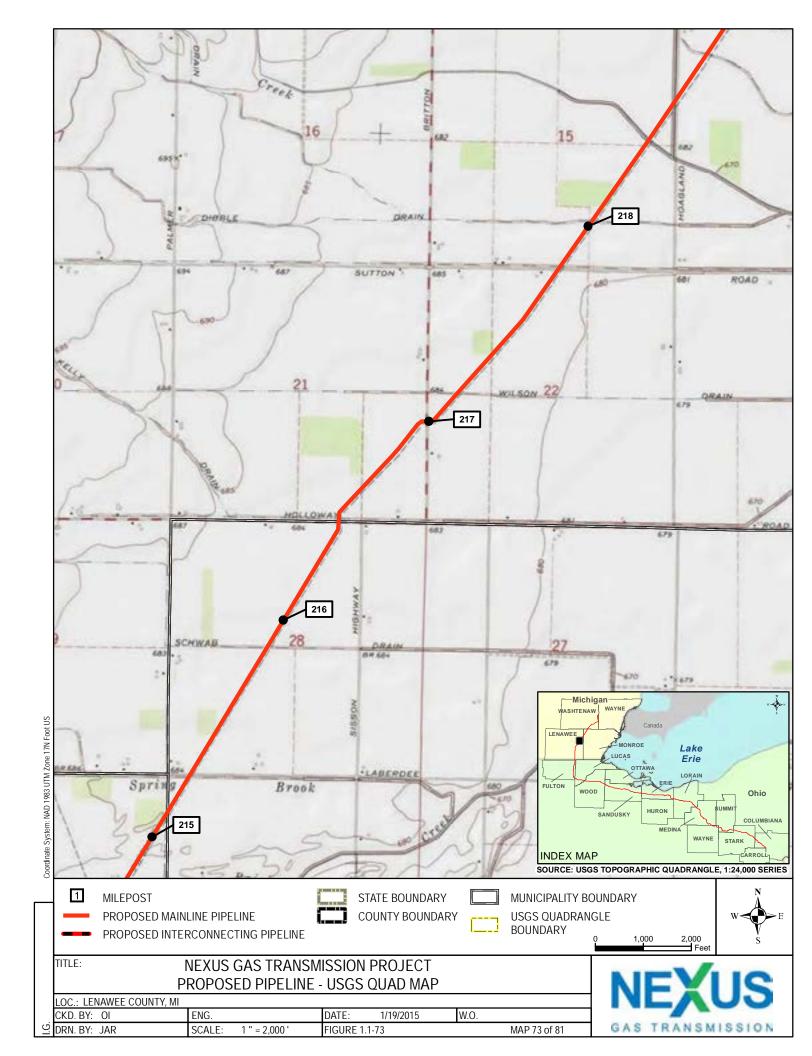


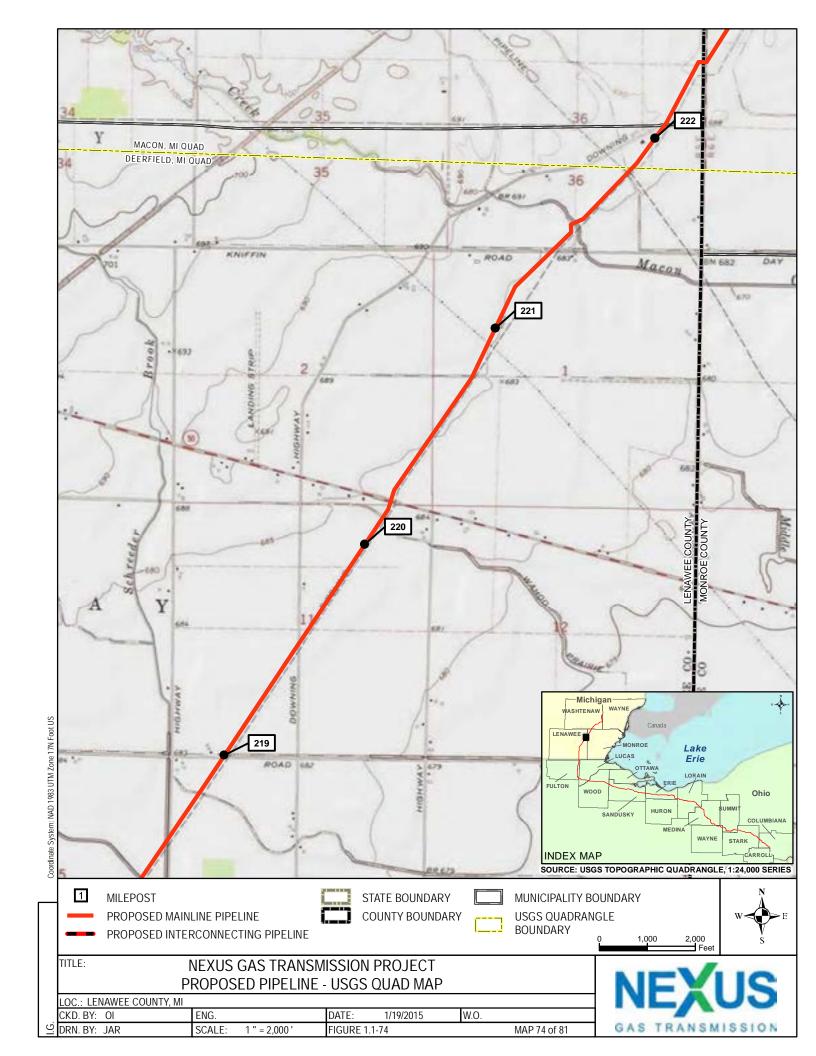


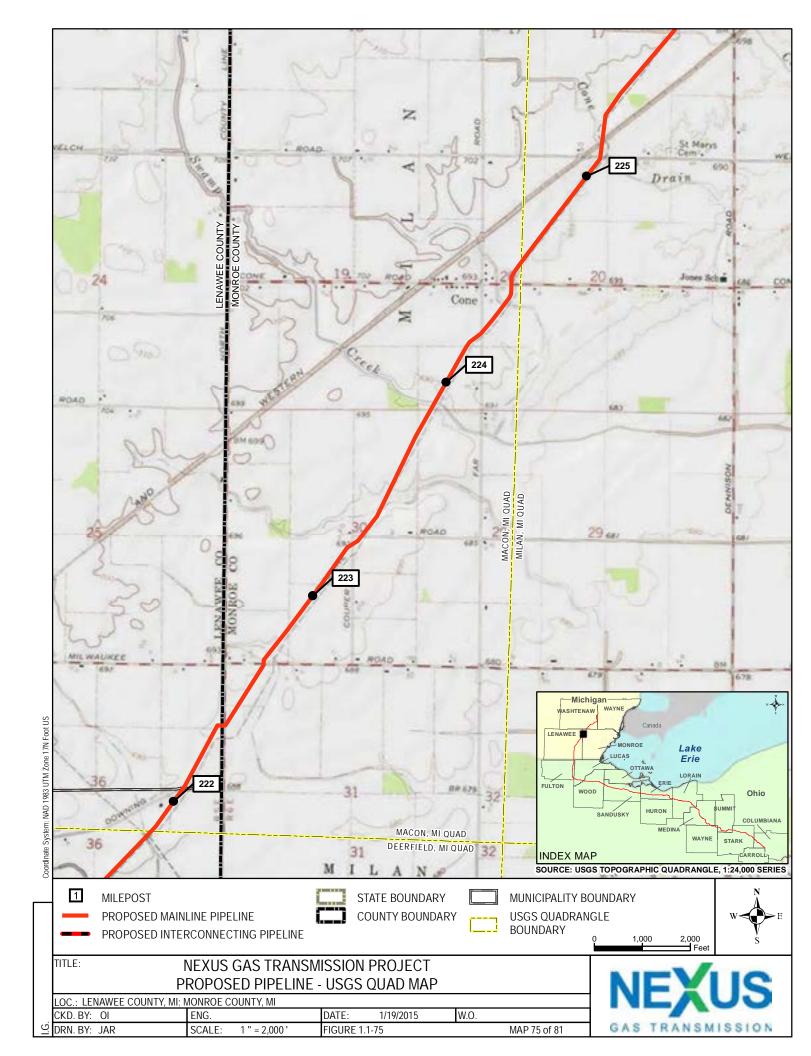


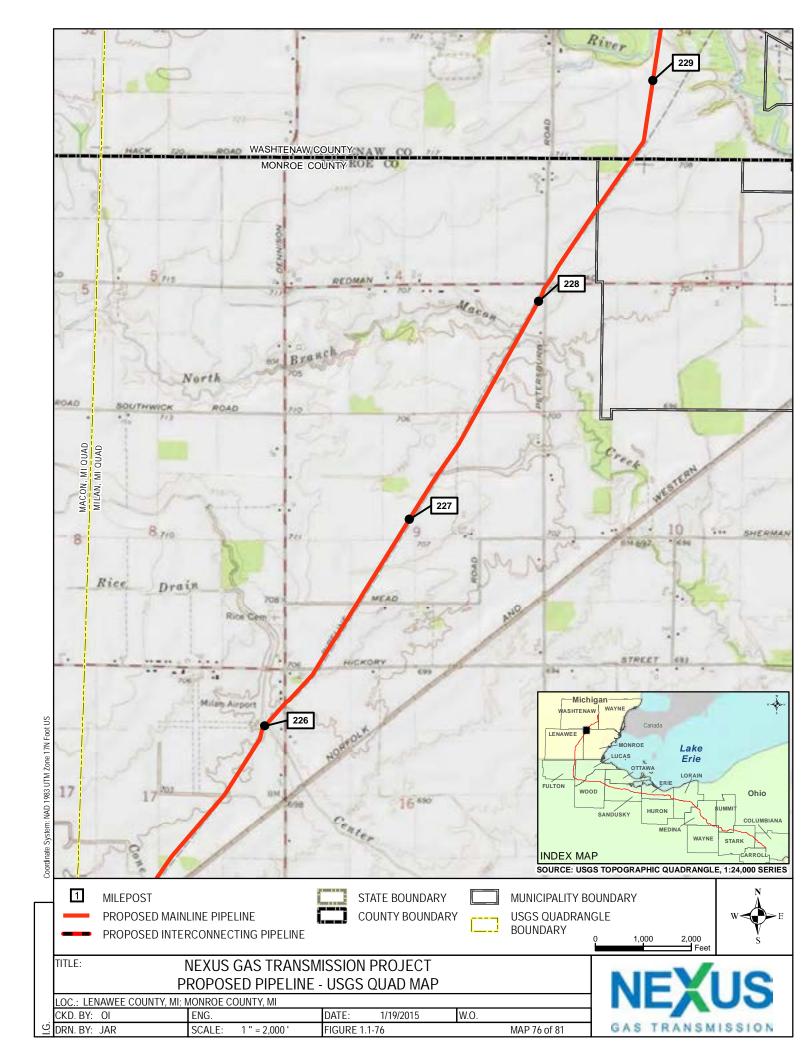


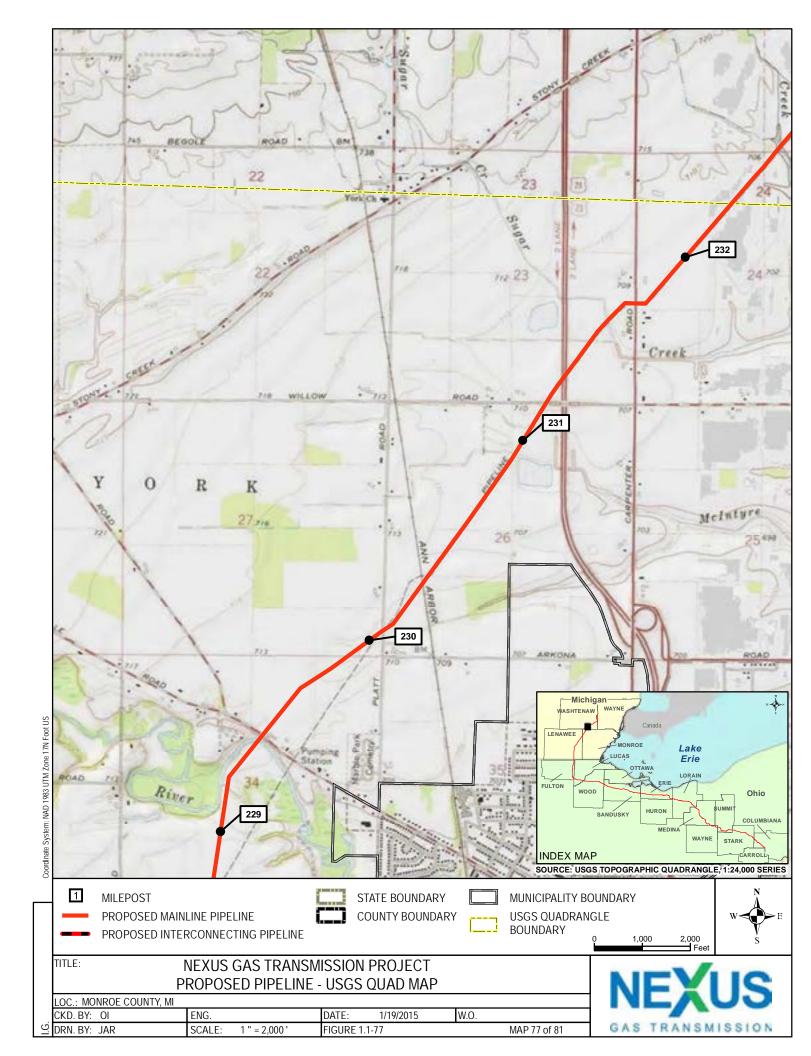


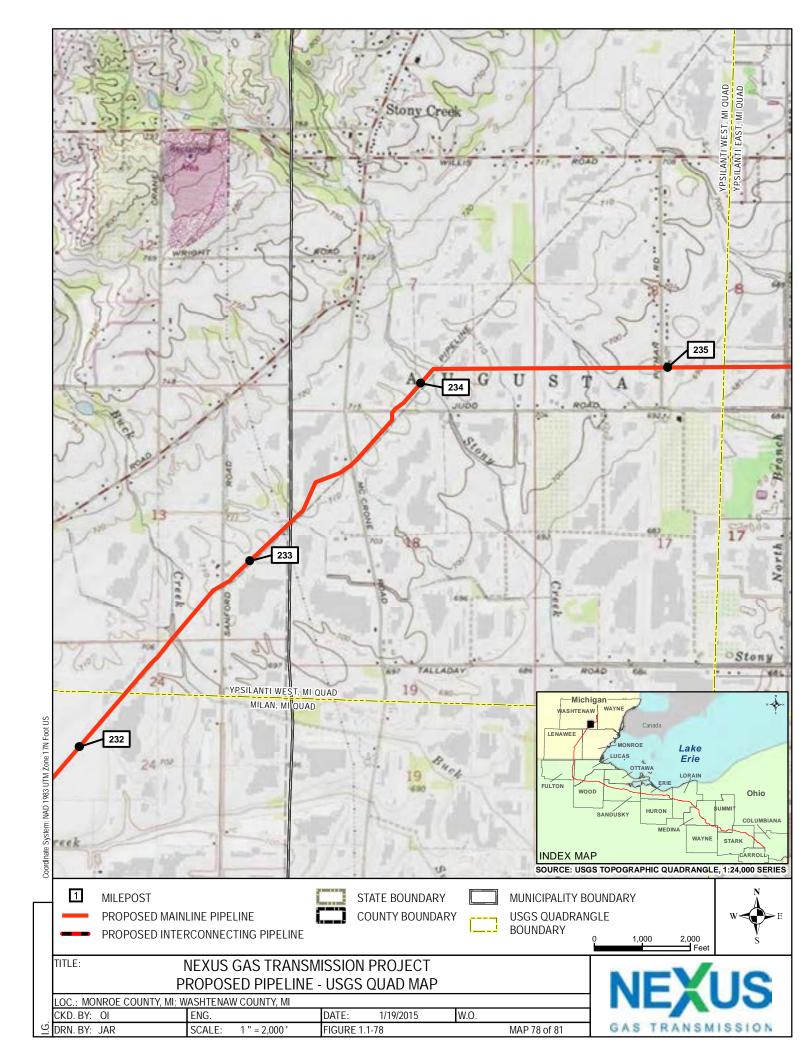


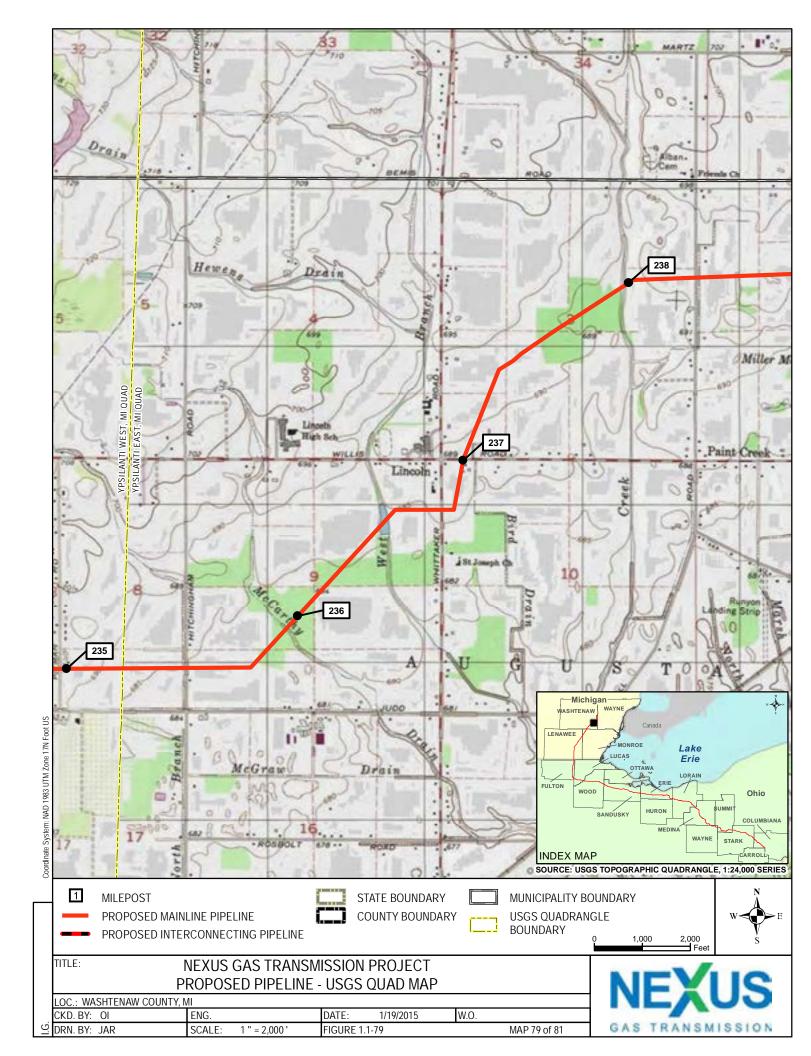


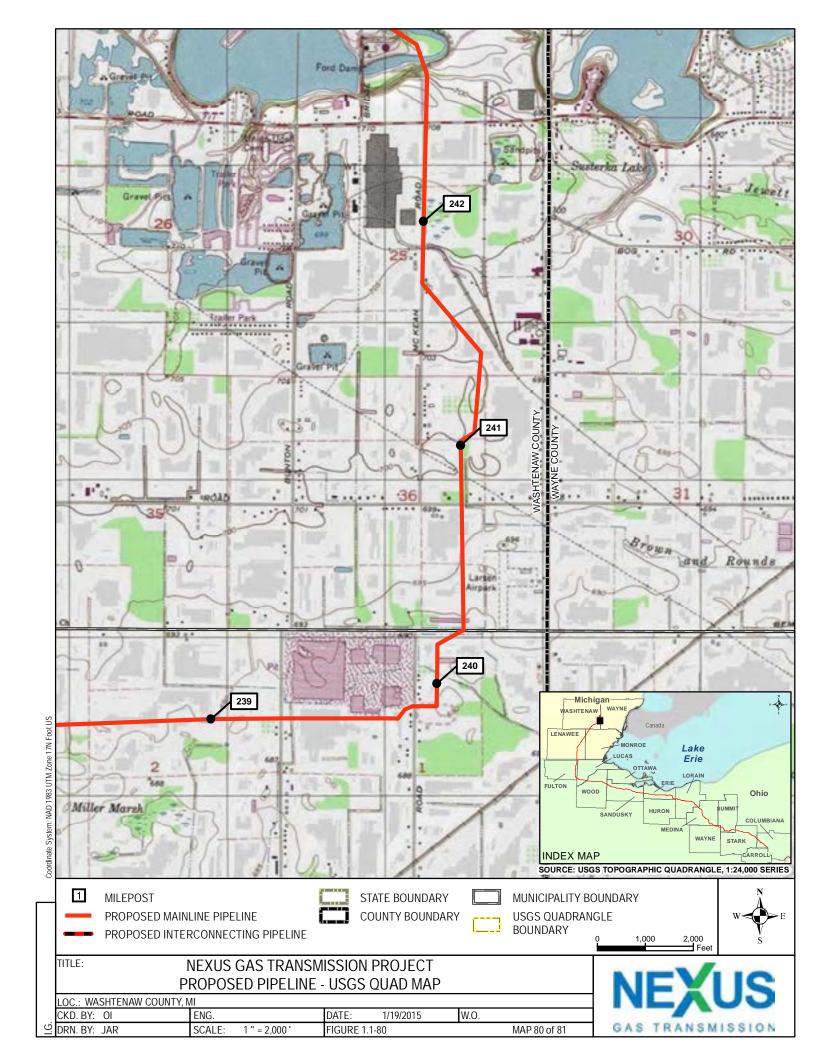


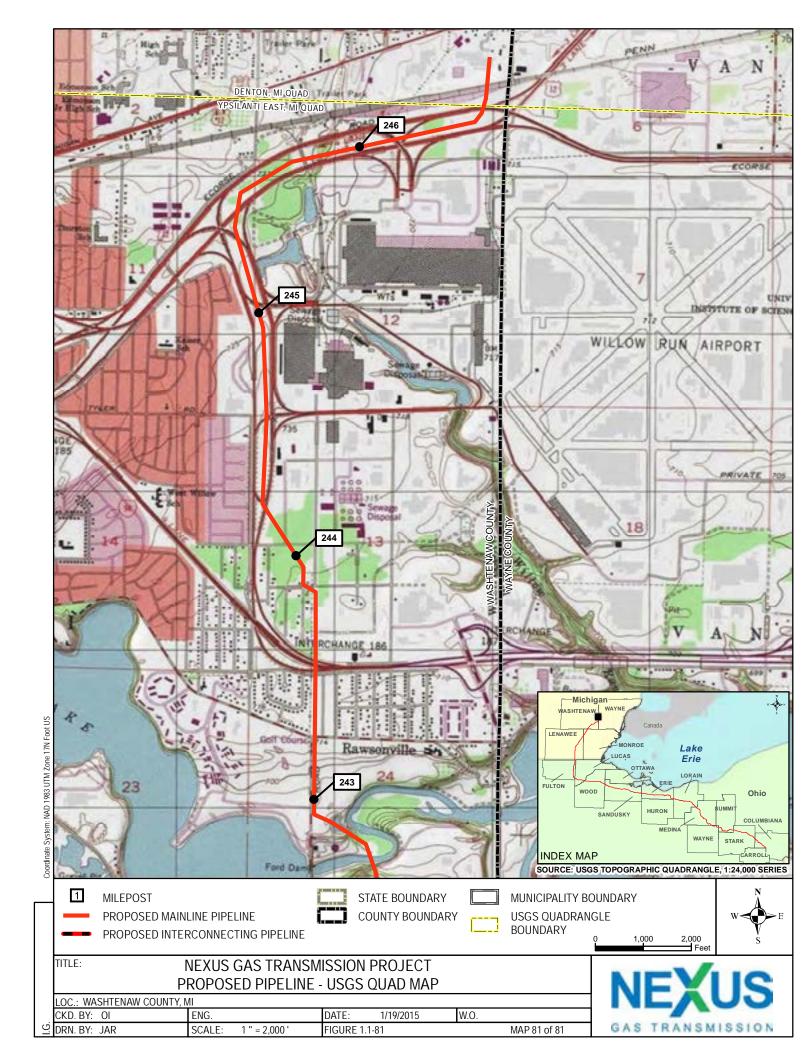














APPENDIX 1B

- ♦ 1B1 Erosion and Sediment Control Plan
- ♦ 1B2 Spill Prevention Control and Countermeasure Plan
- ♦ 1B3 NEXUS Blasting Plan [not included with this filing]



EROSION AND SEDIMENTATION CONTROL PLAN

Company: NEXUS Gas Transmission, LLC

Project: NEXUS Gas Transmission Project

Location: Ohio and Michigan

Prepared by: NEXUS Gas Transmission, LLC

Environmental Construction Permitting

5400 Westheimer Court Houston, Texas 77056-5310

Effective February 18, 2003

Updated January 2015



TABLE OF CONTENTS

DEFINITIONS vii			
1.	INTROI	DUCTION	1
	1.1	Purpose of this Plan	1
	1.2	Guidelines and Requirements	1
	1.3	Surveys, Permits & Notifications	2
	1.4	Inquiries	2
2.	SUPERV	VISION AND INSPECTION	3
	2.1	Role & Responsibilities of the Environmental Inspector	3
	2.2	Environmental Training for Construction	5
3.	CONST	RUCTION TECHNIQUES FOR NATURAL GAS FACILTIES	6
	3.1	Typical ROW Requirements	6
	3.2	Access Roads & Access Points	6
	3.3	Pipe and Contractor Wareyards	
	3.4	Off-ROW Disturbance	
	3.5	Construction Sequence for Pipeline Installation.	
		3.5.1 Clearing & Flagging	10
		3.5.2 Temporary Sediment Barriers	
		3.5.3 Grading	11
		3.5.3.1 Topsoil Segregation	
		3.5.3.2 Tree Stump Removal and Disposal	
		3.5.3.3 Rock Management	
		3.5.4 Temporary Slope Breakers	
		3.5.5 Trenching	
		3.5.5.1 Temporary Trench Plugs	
		3.5.6 Trench & Site Dewatering.	
		3.5.7 Pipe Installation	
		3.5.7.1 Stringing and Bending	
		3.5.7.3 Lowering-in and Tie-ins	
		3.5.8 Backfilling.	
		3.5.8.1 Permanent Trench Breakers	
		3.5.9 Hydrostatic Testing	17
		3.5.10 Pipeline Abandonment and Removal	19
	3.6	ROW Restoration & Final Cleanup	
		3.6.1 Permanent Erosion Control	21
		3.6.1.1 Permanent Slope Breakers	21
		3.6.1.2 Erosion Control Fabric	22
		3.6.2 Revegetation and Seeding	22
		3.6.3 Mulch	23
		3.6.4 Frozen Conditions & Winter Construction	24
		3.6.5 Unauthorized Vehicle Access to ROW	24



	3.7	Aboveground Facility Construction	25
4.	SPECIA	AL CONSTRUCTION METHODS	27
	4.1	Agricultural Areas	27
		4.1.1 Drain Tiles	27
		4.1.2 Irrigation	27
		4.1.3 Soil Compaction Mitigation & Restoration	27
	4.2	Road Crossings	28
	4.3	Residential Areas	28
		4.3.1 Stove Pipe Technique	29
		4.3.2 Drag Section Technique	29
		4.3.3 Residential Area Cleanup and Restoration	29
	4.4	Horizontal Directional Drill Method.	30
5.	WATEI	RBODY CROSSINGS	32
	5.1	General Waterbody Procedures	32
		5.1.1 Time Windows for Instream Work	33
		5.1.2 Equipment Bridges	33
		5.1.3 Clearing and Grading near Waterbodies	
		5.1.4 Temporary Erosion and Sediment Controls at Waterbodies	34
	5.2	Types of Waterbody Crossing Methods	35
		5.2.1 Flume Crossing	35
		5.2.2 Dam-and-Pump Crossing	36
		5.2.3 Wet Crossing	37
	5.3	FERC Waterbody Classifications	37
		5.3.1 Minor Waterbodies	37
		5.3.2 Intermediate Waterbodies	38
		5.3.3 Major Waterbodies	38
	5.4	Restoration.	39
6.	WETLA	AND CROSSINGS	40
	6.1	General Wetland Procedures	40
	6.2	Clearing and Grading at Wetlands	41
	6.3	Temporary Erosion & Sediment Control at Wetlands	42
	6.4	Wetland Crossing Procedure	42
		6.4.1 Push-pull Technique	43
	6.5	Wetland Cleanup and Restoration	43
7.	SPILL I	PREVENTION & RESPONSE	45
	7.1	SPCC / PPC Plan	45
	7.2	Spill Prevention Measures	45
	7.3	Spill Cleanup & Response	46
8.	POST-C	CONSTRUCTION ACTIVITIES	47
	8.1	Post-Construction Monitoring	47



-			
GAS TRANSM			
8.2	Post-Construction Maintenance	·	48
	8.2.1 Uplands		48
	8.2.2 Waterbodies and Wetla	ands	48
8.3	Reporting		49
APPENDIX	A – E&SCP FIGURES		
APPENDIX	B – WATERBODY REFEREN	NCE CITING FERC REQUIREMENTS	
APPENDIX	C – SEED MIX RECOMMEN	IDATIONS	

Table of Contents Page iv January 2015 version



Figure Number	CATEGORY ABBREVIATION / Figure Name	
CONSTRUCT	CONSTRUCTION WORK AREAS (CW)	
CW-1	Typical Trench Detail	
CW-2	Right-of-Way Topsoil Segregation Techniques	
CW-3	Typical Construction Widths Acquiring New Permanent Right-of-Way	
CW-4	Typical Construction Widths Not Acquiring New Permanent Right-of-Way (Single Line System)	
CW-5	Typical Construction Widths Not Acquiring New Permanent Right-of-Way (Multiple Line System)	
ACCESS ROA	ADS & ROAD CROSSINGS (RD)	
RD-1	Access Road Cross Section	
RD-2	Rock Access Pad	
RD-3	Typical Temporary Access Road Through Wetlands	
RD-4	Typical Paved Road Crossing Control Measures (Open Cut)	
RD-5	Typical Paved Road Crossing Control Measures (Bored)	
EROSION CO	NTROLS (EC)	
EC-1	Silt Fence Detail	
EC-2	Straw Bale Detail	
EC-3	Straw Bale Check Dam in a Drainageway	
EC-4	Rock-lined Drainage Swale	
EC-5	Storm Drain Inlet Protection	
EC-6	Temporary Trench Plug Options	
EC-7	Temporary Slope Breaker	
EC-8	Permanent Slope Breaker	
EC-9	Chevron Slope Breaker	
EC-10	Trench Breaker Detail (Sack)	
EC-11	Trench Breaker Detail (Foam)	
EC-12	Permanent Trench Breaker Options	
EC-13	Erosion Control Fabric/Blanket Installation	
EC-14	Typical Erosion Control Blankets on Slopes	



LIST OF FIGURES, continued

Figure Number	CATEGORY ABBREVIATION / Figure Name
WATER DISCHARGES (WD)	
WD-1	Filter Bag
WD-2	Discharge Structure for Hydrostatic Test Water
WD-2	Options for Small Water Discharges
WD-3	Discharge of Hydrostatic Test Water to a Surface Water
BRIDGES (BR)	
BR-1	Temporary Equipment Bridge (Equipment Pads with or without Culverts)
BR-2	Temporary Equipment Bridge (Crushed Stone with Culverts)
BR-3	Temporary Equipment Bridge (Flexi-float or Portable Bridge)
WATERBODY & WETLAND CROSSINGS (WC)	
WC-1	Typical Standard Wetland Crossing
WC-2	Typical Wet Waterbody Crossing
WC-3	Typical Flume Waterbody Crossing
WC-4	Typical Dam-and-Pump Waterbody Crossing
WC-5	Typical Erosion Control Blankets on Streambanks
WC-6	Typical Rip-Rap Placement
SPECIAL USI	E / AGRICULTURAL & RESIDENTIAL AREAS (SU)
SU-1	Drain Tile Repair Procedure

Table of Contents Page vi January 2015 version



7(c) – Activities authorized under a project-specific Certificate of Public Convenience and Necessity from the Federal Energy Regulatory Commission (FERC), pursuant to Section 7(c) of the Natural Gas Act, to transport or sell natural gas, as well as construct, acquire, extend, alter or operate specific natural gas facilities that provide natural gas service.

Abandonment – Permanent reduction in the availability for service of a FERC jurisdictional facility, including facility modifications which would result in changes to certificated parameters (e.g., permanently operating compressors at lower than certificated horsepower or pipelines at lower than certificated design pressures) as well as changes in operating status (e.g., abandoned-in-place, idled and not maintained, decommissioned or removed facilities). Abandonment of pipe or facilities may be authorized under the blanket certificate or a project-specific Order of Abandonment by FERC, in accordance with Section 7(b) of the Natural Gas Act.

Agricultural Land – Actively cultivated and rotated land used for the production of crops including but not limited to corn, grains, orchards, vineyards and hayfields.

Blanket Certificate Project – Blanket certificate authorization is obtained from FERC by the Company and allows the Company to construct, modify, acquire, operate, and abandon a limited set of natural gas facilities, and offer a set of services without the need for further activity-specific certificate authorizations. Regulations for FERC's Blanket Certificate program are provided under Title 18 CFR Part 157, Subpart F. Examples of these projects include, but is not limited to, pipe replacements requiring new permanent right-of-way (ROW) or temporary workspace outside of the original construction footprint, miscellaneous pipe rearrangements, new receipt and delivery points, abandonments, temporary compression facilities, underground storage field remediation and maintenance activities, and underground storage testing and development activities.

Chief Inspector – Person, designated by the Company, responsible for the quality assurance of construction activities on a project by managing on-site project inspection staff and ensuring the construction contractor meets the requirements of the Company's construction specifications, permits, and any plans and drawings related to specific construction activities. All inspectors on the project report to the Chief Inspector and the Chief Inspector reports to the Company's Construction Superintendant.

Clearance Package/Permit Book – The document issued by the Company's Environmental Construction Permitting (ECP) Department that contains all of the necessary environmental permits, clearances, plans and other requirements specific to a project. The Clearance Package/Permit Book is also included as part of the construction contract.

Deviation – A change to the placement of work limits, structures specified in the construction drawings, or changes in the design of control measures as set forth in the E&SCP, with the exception of minor variations from specifications in the typical E&SCP figures (refer to Appendix A) that are required due to site-specific conditions and which are designed to achieve an equivalent or greater degree of environmental protection.

Table of Contents Page vii January 2015 version



Environmental Inspector (EI) – On-site Company representative responsible for inspecting and verifying site compliance with environmental conditions identified in the E&SCP as well as project-specific terms and conditions contained within the Clearance Package / Permit Book. The environmental inspector will perform the duties that are outlined in Section 2.1 of this plan.

Ephemeral stream – Waterbody which flows water only during precipitation events in a typical year and for a short duration after the events. Runoff from rainfall is the primary source of water for stream flow. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream.

Intermediate waterbody – Defined by FERC as a waterbody greater than 10 feet wide but less than or equal to 100 feet wide, measured from water's edge to water's edge at the time of construction.

Intermittent stream – Waterbody which flows during certain times of the year when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Line List – A list prepared by the Company of project-specific instructions for all properties affected by the project, specifying each property owner, the length of crossing, and any special instructions or restrictions for construction crew(s).

Major waterbody – Defined by FERC as a waterbody greater than 100 feet wide, measured at the water's edge at the time of construction.

Minor waterbody – Defined by FERC as a waterbody less than or equal to 10 feet wide, measured at the water's edge at the time of construction.

Pasture – Non-forested land used for grazing of domesticated livestock (horses, cattle, sheep, etc.). Pasture receives periodic renovation and treatments such as tillage, fertilization, mowing, weed control, and may be irrigated. Typical vegetation consists primarily of grasses, herbaceous plants, legumes, and forbs.

Perennial stream – Waterbody which flows water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow and runoff from rainfall is a supplemental source of water for stream flow.

Riparian area – Ecosystems that occupy the transitional zone between terrestrial and aquatic ecosystems. Typical examples of riparian areas include floodplains, streambanks, and lakeshores.

Spill Prevention, Control and Countermeasure Plan /

Preparedness, Prevention and Contingency Plan for Construction Projects (SPCC / PPC Plan) – Company document that contains measures to prevent or reduce the risk of spills or accidental exposure of oil or hazardous materials associated with construction activities, as well as procedures to be employed in the event of a spill, including measures that provide for prompt and effective cleanup of spills, notifications and proper disposal of waste generated during cleanup.

Table of Contents Page viii January 2015 version



State-designated waterbody — Waterbodies specifically identified or recognized by the States or authorized Indian Tribe for water use, value or quality. Designations take into consideration the protection and propagation fish, shellfish and wildlife, as well as use and value for public water supplies, agricultural, industrial, recreational and other purposes, such as navigation. FERC's Procedures contain specific requirements with regards to state-designated fisheries.

Sensitive resource area – Areas (defined by FERC) that include wetlands, waterbodies, cultural resource sites, or sensitive species habitats.

Take up-and-Relay Pipeline Construction – Also called "lift and relay", Company construction terminology for the removal of existing pipe and installation of new pipe at the same alignment within the existing permanent easement.

Wetland – Areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support and, under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Types of wetlands include swamps, marshes, bogs, sloughs, wet meadows, mudflats and natural ponds.

Waterbody – Any natural or artificial stream, river, or drainage with perceptible flow at the time of crossing during construction, as well as other permanent waterbodies such as ponds and lakes.

Table of Contents Page ix January 2015 version



1.1 Purpose of this Plan

This Erosion and Sedimentation Control Plan (E&SCP) has been prepared for use by the Company and its contractors as a guidance manual for minimizing erosion of disturbed soils and transportation of sediments off the construction ROW and into sensitive resource and residential areas during natural gas construction projects. The procedures developed in this plan, which represent the Company's best management practices, are designed to accommodate varying field conditions while achieving compliance with regulatory requirements and protecting environmentally sensitive areas.

This E&SCP is designed to provide guidelines, best management practices and typical techniques for the installation and implementation of soil erosion and sediment control measures while permitting adequate flexibility to use the most appropriate best management practice measures based on site-specific conditions. The intent of the E&SCP is to provide general information on the pipeline construction process and sequence, and to describe specific measures that will be employed during and following construction to minimize impacts to the environment.

Figures provided in Appendix A of this plan illustrate typical and minimum requirements of best management practices for design and utilization of construction workspace areas, access roads and erosion controls, as well as construction methods for special use areas (e.g., agricultural and residential land) and crossing of features during pipeline construction, including wetlands, waterbodies and roads. References to specific figure numbers provided in Appendix A are indicated throughout the E&SCP.

The goal of the E&SCP is to preserve the integrity of environmentally sensitive areas and to maintain existing water quality by:

- Minimizing the extent and duration of disturbance;
- Diverting runoff to stabilized areas;
- Installing temporary and permanent erosion control measures; and
- Establishing an effective inspection and maintenance program.

The E&SCP is intended to be used on Company projects that have been authorized by Federal Energy Regulatory Commission (FERC) pursuant to Section 7(b) and/or 7(c) of the Natural Gas Act to construct, acquire, alter, abandon or operate gas facilities or to provide gas services. This plan is also intended to be used for projects that are conducted under Company's blanket certificate which are regulated under 18 CFR Part 157, Subpart F. All blanket certificate projects that involve ground disturbance or changes to operational air and noise emissions are subject to the FERC's standard environmental conditions, including adherence to FERC's *Upland Erosion Control, Revegetation and Maintenance Plan* (Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures), May 2013 Version.

1.2 Guidelines and Requirements

The measures described in this E&SCP have been developed based on guidelines from the FERC, United States Army Corps of Engineers (COE), the United States Fish and Wildlife Service, the United States



Department of Agriculture, the Natural Resource Conservation Service, and various state agencies as well as from the Company's significant experience and practical knowledge of pipeline construction and effective environmental protection measures. Lessons and insights gained during pipeline construction projects and comments from agency representatives are also incorporated into this E&SCP.

In accordance with FERC regulations, projects under the jurisdiction of Section 7 or the Company's blanket certificate are required to comply with the FERC's Plan and Procedures unless written approval to deviate from the Plan or Procedures is received from the Director of the Office of Energy Projects and the appropriate state agency. This revised version of the E&SCP is consistent with the requirements of FERC's Plan and Procedures (May 2013 version).

If conflicts or differences occur between project-specific conditions of appropriate federal and state agencies and the best management practices described in this E&SCP, consult with the Company Environmental Construction Permitting Department (ECP) representative or ECP Lead. The more stringent or site-specific requirement is typically applicable unless otherwise approved by ECP. With the exception of minor variations from the typical figures that may be required due to site-specific conditions and are designed to achieve an equivalent or greater degree of environmental protection, any deviations from the construction drawings or changes in the design of control measures as set forth in this E&SCP must be approved by the Company's ECP Lead and the appropriate permitting agency prior to implementation. Measures and practices identified within this plan are to be implemented during construction unless otherwise specified by project-specific permit conditions.

1.3 Surveys, Permits & Notifications

The Company shall perform the required environmental field surveys and acquire the necessary environmental permits, clearances and authorizations prior to start of construction of the project. The Company shall notify the appropriate federal, state, and local agencies prior to, during, and/or subsequent to the construction of the project, as identified in the Clearance Package/Permit Book.

1.4 Inquiries

Inquiries regarding this E&SCP should be addressed to the ECP Department at the address shown on the front cover. For field conditions requiring an immediate response, contact the designated person responsible at the address shown on the front cover.



2. SUPERVISION AND INSPECTION

To effectively mitigate project-related impacts, the E&SCP must be properly implemented in the field. Quick and appropriate decisions in the field regarding critical issues such as stream and wetland crossings, placement of erosion controls, trench dewatering, spoil containment, and other construction-related items are essential.

To ensure that the E&SCP is properly implemented, at least one Environmental Inspector (EI) will be designated by the Company for each construction spread during active construction or restoration activities. The EI is responsible for verifying environmental compliance on the construction spread, and performing the duties that are outlined in Section 2.1 below.

2.1 Role & Responsibilities of the Environmental Inspector

Els will have the authority to stop activities that violate the environmental conditions of the FERC's Orders (if applicable), stipulations of other environmental permits or approvals, or landowner easement agreements, as well as order appropriate corrective action.

The EI will have peer status with all other activity inspectors and will report directly to the Chief Inspector who has overall authority on the construction spread or project.

The number and experience of EIs assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected. On 7(c) and other large construction projects, the person designated as the EI will typically be a dedicated role for each construction spread. On blanket certificate projects and any other small construction activities carried out under this E&SCP, the EI role may be carried out by the Chief Inspector or another designated and properly trained Company Inspector on site, at the discretion of the Company. In such instances, the Company may employ additional periodic oversight of the EI by an environmental specialist.

At a minimum, the EI shall be responsible for:

- 1. Inspecting construction activities for compliance with the requirements of this E&SCP, the construction drawings, the environmental conditions of the FERC's Orders (if applicable), proposed mitigation measures, other federal or state and local (if applicable) environmental permits and approvals, and environmental requirements in landowner easement agreements;
- Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;
- 3. Verifying that the limits of authorized construction work areas and locations of access roads are visibly marked before clearing, and maintained throughout construction;
- Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, including waterbodies and wetlands, or areas with special requirements along the construction work area;
- 5. Identifying erosion/sediment control and soil stabilization needs in all areas;



- 6. Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive resource areas, including cultural resource sites, wetlands, waterbodies and sensitive species habitats;
- 7. Verifying that dewatering activities are properly monitored and do not result in the deposition of sand, silt, and/or sediment into sensitive resource areas, including wetlands, waterbodies, cultural resource sites, and sensitive species habitat; stopping dewatering activities if such deposition is occurring and ensuring the design of the discharge is changed to prevent reoccurrence; and verifying that dewatering structures are removed after completion of dewatering activities;
- 8. Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action;
- Advising the Chief Inspector when environmental conditions (such as wet weather, severe storm
 events or frozen soils) make it advisable to restrict or delay construction activities to avoid topsoil
 mixing excessive compaction;
- 10. Ensuring restoration of contours and topsoil;
- 11. Verifying that the soils imported for agricultural or residential use have been certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner, and is considered clean and free of hazardous materials;
- 12. Ensuring that the appropriate erosion/sediment control and stabilization needs are implemented in all areas, including ensuring that erosion and sediment controls are properly installed and maintained daily to prevent sediment flow into sensitive resource areas (e.g., wetlands, waterbodies, cultural resource sites, and sensitive species habitats) and onto roads, and determining the need for additional erosion control devices;
- 13. Inspecting and ensuring the maintenance of temporary erosion and sediment control measures at least:
 - a. On a daily basis in areas of active construction or equipment operation;
 - b. On a weekly basis in areas with no construction or equipment operation; and
 - c. Within 24 hours of each 0.5 inch of rainfall.
- 14. Ensuring the repair of all ineffective temporary erosion and sediment control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts;
- 15. Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase;
- 16. Ensuring proper seed mixes, rates and restoration methods are used, and obtaining documentation;
- 17. Ensuring that the Contractor implements and complies with the Company's Spill Prevention, Control and Countermeasure Plan & Preparedness, Prevention and Contingency Plan for



Construction Projects (SPCC/PPC Plan), the Company's Waste Management Plan, and other Company environmental documents and standard operating procedures;

- 18. Verifying that locations for any disposal of excess construction materials for beneficial reuse comply with this E&SCP and any applicable permits / clearances; and,
- 19. Keeping records of compliance with the environmental conditions of the FERC's Orders and the mitigation measures proposed by the Company in the application submitted to the FERC (if applicable), and other federal or state environmental permits during active construction and restoration. Records should include photo documentation.

2.2 Environmental Training for Construction

Environmental training will be given to both the Company personnel and contractor personnel whose activities have the potential to impact the environment during pipeline construction. All construction personnel from the Chief Inspector, EI, craft inspectors, contractor job superintendent to loggers, welders, equipment operators, and laborers will be given some form of environmental training. The level of training will be commensurate with the type of duties of the personnel. At the discretion of the Company, environmental training for personnel may also be required on projects where it is not required by FERC.

Training will be given prior to the start of construction and throughout the construction process, as needed, and will cover the following issues:

- Specifics of this E&SCP and other Company plans;
- Job or activity specific permit requirements;
- Company policies and commitments;
- Cultural resource procedures and restrictions;
- Threatened and endangered species procedures and restrictions; and
- Any other pertinent information related to the job.

In addition to the EI, all other construction personnel are expected to play an important role in maintaining strict compliance with all permit conditions, and to promptly report any conditions that are perceived as having the potential to threaten environmental protection to the appropriate inspector during construction.



3. CONSTRUCTION TECHNIQUES FOR NATURAL GAS FACILITIES

3.1 Typical ROW Requirements

Pipeline construction workspace requirements are a function of pipe diameter, equipment size, topography, geological rock formations, location of construction such as at road crossings or river crossings, pipeline crossovers, methods of construction such as boring or open-cut construction, or existing soil conditions encountered during construction. As the diameter of the pipeline being installed increases, so does the depth of trench, excavated spoil material, equipment size, and ultimately the amount of construction work space that will be required to construct a project. See Figure CW-1 for a detail of a typical trench and Figures CW-3, CW-4 and CW-5 for typical construction ROW widths. All workspace locations for a given project will be shown on the construction drawings.

Additional construction ROW may be required at specific locations including, but not limited to, steep side or vertical slopes, road crossings, pipeline crossovers, areas requiring supplemental topsoil segregation, and staging areas associated with wetland and waterbody crossings. In particular, as shown on the construction drawings, the construction ROW width may be expanded up to 25 feet for the following situations / areas without approval from the FERC, however, prior approval is required from the EI or ECP:

- Accommodate full construction ROW topsoil segregation;
- Ensure safe construction where topographic conditions, such as side-slopes, or soil limitations exist; and
- Facilitate truck turn-arounds where no reasonable alternative access exists in limited, upland, non-riparian or non-forested areas.

All construction activities, including staging areas and additional spoil storage areas, are restricted to the construction ROW limits identified on the construction drawings, except for specific activities in limited, non-wetland and non-riparian areas that are allowed by the FERC Plan and Procedures (i.e. slope breakers, energy-dissipating devices, dewatering structures, and drain tile system repairs). Use of these limited areas is subject to landowner or land management agency approval and compliance with all applicable survey, permit, and reporting requirements; therefore, prior Company approval is required to use these areas. In some cases, federal, state and local permits and authorizations may require additional approvals.

Minor field realignments and workspace shifts per landowner needs and requirements are only allowed if construction activities remain within the environmental field survey area, comply with project-specific environmental permits and landowner easements, and do not affect new landowners or sensitive resource areas.

3.2 Access Roads & Access Points

To the extent practical, all access to the construction ROW will be limited to existing roads and will be minimized in wetlands. However, additional access roads to the construction ROW may be required at various points along the project where other road crossings (paved or gravel state/local roads) do not exist. Examples of types of access used include pipeline ROWs, abandoned town roads, railroad ROWs, power line service roads, logging roads and farm roads. Improvements to access roads (i.e., grading, placing gravel, replacing/installing culverts, and trimming overhanging vegetation) may be required due to the size



and nature of the equipment that would utilize the road (Figure RD-1). The following conditions apply to the use of all access roads:

- 1. During construction and restoration activities, access to the ROW is limited to the use of new or existing access roads identified on the construction drawings.
- The only access roads that can be used in wetlands, other than the construction ROW, are those existing roads requiring no modification or improvements, other than routine repair, and posing no impact on the wetland.
- 3. The construction ROW may be used for access across wetlands when the wetland soil is firm enough to avoid rutting or the construction ROW has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats). However, access is not allowed through wetlands that are specifically being avoided by HDD or would not otherwise be impacted by the project.
- 4. In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall use access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction ROW.
- 5. Blanket certificate projects may not have construction drawings available in which case access to the ROW will be identified in the Clearance Package / Permit Book.
- 6. Maintain safe and accessible conditions at all road crossings and access points during construction and restoration. Access road maintenance through the construction sequence may include grading and the addition of gravel or stone when necessary.
- 7. Maintain access roads in a stable manner to prevent off-ROW impacts, including impacts to adjacent and/or nearby sensitive resource areas, and implement all appropriate erosion and sediment control measures for construction/improvement of access roads.
- 8. Minimize the use of tracked equipment on public roadways.
- 9. Remove any soil or gravel spilled or tracked onto roadways daily or more frequent as necessary to maintain safe road conditions.
- 10. Repair any damages to roadway surfaces, shoulders, and bar ditches.
- 11. If crushed stone/rock access pads are used in residential or agricultural areas, stone shall be placed on synthetic, nonwoven geotextile fabric to facilitate removal after construction (Figure RD-2).
- 12. All access roads across a waterbody must use an equipment bridge in accordance with Section 5.1.2.
- 13. For access through a saturated wetland, use timber mats or an equivalent, unless otherwise authorized by agency permits (Figure RD-3).



14. Limit construction equipment operating in wetland areas to that needed to clear the ROW, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction ROW. All other construction equipment shall use access roads located in upland areas to the maximum extent practical.

3.3 Pipe and Contractor Wareyards

Pipe and contractor wareyards are required for storing and staging equipment, pipe, fuel, oil, pipe fabrication, and other construction-related materials and preparations. The Contractor shall perform the following measures at pipe and contractor wareyards:

- 1. Strip and segregate topsoil in agricultural lands;
- 2. Install erosion and sediment control structures as directed by the EI or identified on the construction drawings, and as outlined in this E&SCP and the SPCC/PPC Plan. Maintain controls throughout construction and restoration activities;
- 3. Implement and comply with the SPCC/PPC Plan and the Waste Management Plan, including the completion of any required site-specific forms and attachments; and,
- 4. Restore and revegetate all disturbed areas in accordance with the measures outlined in this E&SCP, landowner agreements and/or as directed by the EI. At a minimum, the area must be returned to preconstruction contours and stabilized prior to contractor demobilization.

3.4 Off-ROW Disturbance

All construction activities are restricted to the construction ROW limits identified on the construction drawings, except for specific activities in limited, non-wetland and non-riparian areas that are allowed by the FERC Plan and Procedures. Activities allowed to occur off-ROW are limited to the installation of slope breakers, energy-dissipating devices and dewatering structures, as well as repairs to drain tile. Minor field realignment and workspace shifts per landowner needs and requirements are only allowed if construction activities remain within the environmental field survey area, maintain compliance with project-specific environmental permits and landowner easements, do not affect new landowners or environmental resources, and do not require the operation of heavy equipment off ROW. In the event that inadvertent off-ROW disturbance occurs, the following measures will be implemented:

- 1. The EI will immediately report the occurrence to the Chief Inspector and ROW Agent;
- 2. The conditions that caused the disturbance will be evaluated by the Chief Inspector and the EI, and they will determine whether work at the location can proceed under those conditions; and
- 3. If determined to be necessary by the Chief Inspector and EI, one or more of the following corrective actions will be taken: immediate restoration of the preconstruction contours, seeding and mulching of the disturbed area, and/or installation of erosion or sediment control devices, conduct additional tailgate or employee/contractor training, and investigation of the issue to develop lessons learned for future issue prevention.
- 4. The Company's ECP Department will be notified.



3.5 Construction Sequence for Pipeline Installation

Natural gas pipelines are installed using conventional overland buried pipeline construction techniques. These activities are necessary for the installation of a stable, safe, and reliable transmission facility consistent with U.S. Department of Transportation (U.S.DOT) requirements and regulations. This section provides an overview of the equipment and operations necessary for the installation of a natural gas pipeline, describes potential impacts that may occur from each operation, and identifies the measures that will be implemented to control these potential impacts. This section also discusses in detail the erosion and sediment control techniques that typically apply to each construction activity including clearing, grading, trenching, lowering-in of pipe, backfilling, and hydrostatic testing. Pipe abandonment in-place or removal, which may be associated with a pipeline replacement activity or occur as an independent activity on an existing pipeline, are also covered at the end of this section. ROW restoration is the final step in the typical construction sequence and will be addressed in Section 3.6.

Installation of the pipeline typically proceeds in a linear manner from one end of the construction spread to the other in an assembly line or "mainline" fashion. However, different stages may be running in parallel on different physical segments of the project. In some cases, this means that full completion of one of the construction sequence stages described below may not occur before the next construction sequence stage is initiated. Construction sequencing should be planned to limit the amount and duration of open trench sections, as necessary, to prevent excessive erosion or sediment flow into sensitive environmental resource areas. This is due to the Company's effort to adhere to strict construction schedules in order to minimize safety concerns, landowner effects, and environmental disturbance. The spacing between the individual crews responsible for each interdependent activity is based on anticipated rate of linear progress. The activities listed below are typically performed in the following sequence:

- Surveying and flagging the ROW;
- Clearing the ROW;
- Installing temporary sediment barriers;
- Grading the ROW;
- Installing temporary slope breakers;
- Trenching/excavating the trench;
- Pipe stringing and bending;
- Welding and weld inspection;
- Lowering the pipe into the trench;
- Backfilling the trench;
- Hydrostatic testing of pipe; and
- ROW restoration and clean-up.

Obstacles to the mainline technique are often encountered and are not considered to be out of the ordinary. These obstacles, which include side hill crossings, rock, wetlands, streams, roads and residential areas, do not normally interrupt the assembly line flow.



3.5.1 Clearing & Flagging

Clearing operations include the removal of vegetation within the construction ROW. Various clearing methods are employed depending on tree size, contour of the land, and the ability of the ground to support clearing equipment. Vegetative clearing can be accomplished either by hand or by cutting equipment. The following procedures will be standard practice during clearing:

- 1. Prior to beginning the removal of vegetation,
 - a. The limits of clearing will be established and visibly marked before clearing;
 - Signs and highly visible flagging will also be used to mark the boundaries of sensitive resource areas, including waterbodies and wetlands, and/or areas with special requirements along the construction work area, in accordance with the construction drawings;
 - c. Flagging or marking shall be maintained throughout construction;
 - d. Trees to be protected per landowner requests or as otherwise directed will be clearly marked;
- 2. All construction activities and ground disturbance will be confined to within the construction ROW shown on the construction drawings (with the limited exception of compliance activities described above in Section 3.4);
- 3. All brush and trees will be felled into the construction ROW to minimize damage to trees and structures adjacent to the ROW. Trees that inadvertently fall beyond the edge of the ROW will be immediately moved onto the ROW and disturbed areas will be immediately stabilized, per landowner approval;
- 4. Trees will be chipped and removed or cut into lengths identified by the landowner and then stacked at the edge of the ROW or removed. Trees may be burned depending on local and state restrictions, applicable permits, construction Line List stipulations, and landowner agreements;
- 5. Brush and limbs may be disposed of in one or more of the following ways depending on local restrictions, applicable permits, construction Line List stipulations, and landowner agreements:
 - a. Stockpiled along the edge of the ROW;
 - b. Burned;
 - c. Chipped, spread across the ROW in upland areas, and plowed in at the discretion of the Chief Inspector or EI (excess material must be removed);
 - d. Used as part of erosion control mix material; or
 - e. Hauled off site to a Company-approved location.
- 6. Existing surface drainage patterns shall not be altered by the placement of timber or brush piles at the edge of the construction ROW.



3.5.2 Temporary Sediment Barriers

Sediment barriers, which are temporary sediment controls intended to minimize the flow and deposition of sediment beyond approved workspaces or into sensitive resource areas, shall be installed following vegetative clearing operations. They may be constructed of materials such as silt fence, staked straw bales, compacted earth (e.g., drivable berms across travel lanes), sand bags, or other appropriate materials (Figures EC-1, EC-2, EC-3 and EC-5). Where allowed by regulatory agencies, hay bales may be used in lieu of straw bales with the following restrictions: hay bales shall not be used for mulching and the Contractor is responsible for their removal and disposal.

- 1. Install temporary sediment barriers at the base of slopes greater than 5% where the base of the slope is less than 50 feet from a road crossing, waterbody and/or wetland in accordance with Sections 5.1.4 and 6.3 respectively.
- 2. Do not stake or trench in place straw bales used on equipment bridges or on mats across the travel lane.
- 3. Inspect temporary sediment barriers daily in areas of active construction to ensure proper functioning and maintenance. In other areas with no construction or equipment operation, sediment barriers will be inspected and maintained on a weekly basis throughout construction, and within 24 hours of each 0.5 inch of rainfall. Conduct an inspection within 24 hours once a storm event has produced 0.5 inch of rainfall, even if the storm event is still continuing.
- 4. Maintain all temporary sediment barriers in place until permanent revegetation measures are successful or the upland areas adjacent to wetlands, waterbodies, or roads are stabilized.
- 5. Remove temporary sediment barriers from an area when replaced by permanent erosion or sediment control measures or when the area has been successfully restored as specified in Section 8.1.

3.5.3 Grading

The construction ROW will be graded as needed to provide a level workspace for safe operation of heavy equipment used in pipeline construction. The following procedures will be standard practice during grading:

3.5.3.1 Topsoil Segregation

During construction, topsoil and subsoil will be disturbed by grading of the right-of-way, trench excavation, and by heavy equipment moving along the right-of-way. Implementation of proper topsoil segregation is intended to mitigate these construction impacts and promote or facilitate post-construction revegetation success.

Topsoil segregation methods will be used in all residential areas (except where the topsoil is being replaced), wetlands (except areas where standing water is present or soils are saturated), cultivated or rotated croplands, managed pastures, hayfields, and other areas at the landowner's or land managing agency's request. Either the "ditch plus spoil side" or the "full right-of-way" segregation method will be used, as illustrated in Figure CW-2.



- a. Prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area ("ditch plus spoil side" method) as stipulated in the Construction Contract or Line List.
- b. Segregate at least 12 inches of topsoil in deep soils with more than 12 inches of topsoil. In soils with less than 12 inches of topsoil, make every effort to segregate the entire topsoil layer.
- c. Within wetlands, segregate the top 12 inches of topsoil within the trenchline, except in areas where standing water is present or soils are saturated.
- d. In residential areas, importation of topsoil (i.e. topsoil replacement) is an acceptable alternative to topsoil segregation, if approved by the landowner and Chief Inspector.
- e. Maintain separation of salvaged topsoil and subsoil throughout all construction activities.
- f. Leave gaps in the topsoil piles and spoil piles for the installation of temporary slope breakers to allow water to be diverted off the construction ROW.
- g. Never use topsoil for padding the pipe, constructing temporary slope breakers, trench breakers or trench plugs, improving or maintaining roads, or as a fill material.
- h. Stabilize topsoil piles and minimize loss due to wind and water erosion with use of sediment barriers, mulch, temporary seeding, tackifiers, or functional equivalents, where necessary.

3.5.3.2 Tree Stump Removal and Disposal

- a. Remove tree stumps in upland areas along the entire width of the permanent ROW to allow adequate clearance for the safe operation of vehicles and equipment. Stumps within the temporary ROW will be removed or ground below the surface in accordance with Company construction specifications to allow the safe passage of equipment, as determined by the Chief Inspector or EI.
- b. In wetlands, limit pulling of tree stumps and grading activities to directly over the trenchline.
- c. Dispose of stumps by one of the following methods with the approval of the Chief Inspector and the landowner and in accordance with regulatory requirements:
 - Buried at a Company-approved off-site location (except in wetlands and agricultural areas);
 - Burned on construction ROW;
 - Chipped, spread across the construction ROW in upland areas, and plowed in;
 - Used as erosion control mix material;
 - Ground to grade in wetlands, excess chips will be removed for proper disposal; or
 - Hauled off-site.



d. Grading operations and tree stump removal in wetland areas will be conducted in accordance with Section 6.2.

3.5.3.3 Rock Management

Rock, including blast rock, will be used, removed or disposed of in one of the following ways:

- a. Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. (Rock that is not returned to the trench shall be considered construction material or waste, unless approved for use as mulch or for some other use on the construction work areas by the land owner or land managing agency.);
- b. Windrowed per written landowner agreement with the Company;
- c. Removed and disposed of at a Company-approved landfill; or
- d. Used as riprap for streambank stabilization as allowed by applicable regulatory agency(ies) and provided the rock is uncontaminated and free of soil and other debris (Figure WC-6).

3.5.4 Temporary Slope Breakers

Temporary slope breakers, also called interceptor dikes, are temporary erosion control measures intended to reduce runoff velocity and divert water off the construction ROW. Temporary slope breakers may be constructed of materials such as compacted soil, silt fence, staked straw bales, or sand bags. Segregated topsoil may not be used for constructing temporary slope breakers. If permitted by regulatory agency(ies), hay bales may be used in lieu of straw bales except for mulching. If hay bales are used, the Contractor is responsible for their removal and Company-approved disposal.

1. Install temporary slope breakers on all disturbed areas as necessary following grading operations (Figure EC-7) to avoid excessive erosion. Unless otherwise specified by permit conditions, temporary slope breakers must be installed on slopes greater than 5% at the recommended spacing interval indicated below (Closer spacing should be used if necessary):

<u>Slope</u> (%)	Spacing (feet)
< 5	No structure
5 – 15	300
> 15 – 30	200
> 30	100

- 2. Direct the outfall of each slope breaker to a stable, well vegetated area or construct an energy-dissipating device (silt fence, staked straw bales, erosion control fabric) at the end of the slope breaker.
- 3. Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive resource areas.



- 4. Install temporary slope breakers across the entire construction ROW along slopes greater than 5 % where the base of the slope is less than 50 feet from waterbody, wetland, and road crossings.
- 5. Inspect temporary slope breakers daily in areas of active construction to insure proper functioning and maintenance. In other areas, the slope breakers will be inspected and maintained on a weekly basis throughout construction, and within 24 hours of each 0.5 inch of rainfall. Repairs should be made within 24 hours of identification, if possible.

Drivable berms, which are smaller versions of slope breakers constructed of compacted soil or sand bags, may be used in place of staked straw bales at the entrances and exits of travel lanes at road crossings, waterbodies, and wetlands. They are installed across the width of the travel lane at the start of the equipment crossing and made low enough to allow equipment and other vehicles to pass. Yet, they should function to reduce and divert water runoff from sensitive resource areas.

3.5.5 Trenching

The trench centerline will be staked after the construction ROW has been prepared. In general, a trench will be excavated to a depth that will permit burial of the pipe with a minimum of 3 feet of cover (Figure CW-1). Overland trenching may be accomplished using a conventional backhoe or a rotary wheel-ditching machine. In shale or rocky areas where the use of the conventional excavation equipment is limited, a tractor-drawn ripper or rock hammer may be employed to break and loosen hard substratum material. In areas where rock cannot be ripped or hammered, drilling and blasting may be required. A backhoe may then be used to remove rock and soil from the ditch.

The following procedures will be standard practice during ditching:

- Flag drainage tiles damaged during ditching activities for repair;
- Place spoil in additional extra work areas or at least 10 feet away from the waterbody's edge in the construction ROW. Spoil will be contained with erosion and sediment control devices to prevent spoil materials or sediment-laden water from transferring into waterbodies and wetlands or off of the ROW; and,
- If temporary erosion or sediment controls are damaged or removed during trenching, they shall be repaired and/or replaced before the end of the work day.

3.5.5.1 Temporary Trench Plugs

Temporary trench plugs are barriers within the ditch that are intended to segment the continuous open trench prior to backfill. They typically consist of unexcavated portions of the ditch (hard plug), compacted subsoil or sandbags (soft plug) placed across the ditch, or some functional equivalent. Along steep slopes, they serve to reduce erosion and sedimentation in the trench and minimize dewatering problems at the base of slopes where sensitive environments such as waterbodies and wetlands are frequently located. In addition, they provide access across the trench for wildlife and livestock.

a. Do not use topsoil for constructing trench plugs.



- b. Coordinate with the landowner to identify optimal locations for the placement of temporary hard plugs designed to provide access for livestock.
- c. Temporary trench plugs may be used in conjunction with slope breakers to prevent water in the trench from overflowing into sensitive resource areas (Figure EC-6). Attempt to divert trench overflow to a well-vegetated off-ROW location or construct an energy-dissipating device.
- d. Position temporary trench plugs, as necessary, to reduce trenchline erosion and minimize the volume and velocity of trench water flow at the base of slopes.

3.5.6 Trench & Site Dewatering

Dewatering may be periodically conducted to remove accumulated groundwater or precipitation from the construction ROW, including from within the trenchline. The need for erosion controls as well as the type of control used will vary depending on the type and amount of sediment within the water, and volume and rate of discharge.

- 1. Conduct dewatering (on or off the construction ROW) in such a manner that does not cause erosion and does not result in silt-laden water flowing into any waterbody or wetland.
- 2. Elevate and screen the intake of each hose used to withdraw the water from the trench to minimize pumping of deposited sediments.
- 3. Water may be discharged into areas where adequate vegetation is present adjacent to the construction ROW to function as a filter medium.
- 4. Where vegetation is absent or in the vicinity of waterbody / wetland areas, water will be pumped into a discharge structure that accommodates the anticipated discharge volumes as well as type and amount of sediment within the water being discharged, including
 - a. a filter bag, as illustrated in Figure WD-1, or
 - b. a structure composed of sediment barriers (Options for these types of controls are illustrated in Figure WD-2 and WD-3.).

A structure that is more typically used for discharges of hydrostatic test water, as illustrated in Figure WD-2, may be necessary for large volumes of water.

- 5. When using filter bags, secure the discharge hose to the bag with a clamp.
- 6. Remove dewatering structures as soon as practicable after the completion of dewatering activities.

3.5.7 Pipe Installation

During all phases of the pipe installation process, ensure that all roadway crossings and access points are safe and accessible conditions. Repair damaged temporary erosion controls by the end of the work day. If portions of slope breakers are removed from the travel lane to facilitate safe work conditions, they shall be restored prior to the end of the work day.



3.5.7.1 Stringing and Bending

Following trench excavation, pipe sections will be delivered to the construction site by truck or tracked vehicle, and strung out along the trench. Individual pipe sections will be placed on temporary supports or wooden skids and staggered to allow room for work on the exposed ends. Certain pipe sections will be bent, as necessary, to conform to changes in slope and direction of the trench.

All rope bands should be collected and disposed of properly.

3.5.7.2 Welding

Once the bending operation is complete, the pipe sections will be welded together on supports using approved welding procedures that comply with Company welding specifications. After welding, the welds will be inspected radiographically or ultrasonically to ensure their structural integrity.

3.5.7.3 Lowering-in and Tie-ins

Lowering-in consists of placing the completed pipeline sections into the trench typically using two or more sideboom tractors acting in unison and spaced so as not to buckle or otherwise damage the pipe. The pipeline will be lifted from the supports, swung out over the trench, and lowered directly into the trench. The equipment uses a "leap frogging" technique requiring sufficient area to safely move around other tractors within the construction ROW to gain an advanced position on the pipe. The unwelded ends of the completed pipeline segments (typically present at road crossings, stream crossings, etc.) are then welded together or "tied-in" by specialized tie-in crews.

3.5.8 Backfilling

Backfilling consists of covering the pipe with the earth removed from the trench or with other fill material hauled to the site when the existing trench spoil is not adequate for backfill. Backfilling will follow lowering-in of the pipeline as close as is practical.

In areas where the trench bottom is irregularly shaped due to consolidated rock or where the excavated spoil materials are unacceptable for backfilling around the pipe, padding material may be required to prevent damage to the pipe. This padding material will generally consist of sand or screened spoil materials from trench excavation.

- 1. Under no circumstances shall topsoil be used as padding material.
- 2. Excess rock, including blast rock, may be used to backfill the trench only to the top of the existing bedrock profile in accordance with Company specifications. Rock that is not used to backfill the trench will be managed as described in Section 3.5.3.3.
- 3. Any excess material will be spread within the ROW in upland areas and land contours will be roughed-in to match adjacent topography.



4. The trench may be backfilled with a crown over the pipe to compensate for compaction and settling. Openings will be left in the completed trench crown to restore pre-construction drainage patterns. Crowning shall not be used in wetland areas.

3.5.8.1 Permanent Trench Breakers

Permanent trench breakers are intended to slow subsurface water flow and erosion along the trench and around the pipe in sloping terrain. An engineer or similarly qualified professional shall determine the need for and spacing of permanent trench breakers. However, trench breakers will not be installed within a wetland.

Permanent trench breakers will be constructed with sand bags, polyurethane foam, or an equivalent as identified in the permit requirements (Figure EC-10 and EC-11). Topsoil shall not be used to construct trench breakers. Sakrete may be used at the discretion of the Chief Inspector on severe slopes greater than 30 percent.

Permanent trench breakers, which are used in conjunction with slope breakers, shall be installed at the locations shown on the construction drawings, at the same spacing interval as and upslope of permanent slope breakers, or as otherwise determined by an engineer or similarly qualified professional, such as the EI (Figure EC-12). At a minimum, install trench breakers:

- a. At the base of slopes greater than 5% where the base of the slope is less than 50 feet from a waterbody or wetland;
- b. Where needed to avoid draining of a resource, including at wetland boundaries where the pipeline trench may drain a wetland, and/or seal the trench bottom as necessary to maintain the original wetland hydrology; and,
- c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same spacing as if permanent slope breakers were required.

3.5.9 Hydrostatic Testing

Once the pipeline is completed and before it is placed into service, it will be hydrostatically tested for structural integrity. Hydrostatic testing involves filling the pipeline with clean water and maintaining a test pressure in excess of normal operating pressures for a specified period of time (typically 8 hours). The testing procedure involves filling the pipeline with water, performing the pressure test, and discharging the test water.

The following general hydrostatic testing procedures shall be adhered to for all projects. Environmental conditions for hydrostatic testing activities are also addressed in the project-specific Hydrostatic Test Clearance Package that is issued by ECP if permits are required for water appropriation and/or discharge. During planning and permitting of test events:



- Identify the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location. Use only the water sources identified in the Clearance Package/Permit Book.
 - a. Do not use water from or discharge into state-designated exceptional value waters, waterbodies that provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and/or local permitting agencies grant written permission.
- 2. Locate hydrostatic test manifolds outside wetlands and riparian areas to the maximum extent practicable.
- 3. Attempt to locate discharge sites in a well-vegetated and stabilized area, if practical, at least 50-feet from adjacent waterbody/wetland areas.
- 4. Apply for and obtain state-issued water withdrawal permits and National Pollutant Discharge Elimination System (NPDES) or state-issued discharge permits, as required.

During preparation for testing, including appropriation of source water and preparing discharge/outfall site:

- 1. At least 48 hours before testing activities, the EI shall notify appropriate state agencies (as identified in the relevant permit for hydrostatic test discharges) of the intent to use specific test water sources (unless waived in writing).
- 2. If pumps used for hydrostatic testing are within 100 feet of any waterbody or wetland, the use of secondary containment, operation and refueling of those pumps will be addressed and conducted in accordance with the SPCC/PPC Plan.
- 3. Screen the intake hose to minimize the potential for entrainment of fish and other aquatic life.
- 4. Maintain adequate flow rates to protect aquatic life, provide for all waterbody uses, and provide for downstream withdrawals of water by existing users.
- 5. Install all discharge structures in a well-vegetated and stabilized area, if practical, and attempt to maintain at least a 50-foot vegetated buffer from adjacent waterbody/wetland areas. If an adequate buffer is not available, sediment barriers or similar sediment control measure must be installed.

During the discharge of hydrostatic test water on-site:

- 1. Discharge water only at the locations shown on the construction drawings or locations identified in the Clearance Package/Permit Book or ECP's Hydrostatic Test Clearance Package.
- 2. Regulate rate of discharge water and use energy dissipation device(s) and sediment barriers, as necessary, to prevent erosion, streambed scour to aquatic resources, sedimentation, flooding or excessive stream flow (Figures WD-2 and WD-3).



- 3. Use absorbent booms as necessary during discharge from existing pipe or as stipulated by the applicable NPDES permit.
- 4. The test water may be discharged through an appropriate filtration system including holding tanks or frac tanks and/or carbon filters if needed to meet effluent limitations or conditions stipulated in the NPDES permit.
- 5. Do not discharge into state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and local permitting agencies grant written permission.
- 6. The EI or appropriate designee shall sample and test the source water and discharge water in accordance with the permit requirements.

3.5.10 Pipeline Abandonment and Removal

Pipeline abandonment and removal activities may occur when gas service is no longer needed, such as the abandonment of a lateral to a customer receipt or delivery point. Removal or in-place abandonment of pipe can also be conducted as part of an expansion or maintenance project, such as the lift-and-relay of existing pipe, the replacement or relocation of an existing pipeline due to road or highway modifications, or activities required to maintain compliance with U.S.DOT requirements.

Abandonment approval from FERC, such as project-specific Section 7(b) Order or blanket certificate authorization, is required prior to abandoning facilities or services. Abandonment of FERC-regulated natural gas pipelines or storage facilities, either in place or by removal, must follow FERC's regulations.

Where removal of a section of existing pipeline is required, construction activities typically proceed in a construction sequence similar to what has been described above in Section 3.5, except that instead of the pipeline installation step, the existing pipeline would be cut and removed from the trench. If the pipeline removal is associated with a lift-and-relay project or a replacement, then the new pipeline installation would follow the removal of the old pipe. Pipe that is abandoned by removal will be handled, taken off-site and properly disposed of or recycled in accordance with Company procedures.

When a pipeline is abandoned in place, typically work involves only relatively small excavations to remove above-ground appurtenances and meters, as well as expose the pipe in certain locations, cut it, fill with grout or blanket gas and cap the ends of the pipe, in accordance with agency and Company requirements.

Mitigation measures for pipeline abandonment and removal activities, such as erosion control measures, will follow the same requirements outlined within the E&SCP for pipeline installation in order to minimize erosion and enhance revegetation, as well as mitigate the extent and duration of project-related disturbance to wetlands and waterbodies.



3.6 ROW Restoration & Final Cleanup

Restoration of the ROW will begin after pipeline construction activities have been completed. Restoration measures include the re-establishment of final grades and drainage patterns as well as the installation of permanent erosion and sediment control devices to minimize post-construction erosion. Residential areas will be restored in accordance with Section 4.3.3. Property shall be restored as close to its preconstruction condition as practical unless otherwise specified by the landowner.

- 1. The Contractor shall make every reasonable effort to complete final cleanup of an area (including final grading, topsoil replacement and installation of permanent erosion control structures) within 20 days after backfilling the trench in that area (within 10 days in residential areas). If seasonal or other weather conditions prevent compliance with these timeframes, continue to inspect and maintain temporary erosion and sediment controls (i.e. temporary slope breakers, sediment barriers, and mulch) until conditions allow completion of cleanup. If construction or restoration unexpectedly continues into the winter season, follow the requirements of Frozen Conditions & Winter Construction, Section 3.6.4.
- 2. Seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting.
- 3. If construction or restoration unexpectedly cannot be completed and is delayed until the next recommended growing season, the winter stabilization measures shall be followed.
- 4. Grade the ROW to pre-construction contours, with the exception of the installation of any permanent measures required herein.
- 5. Spread segregated topsoil back across the graded ROW to its original profile.
- 6. Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields, residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction ROW shall be similar to adjacent areas not disturbed by construction. The landowner or land managing agency may approve other provisions in writing.
- 7. A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion and sediment control structures are installed, regularly inspected and maintained. When access is no longer required, the travel lane must be removed and the ROW restored.
- 8. Remove all construction debris (used filter bags, skids, trash, etc.) from all construction work areas unless the landowner or land managing agency approves leaving material onsite for beneficial reuse, stabilization, or habitat restoration. Grade or till the ROW to leave the soil in the proper condition for planting.



3.6.1 Permanent Erosion Control

3.6.1.1 Permanent Slope Breakers

Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction ROW, and prevent sediment deposition into sensitive resources. Permanent slope breakers will be constructed of compacted soil (Figure EC-8). Stone or some functional equivalent may be used when approved by the Company.

- a. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, unless requested by the landowner, at the locations shown on the construction drawings.
- b. Use spacing recommendations obtained from the local soil conservation authority or land managing agency. If not shown on the construction drawings or in the absence of written recommendations, use the following spacing (same as temporary slope breaker spacing) unless closer spacing is necessary to avoid excessive erosion on the construction ROW:

<u>Slope</u> (%)	Spacing (feet)
< 5	No structure
5 – 15	300
> 15 – 30	200
> 30	100

- c. A permanent trench breaker will be located immediately upslope of the slope breaker.
- d. Install permanent slope breakers across the construction ROW at the base of slopes adjacent to roads. When the ROW parallels an existing utility ROW, permanent slope breakers may be installed to match existing slope breakers on the adjacent undisturbed utility ROW.
- e. Install permanent slope breakers across the construction ROW at the base of slopes greater than 5% that are less than 50 feet from a wetland or waterbody, or as needed to prevent sediment transport into a wetland or waterbody.
- f. Construct slope breakers with a 2 to 8 percent outslope to divert surface flow to a stable vegetative area without causing water to pool or erode behind the slope breaker. In the absence of a stable vegetative area, install an energy-dissipating device at the end of the slope breaker.
- g. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction ROW to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction ROW, they are subject to compliance with all applicable survey and permit requirements.
- h. Install chevron-style slope breakers on slopes as appropriate (Figure EC-9).



i. Where drainage is insufficient in upland areas, install a rock-lined drainage swale as approved by the EI. The drainage swale is generally 8 feet wide and a maximum of 18-24 inches deep (Figure EC-4).

3.6.1.2 Erosion Control Fabric / Blankets

Erosion control fabric or blankets are used during restoration, including as mulch, to slow down stormwater and stabilize soil until vegetation becomes established. Examples of these erosion controls include jute thatching or bonded fiber blankets. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat, unless the product is specifically designed to minimize harm to wildlife.

Install erosion control fabric or blankets where necessary or as recommended by the EI

- a. at slope breaker outlets and drainage swales (Figure EC-7, EC-8 and EC-4);
- b. on slopes adjacent to roads or waterbodies (Figure EC-14); and
- c. on waterbody banks at the time of final bank recontouring (Figure WC-5).

Anchor the erosion control fabric or blanket with staples or other appropriate devices in accordance with the manufacturers' recommendations (Figure EC-13). Evaluate flow conditions to determine if erosion control fabric is suitable as an effective vegetation stabilization technique on waterbody banks. High-velocity erosion control fabric should be used on the swale side of permanent slope breakers.

3.6.2 Revegetation and Seeding

Successful revegetation of soils disturbed by project-related activities is essential. Seeding will be conducted using the following requirements:

- 1. Fertilize and add soil pH modifiers in accordance with the recommendations in Appendix C. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as practicable after application;
- 2. Seed all disturbed areas within 6 working days of final grading, weather and soil conditions permitting;
- 3. Prepare seedbed in disturbed areas to a depth of 3 to 4 inches to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed;
- 4. Seed disturbed areas in accordance with the seed mixes, rates, and dates in Appendix C, except in upland areas where landowners or a land management agency may request alternative seed mixes, however, seeding is not required in cultivated croplands unless requested by the landowner;
- 5. Perform seeding of permanent vegetation within the recommended seeding dates as outlined in Appendix C. If seeding cannot be done within those dates, use appropriate temporary erosion



control measures discussed in Section 3.5.2 and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Dormant seeding or temporary seeding of annual species may also be used, if necessary, to establish cover, as approved by the EI. Mulch in accordance with Section 3.6.3. Lawns may be seeded on a schedule established with the landowner;

- 6. Base seeding rates on Pure Live Seed (PLS);
- 7. Use seed within 12 months of seed testing;
- 8. Treat legume seed with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydroseeding); and,
- 9. Uniformly apply and cover seed in accordance with the appropriate seed mix from Appendix C, in the absence of any recommendations from the local soil conservation authorities, landowner, or land managing agency to the contrary.
 - a. A seed drill equipped with a cultipacker is preferred for application but, where permitted by regulatory agencies, broadcast or hydroseeding can be used at double the recommended seeding rates.
 - b. Where seed is broadcast, firm the seedbed with a cultipacker or roller after seeding.
 - c. In rocky soils, or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by the EI.

3.6.3 Mulch

Mulch is intended to stabilize the soil surface and shall consist of weed-free straw, wood fiber hydromulch, erosion control fabric or some functional equivalent as approved by the EI and Chief Inspector.

- 1. Mulch all disturbed upland areas (except cultivated cropland) **before** seeding if:
 - a. Final cleanup, including final grading and installation of permanent erosion control measures, is not completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas); or
 - b. Construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions.

NOTE: When mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent.

2. Apply mulch on all slopes (except in cultivated cropland) concurrent with or immediately after seeding, where necessary, to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the ROW at a rate of 2 tons/acre of straw or equivalent.



- 3. Mulch with woodchips only under the following conditions with prior approval from the Chief Inspector or the EI:
 - a. Do not use more than 1 ton/acre; and
 - b. Add the equivalent of 11 lbs/acre available nitrogen (at least 50% of which is slow release).
- Ensure that mulch is anchored to minimize loss by wind and water. Anchoring may be achieved
 by wet soil conditions, when approved by the EI, mechanical means, or use of liquid mulch
 binders.
- 5. When anchoring with liquid mulch binders, use rates recommended by the manufacturer. Do not use liquid mulch binders within 100 feet of wetlands and waterbodies, except where the product is certified environmentally non-toxic by the appropriate state or federal agency or independent standards-setting organization.
- 6. If used, install erosion control fabric or blankets in accordance with Section 3.6.1.2.

3.6.4 Frozen Conditions & Winter Construction

Winter weather may not provide suitable conditions for soil handling or restoration of disturbed areas. In the event that the construction occurs too late in the year for cleanup activities to adequately proceed or if construction is planned to occur during winter weather conditions, the Company will develop a project-specific Winter Construction Plan that addresses:

- Winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping);
- Stabilization and monitoring procedures if ground conditions will delay restoration until the following spring (e.g., mulching and erosion controls, inspection and reporting, stormwater control during spring thaw conditions); and,
- Final restoration procedures (e.g., subsidence and compaction repair, topsoil replacement, seeding).

The Winter Construction Plan will be provided within the project-specific Clearance Package / Permit Book. Section 7(c) and prior notice projects are required to file the Winter Construction Plan for the review and written approval by the FERC. (The requirement to file a plan does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.)

3.6.5 Unauthorized Vehicle Access to ROW

The Company will offer to install and maintain measures to control unauthorized vehicle access to the ROW based on requests by the manager or owner of forested lands. These measures may include:

- Signs;
- Fences with locking gates;



- Permanent access roads;
- Slash and timber barriers, pipe barriers, or a line of boulders across the ROW; or
- Conifers or other appropriate shrubs with a mature height of 4 feet or less across the ROW.

3.7 Aboveground Facility Construction

Construction at aboveground facilities, including compressor stations, meter stations, valve sites, and other facilities, will follow the same best management practices identified for pipeline installation and removal on the ROW. Work activities in this category can include installation of new aboveground facilities, modification or relocation of facilities at existing compressor station sites, upgrades or installations at existing meter station sites, construction of new receipt or delivery points, and a variety of other activities. Certain project types covered in this section may trigger additional stormwater permitting. Check with the ECP Lead to ensure that all stormwater requirements are met prior to construction.

- 1. Aboveground facilities shall not be located in any wetland, except as permitted or where the location of such facilities outside of wetlands would prohibit compliance with U.S.DOT regulations.
- 2. Install temporary sediment barriers at the base of slopes adjacent to roads and at waterbodies and wetlands in accordance with Sections 5.1.4 and 6.3 respectively.
- 3. Inspect temporary sediment barriers daily in areas of active construction to ensure proper functioning and maintenance. In other areas with no construction or equipment operation, sediment barriers will be inspected and maintained on a weekly basis throughout construction, and within 24 hours of each 0.5 inch of rainfall. Conduct an inspection within 24 hours once a storm event has produced 0.5 inch of rainfall, even if the storm event is still continuing.
- 4. If a waterbody is present on or immediately adjacent to an existing facility property where work is being conducted, install sediment barriers as necessary along the edge of the construction area to contain spoil and sediment within the work area.
- 5. All extra work areas should be located at least 50 feet away from the water's edge of a waterbody or a wetland, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. FERC approval is necessary for the use of work areas if these setback conditions cannot be met.
- 6. Wetland boundaries and buffers (e.g., extra work area setbacks, refueling restrictions) must be clearly marked in the field with signs and /or highly visible flagging until construction-related ground disturbing activities are complete.
- 7. When work is required within a wetland at an existing facility, and standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment or operate normal equipment on timber riprap, prefabricated equipment mats or terra mats. Do not use more than two layers of timber riprap to stabilize the work area.



- 8. Maintain all temporary sediment barriers in place until permanent revegetation measures are successful or the upland areas adjacent to wetlands, waterbodies and roads are stabilized.
- 9. Remove temporary sediment barriers from an area when replaced by permanent erosion or sediment control measures or when the area has been successfully restored as specified in Section 8.1.
- 10. Temporary slope breakers are to be installed on all disturbed areas as necessary to avoid excessive erosion as described in Section 3.5.4.
- 11. Where required for work in wetlands (except areas where standing water is present or soils are saturated) segregate topsoil as described in Section 3.5.3.1.
- 12. Place spoil at least 10 feet upgradient from the edge of waterbodies or as indicated on construction drawings. Spoil will be contained with erosion and sediment control devices to prevent spoil materials or silt-laden water from transferring into waterbodies and wetlands or off of the facility property.
- 13. If required, dewatering should be conducted as described in Section 3.5.6.
- 14. The Contractor shall make every reasonable effort to complete final cleanup of an area (including final grading and installation of permanent erosion control structures) within 20 days after ground disturbing activities are completed. If seasonal or other weather conditions prevent compliance with these time frames, continue to inspect and maintain temporary erosion and sediment controls (temporary slope breakers and sediment barriers) until conditions allow completion of cleanup. Cleanup shall be conducted in accordance with Section 3.6 of this document.
- 15. Grade to contours shown on construction drawings or site plans or return grade to pre-construction contours.
- 16. New gravel, stone and paving at the site shall be placed in accordance with construction drawings. No additional gravel, stone, or paving shall be added without prior approval by ECP.
- 17. Install permanent erosion controls and post-construction stormwater measures at the locations shown on the construction drawings.
- 18. Disturbed soils will be seeded within 6 working days of final grading, weather and soil conditions permitting, unless permit conditions indicate otherwise.
- Remove all timber riprap and prefabricated equipment mats in any wetlands upon completion of construction.



4. SPECIAL CONSTRUCTION METHODS

The Company will utilize the following specialized construction procedures for agricultural areas, road crossings, and residential areas along the pipeline project, when applicable. The project construction drawings, Line Lists, and Construction Contract will indicate the locations where specialized construction methods will be used.

4.1 Agricultural Areas

The following sections identify construction procedures and best practices for activities within actively cultivated or rotated land used for the production of crops including but not limited to corn, grains, orchards, vineyards and hayfields.

4.1.1 Drain Tiles

Develop procedures for constructing through drain-tiled areas and repairing drain tiles after construction. Engage qualified drain tile specialists, as needed, to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialist from the project area, if available.

- 1. Attempt to locate existing drain tiles.
- 2. Probe all drainage tile systems within the area of disturbance to check for damage.
- 3. Ensure that the depth of cover over the new pipeline is sufficient to avoid interference with drain tile systems (existing or proposed). For adjacent pipeline loops in agricultural areas, install the new pipeline with at least the same depth of cover as the existing pipeline(s).
- 4. Repair damaged drain tiles to their original or better condition (Figure SU-1). Filter-covered drain tiles may not be used unless the local soil conservation authorities and the landowner agree in writing prior to construction.

4.1.2 Irrigation

Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties. Repair any damage to irrigation systems as soon as practical.

4.1.3 Soil Compaction Mitigation & Restoration

The following measures are to be employed during decompaction and restoration of soil within agricultural areas disturbed by construction activities:

- In agricultural areas, test topsoil and subsoil disturbed by construction activities for compaction
 at regular intervals. Use penetrometers or other appropriate devices to conduct tests. In order
 to approximate preconstruction conditions, conduct tests on the same soil type under similar
 moisture conditions in undisturbed areas.
- 2. Plow severely compacted soils with a paraplow or other deep tillage implement;
 - a. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil.



- b. If subsequent construction and cleanup activities result in further compaction, conduct additional tilling.
- 3. Soils imported for use within agricultural areas are to be certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner.
- 4. Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields. The size, density, and distribution of rock on the construction work area shall be similar to adjacent areas not disturbed by construction. The landowner or land management agency may approve other provisions in writing.

4.2 Road Crossings

The "open cut" method is typically used when installing the pipeline across small roads (Figure RD-4). Traffic is diverted while the trench is excavated across the road and the pipeline is installed. An open cut crossing may involve closing the road to all traffic and constructing an adequate detour around the crossing area, or excavating one-half of the road at a time allowing through traffic to be maintained. Any detour constructed around the crossing area must remain within the approved construction workspace. After completing the crossing, all backfill is compacted, the road bed is repaired and the road surface is replaced.

Bores are often used to install the pipeline across highways, major roads with heavy traffic, and railroads (Figure RD-5), unless the crossing permit allows an open cut crossing. Similar to a directional drill, as discussed in Section 4.4, the road bore is accomplished with a horizontal drill rig or boring machine. The boring machine drills a hole under the road to allow insertion of the pipe. Typically, a dummy pipe section is pulled through which is welded to the line pipe. The dummy pipe is pulled back through placing the line pipe in the crossing. In some instances, a casing (another larger pipe) is installed in the hole and the pipeline is inserted inside the casing. Casings typically are not installed today, although some states require casings on rail crossings. Casings also may be used in soils where it is difficult to pull pipe. The benefit of the road bore is that it allows installation of the pipeline without disrupting traffic.

Access roads shall be used and maintained in accordance with Section 3.2.

4.3 Residential Areas

Specialized construction procedures will be utilized in areas of heavy residential or commercial/industrial congestion where residences or business establishments lie within 50 feet from the edge of the construction ROW.

- 1. Install safety fence at the edge of the construction ROW for a distance of 100 feet on either side of the residence or business establishment.
- 2. For a distance of 100 feet on either side any residence or business establishment, maintain a minimum distance of 25 feet between any structure and the edge of the construction work area. If a distance of 25 feet cannot be maintained, refer to Section 4.3.2.
- 3. If crushed stone/rock access pads are used in residential areas, rock shall be placed on nonwoven synthetic geotextile fabric to facilitate rock removal after construction.



- 4. Attempt to leave mature trees and landscaping intact within the construction work area unless the trees and landscaping interfere with the installation techniques or present unsafe working conditions, or as specified in landowner agreements.
- 5. Prevent the mixing of subsoil and topsoil by implementing segregation methods in all residential areas, except where the topsoil is being replaced, as stipulated in Section 3.5.3.1, unless the landowner or land managing agency specifically approves otherwise.

In addition to the aforementioned specialized procedures, smaller "spreads" of labor and equipment, operating independent of the mainline work force, will utilize either the stove pipe or drag section pipeline construction techniques in those areas of congestion where a minimum distance of 25 feet cannot be maintained between the residence (or business establishment) and the edge of the construction work area. In no case shall the temporary work area be located within 10 feet of a residence unless the landowner agrees in writing, or the area is within the existing maintained ROW.

The following techniques shall be utilized for a distance of 100 feet on either side of the residence or business establishment at the locations identified in the Company Construction Contract and/or Line List. Refer to site-specific residential construction plans, as applicable.

4.3.1 Stove Pipe Technique

The stove pipe construction technique is a less efficient alternative to the mainline method of construction, typically used when the pipeline is to be installed in very close proximity to an existing structure or when an open trench would adversely impact a commercial/industrial establishment. The technique involves installing one joint of pipe at a time whereby the welding, weld inspection, and coating activities are all performed in the open trench. At the end of each day after the pipe is lowered-in, the trench is backfilled and/or covered with steel plates or timber mats. The length of excavation performed each day cannot exceed the amount of pipe installed.

4.3.2 Drag Section Technique

The drag section construction technique, while less efficient than the mainline method, is normally preferred over the stove pipe alternative. This technique involves the trenching, installation, and backfill of a prefabricated length of pipe containing several segments all in one day. At the end of each day after the pipe is lowered-in, the trench is backfilled and/or covered with steel plates or timber mats. Use of the drag section technique will typically require adequate staging areas outside of the residential and/or commercial/industrial congestion for assembly of the prefabricated sections.

4.3.3 Residential Area Cleanup and Restoration

Restore all lawn areas and landscaping immediately following cleanup operations, or as specified in landowner agreements, including

- 1. Perform appropriate soil compaction mitigation in severely compacted residential areas.
- 2. Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields. The size, density, and distribution of rock on the



construction work area shall be similar to adjacent areas not disturbed by construction. The landowner or land management agency may approve other provisions in writing.

- 3. Importation of topsoil is an acceptable alternative to topsoil segregation. Soils imported for use within residential areas are to be certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner.
- 4. Reseed all disturbed lawns with a seed mixture acceptable to landowner or comparable to the adjoining lawn.

In residential areas, complete final grading, topsoil replacement, and installation of permanent erosion control structures within 10 days after backfilling the trench. Mulch all disturbed areas before seeding if final grading and installation of permanent erosion control measures will not be completed within 10 days after the trench in that area is backfilled in residential areas. If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (i.e., temporary slope breakers, sediment barriers, and mulch) until conditions allow completion of cleanup.

Landowners shall be compensated for damages in a fair and reasonable manner, and as specified in the damage provision within the controlling easement on each property.

4.4 Horizontal Directional Drill Method

Horizontal Directional Drilling (HDD) is a trenchless crossing method that can help avoid direct impacts to sensitive resources (e.g., waterbodies and wetlands) or infrastructure (e.g., roads and railways) by directionally drilling beneath them. HDD installation typically is carried out in three stages:

- 1. Directional drilling of a small diameter pilot hole;
- 2. Enlarging the pilot hole to a sufficient diameter to accommodate the pipeline; and,
- 3. Pulling the prefabricated pipeline, or pull string, into the enlarged bore hole.

For each waterbody or wetland that would be crossed using the HDD method, the Company will prepare a project-specific HDD Plan that includes:

- Site-specific construction diagrams that show the location of mud pits, pipe assembly areas, and all areas to be disturbed or cleared for construction;
- Justification that disturbed areas are limited to the minimum needed to construct the crossing;
- Identification of any aboveground disturbance or clearing between the HDD entry and exit workspaces during construction;
- A description of how an inadvertent release of drilling mud would be contained and cleaned up; and
- A contingency plan for crossing the waterbody or wetland in the event the HDD is unsuccessful and how the abandoned drill hole would be sealed, if necessary.

The HDD Plan will be provided within the project-specific Clearance Package / Permit Book.



Section 7(c) and prior notice projects are required to file HDD plans for the review and written approval by the FERC. (This requirement to file a plan does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.)

During post-construction maintenance activities, do not conduct any routine vegetation mowing or clearing in riparian areas or wetlands that are between HDD entry and exit points.



5. WATERBODY CROSSINGS

The intent of these procedures is to minimize the extent and duration of project related disturbances within waterbodies. The following section describes the construction procedures and mitigation measures that will be used for pipeline installations at waterbodies. The length of the crossing, the sensitivity of the area, existing conditions at the time of the crossing, and permit requirements will determine the most appropriate measures to be used.

The Waterbody Reference Citing FERC Requirements in Appendix B summarizes general waterbody crossing methods and requirements identified in the FERC Procedures. These tables provide a brief reference of the restrictions on construction techniques for waterbody crossings; equipment bridges; construction time windows. However, as more stringent agency specific requirements may exist, refer to the Clearance Package / Permit Book for project-specific requirements.

5.1 General Waterbody Procedures

Pipeline construction across waterbody channels may result in short term water quality impacts. The following general procedures are to be followed to minimize or avoid impacts at waterbody crossings:

- 1. Crossings of waterbodies may proceed using standard upland construction techniques when they are dry or frozen and not flowing provided that the EI verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature. In the event of perceptible flow, all applicable requirements of Section 5 must be followed.
- 2. Construct crossings as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit.
- 3. Where waterbodies meander or have multiple channels, route the pipeline to minimize the number of waterbody crossings.
- 4. Perform mobilization of construction equipment, trench excavation, and backfilling in a manner that will minimize the potential for erosion and sedimentation within the waterbody channel.
- 5. Locate all extra work areas, such as staging and additional spoil storage areas, at least 50 feet away from water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. Site-specific written approval by FERC is required for all extra work areas with a less than 50-foot setback and associated measures to be used to ensure the waterbody is adequately protected.
- 6. Implement erosion control measures to confine water quality impacts within the immediate construction area and to minimize impacts to downstream areas.
- 7. Place all spoil from the waterbody within the construction ROW at least 10 feet from the water's edge or in the extra work areas shown on the construction drawings.
- 8. Maintain adequate flow rates to protect aquatic life and prevent the interruption of existing downstream uses.
- 9. Dewater trench in accordance with the procedures described in Section 3.5.6.



5.1.1 Time Windows for Instream Work

Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis, instream work must occur during the following time windows:

- Coldwater fisheries June 1 through September 30; and
- Coolwater and warmwater fisheries June 1 through November 30.

Installation or removal of equipment bridges above the top of bank is not subject to the aforementioned time windows.

5.1.2 Equipment Bridges

Equipment bridges may be installed and used where needed to allow equipment access across waterbodies.

- 1. Until the equipment bridge is installed, only clearing equipment and equipment necessary for installation of equipment bridges may cross the waterbody, and the number of crossings shall be limited to one crossing per piece of equipment, unless otherwise authorized by the appropriate permitting agency. EI approval is required prior to equipment crossing a waterbody without an equipment bridge.
- 2. Construct and maintain equipment bridges that allow unrestricted flow and prevent sediment from entering the waterbody. The Construction Contract agreement and/or permit conditions may specify the type of bridge to be used. Examples of bridges are provided below:
 - a. Equipment pads with or without culvert(s), as illustrated in Figure BR-1;
 - b. Clean crushed stone and culvert(s), as illustrated in Figure BR-2;
 - c. Flexi-float or portable bridges, as illustrated in Figure BR-3;
 - d. Double equipment pads, geotextile fabric and sideboards with or without culvert(s); or
 - e. Railroad car bridges without culverts.
- 3. Design and maintain each equipment bridge to withstand the highest flows that would occur. Align culverts/flumes to prevent bank erosion or streambed scour. If necessary, install energy dissipating devices downstream of culverts.
- 4. Do not use soil to construct or stabilize equipment bridges.
- 5. Design and maintain equipment bridges to prevent sediment from entering the waterbody.
- 6. Remove temporary equipment bridges as soon as practicable after permanent seeding.
- 7. If there will be more than 1 month between final cleanup and the beginning of permanent seeding and reasonable alternative access to the ROW is available, remove temporary equipment bridges as soon as practicable after final cleanup.



8. Obtain any necessary approval or authorization from the COE and/or the appropriate state agency for temporary and permanent bridges.

5.1.3 Clearing and Grading near Waterbodies

- 1. Confine construction activities and ground disturbance to the construction ROW boundaries, as shown on the construction drawings. Restrict extra work areas (such as staging areas and additional spoil storage areas) to only those shown on the construction drawings.
- 2. If the pipeline parallels a waterbody, maintain at least 15 feet of undisturbed vegetation between the waterbody (and any adjacent wetland) and the ROW except where maintaining this offset will result in greater environmental impact.
- 3. Clear the ROW adjacent to all waterbodies *up to the high water bank* (where discernible). Within 10 feet of the high water bank, trees shall be cut to ground level and with little to no ground disturbance. **Do not grub** this 10-foot vegetative strip with equipment.
- 4. Immediately remove all cut trees and branches that inadvertently fall into a waterbody and stockpile in an upland area within the construction ROW for disposal.
- 5. Grade the ROW adjacent to waterbodies *up to within 10 feet of the high water bank*, leaving an ungrubbed vegetative strip intact.
- 6. Clearing and grading operations may proceed through the 10-foot vegetative strip **only on the working side of the ROW** in order to install the equipment bridge and travel lane. Use temporary sediment barriers to prevent the flow of bank spoil into the waterbody.

5.1.4 Temporary Erosion and Sediment Controls at Waterbodies

Install sediment barriers immediately after initial disturbance of the waterbody or adjacent upland. Sediment barriers must be properly maintained throughout construction and repaired or reinstalled as necessary (such as after backfilling of the trench), until replacement by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in Section 3.5, however, the following specific measures must be implemented at stream crossings:

- 1. Install sediment barriers across the entire construction ROW at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody.
- 2. Install sediment barriers along the edge of the construction ROW as necessary to contain spoil within the construction ROW and prevent sediment flow into the waterbody where waterbodies are adjacent to the construction ROW or parallel to the construction ROW and the ROW slopes toward the waterbody.
- 3. Removable or temporary sediment barriers, such as slope breakers or drivable berms as described in Section 3.5.4, may be used in lieu of sediment barriers in front of equipment bridges or timber mats across the travel lane. Removable sediment barriers can be removed



during the construction day, but must be reinstalled after construction has stopped for the day or whenever heavy precipitation is imminent.

4. Use temporary trench plugs at all 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. Trench plugs shall be of sufficient size to withstand upslope water pressure.

5.2 Types of Waterbody Crossing Methods

Waterbody crossing techniques allowed for use on a project will be determined by agency consultations and permits. Construction at waterbodies will be conducted using two principal crossing methods, a "dry" crossing and a "wet" crossing. The "dry" or "dry-ditch" crossing procedure is further divided into a flume crossing and a dam-and-pump crossing methods. These methods are designed to maintain downstream flow at all times and to isolate the construction zone from the stream flow by channeling the water flow through a flume pipe or by damming the flow and pumping the water around the construction area. The overall objective is to minimize siltation of the waterbody and to facilitate trench excavation of saturated spoil. The two "dry" crossings are further described below in Sections 5.2.1 and 5.2.2.

The "wet" or "open-cut" crossing method involves trenching in the waterbody without isolating the construction zone from the stream flow. The objective of this method is to complete the waterbody crossing as quickly as practical in order to minimize the duration of impacts to aquatic resources. The wet crossing method is further described below in Section 5.2.3.

All streams, their classifications, timing windows, applicable permits and crossing procedures will be identified in the project-specific Clearance Package/Permit Book and on the construction drawings. Unless approved otherwise by the appropriate federal or state agency, pipeline construction and installation must occur using one of the two "dry" crossing methods for waterbodies state-designated as either coldwater or significant coolwater or warmwater fisheries, or federally designated as critical habitat. The flume and dam-and-pump crossing methods are applicable to waterbodies up to 30 feet wide (possibly wider depending on flow volume and rate) at the water's edge at the time of construction.

5.2.1 Flume Crossing

The flume crossing method utilizes a flume pipe(s) to transport stream flow across the disturbed area and allows trenching to be done in drier conditions (Figure WC-3). The flume pipe(s) installed across the trench will be sized to accommodate anticipated stream flows. Flumes are generally not recommended for use on a waterbody with a broad unconfined channel, unstable banks, a permeable substrate, excessive stream flow, or where the installation and construction of the flume crossing will adversely affect the bed or banks of the stream.

The flume waterbody crossing shall be installed as follows:

- 1. Install flume pipe(s) after blasting and other rock breaking measures (if required), but before trenching;
- 2. Properly align flume pipe(s) to prevent bank erosion and streambed scour;



- 3. Use sand bags or equivalent dam diversion structure to provide a seal at either end of the flume to channel water flow (some modifications to the stream bottom may be required to achieve an effective seal);
- 4. **Do not remove flume pipe** during trenching, pipe laying (thread pipe underneath the flume pipe(s)), or backfilling activities, or initial streambed restoration efforts, except for crossings where a dam-and-pump method (as described in Section 5.2.2 below) has been established as an alternative measure to redirect stream flow; and
- 5. Remove all flume pipes and dams that are not also part of the equipment bridge as soon as final cleanup of the stream bed and bank is complete.

5.2.2 Dam-and-Pump Crossing

The dam-and-pump crossing method is presented as an alternative dry crossing procedure to the flume crossing (in limited cases, it may be used in combination with a flume crossing). The dam-and-pump method is accomplished by utilizing pumps to transport stream flow across the disturbed area (Figure WC-4). This method involves placing sandbags across the existing stream channel upstream from the proposed crossing to stop water flow and downstream from the crossing to isolate the work area. Pumps are used to pump the water across the disturbed area and back into the stream further downstream.

The dam-and-pump procedure allows for more space and flexibility during trenching and pipe installation, which shortens the duration of time spent at the waterbody. The dam-and-pump method may be used for crossings of waterbodies where pumps can adequately transfer stream flow volumes around the work area, and where there are no concerns about sensitive species passage.

The dam-and-pump crossing method shall be installed as follows:

- 1. Install and properly seal sandbags at the upstream and downstream location of the crossing;
- 2. Create an in-stream sump using sandbags if a natural sump is unavailable for the intake hose;
- 3. Initiate pumping of the stream around the work area prior to excavating the trench;
- 4. Monitor dam and pumps <u>at all times</u> to ensure proper operation until the waterbody crossing is completed; and,
- 5. Remove the sandbag dams, pumps and hoses and return normal flow back to the waterbody following installation and restoration of the streambed.

Implementation of the dam-and-pump crossing method will meet the following performance criteria:

- Use sufficient pumps, including onsite backup pumps, to maintain downstream flows;
- Construct dams with materials that prevent sediment and other pollutants from entering the waterbody (e.g., sandbags or clean gravel with plastic liner);
- Screen all intake hoses to minimize the entrainment of fish and other aquatic life
- Prevent streambed scour at pump discharge; and



 Continuously monitor the dam and pumps to ensure proper operation throughout the waterbody crossing.

5.2.3 Wet Crossing

Open-cut crossings involve excavating a trench for the pipeline across the bottom of the waterbody to be crossed (Figure WC-2). Depending on the depth of the water, construction equipment may be placed on barges or other floating platforms to excavate the pipe trench.

This construction technique is typically used to cross waterbodies that are not state-designated, such as ephemeral drainage ditches, and ephemeral and intermittent streams, as well as intermediate and major waterbodies with substantial flows that cannot be effectively flumed or pumped around the construction zone using one of the dry crossing techniques.

5.3 FERC Waterbody Classifications

In the FERC Procedures, a "waterbody" is defined to include any natural or artificial stream, river, or drainage with perceptible flow at the time of crossing, and other permanent waterbodies such as ponds and lakes. Waterbodies have been further divided into three classifications by FERC depending on the width of the feature, which dictate construction limitations or requirements.

5.3.1 Minor Waterbodies

FERC defines a "minor waterbody" as a waterbody less than or equal to 10 feet wide at the water's edge at the time of crossing. Minor waterbodies shall be crossed in accordance with the following requirements:

- 1. All spoil from minor waterbody crossings must be placed in the construction ROW at least 10 feet from the water's edge or in additional extra work areas as described above in Section 5.1.
- 2. Unless approved otherwise by the appropriate federal or state agency, utilize a dry crossing construction technique to install crossings at all minor waterbodies that are state-designated fisheries or federally designated as critical habitat, as identified in the Clearance Package/Permit Book (Figures WC-3 or WC-4).
 - a. All construction equipment must use an equipment bridge to cross state-designated fisheries as specified in Section 5.1.2.
- 3. Where a dry-ditch crossing is not required, minor waterbodies may be crossed using the wet crossing method, with the following restrictions:
 - Except for blasting and other rock breaking measures, complete instream construction activities (including trenching, pipe installation, backfill, and restoration of the streambed contours) within 24 hours. Streambanks and unconsolidated streambeds may require additional restoration after this period;
 - b. Limit use of equipment operating in the waterbody to that needed to construct the crossing;



- c. If a flume is installed within the waterbody during mainline activities, it can be removed just prior to lowering in the pipeline (The 24-hour timeframe starts as soon as the flume is removed.); and,
- d. Equipment bridges are not required at minor waterbodies that do not have a state-designated fishery classification or protected status (e.g., agricultural or intermittent drainage ditches). However, if an equipment bridge is used it must be constructed as described in Section 5.1.2.

5.3.2 Intermediate Waterbodies

FERC defines an "intermediate waterbody" as a waterbody greater than 10 feet wide but less than or equal to 100 feet wide at the water's edge at the time of crossing. Intermediate waterbodies shall be crossed in accordance with the following requirements:

- 1. All spoil from intermediate waterbody crossings must be placed in the construction ROW at least 10 feet from the water's edge or in additional extra work areas as described above in Section 5.1.
- 2. Unless approved otherwise by the appropriate federal or state agency, install the pipeline using a dry crossing method for crossings of waterbodies up to 30 feet wide (at the water's edge at the time of construction) that are
 - a. state-designated as either coldwater or significant coolwater or warmwater fisheries, or
 - b. federally designated as critical habitat.
- 3. Where a dry-ditch crossing is not required, intermediate waterbodies may be crossed using the wet crossing method, with the following restrictions:
 - a. Complete instream construction activities (not including blasting and other rock breaking measures) within 48 hours, unless site-specific conditions make completion within 48 hours infeasible;
 - b. Limit use of equipment operating in the waterbody to that needed to construct the crossing; and,
 - c. All other construction equipment must cross on an equipment bridge as specified in Section 5.1.2.

5.3.3 Major Waterbodies

FERC defines a "major waterbody" as a waterbody greater than 100 feet wide at the water's edge at the time of crossing. Before construction, the Company shall prepare and file for the review and written approval by the FERC a detailed, site-specific construction plan and scaled drawings identifying all areas to be disturbed by construction for each major waterbody crossing, however the scaled drawings are not required for any offshore portions of pipeline projects. (The requirement to file major waterbody crossing plans does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.) This site-specific plan must be



developed in consultation with the appropriate state and federal agencies and shall include extra work areas, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues.

Upland spoil from major waterbody crossings must be placed in the construction ROW at least 10 feet from the water's edge or in additional extra work areas as described in Section 5.2.

5.4 Restoration

Restore and stabilize the waterbody banks and channel in accordance with this section.

- 1. Return all waterbody banks to preconstruction contours or to stable angle of repose as approved by the EI.
- 2. Use clean gravel or native cobbles for the upper 12 inches of trench backfill in all waterbodies identified in the Clearance Package/Permit Book as coldwater fisheries, unless otherwise specified by state-specific agency recommendations or permit conditions.
- 3. For wet crossings, stabilize waterbody banks and install temporary sediment barriers within 24 hours of completing the crossing.
- 4. For dry crossings, complete bank stabilization before returning flow to the waterbody channel.
- 5. Limit the use of rock riprap to areas where flow conditions preclude effective vegetation stabilization techniques such as seeding and erosion control fabric, unless otherwise specified by COE and state permits. Limit the placement of rock riprap to the slopes along the disturbed waterbody crossing. Application of riprap for bank stabilization must comply with COE, or its delegated agency, permit terms and conditions.
- 6. Install erosion control fabric, in accordance with Section 3.6.1.2, or a functional equivalent on waterbody banks at the time of final bank contouring (Figure EC-13, WC-5). Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat unless the product is specifically designed to minimize harm to wildlife.
- 7. Revegetate disturbed riparian areas with native species of conservation grasses, legumes and woody species similar in density to adjacent undisturbed lands.
- 8. In the event that final cleanup is deferred more than 20 days after the trench is backfilled, all slopes within 100 feet of waterbodies shall be mulched with 3 tons/acre of straw.
- 9. Remove all temporary sediment barriers when replaced by permanent erosion controls or when restoration of adjacent upland areas is successful as specified in Section 8.1.
- 10. Install a permanent slope breaker and a trench breaker at the base of slopes greater than 5% that are less than 50 feet from each waterbody crossed.



6. WETLAND CROSSINGS

The term "wetland" as used in this plan includes any area that satisfies the requirements of the current federal methodology for identifying and delineating wetlands. The requirements outlined below do not apply to wetlands in actively cultivated or rotated cropland. Standard upland protective measures, including workspace and topsoil segregation requirements, apply to these agricultural wetlands.

Wetland boundaries are identified on the construction drawings and within the Clearance Package / Permit Book. Wetlands are delineated prior to construction using current federal methodology and summarized within a wetland delineation report, which identifies the following information for all wetlands that would be affected by the construction ROW:

- Location, including pipeline milepost if crossed by centerline;
- National Wetland Inventory (NWI) classification;
- Crossing length in feet;
- Area of permanent and temporary disturbance that would occur in each wetland, sorted by NWI classification type.

6.1 General Wetland Procedures

Crossing procedures are to comply with COE, or its delegated agency, permit terms and conditions. Project-specific permits or authorizations issued by the COE or other appropriate agenc(ies) are provided in the Clearance Package / Permit Book. Implement the following general requirements during planning and construction near or across wetlands:

- 1. Route the pipeline to avoid wetland areas to the maximum extent possible.
- 2. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands. Where looping an existing pipeline, overlap the existing pipeline right-of-way with the new construction right-of-way. In addition, locate the loop line no more than 25 feet away from the existing pipeline unless site-specific constraints would adversely affect the stability of the existing pipeline.
- 3. Identify site-specific areas where excessively wide trenches could occur and/or where spoil piles could be difficult to maintain because existing soils lack adequate unconfined compressive strength.
- 4. Limit construction activity and ground disturbance in wetland areas to a construction ROW width of 75 feet or as shown on the construction drawings. Only with prior written approval from the FERC, construction ROW width within the boundaries of federally delineated wetlands may be expanded beyond 75 feet if required by site-specific topographic conditions or soil limitations.
- 5. All extra work areas must be located at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. Only with prior written approval from the FERC, the Company can locate extra work areas closer than 50 feet from the wetland if site-specific conditions justify a less than 50-foot setback.



- 6. Aboveground facilities shall not be located in any wetland, except as permitted or where the location of such facilities outside of wetlands would prohibit compliance with U.S.DOT regulations.
- 7. In the event a waterbody crossing is located within or adjacent to a wetland crossing, the Company must file a site-specific crossing plan for review and obtain written approval by the FERC before construction if all measures of Sections V. and VI. of the FERC Procedures cannot be met.
- 8. Limit construction equipment operating in wetland areas to that needed to clear the ROW, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction ROW. All other construction equipment shall use access roads located in upland areas to the maximum extent practical. Refer to Section 3.2 for other requirements and restrictions pertaining to access to the construction ROW or use of roads across wetlands.

6.2 Clearing and Grading at Wetlands

- 1. Wetland boundaries and buffers (e.g., extra work area setbacks, refueling restrictions) must be clearly marked in the field with signs and /or highly visible flagging until construction-related ground disturbing activities are complete.
- 2. If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment or operate normal equipment on timber riprap, prefabricated equipment mats or terra mats on the working side of the ROW during clearing operations.
- 3. Attempt to use no more than two layers of timber riprap to stabilize the ROW. If approved by the COE, woody debris can be burned in wetlands as long as it is in accordance with state and local regulations, ensuring that all woody debris is removed for disposal.
- 4. Cut vegetation just above ground level and grind stumps to ground level, leaving existing root systems in place and remove any excess vegetation (e.g., wood chips). Immediately remove all cut trees, limbs and branches from the wetland and stockpile in an upland area on ROW for disposal.
- 5. Limit pulling of tree stumps and grading activities to directly over the trenchline. Do not grade or remove stumps or root systems from the rest of the construction ROW in wetlands unless the Chief Inspector and EI determine that safety-related construction constraints require grading or the removal of tree stumps from under the working side of the construction ROW.
- 6. Do not cut trees outside of the construction ROW to obtain timber for riprap or equipment mats.
- 7. Cleared materials, such as slash, logs, brush, and wood chips, shall not be permanently placed within wetland areas.



6.3 Temporary Erosion & Sediment Control at Wetlands

Install sediment barriers immediately after initial ground disturbance at the following locations:

- Within the ROW at the edge of the boundary between wetland and upland;
- At the base of slopes greater than 5% where the base of the slope is less than 50 feet from a wetland;
- Across the entire ROW immediately upslope of the wetland boundary to contain spoil within the construction ROW and prevent sediment flow into the wetland;
- Along the edge of the ROW, where the ROW slopes toward the wetland, to protect adjacent, off ROW wetland; and
- Along the edge of the ROW as necessary to contain spoil and prevent sediment from migrating
 outside the construction ROW in areas where a wetland is both within and adjacent to the
 construction ROW.

Maintain all sediment barriers throughout construction and reinstall as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete in accordance with Section 8.1. Remove the sediment barriers during right-of-way cleanup.

6.4 Wetland Crossing Procedure

Procedures used to install a pipeline across wetlands vary depending on the level of soil stability and saturation encountered during construction. The following best management practices are to be employed during standard wetland crossings:

- 1. Assemble the pipeline in an upland area unless the wetland is dry enough to adequately support skids and pipe.
- 2. Do not use rock, soil imported from outside the wetland, tree stumps, or brush riprap to stabilize the ROW.
- 3. Perform topsoil segregation in accordance with Section 3.5.3.1, including segregating the top 1 foot of topsoil from the area disturbed by trenching, except in areas where standing water is present or soils are saturated. Immediately after backfilling is complete, restore the segregated topsoil to its original location.
- 4. If required, dewatering should be conducted as described in Section 3.5.6.
- 5. Minimize the length of time that topsoil is segregated and the trench is open. Do not trench the wetland until the pipeline is assembled and ready for lowering-in.
- 6. Use "push-pull" or "float" construction techniques to place the pipe in the trench where water and other site conditions allow (Refer to Section 6.4.1 below).
- 7. Install permanent trench breakers at the wetland boundaries and/or seal the trench bottom as necessary to maintain the original wetland hydrology at locations where the pipeline trench may drain a wetland.



- 8. Install a permanent slope breaker and a trench breaker at the base of slopes near the boundary between the wetland and adjacent upland areas for each wetland crossed.
- 9. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5% where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. In some areas, with the approval of the EI, an earthen berm may be suitable as a sediment barrier adjacent to the wetland.
- 10. Restore segregated topsoil to its original position after backfilling is complete. When required, additional fill material imported from off the ROW must be approved by the EI.
- 11. Preconstruction wetland contours and flow regimes will be restored to the extent practical.

6.4.1 Push-pull Technique

The "push-pull" or "float" or "drag section" method may be utilized during wetland crossings if conditions are suitable at the time of construction. Sufficient, naturally present groundwater volumes that fill the excavated trench are required to facilitate this installation method. This method may be used to install the pipeline if the wetland to be crossed contains standing water or saturated and/or unstable soils.

- Trenching equipment will excavate a trench across the wetland, either using low-ground-weight equipment or working on timber matting.
- While the trench is being excavated, the pipeline crossing sections will be assembled and welded together in uplands.
- Prefabricated pipeline crossing sections will then be pushed or pulled into the trench; floated across the wetland and released into the trench if the trench is filled with water; or, carried into position with sideboom tractors supported on equipment mats.
- The excavating equipment will "walk through" the wetland by carrying timber mats and repositioning the mats as it operates from one mat to the next through the wetland during trenching, backfilling, and cleanup activities.

6.5 Wetland Cleanup and Restoration

- 1. Restore pre-construction wetland contours to maintain the wetland hydrology.
- 2. Revegetate the ROW with annual ryegrass at 40 lbs/acre PLS or with the recommended Wetland Seed Mix in Appendix C or project-specific seed mix where applicable, unless standing water is present or unless prohibited by state or land management agency.
- 3. **Do not use lime, mulch or fertilizer in wetland areas** unless required in writing by the appropriate federal or state agency, as identified in the Clearance Package/Permit Book.
- 4. In the event that final cleanup is deferred more than 20 days after the trench is backfilled, all slopes adjacent to wetlands shall be mulched with 3 tons/acre of straw for a minimum of 100 feet on each side of the crossing.



- 5. Remove all project-related material used to support equipment on the construction ROW, including timber riprap and prefabricated equipment mats, upon completion of construction.
- 6. Develop specific procedures in coordination with the appropriate federal or state agency, where necessary, to prevent the invasion or spread of invasive vegetation (such as purple loosestrife and phragmites).
- 7. Ensure that all disturbed areas permanently revegetate in accordance with Section 8.1.
- 8. Remove temporary sediment barriers located at the boundary between wetland and adjacent upland areas after upland revegetation and stabilization of adjacent upland areas are successful as specified in Section 8.1.



7. SPILL PREVENTION & RESPONSE

7.1 SPCC / PPC Plan

The Company and Contractor shall adhere to the SPCC/PPC Plan at all times. This plan has been prepared to meet the requirements of several federal regulations and guidelines: the FERC's Plan and Procedures; Oil Pollution Act; Federal Water Pollution Control Act; Comprehensive Environmental Response, Compensation and Liability Act of 1980; the Resource Conservation and Recovery Act; Toxic Substances Control Act; and, the Clean Water Act.

The purpose of the SPCC/PPC Plan is to reduce the probability and risk of a potential spill or release of oil or hazardous materials during construction-related activities. The objectives of this plan are to identify and address:

- The type and quantity of material handled, stored, or used on site during construction;
- Measures to be taken for spill preparedness and prevention;
- Emergency response procedures;
- Spill incident reporting/notification procedures; and
- Local emergency response team arrangements.

7.2 Spill Prevention Measures

Structure operations in a manner that reduce the risk of spills or the accidental exposure of fuels or hazardous materials to waterbodies or wetlands. At a minimum,

- 1. All employees handling fuels and other hazardous materials are to be properly trained.
- 2. All equipment shall be in good operating order and inspected on a regular basis.
- 3. Fuel trucks transporting fuel to on-site equipment should travel only on approved access roads.
- 4. All equipment is to be parked overnight and/or fueled at least 100 feet from any wetland or waterbody. These activities can occur closer only if the EI determines that there is no reasonable alternative, and appropriate steps have been taken (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill.
- 5. Do not store hazardous materials, including chemicals, fuels, and lubricating oils within 100 feet of a wetland, waterbody or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas. If the 100-foot setback cannot be met, this activity can be performed within the 100-foot setback, with EI approval, if done in accordance with the SPCC/PPC Plan.
- 6. Do not perform fondu or concrete coating activities within 100 feet of any wetland or waterbody boundary, unless the location is an existing industrial site designated for such use. If the 100-foot setback cannot be met, these activities can be performed within the 100-foot setback, if the EI



determines that there is no reasonable alternative and appropriate steps have been taken (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill.

- 7. Pumps operating within 100 feet of a waterbody or wetland boundary shall utilize appropriate secondary containment systems to prevent spills; and
- 8. Bulk storage of hazardous materials, including chemicals, fuels, and lubricating oils have appropriate secondary containment systems to prevent spills.

7.3 Spill Cleanup & Response

Structure operations in a manner that provides for the prompt and effective cleanup of spills of fuel and other hazardous materials. At a minimum,

- 1. Ensure that each construction crew (including cleanup crews) has on hand sufficient supplies of absorbent and barrier materials to allow the rapid containment and recovery of spilled materials and knows the procedure for reporting spills and unanticipated discoveries of contamination;
- 2. Ensure that each construction crew has on hand sufficient tools and material to stop leaks; and,
- 3. Know the contact names and telephone numbers for all local, state, and federal agencies (including, if necessary, the U. S. Coast Guard and the National Response Center) that must be notified of a spill; and follow the requirements of those agencies in cleaning up the spill, in excavating and disposing of soils or other materials contaminated by a spill, and in collecting and disposing of waste generated during spill cleanup.



8. POST-CONSTRUCTION ACTIVITIES

8.1 Post-Construction Monitoring

Projects conducted under the blanket certificate or a project-specific Section 7 Order, shall meet the monitoring requirements set forth in this section. Company personnel shall perform the following:

- 1. Establish and implement a program to monitor the success of restoration upon completion of construction and restoration activities.
- 2. Conduct follow-up inspections of all disturbed upland areas as necessary, to determine the success of revegetation and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.
- 3. In nonagricultural upland areas, revegetation shall be considered successful if the vegetative cover is sufficient to prevent the erosion of soils on the disturbed ROW and density and cover are similar to that in adjacent undisturbed area. Sufficient coverage in upland areas is defined when vegetation has a uniform 70 percent vegetative coverage.
- 4. In agricultural areas, revegetation shall be considered successful when upon visual survey, growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise.
- 5. In wetlands, monitor and record the success of revegetation annually, until wetland revegetation is successful:
 - a. Wetland revegetation will be considered successful when the affected wetland satisfies the current federal definition for a wetland (i.e. soils, hydrology, and vegetation);
 - Vegetation should be at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction;
 - c. If natural rather than active revegetation was used, the plant species composition must be consistent with early successional wetland plant communities in the affected ecoregion;
 - d. Invasive species and noxious weeds should be absent unless they are abundant in adjacent areas that were not disturbed by construction; and,
 - e. For any wetland where revegetation is not successful at the end of 3 years after construction, the Company shall develop and implement (in consultation with a professional wetland ecologist) a remedial plan to actively revegetate the wetland.
- 6. Inspect all remaining temporary erosion and sediment controls during routine patrols to ensure proper functioning. Any deficiencies found will be reported and corrected as needed. Once the area has revegetated and stabilized, the erosion controls will be removed.
- 7. Revegetation efforts (such as fertilizing or reseeding) will continue until revegetation is successful.



- 8. Restoration shall be considered successful if the ROW surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the land owner or land managing agency), revegetation is successful, and proper drainage has been restored.
- 9. Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in agricultural areas until restoration is successful.
- 10. Make efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, throughout the life of the project. Maintain signs, gates, and vehicle trails as necessary.

8.2 Post-Construction Maintenance

Routine maintenance of the ROW is required to allow continued access for routine pipeline patrols, maintaining access in the event of emergency repairs, and visibility during aerial patrols. Where the newly established pipeline ROW is located on other existing ROWs not affiliated with the Company, the easement holder or owner will continue to maintain their ROWs using procedures specified in their vegetative management programs.

Projects conducted under this E&SCP and subject to the FERC Plan and Procedures, shall meet the maintenance requirements set forth in this section. The following requirements restrict the amount of vegetation maintenance that can occur within new ROW.

8.2.1 Uplands

In upland areas, maintenance of the ROW will involve clearing the entire ROW of woody vegetation.

- 1. Routine vegetation mowing or clearing over the full width of the permanent ROW in uplands shall be conducted no more frequently than <u>once every 3 years</u>. However, to facilitate periodic corrosion and leak surveys, a 10-foot wide corridor centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state.
- 2. Routine vegetation mowing or clearing shall not occur between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency of the U.S. Fish and Wildlife Service.

8.2.2 Waterbodies and Wetlands

- 1. Do not conduct routine vegetation mowing or clearing over the full width of the permanent ROW in wetlands or riparian areas.
 - a. Limit routine vegetation mowing or clearing practices adjacent to waterbodies to allow a riparian strip that measures 25 feet back from the waterbody's mean high water mark. This riparian strip will be allowed to permanently revegetate with native plant species across the entire construction ROW.
 - b. To facilitate periodic corrosion and leak surveys within wetlands and the 25-foot-wide riparian strip adjacent to waterbodies, a corridor up to 10 feet wide centered on the pipeline



may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state.

- c. Trees located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent ROW.
- 2. Do not conduct any routine vegetation mowing or clearing in riparian areas or wetlands that are between HDD entry and exit points.
- 3. Herbicides or pesticides shall not be used in or within 100 feet of a wetland or waterbody, except as specified by the federal or state agency.
- 4. Time of year restrictions apply to routine mowing as well as selective clearing of trees within riparian or wetland areas. These activities are prohibited between April 15 August 1 of any year.

8.3 Reporting

The Company shall maintain records that identify by milepost:

- 1. Method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used:
- 2. Acreage treated;
- 3. Dates of backfilling and seeding;
- 4. The location of any subsurface drainage repairs or improvements made during restoration;
- 5. Names of landowners requesting special seeding treatment and a description of the follow-up actions; and
- 6. Any problem areas and how they were addressed.

The Contractor is responsible for providing the EI with the information and documentation on applications, rates, and types of fertilizer, pH modifying agents, seed and mulch that are used during a project.

For the FERC-authorized projects, other than projects conducted under the blanket certificate, the Company will file quarterly activity reports documenting problems, including those identified by the landowner, and corrective actions taken for <u>at least 2 years</u> following construction.

A wetland revegetation monitoring report identifying the status of the wetland revegetation efforts will be filed at the end of 3 years following construction, and annually thereafter documenting progress within the wetland until revegetation is successful. The requirements to file wetland restoration reports with FERC does not apply to projects authorized under the blanket certificate (i.e. automatic and prior notice) or advanced notice provisions in the FERC regulations.



APPENDIX A

E&SCP FIGURES



WATERBODY REFERENCE CITING FERC REQUIREMENTS



APPENDIX B: Waterbody Reference Citing FERC Requirements

Waterbodies may be specifically identified or recognized by the States or authorized Indian Tribe for water use, value or quality, such as fisheries. FERC's *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) contain specific requirements with regards to state-designated fisheries which are summarized in the table below. This table is a general reference of waterbody construction techniques and restrictions required by the FERC Procedures, 2013 version. Project-specific permits obtained for a given project may be more restrictive and must be followed (Refer to project-specific Clearance Package/Permit Book).

FERC Waterbody Type ^a	Crossing Width ^b	Construction Crossing Method ^c	Seasonal Timing Restriction ^d	Waterbody Construction Duration ^e	
Not Designated Fisheries					
MINOR	≤ 10 feet	Dry or Wet	No	24 hours	
INTERMEDIATE	> 10 feet but ≤ 100 feet	Dry or Wet	No	48 hours	
MAJOR	> 100 feet	Refer to site-specific plan	No	N/A	
Designated Fisheries					
MINOR	≤ 10 feet	Dry only	Yes	N/A	
INTERMEDIATE	> 10 feet but ≤ 100 feet	Dry or Wet	Yes	N/A	
MAJOR	> 100 feet	Refer to site-specific plan	Yes	N/A	

- a) Waterbody types or classifications as defined in the FERC Procedures. Refer to Section 5.3 of E&SCP.
- b) Measured from the water's edge at the time of crossing.
- "Dry" = Dry crossing includes dam-and-pump or flume crossing methods where the stream flow is isolated from the construction area. A dry crossing is generally required for crossings up to 30 feet wide for state designated fisheries or federally designated critical habitat.
 - "Wet" = Wet crossing generally refers to the open-cut method that allows continuous flow of the stream across the construction area.
 - "Refer to site-specific plan" = A plan is required for each major crossing as well as each waterbody or wetland that would be crossed using the HDD method requires a project-specific HDD Plan (refer to Section 4.4).
- ^{d)} For designated fisheries, instream work must occur during the following seasonal time windows, unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis:
 - coldwater fisheries construction must occur from June 1 through September 30.
 - coolwater and warmwater fisheries construction must occur from June 1 through November 30.

NOTE: project-specific waterbody crossings may have other federal and state agency timing restrictions. Seasonal timing windows will be indicated within the project-specific waterbody crossing table and/or within the Environmental Clearance/Permit Book for the project. The FERC seasonal timing window restrictions do not apply to the installation or removal of equipment bridges.

• The construction duration of the crossing officially begins with in-stream activities, including in-stream trenching, pipe installation, backfill, and restoration of the streambed contours. Duration does not apply to in-stream work for dry crossings, and does not apply to blasting activities.





SEED MIX RECOMMENDATIONS



SEED MIX RECOMMENDATIONS: "NORTHERN ZONE"

The Northern Zone is generally defined as areas north of the northern borders of Arkansas and Tennessee.

UPLAND AREAS

Lime 4.0 tons/acre

Fertilizer 1000 lbs./acre (10-20-20)

Mulch (Wheat Straw) 3.0 tons/acre

Upland Seed Mix	75 lbs./acre Pure Live Seed (PLS)
Kentucky Bluegrass	20%
Red Fescue ¹	20%
Kentucky 31 Tall Fescue ¹	15%
Redtop	10%
Perennial ryegrass	20%
White clover	5%
Birdsfoot Trefoil (Minimum 20% hard seed)	10%
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¹Fescue must be endophyte-free.

Pasture Mix	20 lbs./acre PLS

(For use only in disturbed pasture areas with landowner's permission.)

Kentucky Bluegrass	31%
Medium Red clover	26%
Norcen Trefoil	17%
Poly Perennial Rye	26%

Recommended Seeding Dates

(For the establishment of temporary or permanent vegetation.)

Spring: March 15 - May 30 Fall: August 1 - October 15

WINTER STABILIZATION

If restoration does not occur prior to October 15, seed the construction ROW with 1.5 bushels per acre of winter rye or similar variety of rye as requested by the landowner. Mulch the construction ROW at 3.0 tons per acre with wheat straw, including areas adjacent to streams and wetland crossings. Seed segregated topsoil piles with winter rye and mulch at a rate of 3.0 tons per acre.

WETLAND AREAS

DO NOT USE LIME OR FERTILIZER !!!

Do not use fertilizer, lime, or mulch within wetlands unless required in writing by the appropriate federal or state agency (as identified in the Clearance Package/Permit Book). Mulch consists of weed-free straw, wood fiber hydromulch or some functional equivalent as approved by the EI and Chief Inspector. When used, apply mulch (wheat straw) at a rate of 3.0 tons/acre.

Wetland Seed Mix

Annual Ryegrass

40 lbs./acre PLS

APPENDIX A

E&SCP FIGURES

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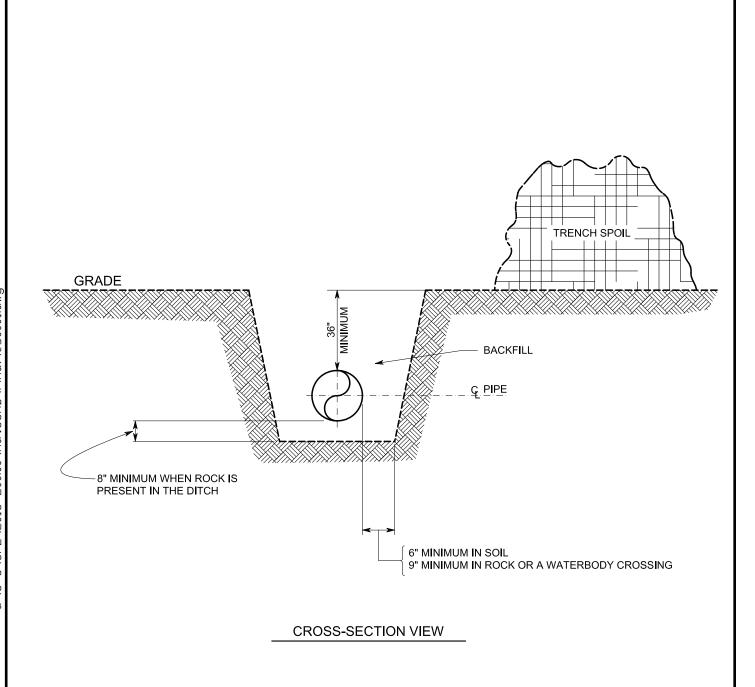
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INDEX OF FIGURES

APPENDIX A



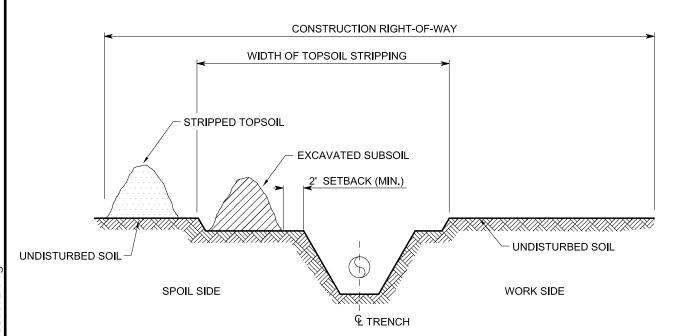
NOTES:

- 1. ALL PRECONSTRUCTION CONTOURS WILL BE RE-ESTABLISHED UPON COMPLETION OF PIPE INSTALLATION. EXCEPT IN WETLANDS, A CROWN MAY BE LEFT TO ACCOUNT FOR DITCH SETTLING, AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
- 2. IN COLD WATER FISHERY STREAMS, THE TOP 12" OF THE TRENCH WILL BE BACKFILLED WITH CLEAN GRAVEL OR NATIVE COBBLES UNLESS OTHERWISE SPECIFIED BY THE PERMITTING AGENCY.

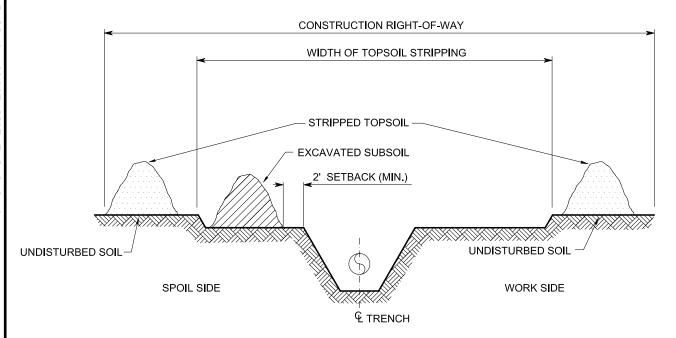
TYPICAL TRENCH DETAIL

FIGURE CW-1

DWG. **ES-0001**



DITCH PLUS SPOILSIDE TOPSOIL SEGREGATION



FULL RIGHT-OF-WAY TOPSOIL STRIPPING

NOTES:

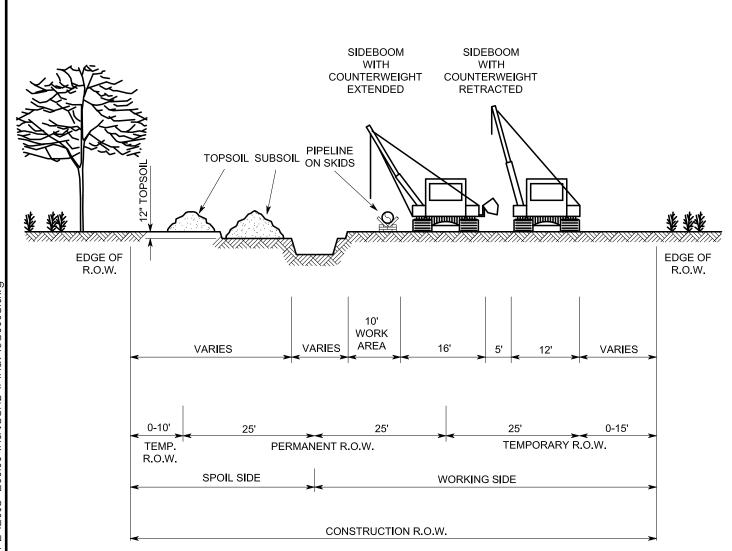
- 1. TOPSOIL MAY BE STORED IN LOCATIONS AS SHOWN ABOVE OR AT OTHER COMPANY APPROVED LOCATIONS WITHIN THE CONSTRUCTION R.O.W.
- 2. LEAVE GAPS IN SPOIL PILES FOR WATER RUN-OFF.
- 3. MAINTAIN SEPARATION OF SALVAGED TOPSOIL AND SUBSOIL THROUGHOUT ALL CONSTRUCTION ACTIVITIES.
- 4. STABILIZE TOPSOIL PILES AND MINIMIZE LOSS DUE TO WATER OR WIND EROSION WITH USE OF SEDIMENT BARRIERS, MULCH, TEMPORARY SEEDING, TACKIFIERS OR FUNCTIONAL EQUIVALENTS, WHERE NECESSARY.

RIGHT-OF-WAY TOPSOIL SEGREGATION TECHNIQUES

FIGURE CW-2

DWG. **ES-0002**

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PIPE DIAMETER	SPOIL SIDE (FT.)	WORKING SIDE (FT.)	CONSTRUCTION R.O.W. (FT.)
12" OR LESS	25	50	75
14" - 30"	35	50	85
36" - 42"	35	65	100
WETLANDS	25	50	75

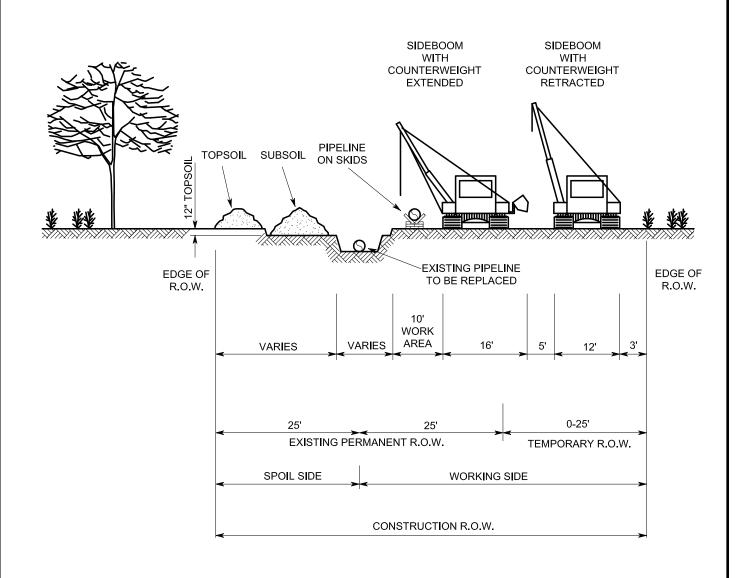
NOTES:

- ALTHOUGH THE DIMENSIONS SHOWN ARE TYPICAL, SOME VARIATIONS MAY EXIST DUE TO SITE SPECIFIC CONDITIONS.
 UNLESS OTHERWISE INDICATED ON THE ALIGNMENT SHEETS, THE MAXIMUM WIDTH OF THE CONSTRUCTION RIGHT-OF-WAY
 SHALL BE AS SHOWN IN THE TABLE FOR THE APPROPRIATE PIPE DIAMETER.
- 2. TOPSOIL SEGREGATION METHODS WILL BE USED IN ALL RESIDENTIAL AREAS AND WHEN THE CONSTRUCTION ROW IS WIDER THAN 30 FEET IN CULTIVATED OR ROTATED AGRICULTURAL LANDS, MANAGED PASTURES, HAYFIELDS, AND OTHER AREAS AT THE LANDOWNER'S OR LAND MANAGEMENT AGENCY'S REQUEST. FOR WETLANDS, SEGREGATE THE TOP 12 INCHES OF TOPSOIL WITHIN THE DITCH LINE, EXCEPT IN AREAS WHERE STANDING WATER IS PRESENT OR SOILS ARE SATURATED.

TYPICAL CONSTRUCTION WIDTHS ACQUIRING NEW PERMANENT RIGHT-OF-WAY

FIGURE CW-3

DWG. **ES-0003**



PIPE DIAMETER	SPOIL SIDE (FT.)	WORKING SIDE (FT.)	CONSTRUCTION R.O.W. (FT.)
12" OR LESS	25	25	50
14" - 30"	25	50	75
36" - 42"	25	50	75
WETLANDS	25	50	75

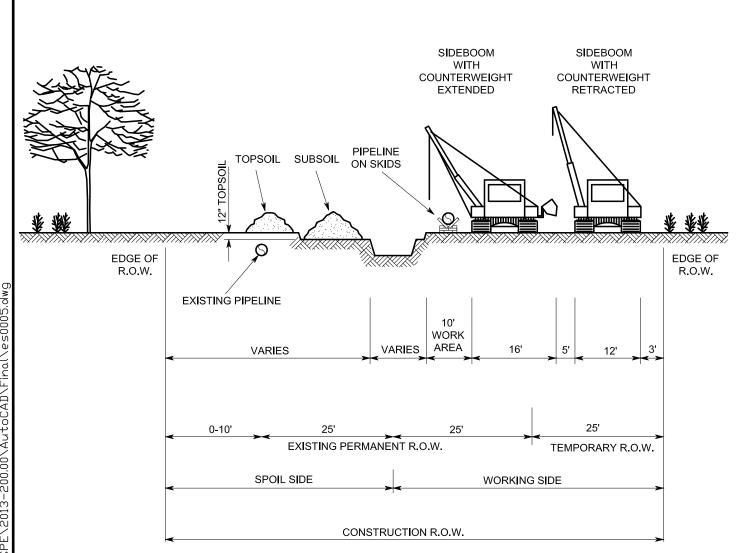
NOTES:

- ALTHOUGH THE DIMENSIONS SHOWN ARE TYPICAL, SOME VARIATIONS MAY EXIST DUE TO SITE SPECIFIC CONDITIONS.
 UNLESS OTHERWISE INDICATED ON THE ALIGNMENT SHEETS, THE MAXIMUM WIDTH OF THE CONSTRUCTION RIGHT-OF-WAY
 SHALL BE AS SHOWN IN THE TABLE FOR THE APPROPRIATE PIPE DIAMETER.
- 2. TOPSOIL SEGREGATION METHODS WILL BE USED IN ALL RESIDENTIAL AREAS AND WHEN THE CONSTRUCTION ROW IS WIDER THAN 30 FEET IN CULTIVATED OR ROTATED AGRICULTURAL LANDS, MANAGED PASTURES, HAYFIELDS, AND OTHER AREAS AT THE LANDOWNER'S OR LAND MANAGEMENT AGENCY'S REQUEST. FOR WETLANDS, SEGREGATE THE TOP 12 INCHES OF TOPSOIL WITHIN THE DITCH LINE, EXCEPT IN AREAS WHERE STANDING WATER IS PRESENT OR SOILS ARE SATURATED.
- 3. IF THE WORKING SIDE MUST BE GREATER THAN THE VALUES SHOWN IN THE TABLE, COMPANY MUST REQUEST APPROVAL FROM THE F.E.R.C.

TYPICAL CONSTRUCTION WIDTHS NOT ACQUIRING NEW PERMANENT RIGHT-OF-WAY (SINGLE LINE SYSTEM)

FIGURE CW-4

DWG. ES-0004



PIPE DIAMETER	SPOIL SIDE (FT.)	WORKING SIDE (FT.)	CONSTRUCTION R.O.W. (FT.)
12" OR LESS	25	50	75
14" - 30"	35	50	85
36" - 42"	35	50	85
WETLANDS	25	50	75

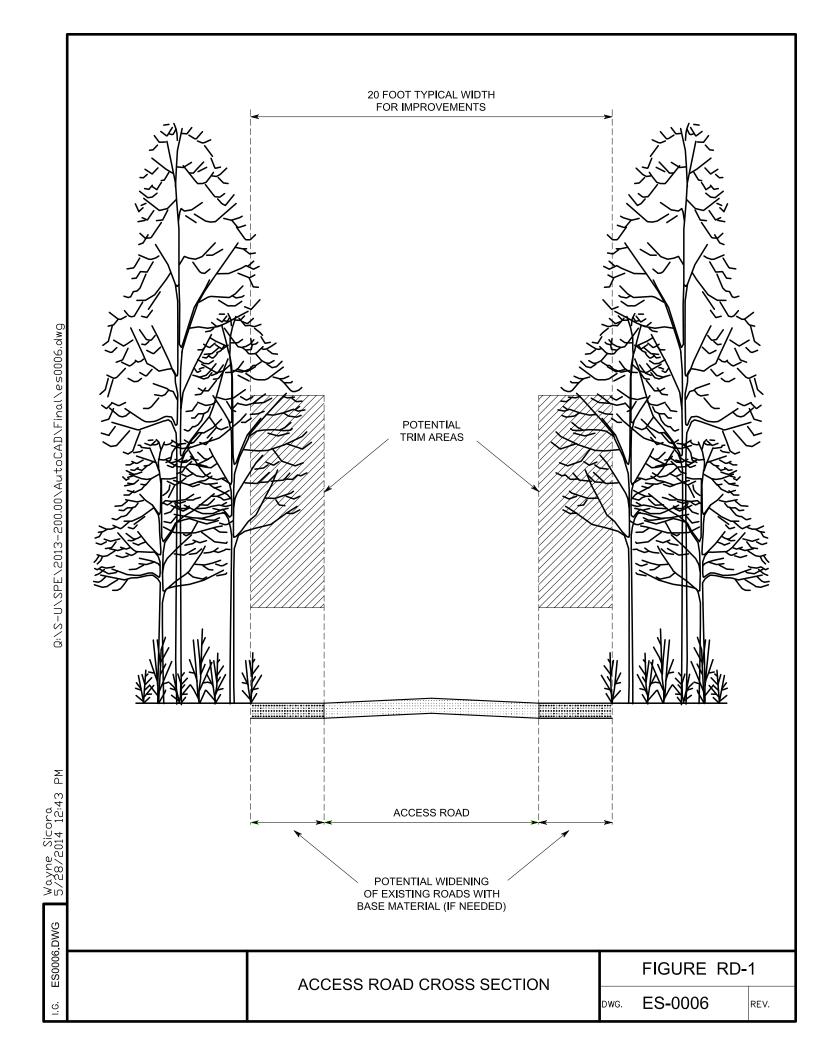
NOTES:

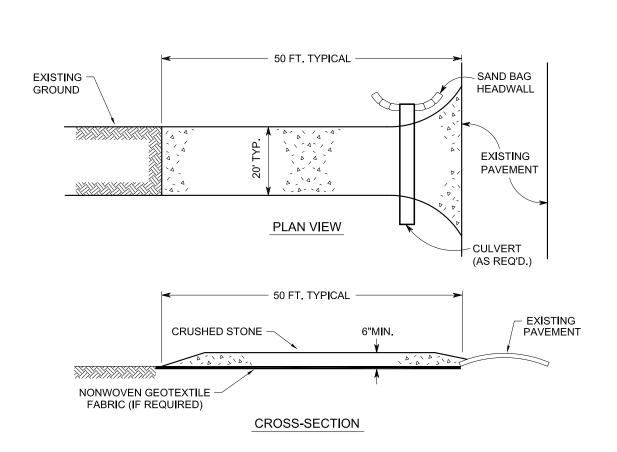
- 1. ALTHOUGH THE DIMENSIONS SHOWN ARE TYPICAL, SOME VARIATIONS MAY EXIST DUE TO SITE SPECIFIC CONDITIONS. UNLESS OTHERWISE INDICATED ON THE ALIGNMENT SHEETS, THE MAXIMUM WIDTH OF THE CONSTRUCTION RIGHT-OF-WAY SHALL BE AS SHOWN IN THE TABLE FOR THE APPROPRIATE PIPE DIAMETER.
- 2. TOPSOIL SEGREGATION METHODS WILL BE USED IN ALL RESIDENTIAL AREAS AND WHEN THE CONSTRUCTION ROW IS WIDER THAN 30 FEET IN CULTIVATED OR ROTATED AGRICULTURAL LANDS, MANAGED PASTURES, HAYFIELDS, AND OTHER AREAS AT THE LANDOWNER'S OR LAND MANAGEMENT AGENCY'S REQUEST. FOR WETLANDS, SEGREGATE THE TOP 12 INCHES OF TOPSOIL WITHIN THE DITCH LINE, EXCEPT IN AREAS WHERE STANDING WATER IS PRESENT OR SOILS ARE SATURATED.
- 3. IF THE WORKING SIDE MUST BE GREATER THAN 50 FEET (i.e. TEMPORARY WORKSPACE IS GREATER THAN 25 FEET), COMPANY MUST REQUEST APPROVAL FROM THE F.E.R.C.

TYPICAL CONSTRUCTION WIDTHS NOT ACQUIRING NEW PERMANENT RIGHT-OF-WAY (MULTIPLE LINE SYSTEM)

FIGURE CW-5

ES-0005 DWG.



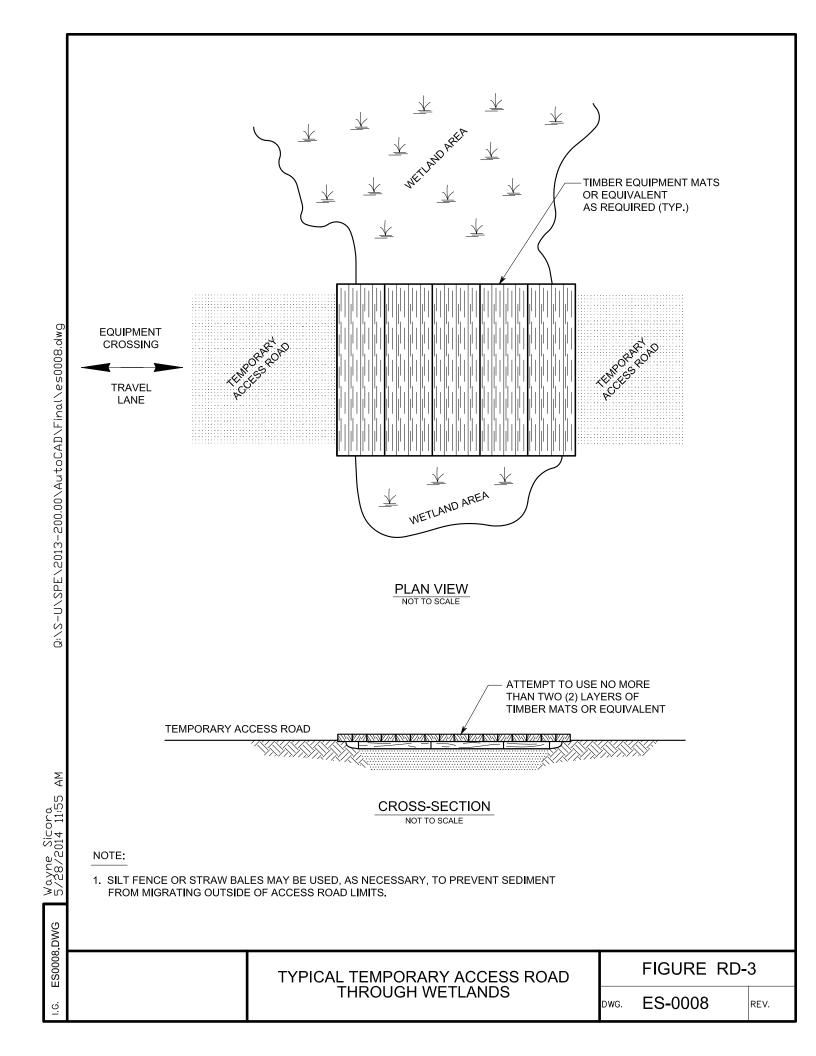


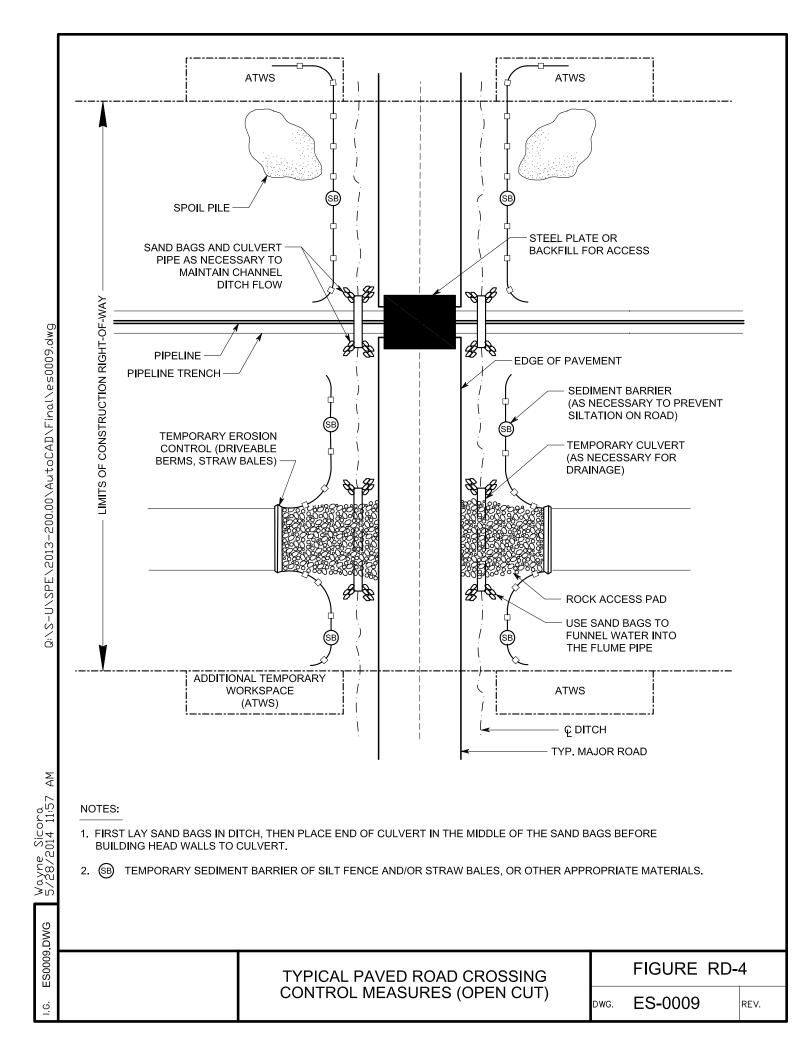
CONSTRUCTION SPECIFICATIONS:

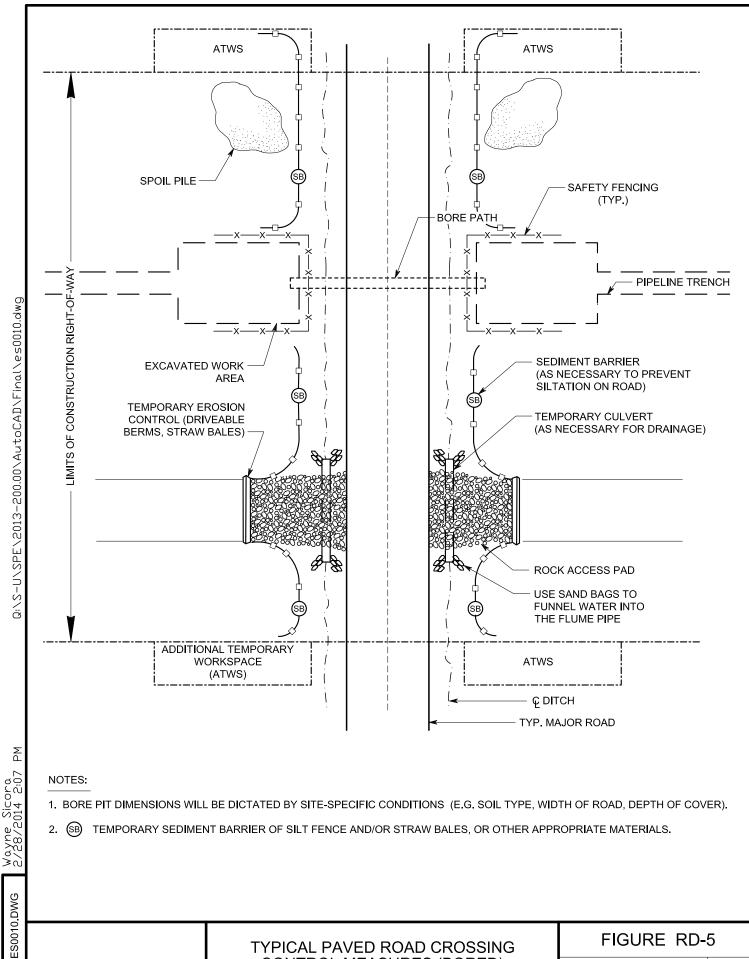
- 1. STONE SIZE = 4" 6" AVG. DIAMETER
- 2. ALL STONE MUST BE PLACED ON NON-WOVEN GEOTEXILE FABRIC IF USED IN RESIDENTIAL OR AGRICULTURAL AREAS.
- 3. LENGTH = FIFTY (50) FOOT TYPICAL (IF SITE CONDITIONS ALLOW)
- 4. WIDTH = TWENTY (20) FOOT TYPICAL.
- 5. THICKNESS = SIX (6) INCHES MINIMUM.
- 6. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A DRIVEABLE BERM OR OTHER TEMPORARY EROSION CONTROL DEVICE CAN BE USED.
- 7. THE ENTRANCE SHALL BE PERIODICALLY INSPECTED AND MAINTAINED IN A CONDITION THAT MINIMIZES TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. MAINTENANCE MAY INCLUDE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE REPAIR / CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ANY SEDIMENT THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO ROADWAYS MUST BE REMOVED AS SOON AS PRACTICAL.

FIGURE RD-2 **ROCK ACCESS PAD**

> ES-0007 DWG.





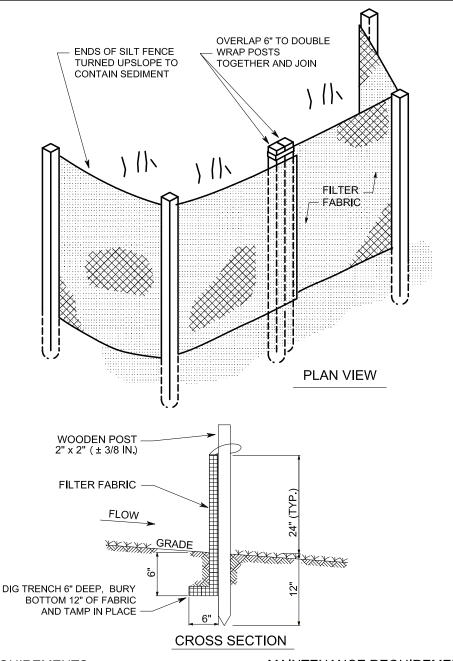


TYPICAL PAVED ROAD CROSSING CONTROL MEASURES (BORED)

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FIGURE RD-5

ES-0010 DWG.



INSTALLATION REQUIREMENTS:

- WHEN USING SILT FENCE, PLACE IT:
 - BETWEEN DISTURBED AREAS AND DOWN-SLOPE ENVIRONMENTAL RESOURCE AREAS
 - AT THE BASE OF ALL SLOPES NEXT TO WETLANDS, WATERBODIES, AND ROAD CROSSINGS
 - AT THE INLET AND OUTLET OF OPEN DRAINAGE STRUCTURES
 - APPROXIMATELY 8 FEET BEYOND THE TOE OF THE SLOPE TO GIVE THE SEDIMENT ROOM TO COLLECT (IF POSSIBLE)
- USE SANDBAGS OR BACKFILLING TO KEY IN THE BOTTOM OF THE FABRIC WHERE IT IS NOT FEASIBLE TO TRENCH IT IN (LEDGES, ROCKY SOIL, LARGE ROOTS, ETC.)

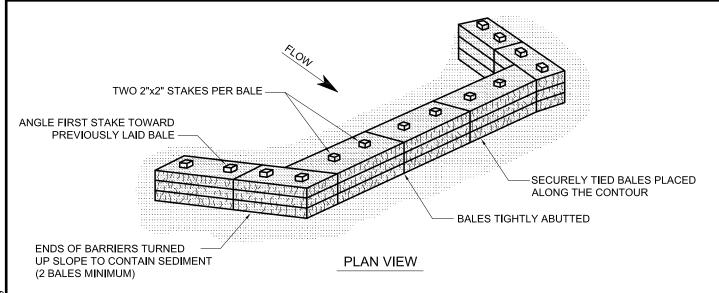
MAINTENANCE REQUIREMENTS:

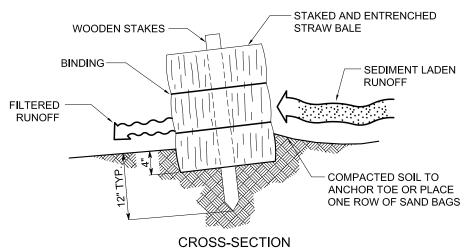
- INSPECT SILT FENCE:
 - ◆ DAILY IN AREAS OF ACTIVE CONSTRUCTION
 - ♦ WEEKLY IN AREAS WITH NO CONSTRUCTION
 - WITHIN 24 HOURS FOLLOWING EACH RAINFALL EVENT OF ≥ 0.5 INCH.
- REPAIR OR REPLACE SILT FENCE AS NEEDED
- REMOVE ACCUMULATED SEDIMENTS TO AN UPLAND AREA WHEN SEDIMENT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE SILT FENCE.

SILT FENCE DETAIL

FIGURE EC-1

Dwg. ES-0011





INSTALLATION REQUIREMENTS:

- WHEN USING STRAW BALES, PLACE THEM:
 - WITH THEIR ENDS TIGHTLY ABUTTING AND EMBEDDED IN THE SOIL A TYPICAL OF 4".
 - BETWEEN DISTURBED AREAS AND DOWN-SLOPE ENVIRONMENTAL RESOURCE AREAS.
 - AT THE BASE OF ALL SLOPES NEXT TO WETLANDS, WATERBODIES, AND ROAD CROSSINGS
 - ◆ AT THE INLET AND OUTLET OF OPEN DRAINAGE STRUCTURES.
 - ◆ APPROXIMATELY 6 FEET BEYOND THE TOE OF THE SLOPE TO GIVE THE SEDIMENT ROOM TO COLLECT.
- KEY IN THE BOTTOM OF THE BALE. IN AREAS WHERE IT IS NOT FEASIBLE TO TRENCH IT IN (LEDGES, ROCKY SOIL, LARGE TREE ROOTS, ETC.), USE NATIVE SOIL AS BACKFILL UP-SLOPE OF THE BALE OR PLACE ONE ROW OF SAND BAGS.
- DO NOT STAKE OR TRENCH IN PLACE STRAW BALES USED ON EQUIPMENT BRIDGES OR ON MATS ACROSS THE TRAVEL LANE.
- IF USED IN CONJUNCTION WITH SILT FENCE, BALES ARE PLACED DOWNSLOPE / UPSLOPE OF THE SILT FENCE AND DO NOT NEED TO BE TRENCHED IN.

MAINTENANCE REQUIREMENTS:

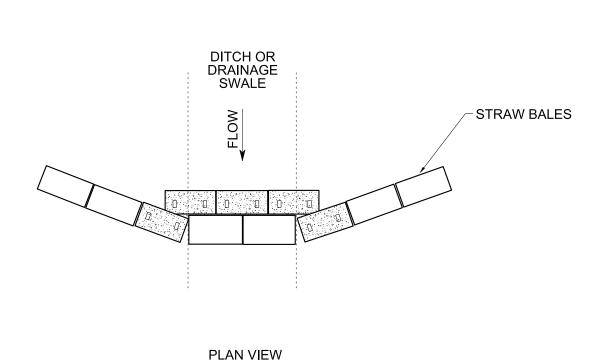
- INSPECT BALES:
 - ◆ DAILY IN AREAS OF ACTIVE CONSTRUCTION.
 - ◆ WEEKLY IN AREAS WITH NO CONSTRUCTION.
 - WITHIN 24 HOURS FOLLOWING EACH RAINFALL EVENT OF ≥ 0.5 INCH.
- REPAIR OR REPLACE BALES AS NEEDED.
- REMOVE ACCUMULATED SEDIMENTS TO AN UPLAND AREA AS NEEDED.

FIGURE EC-2

STRAW BALE DETAIL

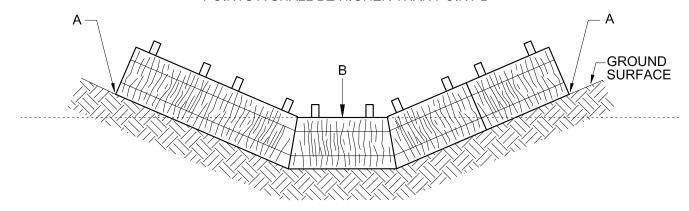
DWG. ES-0012

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POINTS A SHALL BE HIGHER THAN POINT B

NOT TO SCALE



$\frac{\text{CROSS-SECTION}}{\text{NOT TO SCALE}}$

NOTE:

1. THE NUMBER OF BALES IS DETERMINED BASED ON SITE SPECIFIC FACTORS.

STRAW BALE CHECK DAM
IN A DRAINAGEWAY

FIGURE EC-3

DWG. **ES-0013**

SMOOTHLY BLEND CONTACT AREA 4" - 6" ROCK 8 FEET (TYP.) **RIPRAP** DEPTH OF 18" - 24" FILTER FABRIC OR AGGREGATE FILTER (AS REQUIRED)

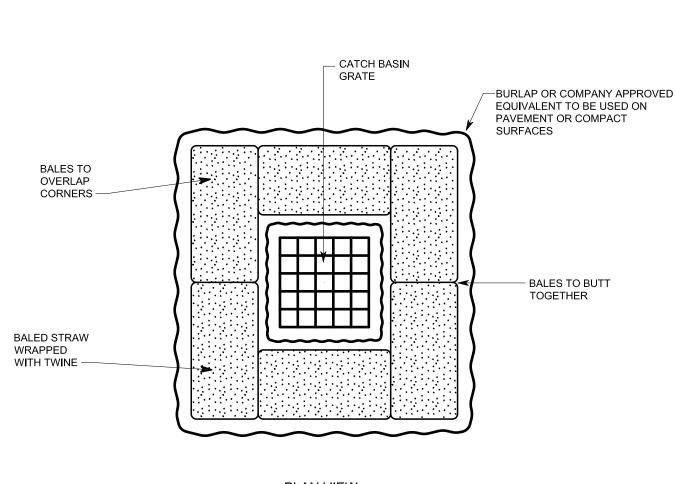
INSTALLATION REQUIREMENTS:

- 1. RIPRAP CHANNELS CAN BE CONSTRUCTED WITH GRASS-LINED SLOPES WHERE SITE CONDITIONS WARRANT.
- 2. STABILIZE CHANNEL INLET POINTS AND INSTALL OUTLET PROTECTION (AS NEEDED) DURING CHANNEL INSTALLATION.
- 3. INSTALL ENERGY DISSIPATING DEVICE (AS NEEDED) TO PREVENT SCOUR TO THE RECEIVING OUTLET.
- 4. REMOVE ALL TREES, BRUSH, AND OTHER OBJECTIONABLE MATERIAL FROM THE CHANNEL.
- 5. INSTALL FILTER FABRIC OR GRAVEL LAYER TO PREVENT PIPING (AS REQUIRED)

MAINTENANCE REQUIREMENTS:

- 1. INSPECT CHANNEL DURING AND FOLLOWING CONSTRUCTION AND MAKE REPAIRS AS NEEDED.
- 2, KEEP THE CHANNEL FREE OF DEBRIS AND OBSTRUCTIONS.

FIGURE EC-4 **ROCK-LINED DRAINAGE SWALE**



PLAN VIEW

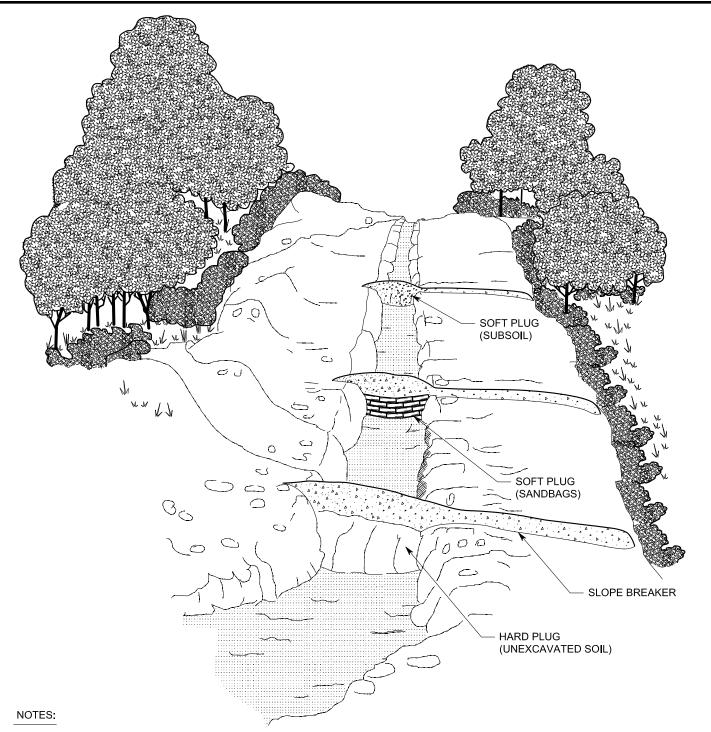
NOTES:

- 1. SURROUND STREET DRAINAGE STRUCTURE INLET WITH STRAW BALES PRIOR TO CONSTRUCTION AND MAINTAIN UNTIL CONSTRUCTION IS COMPLETED.
- 2. FOR BALES PLACED ON PAVEMENT (OR COMPACT SURFACES), PLACE BURLAP OR COMPANY APPROVED EQUIVALENT BETWEEN PAVEMENT AND BALE.
- 3. REMOVE ACCUMULATED SEDIMENT.
- 4. AN ALTERNATIVE STORM DRAIN INLET PROTECTION MAY USE ONLY FABRIC LINING WITHOUT STRAW BALES BASED ON THE DISCRETION OF THE THE ENVIRONMENTAL INSPECTOR.

FIGURE EC-5

STORM DRAIN INLET PROTECTION

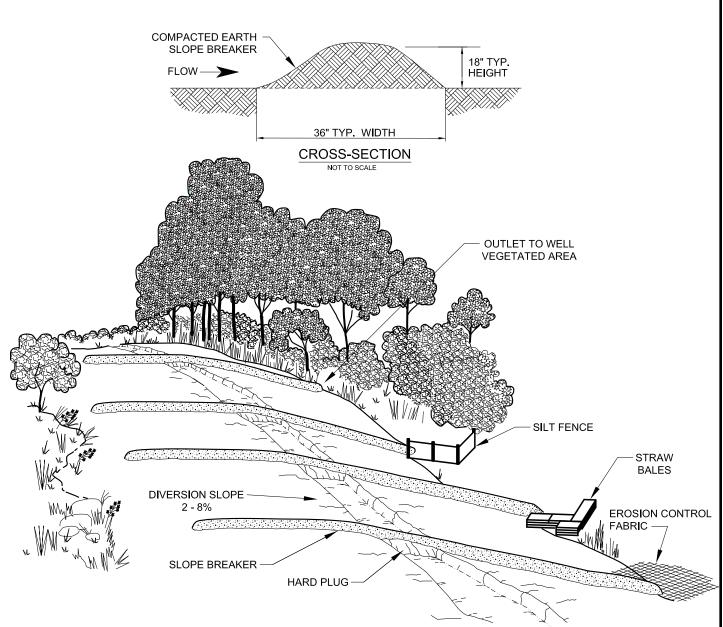
DWG. ES-0015



- 1. TEMPORARY TRENCH PLUG MATERIALS MAY CONSIST OF UNEXCAVATED PORTIONS OF THE TRENCH (HARD PLUG), COMPACTED SUBSOIL OR SANDBAGS PLACED ACROSS THE DITCH (SOFT PLUG), OR SOME FUNCTIONAL EQUIVALENT. THESE OPTIONS ARE DEPICTED ABOVE. DO NO USE TOPSOIL FOR TRENCH PLUGS.
- 2. POSITION TEMPORARY TRENCH PLUGS, AS NECESSARY, TO REDUCE TRENCHLINE EROSION AND MINIMIZE THE VOLUME AND VELOCITY OF TRENCH WATER FLOW AT THE BASE OF SLOPES.
- 3. TEMPORARY TRENCH PLUGS MAY BE USED IN CONJUNCTION WITH SLOPE BREAKERS TO DIVERT TRENCH WATER OVERFLOW AND PREVENT OVERFLOW INTO SENSITIVE RESOURCE AREAS.
- 4. DIVERT TRENCH OVERFLOW TO A WELL-VEGETATED OFF-R.O.W. LOCATION OR INSTALL APPROPRIATE ENERGY DISSIPATING DEVICE.
- 5. USE TEMPORARY TRENCH PLUGS AT WATERBODY CROSSINGS, AS NECESSARY.

FIGURE EC-6 TEMPORARY TRENCH PLUG OPTIONS

> ES-0016 DWG.



TEMPORARY SLOPE BREAKERS

INSTALLATION REQUIREMENTS:

- INSTALL SLOPE BREAKERS IN ALL DISTURBED AREAS AS NECESSARY TO AVOID EXCESSIVE EROSION AT THE LOCATIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR AS APPROVED BY THE ENVIRONMENTAL INSPECTOR (EI).
- MUST BE INSTALLED ON SLOPES GREATER THAN 5% WHERE THE BASE OF THE SLOPE IS LESS THAN 50 FEET FROM A WATERBODY, WETLAND OR ROAD CROSSING AT THE FOLLOWING MINIMUM SPACING:

SLOPE (%)	SPACING (FT.)
5 - 15	300
> 15 - 30	200
> 30	100

- CONSTRUCT USING SAND BAGS, STAKED STRAW BALES, SILT FENCE, OR SOIL.
- INSTALL WITH A 2-8% OUTFALL ANGLE.

- POSITION OUTFALL TO PREVENT SEDIMENT DISCHARGE INTO WETLANDS, WATERBODIES, OR OTHER SENSITIVE RESOURCES.
- FILTER RUN-OFF WATER BY CONSTRUCTING THE OUTLET IN A WELL VEGETATED STABLE AREA, OR BY USING AN ENERGY DISSIPATING DEVICE (SILT FENCE, STRAW BALES, EROSION CONTROL FABRIC), IF NEEDED, THE TYPE OF ENERGY DISSIPATION DEVICE WILL DEPEND ON SITE CONDITIONS (OPTIONS ARE DEPICTED ABOVE).

MAINTENANCE REQUIREMENTS:

- INSPECT DURING CONSTRUCTION AND MAKE REPAIRS AS NEEDED.
- KEEP THE CHANNEL FREE OF DEBRIS AND OBSTRUCTIONS.

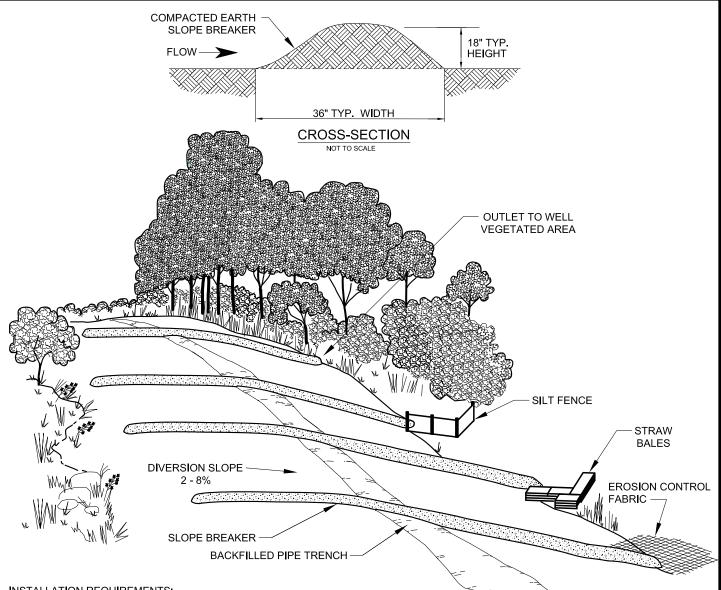
FIGURE EC-7

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INSTALLATION REQUIREMENTS:

- INSTALL AND MAINTAIN IN ALL DISTURBED AREAS TO AVOID EXCESSIVE EROSION, EXCEPT CULTIVATED AREAS AND LAWNS (UNLESS REQUESTED BY THE LANDOWNER), USING SPACING RECOMMENDATIONS OBTAINED FROM THE LOCAL SOIL CONSERVATION AUTHORITY OR LAND MANAGEMENT AGENCY, AT THE LOCATIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR AS APPROVED BY THE ENVIRONMENTAL INSPECTOR (EI).
- INSTALL ON SLOPES GREATER THAN 5% WHERE THE BASE OF THE SLOPE IS LESS THAN 50 FEET FROM A WATERBODY, WETLAND OR ROAD CROSSING AT THE FOLLOWING MINIMUM SPACING IN THE ABSENCE OF WRITTEN RECOMMENDATIONS:

SLOPE (%)	SPACING (FT.)
5 - 15	300
> 15 - 30	200
> 30	100

- CONSTRUCT USING SOIL, STONE, OR SOME FUNCTIONAL EQUIVALENT.
- INSTALL WITH A 2-8% OUTFALL ANGLE.
- POSITION OUTFALL TO PREVENT SEDIMENT DISCHARGE INTO WETLANDS, WATERBODIES, OR OTHER SENSITIVE RESOURCES.

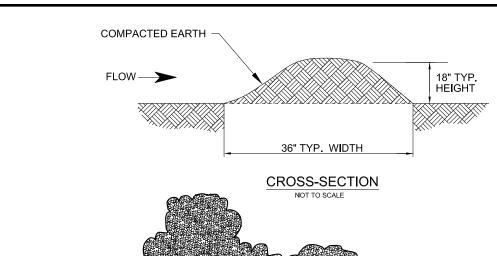
- FILTER RUN-OFF WATER BY CONSTRUCTING THE OUTLET IN A WELL VEGETATED STABLE AREA, OR BY USING AN ENERGY DISSIPATING DEVICE (SILT FENCE, STRAW BALES, EROSION CONTROL FABRIC). IF NEEDED, THE TYPE OF ENERGY DISSIPATION DEVICE WILL DEPEND ON SITE CONDITIONS (OPTIONS ARE DEPICTED ABOVE).
- IF NECESSARY, OUTFALL MAY EXTEND SLIGHTLY, UP TO 4 FEET, BEYOND THE EDGE OF THE CONSTRUCTION RIGHT-OF-WAY, SUBJECT TO ALL APPLICABLE SURVEY REQUIREMENTS.

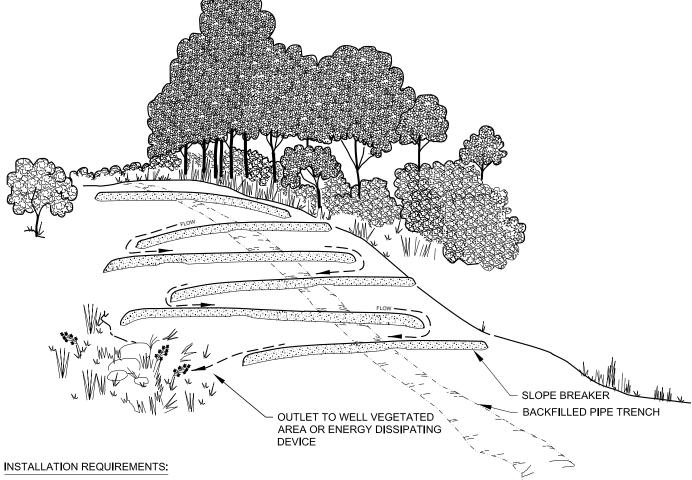
MAINTENANCE REQUIREMENTS:

- INSPECT DURING AND FOLLOWING CONSTRUCTION AND MAKE REPAIRS AS NEEDED.
- KEEP THE CHANNEL FREE OF DEBRIS AND OBSTRUCTIONS.
- SEED AND MULCH PERMANENT SLOPE BREAKERS FOLLOWING CONSTRUCTION.

FIGURE EC-8

ES-0018 DWG.





- INSTALL IN ALL AREAS EXCEPT RESIDENTIAL OR AGRICULTURAL (UNLESS AUTHORIZED BY LANDOWNER OR LAND MANAGING AGENCY).
- CONSTRUCT USING EARTH FILLED SACKS OR STAKED STRAW BALES FOR TEMPORARY OR COMPACTED EARTH AND ROCK FOR PERMANENT.
- INSTALL WITH A 2-8% OUTFALL ANGLE.
- FOR TEMPORARY CHEVRON SLOPE BREAKERS, POSITION OUTFALL TO PREVENT SEDIMENT DISCHARGE INTO WETLANDS, WATERBODIES, OR OTHER SENSITIVE RESOURCES.
- FILTER RUN-OFF WATER BY CONSTRUCTING AN OUTLET USING AN ENERGY DISSIPATING DEVICE (SILT FENCE, STRAW BALES, EROSION CONTROL FABRIC), AS APPROVED BY THE ENVIRONMENTAL INSPECTOR.

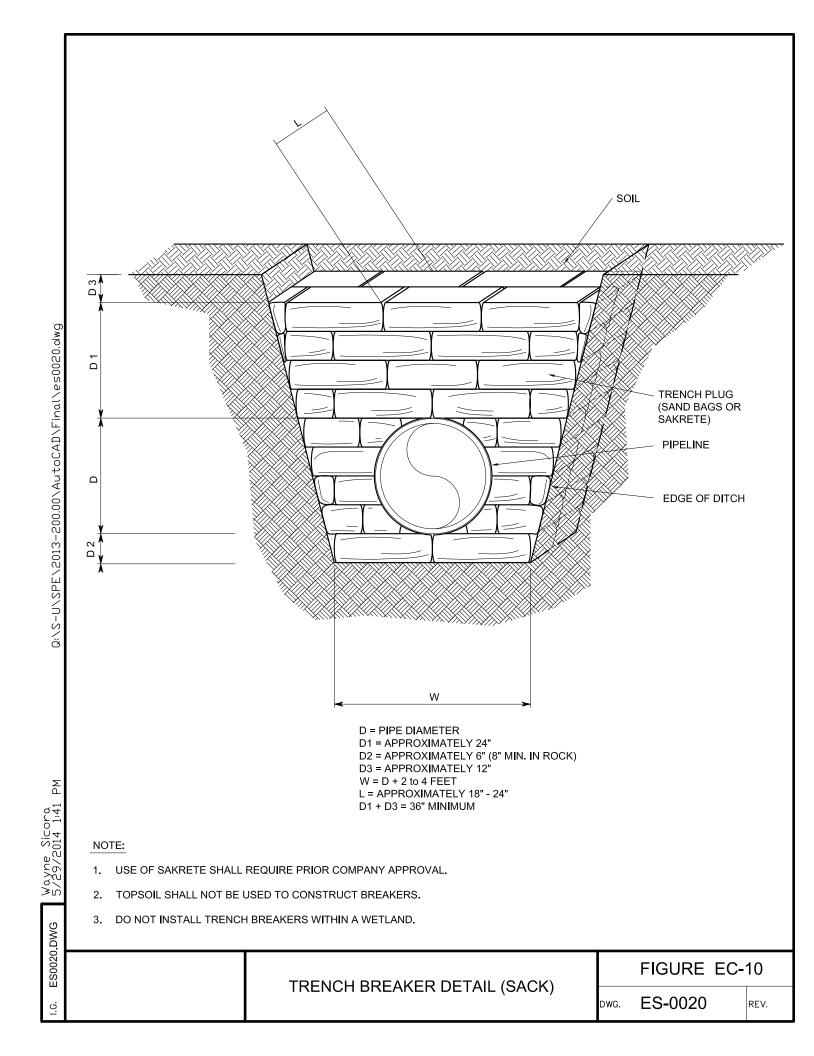
MAINTENANCE REQUIREMENTS:

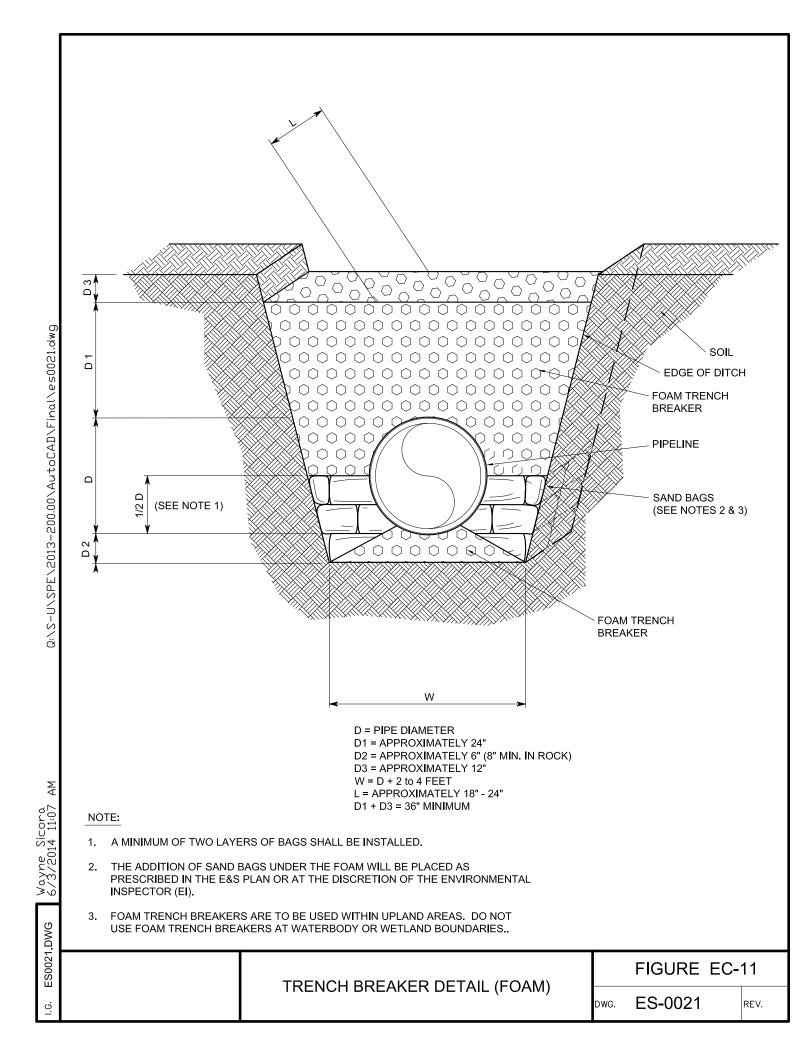
- INSPECT DURING AND FOLLOWING CONSTRUCTION AND MAKE REPAIRS AS NEEDED.
- KEEP THE CHANNEL FREE OF DEBRIS AND OBSTRUCTIONS.
- SEED AND MULCH PERMANENT SLOPE BREAKERS FOLLOWING CONSTRUCTION.

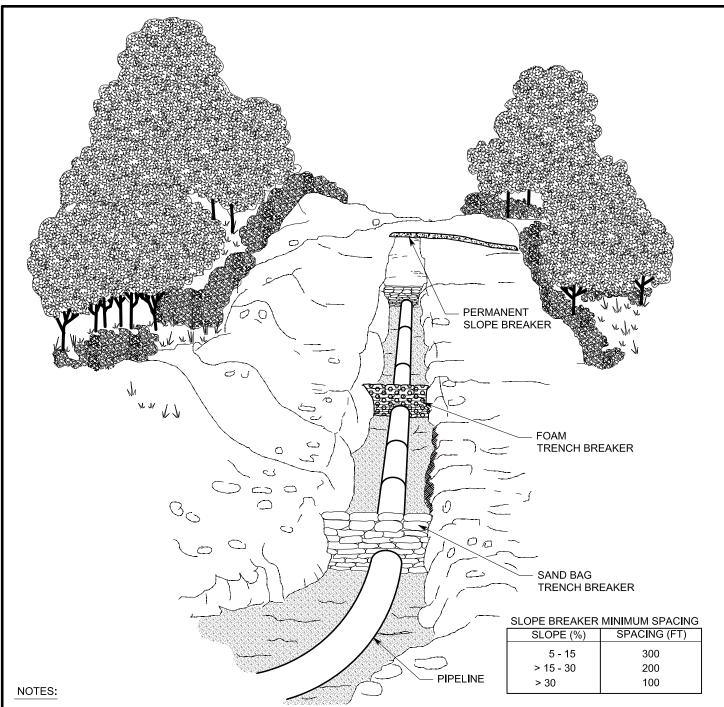
FIGURE EC-9

CHEVRON SLOPE BREAKER

DWG. ES-0019



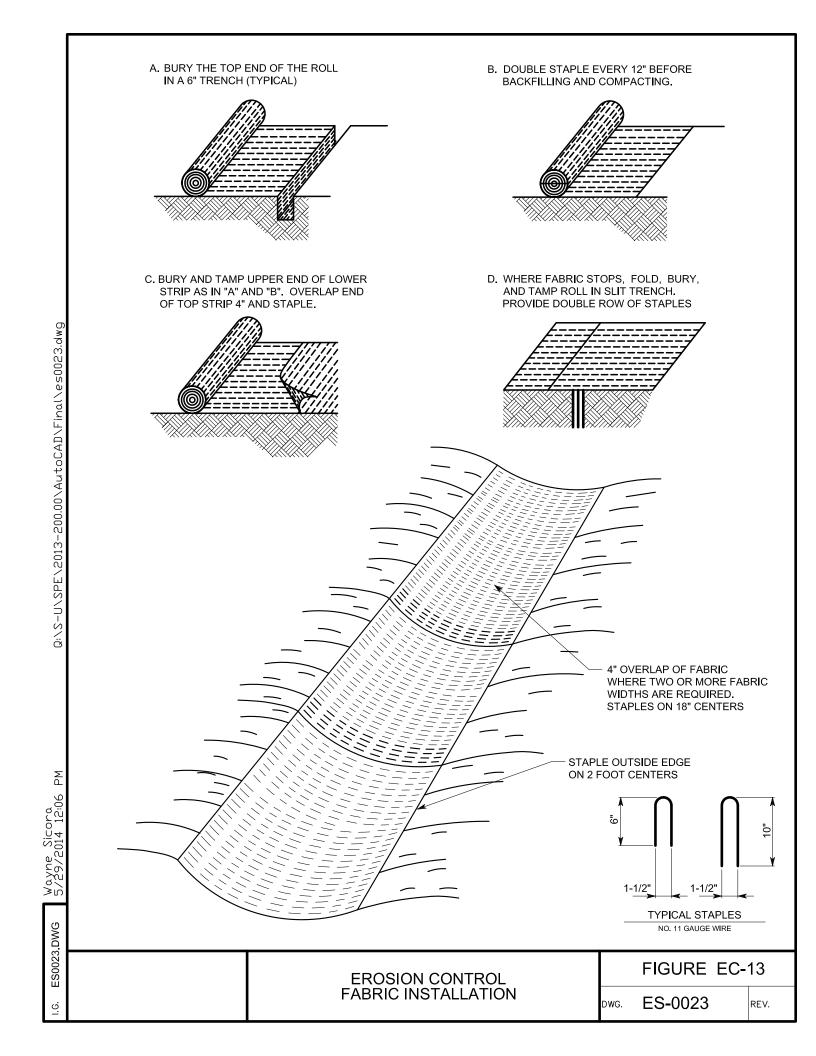


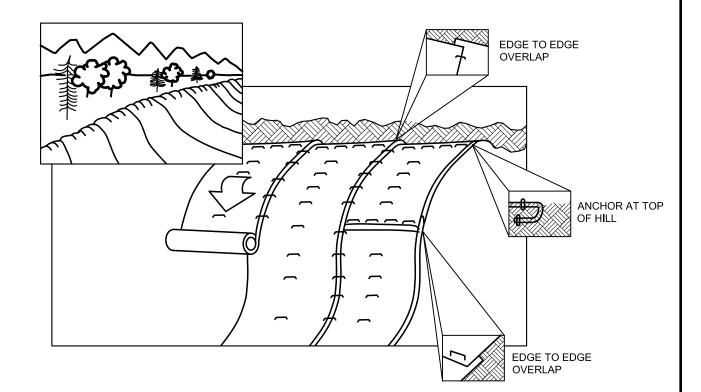


- 1. PERMANENT TRENCH BREAKER MATERIALS WILL CONSIST OF SAND BAGS, POLYURETHANE FOAM OR SOME FUNCTIONAL EQUIVALENT PLACED ACROSS THE DITCH AS IDENTIFIED IN PERMIT REQUIREMENTS. DO NOT USE TOPSOIL FOR TRENCH BREAKERS. THESE OPTIONS ARE DEPICTED ABOVE.
- 2. PERMANENT TRENCH BREAKERS, WHICH ARE USED IN CONJUNCTION WITH SLOPE BREAKERS, SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR AS DETERMINED IN THE FIELD BY THE ENVIRONMENTAL INSPECTOR.
- 3. AT A MINIMUM, INSTALL A TRENCH BREAKER AT THE BASE OF SLOPES GREATER THAN 5 PERCENT WHERE THE BASE OF THE SLOPE IS LESS THAN 50 FEET FROM A WATERBODY OR WETLAND AND WHERE NEEDED TO AVOID DRAINING A WATERBODY OR WETLAND.
- 4. INSTALL TRENCH BREAKERS AT WETLAND BOUNDARIES AND/OR SEAL THE TRENCH BOTTOM AS NECESSARY TO MAINTAIN THE ORIGINAL WETLAND HYDROLOGY. DO NOT INSTALL TRENCH BREAKERS WITHIN A WETLAND.
- 5. IN AGRICULTURAL FIELDS AND RESIDENTIAL AREAS WHERE SLOPE BREAKERS ARE NOT TYPICALLY REQUIRED, INSTALL TRENCH BREAKERS AT THE SAME SPACING AS IF PERMANENT SLOPE BREAKERS WERE REQUIRED.

PERMANENT TRENCH BREAKER OPTIONS FIGURE EC-12

DWG. ES-0022



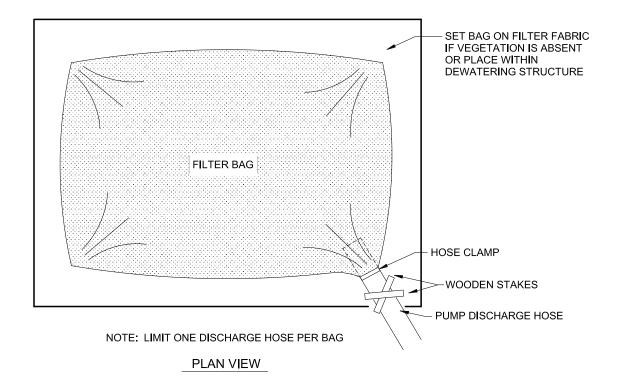


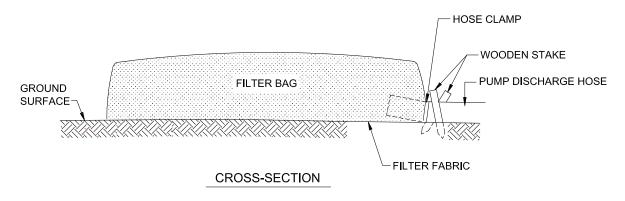
NOTES:

- 1. EROSION CONTROL BLANKETS (FABRIC) SHALL BE USED AT LOCATIONS IDENTIFIED IN THE PLAN AND/OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
- 2. EROSION CONTROL BLANKETS SHALL MEET THE REQUIREMENTS SPECIFIED IN THE PLAN AND/OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
- 3. STAPLES SHALL BE MADE OF 11 GAUGE WIRE, U-SHAPED WITH 6" LEGS AND A 1" CROWN. STAPLES SHALL BE DRIVEN INTO THE GROUND FOR THE FULL LENGTH OF THE STAPLE LEGS.
- 4. BLANKETS SHALL BE INSTALLED ACCORDING TO MANUFACTURER SPECIFICATIONS OR AS STATED BELOW:
 - EXTEND TOP OF BLANKET 3 FEET PAST THE UPPER EDGE OF THE SLOPE.
 - ANCHOR ("KEY") THE UPPER EDGE OF THE BLANKET INTO THE SLOPE USING A 6" DEEP TRENCH AND ROLL THE BLANKET DOWN THE HILL. DOUBLE STAPLE EVERY 12" BEFORE BACKFILLING AND COMPACTING TRENCH.
 - INSTALL LOOSELY ON SLOPE AND AVOID STRETCHING EROSION CONTROL BLANKETS DURING INSTALLATION.
 - BRING ROLL BACK OVER THE TOP OF THE TRENCH AND CONTINUE TO ROLL DOWN SLOPE. STAPLE EVERY 12" WHERE BLANKETS EXIT THE TRENCH AT THE TOP OF THE SLOPE.
 - WHEN BLANKETS ARE SPLICED DOWN-SLOPE TO ADJOINING BLANKETS (SLOPE OR STREAMBANK MATS), THE UPPER BLANKET SHALL BE PLACED OVER THE LOWER (SHINGLE STYLE) WITH APPROXIMATELY 6" OF OVERLAP. STAPLE THROUGH THE OVERLAPPED AREA EVERY 12".
 - OVERLAP ADJACENT BLANKETS 6". STAPLE EDGES OF BLANKETS AND CENTER EVERY 36".
- 5. IN LIVESTOCK AREAS WHERE EROSION CONTROL BLANKETS ARE APPLIED TO THE SLOPES, FENCING WILL BE USED IF NECESSARY TO EXCLUDE LIVESTOCK, WITH PERMISSION OF THE LANDOWNER.
- 6. MONITOR WASHOUTS, STAPLE INTEGRITY OR BLANKET MOVEMENT. REPLACE OR REPAIR AS NECESSARY.
- 7. DO NOT USE SYNTHETIC MONOFILAMENT MESH / NETTED MATERIALS IN AREAS DESIGNATED AS SENSITIVE WILDLIFE HABITAT, UNLESS THE PRODUCT IS SPECIFICALLY DESIGNED TO MINIMIZE HARM TO WILDLIFE.

TYPICAL EROSION CONTROL BLANKETS ON SLOPES

FIGURE EC-14





NOTES:

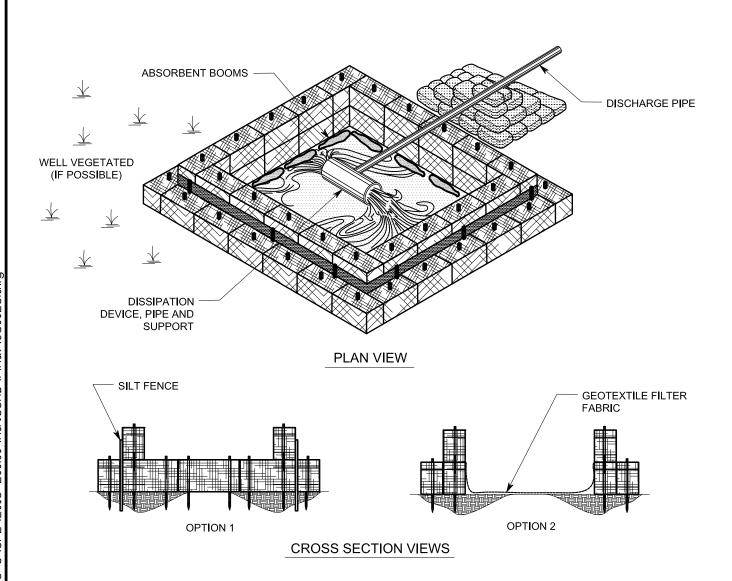
- 1. THE FILTER BAG OR STRUCTURE MUST BE MANNED WHEN THE PUMPING IS INITIATED TO ENSURE PROPER OPERATION AND FUNCTIONALITY.
- 2. REMOVE DEWATERING STRUCTURE AS SOON AS PRACTICABLE AFTER COMPLETION OF DEWATERING ACTIVITIES.
- 3. PLACEMENT OF FILTERBAGS SHOULD BE IN A MANNER THAT BAG USE DOES NOT CAUSE EROSION. IF SITE CONDITIONS ALLOW, PLACE FILTER BAG IN WELL-VEGETATED AREA, A MINIMUM OF 50 FEET FROM WETLANDS OR WATERBODIES.

FILTER BAG

FIGURE WD-1

DWG. ES-0025

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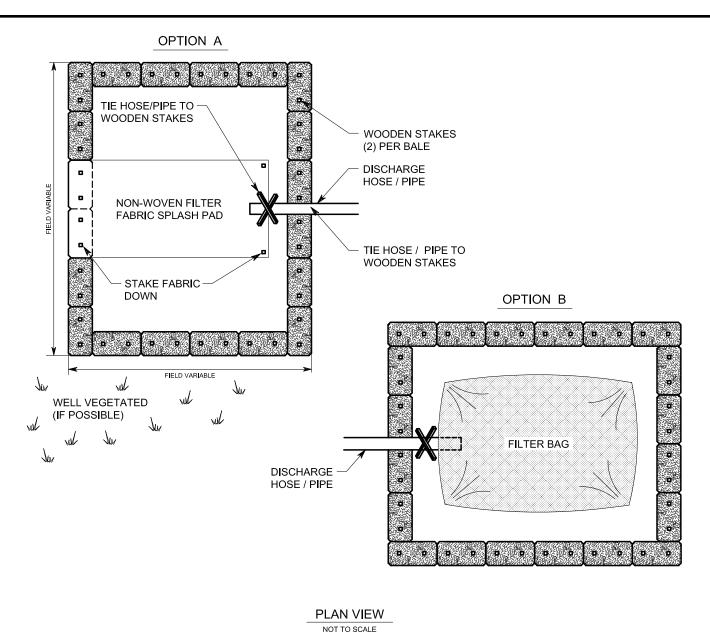
NOTES:

- 1. SIZE AND DIMENSION OF DEWATERING STRUCTURE WILL VARY DEPENDING ON THE VOLUME AND RATE OF DISCHARGE. STAGGER PLACEMENT OF STRAW BALES WHEN TWO ROWS ARE USED.
- 2. COVER THE BASE OF THE DISCHARGE STRUCTURE EITHER WITH STRAW BALES (OPTION 1) OR LINE WITH GEOTEXTILE FABRIC (OPTION 2).
- 3. PROVIDE SUPPORT TO ENSURE THAT DISCHARGE PIPE DOES NOT REST ON STRAW BALES.
- 4. PLASTIC SHEETING, WOODEN MATS OR STEEL PLATES MAY ALSO BE USED, AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR, TO PREVENT EROSION, STREAMBED SCOUR, SUSPENSION OF SEDIMENTS OR EXCESSIVE STREAMFLOW.
- 5. ABSORBENT BOOMS MUST BE USED DURING DISCHARGES FROM EXISTING / USED PIPE OR AS DIRECTED BY PERMIT REQUIREMENTS.
- PREVENT EROSION, STREAMBED SCOUR, SUSPENSION OF SEDIMENTS AND EXCESSIVE STREAMFLOW BY PROPER DESIGN OF STRUCTURE, REGULATING THE WATER DISCHARGE RATE AS WELL AS USE OF ENERGY DISSIPATION DEVICE(S) AND SEDIMENT BARRIERS, AS NECESSARY.

DISCHARGE STRUCTURE FOR HYDROSTATIC TEST WATER

FIGURE WD-2

DWG. ES-0026



NOTES:

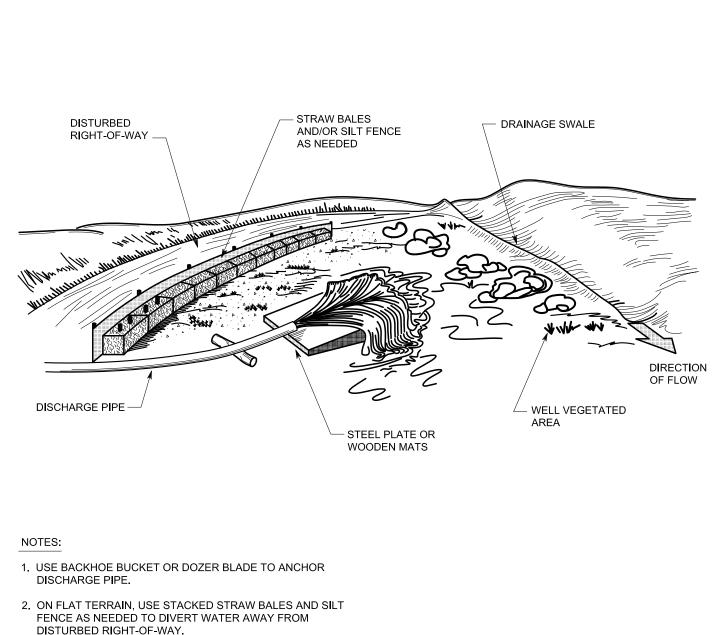
- 1. SIZE AND DIMENSION OF DEWATERING STRUCTURE, INCLUDING NUMBER OF STRAW BALES USED, WILL VARY DEPENDING ON VOLUME OF WATER DISCHARGED, RATE OF DISCHARGE AND SITE CONDITIONS, SUCH AS THE TYPE AND AMOUNT OF SEDIMENT WITHIN THE DISCHARGE WATER.
- 2. PREVENT EROSION, STREAMBED SCOUR, SUSPENSION OF SEDIMENTS AND EXCESSIVE STREAMFLOW BY PROPER DESIGN OF STRUCTURE, REGULATING THE WATER DISCHARGE RATE AS WELL AS USE OF ENERGY DISSIPATION DEVICE(S) AND SEDIMENT BARRIERS, AS NECESSARY.
- 3. MONITOR AND CONDUCT DISCHARGES IN A MANNER THAT DOES NOT CAUSE EROSION AND DOES NOT RESULT IN SILT-LADEN WATER FLOWING INTO ANY WATERBODY OR WETLAND.
- 4. DO NOT DEPOSIT SAND, SILT, AND/OR SEDIMENT INTO SENSITIVE ENVIRONMENTAL RESOURCE AREAS, INCLUDING WETLANDS, WATERBODIES, CULTURAL RESOURCE SITES, AND SENSITIVE SPECIES HABITATS. STOP DEWATERING ACTIVITIES IF SUCH DEPOSITION IS OCCURRING AND ENSURE THE DESIGN OF THE DISCHARGE IS CHANGED TO PREVENT REOCCURRENCE.
- 5. ABSORBENT BOOMS MUST BE USED DURING DISCHARGES FROM EXISTING / USED PIPE OR AS DIRECTED BY PERMIT REQUIREMENTS.
- 6. FILTER BAGS SHOULD BE INSTALLED ACCORDING TO THE DETAILS SHOWN IN "FILTER BAG" FIGURE.
- 7. REMOVE STRUCTURE AS SOON AS PRACTICABLE AFTER COMPLETION OF WATER DISCHARGES.

OPTIONS FOR SMALL WATER DISCHARGES

FIGURE WD-3

DWG. ES-0027

cj.

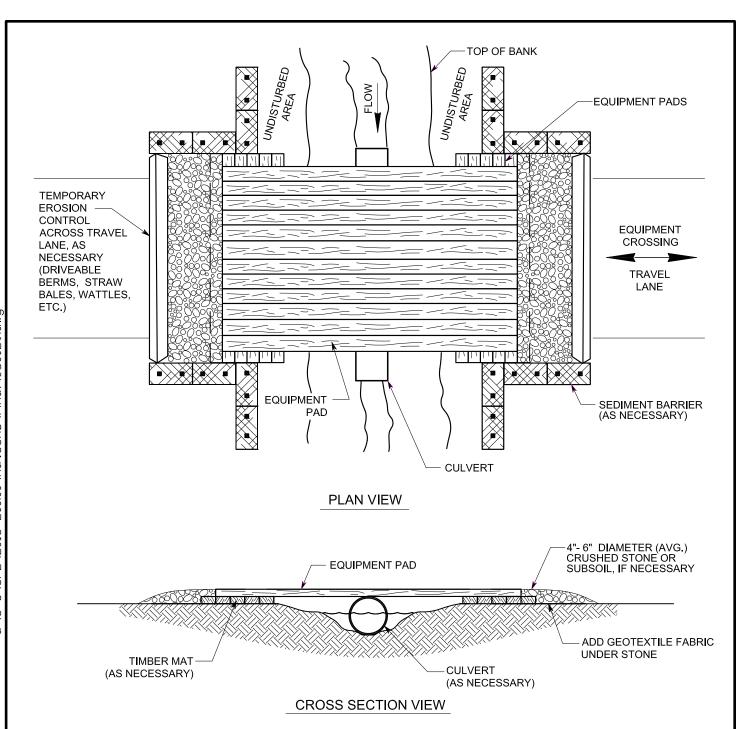


DISTURBED RIGHT-OF-WAY.

DISCHARGE OF HYDROSTATIC TEST WATER TO A SURFACE WATER

FIGURE WD-4

ES-0028 DWG.



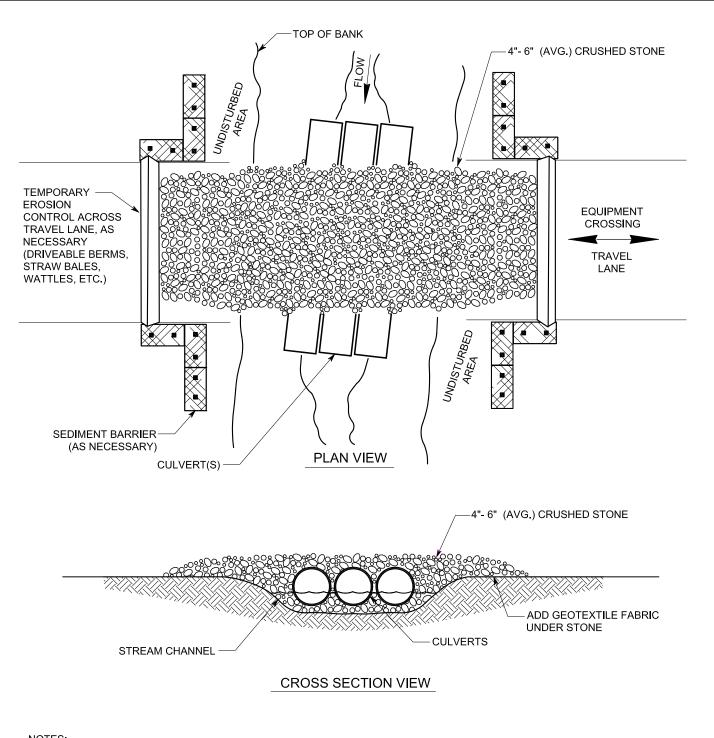
NOTES:

- 1. TEMPORARY SEDIMENT BARRIER CONSISTS OF SILT FENCE AND/ OR STRAW BALES, OR OTHER APPROPRIATE MATERIAL.
- 2. NUMBER AND DIAMETER OF CULVERTS, AS WELL AS USE OF CULVERTS, WILL DEPEND ON SITE-SPECIFIC CONDITIONS.
- 3. EQUIPMENT PAD, TYPICALLY CONSTRUCTED OF HARDWOOD, SHALL BE IN GOOD CONDITION AND MUST ACCOMMODATE THE LARGEST EQUIPMENT USED. ADDITIONAL EQUIPMENT PADS CAN BE PUT SIDE BY SIDE IF EXTRA WIDTH IS REQUIRED. BRIDGE MUST SPAN FROM TOP OF BANK TO TOP OF BANK.
- 4. CRUSHED STONE OR SUBSOIL MAY BE USED AS ILLUSTRATED, IF NECESSARY, WITHIN TRAVEL LANE AS RAMP.
- 5. CONSTRUCT AND MAINTAIN BRIDGE TO WITHSTAND THE HIGHEST EXPECTED FLOW WHILE BRIDGE IS IN USE AND PREVENT SOIL FROM ENTERING WATERBODY. DO NOT USE SOIL TO CONSTRUCT OR STABILIZE BRIDGE.

TEMPORARY EQUIPMENT BRIDGE (EQUIPMENT PADS WITH OR WITHOUT CULVERTS) FIGURE BR-1

DWG. ES-0029

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NOTES:

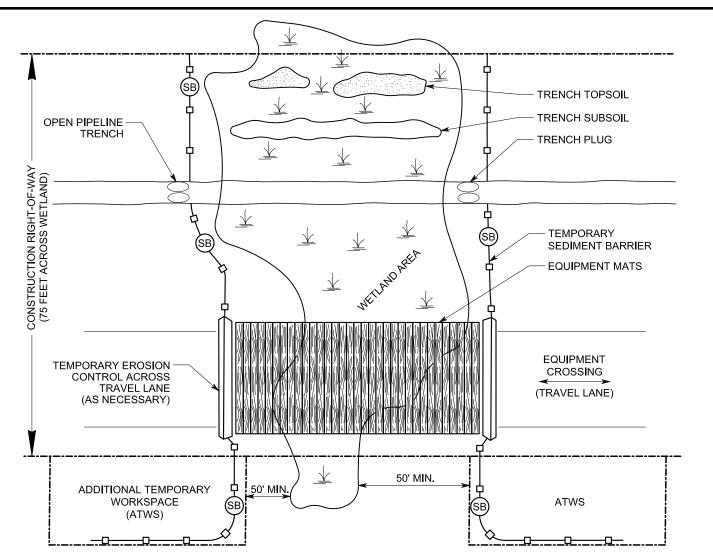
- 1. NUMBER AND DIAMETER OF CULVERTS WILL DEPEND ON SITE-SPECIFIC CONDITIONS. USE CULVERTS A MINIMUM OF 12-INCH DIAMETER.
- 2. ALIGN CULVERTS TO PREVENT EROSION AND STREAMBED SCOUR.
- 3. TEMPORARY SEDIMENT BARRIER CONSISTS OF SILT FENCES AND/OR STRAW BALES, OR OTHER APPROPRIATE MATERIALS.
- 4. ATTEMPT TO REMOVE ALL IMPORTED ROCK DURING REMOVAL OF THE BRIDGE.
- 5. DO NOT USE SOIL TO CONSTRUCT OR STABILIZE BRIDGES.

TEMPORARY EQUIPMENT BRIDGE (CRUSHED STONE WITH CULVERTS)

FIGURE BR-2

ES-0030 DWG.

DWG.



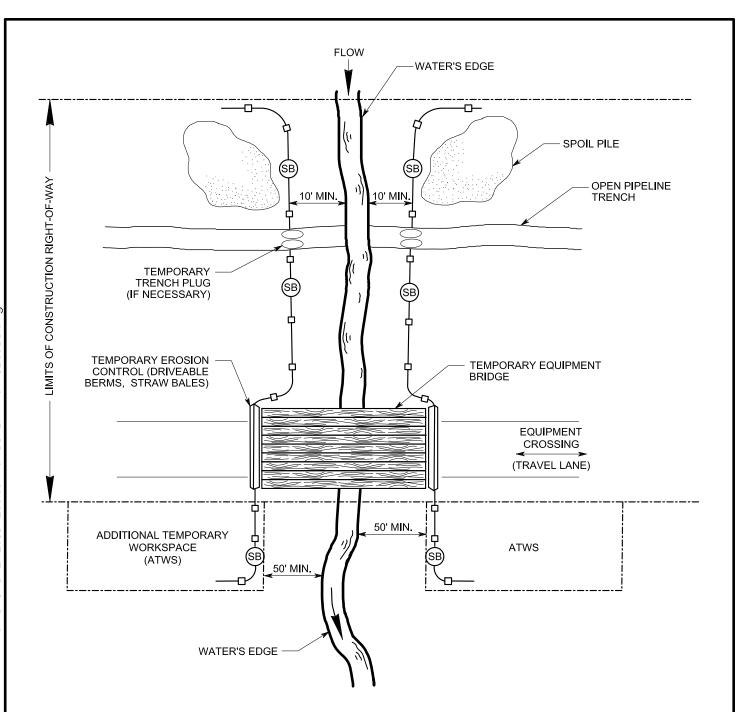
NOTES:

- 1. IN WETLANDS, EQUIPMENT MATS OR LOW GROUND WEIGHT EQUIPMENT SHALL BE UTILIZED IN SATURATED GROUND CONDITIONS.
- 2. LIMIT PULLING OF TREE STUMPS AND GRADING TO DIRECTLY OVER TRENCHLINE, EXCEPT IN SITUATIONS THAT THE CHIEF INSPECTOR AND ENVIRONMENTAL INSPECTOR DETERMINE SAFETY-RELATED CONSTRUCTION CONSTRAINTS REQUIRE GRADING OR THE REMOVAL OF STUMPS FROM UNDER THE WORKING SIDE.
- 3. SEGREGATE THE TOP 12 INCHES OF TOPSOIL WITHIN THE DITCHLINE IN WETLANDS, EXCEPT IN AREAS WHERE STANDING WATER IS PRESENT OR SOILS ARE SATURATED.
- 4. DO NOT TRENCH THE WETLAND UNTIL THE PIPELINE IS ASSEMBLED AND READY FOR LOWERING IN.
- 5. CONCRETE COATING OR PIPELINE WEIGHTS OF AN APPROPRIATE TYPE, WEIGHT AND SPACING WILL BE USED AS REQUIRED. NO CONCRETE COATING ACTIVITIES WITHIN 100 FEET OF A WETLAND OR WATERBODY BOUNDARY, UNLESS THE LOCATION IS AN EXISTING INDUSTRIAL SITE DESIGNATED FOR SUCH USE.
- 6. INSTALL SEDIMENT BARRIERS (S) ALONG THE EDGE OF THE CONSTRUCTION RIGHT-OF-WAY AS NECESSARY TO CONTAIN SPOIL AND SEDIMENT WITHIN THE CONSTRUCTION RIGHT-OF-WAY THROUGH WETLANDS.
- 7. IN THE TRAVEL LANE, SEDIMENT BARRIERS MAY CONSIST OF REMOVABLE SEDIMENT BARRIERS OR DRIVABLE BERMS.
- 8. AT THE BASE OF SLOPES (GREATER THAN 5 PERCENT) THAT ARE LESS THAN 50 FEET FROM A WETLAND, INSTALL AND MAINTAIN TEMPORARY SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION RIGHT-OF-WAY UNTIL REVEGETATION IS SUCCESSFUL.
- 9. NO FERTILIZER OR LIME SHALL BE USED WITHIN WETLANDS.
- 10. DEWATER THE TRENCH IN A MANNER THAT DOES NOT CAUSE EROSION OR RESULT IN SILT-LADEN WATER FLOWING INTO ANY WETLAND.

TYPICAL STANDARD WETLAND CROSSING

FIGURE WC-1

DWG. ES-0032



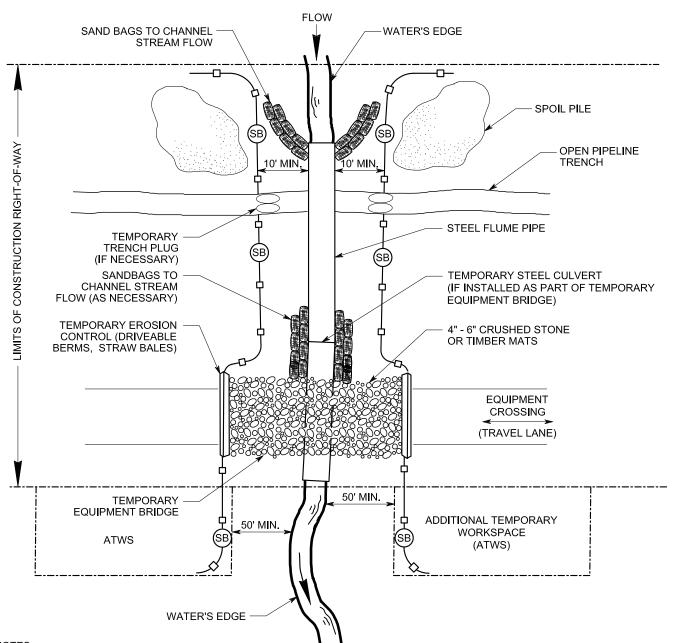
NOTES:

- 1. (SB) TEMPORARY SEDIMENT BARRIER OF SILT FENCE AND/OR STRAW BALES, OR APPROPRIATE MATERIALS.
- 2. FOR MINOR WATERBODIES, COMPLETE TRENCHING AND BACKFILLING IN THE WATERBODY (NOT INCLUDING BLASTING OR OTHER ROCK BREAKING MEASURES) WITHIN 24 CONTINUOUS HOURS. IF A FLUME IS INSTALLED WITHIN THE WATERBODY DURING MAINLINE ACTIVITIES, IT CAN BE REMOVED JUST PRIOR TO LOWERING IN THE PIPELINE. THE 24-HOUR TIMEFRAME STARTS AS SOON AS THE FLUME IS REMOVED.
- 3. FOR INTERMEDIATE WATERBODIES (>10 FEET TO 100 FEET WIDE MEASURED WATER'S EDGE TO EDGE), COMPLETE TRENCHING AND BACKFILLING IN THE WATERBODY (NOT INCLUDING BLASTING OR OTHER ROCK BREAKING MEASURES) WITHIN 48 CONTINUOUS HOURS, UNLESS SITE-SPECIFIC CONDITIONS MAKE COMPLETION WITHIN 48 HOURS INFEASIBLE.

TYPICAL WET WATERBODY CROSSING

FIGURE WC-2

DWG. ES-0033



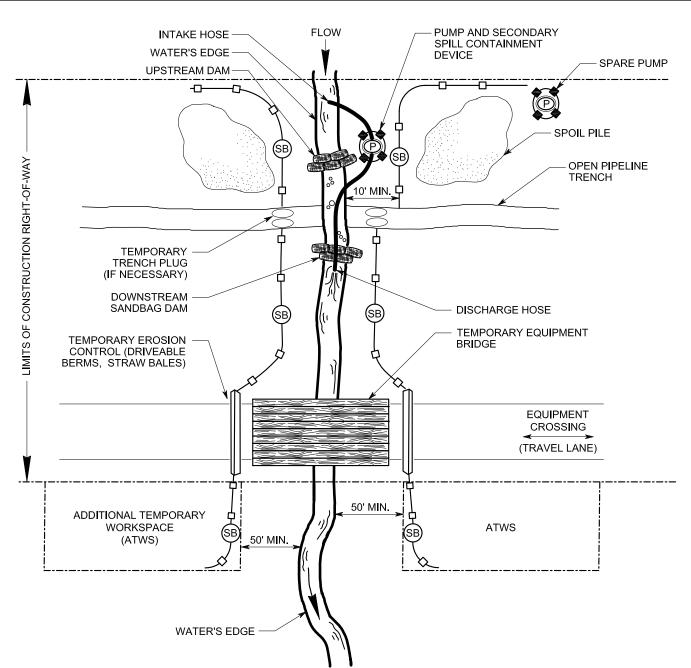
NOTES:

- 1. (SB) TEMPORARY SEDIMENT BARRIER OF SILT FENCE AND/ OR STRAW BALES, OR OTHER APPROPRIATE MATERIALS.
- 2. SAND BAGS MUST BE FILLED WITH SAND FREE OF SILT, ORGANICS, AND OTHER MATERIAL.
- 3. ENSURE SANDBAGS ARE INSTALLED BEFORE PLACING FLUME PIPE.
- 4. ALIGN FLUME(S) TO PREVENT BANK EROSION AND STREAM SCOUR.
- 5. CONDUCT ALL IN-STREAM ACTIVITY (EXCEPT BLASTING OR OTHER ROCK BREAKING MEASURES) WITH THE FLUME(S) IN PLACE. FLUME PIPE(S) MAY NOT BE REMOVED FOR LOWERING IN PIPE OR INITIAL STREAMBED RESTORATION EFFORTS.
- 6. THE ENDS OF THE FLUME AND CULVERT MUST EXTEND TO AN UNDISTURBED AREA.
- 7. CONTRACTOR TO DETERMINE ACTUAL NUMBER AND SIZE OF FLUMES AND CULVERTS REQUIRED BASED ON STREAM WIDTH AND STREAM FLOW RATE AT THE TIME OF CROSSING.
- 8. WATER ACCUMULATING WITHIN THE WORK AREA SHALL BE PUMPED TO A FILTER BAG OR DEWATERING STRUCTURE PRIOR TO DISCHARGING INTO ANY SURFACE WATER.

TYPICAL FLUME
WATERBODY CROSSING

FIGURE WC-3

DWG. ES-0034



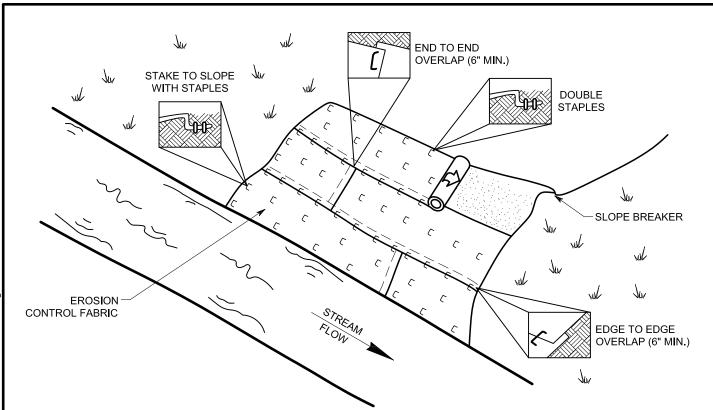
NOTES:

- 1. (SB) TEMPORARY SEDIMENT BARRIER OF SILT FENCE AND/ OR STRAW BALES, OR OTHER APPROPRIATE MATERIALS
- 2. INSTALL AND SEAL SANDBAGS UPSTREAM AND DOWNSTREAM OF THE CROSSING.
- 3. CREATE AN UPSTREAM SUMP USING SANDBAGS IF NATURAL SUMP IS UNAVAILABLE FOR THE INTAKE HOSE.
- 4. EXCAVATE ACROSS STREAM CHANNEL FOLLOWING WATER REROUTING.
- 5. DO NOT REFUEL OR STORE FUEL WITHIN 100 FEET OF THE WATERBODY. IF NOT FEASIBLE, ALTERNATIVE METHODS MUST BE APPROVED BY ENVIRONMENTAL INSPECTOR.
- 6. MONITOR PUMPS AT ALL TIMES DURING STREAM CROSSING PROCEDURE.
- 7. (P) USE SUFFICIENT PUMPS, INCLUDING ONSITE BACKUP PUMPS, TO MAINTAIN DOWNSTREAM FLOW.
- 8. SCREEN PUMP INTAKES. PREVENT SCOURING WITHIN WATERBODY BY HOSE DISCHARGE.

TYPICAL DAM-AND-PUMP WATERBODY CROSSING

FIGURE WC-4

DWG. ES-0035



NOTES:

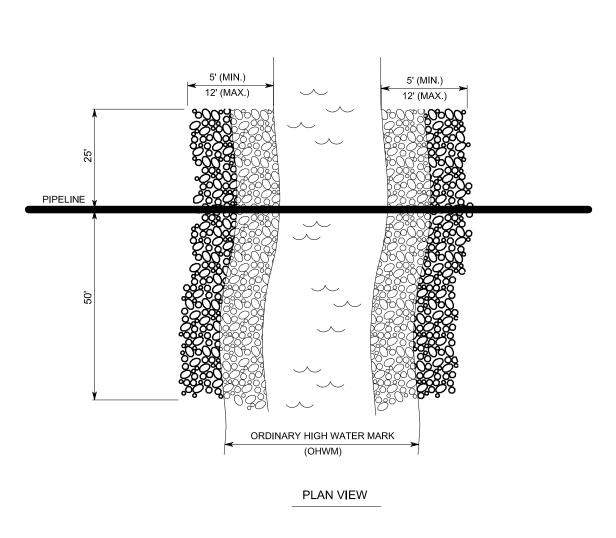
- 1. EROSION CONTROL BLANKETS (FABRIC) SHALL BE PLACED ON THE BANKS OF FLOWING STREAMS WHERE VEGETATION HAS BEEN REMOVED OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
- 2. EROSION CONTROL BLANKETS SHALL MEET THE REQUIREMENTS SPECIFIED IN THE E&S PLAN AND/OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
- 3. STAPLES SHALL BE MADE OF 11 GAUGE WIRE, U-SHAPED WITH 6" LEGS AND A 1" CROWN. STAPLES SHALL BE DRIVEN INTO THE GROUND FOR THE FULL LENGTH OF THE STAPLE LEGS. ALTERNATELY 1" WOODEN PEGS 6" LONG AND BEVELED TO SECURE MATTING.
- 4. BLANKETS SHALL BE INSTALLED ACCORDING TO MANUFACTURER SPECIFICATIONS OR AS STATED BELOW:
 - EXTEND TOP OF BLANKET 2 FEET PAST THE UPPER EDGE OF THE HIGH WATER MARK. IF A SLOPE BREAKER IS PRESENT ON THE APPROACH SLOPE, BEGIN THE BLANKET ON THE UPHILL SIDE OF THE SLOPE BREAKER.
 - INSTALL BLANKET(S) ACROSS THE SLOPE IN THE DIRECTION OF THE WATER FLOW.
 - ANCHOR ("KEY") THE UPSTREAM EDGE OF THE BLANKET(S) INTO THE SLOPE USING A 6" DEEP TRENCH. DOUBLE STAPLE EVERY 12" BEFORE BACKFILLING AND COMPACTING TRENCH
 - OVERLAP THE EDGES OF PARALLEL BLANKETS A MINIMUM OF 6". PLACE THE UPPER BLANKET OVER THE LOWER BLANKET (SHINGLE STYLE) AND STAPLE EVERY 12" ALONG THE LENGTH OF THE EDGE.
 - WHEN BLANKET ENDS ARE ADJOINED, PLACE THE UPSTREAM BLANKET OVER THE DOWNSTREAM BLANKET (SHINGLE STYLE) WITH APPROXIMATELY 6" OF OVERLAP AND STAPLE THROUGH THE OVERLAPPED AREA EVERY 12".
 - STAPLE DOWN THE CENTER OF THE BLANKET(S), THREE STAPLES IN EVERY SQUARE YARD.
- 5. IN LIVESTOCK AREAS WHERE EROSION CONTROL BLANKETS ARE APPLIED TO THE STREAMBANKS, FENCING MAY BE USED IF NECESSARY TO EXCLUDE LIVESTOCK, WITH PERMISSION OF THE LANDOWNER.
- 6. MONITOR WASHOUTS, STAPLE INTEGRITY OR BLANKET MOVEMENT. REPLACE OR REPAIR AS NECESSARY.
- 7. DO NOT USE SYNTHETIC MONOFILAMENT MESH / NETTED MATERIALS IN AREAS DESIGNATED AS SENSITIVE WILDLIFE HABITAT, UNLESS THE PRODUCT IS SPECIFICALLY DESIGNED TO MINIMIZE HARM TO WILDLIFE.

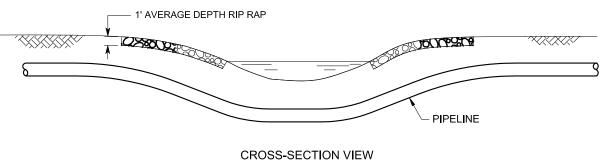
NOT TO SCALE

TYPICAL EROSION CONTROL BLANKETS ON STREAMBANKS

FIGURE WC-5

DWG. ES-0036





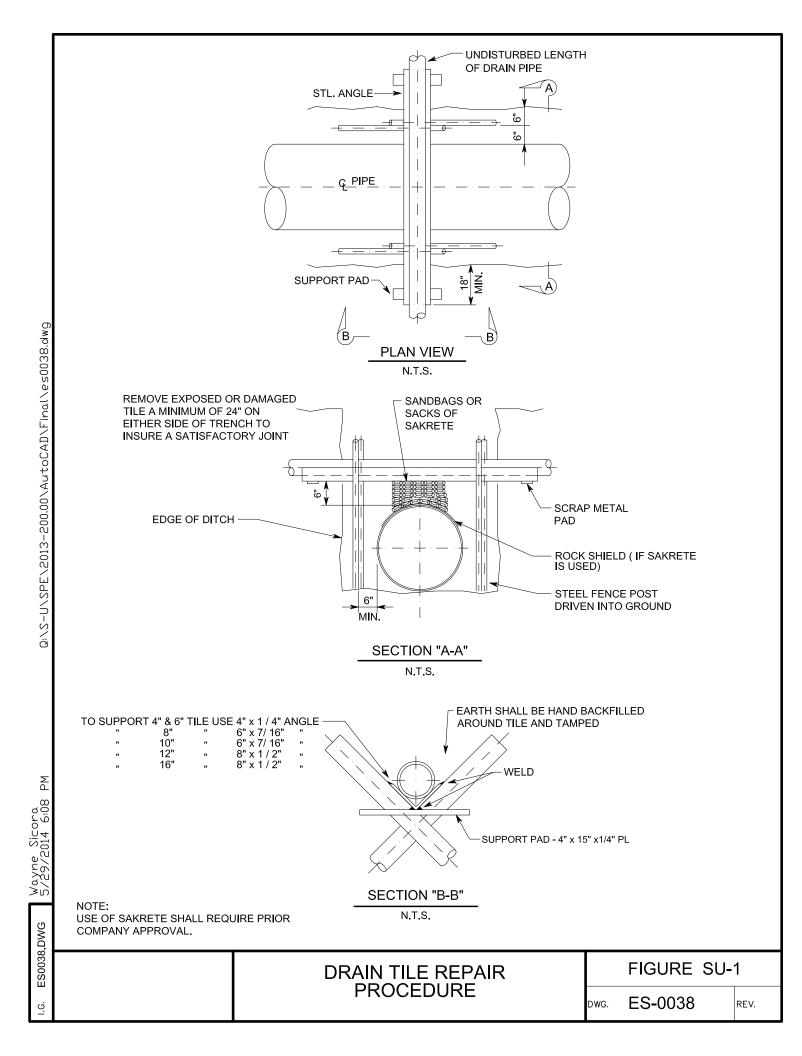
NOTES:

- 1. RIP-RAP SHALL NOT EXCEED 500 FEET IN LENGTH ALONG THE BANK.
- 2. RIP-RAP WILL NOT EXCEED AN AVERAGE OF ONE CUBIC YARD PER RUNNING FOOT BELOW THE OHWM.
- 3. RIP-RAP INSTALLATION SHALL BE IN COMPLIANCE WITH ALL APPLICABLE PERMITS.
- 4. RIP-RAP MUST BE CLEAN AND FREE OF SOIL AND DEBRIS.
- 5. RIP-RAP SHALL NOT BE PLACED IN A MANNER THAT IMPAIRS SURFACE WATER FLOW.
- 6. GEOTEXTILE FABRIC MAY BE INSTALLED BELOW RIP-RAP.

NOT TO SCALE

TYPICAL RIP-RAP PLACEMENT FIGURE WC-6

DWG. **ES-0037**





SEED MIX RECOMMENDATIONS: "SOUTHERN ZONE"

The Southern Zone is generally defined as areas south of the northern borders of Arkansas and Tennessee.

UPLAND AREAS

Lime (agricultural limestone)2.5 tons/acreFertilizer (6-12-12)950 lbs./acreMulch (Oats, Wheat or Bermudagrass Straw)3.0 tons/acre

Seed Mixture¹

Sorghum, Sudangrass, or Sudangrass Hybrids² 40 lbs/acre Pure Live Seed (PLS)

Kentucky 31 Tall Fescue³

Big Bluestem

10 lbs/acre PLS

Indiangrass

10 lbs/acre PLS

Bermudagrass

10 lbs/acre PLS

Bermudagrass

10 lbs/acre PLS

Sericea Lespedeza⁴

10 lbs/acre PLS

White Clover⁴

5 lbs/acre PLS

Birdsfoot Trefoil⁴

10 lbs/acre PLS

Recommended seeding dates

(For establishment of temporary or permanent vegetation.)

Spring: March 15 - May 30 Fall: August 1 - October 15

WINTER STABILIZATION

If restoration does not occur prior to October 15, seed the construction ROW with 1.5 bushels per acre of winter rye or similar variety of rye as requested by the landowner. Mulch construction ROW at 3.0 tons per acre with wheat straw, including areas adjacent to stream and wetland crossings. Seed segregated topsoil piles with winter rye and mulch at a rate of 3.0 tons per acre.

WETLAND AREAS

DO NOT USE LIME OR FERTILIZER !!!

Do not use fertilizer, lime, or mulch within wetlands unless required in writing by the appropriate federal or state agency (as identified in the Clearance Package/Permit Book). Mulch consists of weed-free straw, wood fiber hydromulch or some functional equivalent as approved by the EI and Chief Inspector. When used, apply mulch (Oats, Wheat, or Bermudagrass straw) at a rate of 3.0 tons/acre.

Wetland Seed Mix:

Annual Ryegrass

40 lbs/acre PLS

¹ An alternative seed mixture may be requested by the landowner(s).

² These species may be sold under the following trade names: DeKalb SX17, Greentreat III, Greentreat III, Tastemaker DR, Tastemaker III, FFR202, or Sordan 79.

³Fescue must be endophyte-free.

⁴ Legumes should be treated with a species specific inoculate prior to seeding. Legume seed and soil should be scarified.



SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN &

PREPAREDNESS, PREVENTION, AND CONTINGENCY (PPC) PLAN for CONSTRUCTION PROJECTS

Project: **NEXUS Gas Transmission Project**

Prepared By:

NEXUS Gas Transmission, LLC Environmental Construction Permitting 5400 Westheimer Court Houston, TX 77056-5310

Effective February 18, 2003

Updated: January 2015



TABLE OF CONTENTS

PURPOSE/PLAN OBJECTIVE	1
TRAINING	2
PRE-PLANNING - MATERIAL INVENTORY AND DOCUMENTATION	
SPILL AND LEAK PREPAREDNESS AND PREVENTION	4
1 Prevention and Preparedness	4
4.1.3 Loading/Unloading Areas	
CONTINGENCY PLAN AND EMERGENCY PROCEDURES	7
SPILL CLEAN-UP/WASTE DISPOSAL PROCEDURES OF HYDROSTATIC TEST WATER	9
1 OIL/FUEL AND HAZARDOUS MATERIAL SPILLS AND UNANTICIPATED RELEASES	
3 NOTIFICATION	
HOUSEKEEPING PROGRAM	11
1 Construction Area	11
3 SECURITY	
	TRAINING PRE-PLANNING - MATERIAL INVENTORY AND DOCUMENTATION

LIST OF APPENDICES

APPENDIX A - TABLES

TABLE I - MATERIAL AND WASTE INVENTORY

TABLE II – EMERGENCY RESPONSE AND PERSONAL PROTECTIVE EQUIPMENT

TABLE III – KEY EMERGENCY CONTACTS

TABLE IV - TANK AND CONTAINER STORAGE EXCEPTION AREAS

TABLE V - WASTE STORAGE SECURITY INFORMATION

TABLE VI- AREAS FOR POTENTIAL LEAKS AND SPILLS

APPENDIX B – MATERIAL SAFETY DATA SHEETS (MSDS)

APPENDIX C - EH&S INCIDENT INVESTIGATION FORM

APPENDIX D - REQUIRED SIGNATURE FORMS

APPENDIX E - PIPE YARD / FACILITY STORAGE DRAWING



ABBREVIATIONS AND DEFINITIONS

CERCLA Comprehensive Environmental Response, Compensation and Liability Act

CI Chief Inspector (Company employee or Contractor Employee performing the

duties of the onsite Construction Manager or Engineer)

Company NEXUS Gas Transmission, LLC

Company SC Company Spill Coordinator (The Environmental Inspector or the Chief

Inspector)

Contractor Third party service provider performing construction activities for the

Company on property owned or under the control of the Company. This role may be filled by the Company on small projects constructed by Company

personnel and equipment.

Contractor SC Contractor Spill Coordinator

CWA Clean Water Act

DOT U. S. Department of Transportation

E&C Engineering & Construction

ECP Environmental Construction Permitting

EHS, EH&S Environmental Health and Safety

EI Environmental Inspector (Company employee or Contractor Employee

performing the duties of onsite environmental specialist overseeing Contractor

compliance with environmental permit conditions, laws and regulations)

E&SCP Erosion & Sedimentation Control Plan

FERC Federal Energy Regulatory Commission

FWPC Federal Water Pollution Control Act

HDD Horizontal Directional Drill

JSA Job Safety Analysis

MSDS Material Safety Data Sheets

ppm Parts per Million

Environmental Lead Environmental Construction Permitting specialist assigned to the project

OPA Oil Pollution Act

RCRA Resource Conservation and Recovery Act

SPCC Plan or Plan Spill Prevention, Control and Countermeasure Plan

TSCA Toxic Substances Control Act



1.0 PURPOSE/PLAN OBJECTIVE

NEXUS Gas Transmission, LLC ("Company") has prepared this Spill Prevention, Control and Countermeasure ("SPCC") Plan ("Plan") for construction projects in the United States. The purpose of this Plan is to reduce the probability and risk of a potential spill or release of oil or hazardous materials by the Company or Contractor during construction-related activities, by providing training to the Company and Contractor and expediting spill response and cleanup. This plan is not intended to meet the requirements of existing facility operations.

The Plan's specific objectives are to identify and address:

- The type and quantity of material handled, stored, or used on site during construction;
- The measures to be taken for spill preparedness and prevention;
- Emergency response procedures;
- Spill incident reporting/notification procedures; and
- Local emergency response team arrangements.

This plan has been prepared to meet the requirements of the Federal Energy Regulatory Commission's ("FERC's") *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures), the Oil Pollution Act ("OPA"), the Federal Water Pollution Control Act ("FWPC"), the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") of 1980, the Resource Conservation and Recovery Act ("RCRA"), the Toxic Substances Control Act ("TSCA") and the Clean Water Act ("CWA").

The Company Environmental Construction Permitting ("ECP") group is responsible for the development and maintenance of this Plan. The Plan will be distributed to the Company Engineering & Construction ("E&C") Department's teams and associated Company personnel and will be included in the construction contract. It is the responsibility of the E&C teams to distribute to any necessary Contractors for implementation.

This Plan outlines both Company and Contractor responsibilities by topic. The Contractor is responsible for implementation of the Plan. In the absence of a Contractor, the Company will be responsible for both Company and Contractor responsibilities as they are laid out in this Plan.

A copy of the Plan must be on site during active construction and should also be maintained at the closest construction field office.



2.0 TRAINING

The Company requires all Contractor and Company personnel engaged in any construction activity to receive training in the implementation of the Plan prior to the commencement of on-site construction related activities.

Site visitors are to be given a brief review of the Plan as part of their orientation on safety and emergency procedures prior to the start of any on-site activities.

Contractor Responsibility

The Contractor will be responsible for the following:

- Keep training records
- Perform training briefings through ongoing meetings like tailgates and the daily project Job Safety Analysis ("JSA") that include:
 - Precautionary measures to prevent spills;
 - o Potential sources of spills, including equipment failure or malfunction;
 - o Standard operating procedures in the event of a spill;
 - o Applicable notification requirements;
 - o Equipment, materials and supplies available for clean-up of a spill;
 - o Hazardous waste identification procedures;
 - o Generation and proper handling of all non-hazardous waste, hazardous waste, and other toxic substances;
 - o Proper storage, labeling, transportation and disposal of non hazardous and hazardous waste; and
 - o Sample collection procedures.

Company Responsibility

The Company Chief Inspector ("CI"), Environmental Inspector ("EI"), or their designate will perform the following:

- Teach awareness-level training at the initial project environmental training session;
- Ensure further training is available for other new project personnel; and
- Audit training records kept by the Contractor as necessary.



3.0 PRE-PLANNING - MATERIAL INVENTORY AND DOCUMENTATION

Contractor Responsibility

The Contractor will be responsible for the following **prior** to the start of construction:

- Develop an inventory of all oil/hazardous material stored or used during construction;
- Complete Tables I, II, IV, V and VI (see Appendix A);
- Obtain material safety data sheets ("MSDS") (Appendix B) for all hazardous and non-hazardous substances listed in Table I (see Appendix A);
- Prepare a basic facility diagram or sketch for any storage areas, including pipe yards and temporary storage areas. The diagram should include locations of oil-filled containers, direction of run-off, emergency evacuation routes and assembly areas (see Appendix E); and
- Submit the required Tables, MSDS, and signature pages to the ECP's Environmental Lead for review and approval.

Company Responsibility

- Complete Tables III (see Appendix A);
- Review the Tables, MSDS, and signature pages submitted by the Contractor for approval; and
- Distribute approved Tables, MSDS, and signature pages to include in Plan as Appendices A, B and D.
- Fill out any signature pages or forms (see Appendix D)
 - o Management Approval and Cleanup Commitment
 - Certificate of Determination of Substantial Harm Criteria



4.0 SPILL AND LEAK PREPAREDNESS AND PREVENTION

4.1 Prevention and Preparedness

Contractor Responsibility

- Complete Appendix A, Table I, Material and Waste Storage Inventory, and Table VI, Areas for Potential Leaks and Spills, prior to construction;
- Provide spill prevention, containment, and clean up equipment, and keep it available on-site;
- Perform daily inspections of all equipment, storage tanks, and/or container storage areas;
- Repair all leaking equipment, machinery or tools immediately. If items cannot be repaired, remove them immediately from the project site;
- Maintain a minimal spill kit (absorbent diapers, plastic bags, gloves, etc.) for each piece of hydraulically operated equipment and personnel vehicles within the project area;
- Store materials as indicated in the storage facility diagram or sketch provided by the Contractor in Appendix E;
- Submit a secondary containment plan for any hazardous material storage within the project area to the Company for approval **prior** to storage; and
- Obtain written approval from the project CI or EI for hazardous material storage within 100 feet of a wetland or waterbody.

Company Responsibility

Review any secondary containment or storage plans submitted by the Contractor for approval.

4.1.1 Secondary Containment

Contractor Responsibility

- Single wall tanks shall be provided with temporary secondary containment that will hold at least 110% of the tank capacity of the largest tank inside the containment area;
 - o This includes pumps, generators, compressors or other petroleum powered equipment used on site for dewatering and other activities during construction.
- PCB (50 parts per million ("ppm") or greater) storage tanks shall be double-walled or have secondary containment that will hold 200 percent of the tank capacity;
- All containers with a storage capacity greater than 55 gallons shall have temporary containment (see Appendix A, Table I for type of temporary containment); and
- All pumps and other portable fuel burning equipment used during construction will be sited in secondary containment.

4.1.2 Storage/Inspection (Tanks/Containers)

Contractor Responsibility

- Operate only those tanks for fuel and material storage that meet the approval of the Company;
- Elevate tanks a maximum of two feet above grade;
- Inspect vehicle-mounted tanks to ensure all are equipped with flame/spark arrestors on all vents to prevent self-ignition;



- Locate tank storage in areas that are at least 100 feet from all waterbodies, wetlands, and designated municipal watershed areas, with certain exceptions as approved by ECP and listed in Appendix A, Table IV;
- Complete Appendix A, Table IV, Tank and Container Storage Exception Areas, and submit to the Company for approval prior to construction;
- Inspect all tanks daily for leaks and deterioration. The results of all inspections shall be made available to the Company upon request;
- Do not store incompatible materials in sequence in tanks prior to decontamination (A general list of potentially incompatible materials that may be used during construction are included in Appendix A, Table I);
- Store small cans of gasoline, diesel, solvents, etc., within the temporary secondary containment or within secured trailers or vehicles when not in use;
- Replace leaking and/or deteriorated containers as soon as the condition is first detected; and
- Ensure that all container storage and containment areas being used to store hazardous materials or wastes are in compliance with applicable local, state and federal requirements.

4.1.3 Loading/Unloading Areas

Contractor Responsibility

- Transfer liquids and refuel only in pre-designated and pre-approved locations that are at least 100 feet from all waterbodies and wetlands, with certain exceptions as approved by the EI and listed in Appendix A;
- Inspect the area beneath loading/unloading location for spills before and after each use;
- Utilize drip pans at all hose connections while loading/unloading liquids. If a leak or spill occurs, the loading/unloading operation will be stopped and the spill will be contained, cleaned up and collected prior to continuing the operation;
- Inspect all outlets of the tank trucks prior to leaving the loading and unloading area to prevent possible leakage from the truck while in transit;
- Equip any service vehicle used to transport lubricants and fuel with an emergency response spill kit. At a minimum, this kit must include:
 - o 25 lbs of granular oil absorbent
 - o 10, 48" x 3" oil socks
 - o 5, 17" x 17" oil pillows
 - o 1, 10" x 4" oil boom
 - o 20, 24" x 24" x 3/8" oil mats
 - o Garden size, 6 mil, polyethylene bags
 - o 10 pair of latex gloves
 - 1, 55-gallon polyethylene open-head drum;
- Equip any service vehicle used to transport lubricants and fuel with a chemical response kit. At a minimum, this kit must include:
 - o 1 bag of loose chemical pulp
 - o 2 to 3, 17" x 17" chemical pillows
 - o 2, 48" x 3" chemical socks
 - o 5, 18" x 18" x 3/8" adsorbent mats
 - o garden-size, 6 mil, polyethylene bags
 - o 10 pair of latex gloves
 - o 1, 30-gallon polyethylene open-head drum
 - o hazardous waste labels



Company Responsibility

• Personnel shall be present during loading and unloading activities.



5.0 CONTINGENCY PLAN AND EMERGENCY PROCEDURES

All Company and Contractor personnel have responsibilities for spill prevention, control, and countermeasure.

Contractor Responsibility

- Maintain adequate manpower and equipment at the pipe yard or contractor ware yard necessary to divert any spill from reaching waterbodies and wetland areas; and
- Complete Appendix A, Table I, Emergency Response and Personal Protective Equipment, with a list of emergency equipment and storage location.

Company Responsibility

• Complete Appendix A, Table III, Key Emergency Contacts, prior to construction, and update as necessary.

First Responder Responsibility

The first responder is the person who first observes a spill or release of oil or other hazardous materials to the environment.

This person will take the following steps:

- Assess the situation to determine if the situation poses an immediate threat to human health or the environment;
- Identify hazardous material involved, if any;
- Report the spill to the Company Spill Coordinator ("Company SC") and Contractor Spill Coordinator ("Contractor SC") immediately; and
- Standby at a safe distance and keep others away.

Contractor SC Responsibility

- Coordinate the response to all spills which occur as a result of Contractor operations;
- Report the spill to the Company;
- Coordinate with the Company SC; and
- Conduct subsequent site investigations and associated incident reports unless otherwise directed by the Company.

The Contractor SC may be removed by the Company SC as spill response coordinator at the discretion of the Company.

The Contractor SC will direct Contractor personnel to:

- Shut off source of spill or leak as quickly as possible;
- Minimize affected area with appropriate containment or dike/berm;
- Assemble required spill response equipment as required (protective clothing, gear, heavy equipment, pumps, absorbent material, empty drums, etc.);
- Ensure that spilled material is placed in appropriate containers, in accordance with the best management practices and applicable laws and regulations;



- Properly label and store containers in accordance with applicable requirements; and
- Ensure that all spill response equipment is fully functional. Any equipment that cannot be reused shall be replaced.

Company SC Responsibility

The Company SC will be responsible for overseeing the Contractor SC's clean up of all spills of oil or hazardous materials.

Upon notification, the Company SC shall:

- Assess situation for potential threat to human health, environment and the neighboring community;
- Implement evacuation, if necessary;
- Activate emergency shutdown, if necessary;
- Control source as conditions warrant;
- Ensure that incompatible materials are kept away from the impacted area;
- Keep any potential ignition source away from the impact area, if spilled material is flammable;
- Coordinate sampling, disposal and equipment decontamination with Environmental Health and Safety ("EHS") in Houston, if necessary;
- For spills of PCBs, contact EHS for special spill response requirements related to PCB spills;
- Assist with the coordination of cleanup and disposal activities;
- If necessary, contact outside remediation services, in coordination with EHS, to assist with clean up;
- Notify EHS of all quantities and description of wastes to be handled by EHS;
- Complete the EH&S Incident Investigation Form (see Appendix C) and distribute accordingly;
- For unanticipated release of hydrostatic test waters, notify state contact if required by state permit, in accordance with timeframes required by state permit;
- Review permits to determine if immediate water sampling of test water is required and arrange if necessary; and
- Determine if local Right of Way agent will notify public officials (e.g. township manager and/or mayor).



6.0 SPILL CLEAN-UP/WASTE DISPOSAL PROCEDURES OF HYDROSTATIC TEST WATER

6.1 Oil/Fuel and Hazardous Material Spills and Unanticipated Releases

Contractor Responsibility

- Ensure no immediate threat to surrounding landowners or environment;
- Identify/verify the material and quantity released;
- Review MSDS to determine the proper handling;
- Ensure that Personal Protective Equipment and containers are compatible with the substance;
- Remediate small spills and leaks as soon as feasible. Use adsorbent pads whenever possible to reduce the amount of contaminated articles;
- Restrict the spill by stopping or diverting flow to the oil/fuel tank;
- If the release exceeds the containment system capacity, immediately construct additional containment using sandbags or fill material. Every effort must be made to prevent the seepage of oil into soils, wetlands and surface waters;
- Block off drains and containment areas to limit the extent of the spill. For chemical spills, never wash down a spill with water;
- If a release occurs into a storm drain or stream, immediately pump any floating layer into drums. For high velocity streams, place oil booms or hay bales between the release area and the site boundary and downstream of affected area. As soon as possible, excavate contaminated soils and sediments within approved work areas;
- Collect and reclaim as much of the spill as possible using a hand pump or similar device.
 Containerize contaminated soils in an appropriate Department of Transportation ("DOT") container in accordance with applicable requirements. Never place incompatible materials in the same drum;
- For larger quantities of soils, construct temporary waste piles using plastic liners placing the contaminated soils on top of the plastic and covered by plastic. Plastic-lined roll-off bins should be leased for storing this material as soon as feasible;
- Properly label any drums, containers or storage piles in accordance with applicable requirements;
- Move drum to secure staging or storage area;
- Decontaminate all equipment in a contained area and collect fluids in drums;
- Document and report cleanup activities to the Company SC as soon as feasible; and
- If environmentally sensitive resources (wetlands, waterbodies) exist in the area, ensure that Best Management Practices as described in Company's Erosion & Sedimentation Control Plan ("E&SCP") are utilized to minimize impact to these resources.

Company Responsibility

- If necessary, arrange for sampling the substance for analysis and waste profiling, according to instructions from the Company Standard Operating Procedures, and/ or EHS;
- Document and report activities to EHS as soon as feasible.



6.2 Disposal of Contaminated Materials/Soils

For Company and Contractor protocol on the disposal of contaminated materials, soils, or any other waste materials, please see the Company Waste Management Plan.

6.3 Notification

Company Responsibility

- The Company SC shall notify the Emergency Spill Hotline at (800) 735-6364 and those listed in Appendix A, Table III, immediately for spills that meet any of the following criteria:
 - o one pound or more of a solid material (excluding Horizontal Directional Drill ("HDD") mud) spilled on land;
 - o five gallons or more of a liquid spilled on land;
 - o creates a sheen on water; or
 - o unanticipated release of hydrostatic test water.
- If necessary, notify the local fire department, law enforcement authority, or health authority as appropriate. The following information should be provided:
 - o the name of the caller and callback number;
 - o the exact location and nature of the incident;
 - o the extent of personnel injuries and damage;
 - o the extent of release; and
 - o the material involved and appropriate safety information.
- An incident report form should be filled out following containment and cleanup of the spill or release. Incident data should be gathered using the *EH&S Incident Investigation Form* (see Appendix C) and should be sent to the appropriate ECP project manager for records retention and entry into the EPASS/ILP database.



7.0 HOUSEKEEPING PROGRAM

7.1 Construction Area

Contractor Responsibility

- Maintain construction area in neat and orderly manner; and
- Routinely collect and properly dispose of all trash off-site.

7.2 Contractor Yards/Ware Yards

Contractor Responsibility

- Produce a "site specific" plan to address storage, spill prevention and overall yard organization
 for all contractor yards and ware yards. Contractor yard "site specific" plans should include the
 following:
 - o facility name;
 - o physical address;
 - o longitude and latitude coordinates;
 - o directions to facility (including road names);
 - o date of first oil and hazardous material storage;
 - o location of oil and hazardous material containers greater than 55 gallons;
 - o loading/unloading areas;
 - o direction of drainage flow; and
 - o primary and secondary evacuation routes.
- Provide adequate aisle spacing to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment as necessary in storage areas:
- Ensure similar housekeeping practices enforced in construction areas are also implemented in storage areas; and
- Any facility with an aggregate aboveground oil storage capacity greater than 1,320 US gallons but less than 10,000 gallons must have the plan self-certified by the owner or operator of the qualified facility or a licensed Professional Engineer. Any facility with an aggregate aboveground oil storage capacity greater than 10,000 gallons must have the plan reviewed and certified by a licensed Professional Engineer.

7.3 Security

Contractor Responsibility

- Hazardous wastes and waste containing PCBs greater than 50 ppm will be stored in a secured location (i.e. fenced, locked, etc.). Fuel storage areas will be located to minimize, as much as possible, tampering by unauthorized personnel during non-operational hours.
- Complete Table V, Waste Storage Security Information, in Appendix A, prior to construction.

Company Responsibility

• Review Table V, Waste Storage Security Information in Appendix A, that has been prepared by the Contractor prior to construction.



Project Signatures:	
Company Spill Coordinator:	
Print Name	
Signature	Date
Contractor Spill Coordinator	
Print Name	
Signature	Date



APPENDIX A - TABLES



TABLE I – MATERIAL AND WASTE INVENTORY

Oil and Fuel to be used or stored on site during construction:

STORAGE CAPACITY OF OIL FILLED-CONTAINERS

Container Number ^{a/}	Storage capacity (volume)	Location
ne reference container	numbers should correspond to the fa	cility diagram in Appendix E.
mercial Chemicals to	he used or stored on site during cons	estruction:
	be used or stored on site during cons	

Hazardous and Non-Hazardous Wastes to be used or stored on site during construction:

Incompatible Materials to be used or stored on site during construction:

Type of Temporary Containment containers to be used:

TABLE I TO BE COMPLETED BY CONTRACTOR
Prior to the Start of Construction and updated as necessary



TABLE II – EMERGENCY RESPONSE AND PERSONAL PROTECTIVE EQUIPMENT

Spill Response:

Equipment	Quantity	Location

Fire Protection:

Equipment	Quantity	Location

Personnel Protection:

Equipment	Quantity	Location

TABLE II TO BE COMPLETED BY CONTRACTOR
Prior to the Start of Construction and updated as necessary



TABLE III – KEY EMERGENCY CONTACTS

The list of key personnel who will be contacted in the event of an emergency or spill incident include:

	Company Emergency Contacts	Contact Name	Phone Number
	Company Spill Coordinator & Environmental nspector (within 15 minutes identifying of incident))	
2	4-hour Emergency Spill Hotline 1-800-735-6364 (within 15 minutes of identifying incident)		
R	Regional Environmental Coordinator (within 15 minutes of identifying incident)		
(r	CCP's Project Environmental Lead / PM notify within 60 minutes of incident & submit spill Report Form within 24 hours to ECP PM)		
C	Company Project Manager		
C	Company Environmental Coordinator		
	Field Construction Company Construction Coordinator		
<u>C</u>	Contractor Emergency Contact		
C	Contractor Spill Coordinator		
<u>L</u>	Local Authorities – As necessary		
Eme	ergency contact for Police, Fire & Medical assistance	e	Dial 911
	n-Emergency Local Authorities or Contacts		
Lo	cation Contact	Phone Num	ber



4. <u>Environmental Agencies</u>

Notification to be made by Regional Environmental Coordinator and ECP's PM

5. Potential Environmental Remedial Service Contractors

Clean Harbors Environmental Services, Inc. Howard Alexander (800) 782-8805

Safety-Kleen (FS), Inc Edward A. Mitchell (281) 478-7700

U.S.A. Environment Cesar Garcia (713) 425-6925 or (832) 473-5354

WRS Infrastructure and Environment Inc Steve Maxwell (281) 731-0886

TABLE III TO BE COMPLETED BY COMPANY

Prior to the Start of Construction and updated as necessary



TABLE IV - TANK AND CONTAINER STORAGE EXCEPTION AREAS

Tank and container storage shall be located in areas that are at least 100 feet from all waterbodies and wetlands.

The below exceptions have been approved by ECP and EHS:

- 1.
- 2.
- 3.
- 4.

TABLE IV TO BE COMPLETED BY CONTRACTOR
Prior to the Start of Construction and updated as necessary



TABLE V – WASTE STORAGE SECURITY INFORMATION

TABLE V TO BE COMPLETED BY CONTRACTOR
Prior to the Start of Construction and updated as necessary



TABLE VI-AREAS FOR POTENTIAL LEAKS AND SPILLS

2.

4.

3.

TABLE VI TO BE COMPLETED BY CONTRACTOR
Prior to the Start of Construction and updated as necessary



APPENDIX B - MSDS



APPENDIX C – EH&S INCIDENT INVESTIGATION FORM



${\bf APPENDIX~D-REQUIRED~SIGNATURE~FORMS}$



Management Approval and Cleanup Commitment 40 CFR §112.7

This Spill Prevention, Control and Countermeasures Plan (Plan), including the Spill Procedures Chart and Supplemental Document, which has been prepared in accordance with 40 CFR 112, has been reviewed and approved by the Project Manager. The Project Manager has the level of authority to commit the necessary resources to fully implement this Plan and to contain and clean up any oil discharged at this facility. By signing below, the **Project Manager** also **authorizes station supervisors to expediently commit manpower, equipment, and materials necessary to contain and remove any harmful quantity of oil discharged from this facility (40 CFR §112.7). This commitment includes the authority to use company and/or contract personnel and equipment.**

Facility Name:	
Location:	
Signature:	
Name:	
Date:	
Title:	



CERTIFICATE OF DETERMINATION OF SUBSTANTIAL HARM CRITERIA

Facility Name:			
Location:			
Does the facility transfer oil over water to or from vessels and d storage capacity greater than or equal to 42,000 gallons?	loes the fac Yes	ility have a to No	otal oil
Does the facility have a total oil storage capacity greater than or does the facility lack secondary containment that is large enough largest aboveground oil storage tank plus sufficient freeboard to any aboveground oil storage tank area?	h to contair	n the capacity	of the
Does the facility have a total oil storage capacity greater than or the facility located at a distance (as calculated using the appropriate Attachment C-III or a comparable formula) such that a discharge injury to fish and wildlife and sensitive environments? For furth and sensitive environments, see Appendices I, II, and III to DOG and Vessel Response Plans: Fish and Wildlife and Sensitive Enthis Part, Section 13, for availability) and the applicable Area C	riate formulate from the ner descript C/NOAA's vironments	la in rule 40 (facility could ion of fish an "Guidance fo" (see Appen	CFR 112 cause d wildlife or Facility
Does the facility have a total oil storage capacity greater than or the facility located at a distance (as calculated using the appropriate to this appendix or a comparable formula) such that a discharge down public drinking water intake? For the purpose of 40 CFR are analogous to public water systems as described in 40 CFR 1	riate formul from the fa 112, public	la in Attachm acility would	ent C-III shut
,	Yes	No	
Does the facility have a total oil storage capacity greater than or has the facility experienced a reportable oil discharge in an amo 10,000 gallons within the last five years?			
·	Yes	No	
Certification I certify under penalty of law that I have personally examined an submitted in this document, and that based on my inquiry of the information, I believe that the submitted information is true, accordingly.	ose individ	uals responsib	
Signature: Title:			
Name (please type or print):			
Date:			



APPENDIX E – PIPEYARD / FACILITY STORAGE DRAWING



APPENDIX 1C

- ♦ 1C1 Non-Landowner, Federal, State and Local Agency Contact List
- ♦ 1C2 –Agency Correspondence
- ♦ 1C3 NEXUS Public and Agency Participation Plan



1C1 -	Non-Landowner,	, Federal	State and Local	Agency	Contact List



NEXUS Project Stakeholder List - Non-Landowners Federal, State, and Local Agency Contacts Response Initial Contact Office Date/Type Agency **Contact Name Contact Email Contact Address** Contact **Date Sent** Phone Date **FEDERAL FERC Office of Energy Projects** Office of Energy Division of Gas- Environment and **Projects** Joanne Joanne.Wachholder@ Engineering 12/17/14 Division of Gas-Wachholder. FERC TBD ferc.gov Gas Branch 1 introductory **Environment and FERC Project** 888 First Street, NE meeting Engineering Manager Washington, D.C. 20426 Gas Branch 1 office 6J-06 Pittsburgh District Corps of Engineers **USACE** Pittsburgh 12/30/14 Matt Mason, William S. Moorhead Federal District 10/31/14 10/31/14 via letter (412) 395-Matthew.R.Mason@usa USACE Building Regulatory 7129 ce.army.mil via letter from Buffalo (Northern via FedEx Branch 1000 Liberty Avenue Pittsburgh District) District Regulatory Branch, Suite 2200 Pittsburgh, PA 15222 **Huntington District** 12/30/14 Mark Taylor, 10/31/14 (304) 399-MARK.A.TAYLOR@usace **Regulatory Division** 10/31/14 via letter USACE **Huntington District** Chief, Energy from Buffalo 5610 .army.mil 502 8th Street via letter via FedEx Resources District Huntington, WV 25701 **Buffalo District Office** Mark Scalabrino (800) 833-10/31/14 10/31/14 12/30/14 **Buffalo District TBD** 1776 Niagara St. Ohio Regulatory USACE via FedEx 6390 via letter via letter Chief Buffalo, NY 14207 Stanley F. 12/30/14 USACE, Regulatory Office Cowton, Jr., (313) 226stanley.f.cowton@usace 10/31/14 10/31/14 via letter **Detroit District** Regulatory 477 Michigan Avenue, 6th Floor USACE 2219 via FedEx from Buffalo .army.mil via letter Project Detroit, Michigan 48226-2550 District Manager Chris Mensing, East Lansing East Lansing Field Office 10/14/14 10/14/14 10/14/14 Fish and (517) 351-Michigan Field chris mensing@fws.gov 2651 Coolidge Road **USFWS** Wildlife 8316 via phone via email via email Office East Lansing, MI 48823

Biologist



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
USFWS	East Lansing Michigan Field Office	Burr Fisher, Wildlife Biologist	(517) 351- 8286	Burr_fisher@fws.com	East Lansing Field Office 2651 Coolidge Road East Lansing, MI 48823	09/22/14 via letter	09/22/14 via email	12/3/14 via letter
USFWS	Ohio Field Office	Angela Boyer, Endangered Species Coordinator	(614) 416- 8993 x22	angela_boyer@fws.gov	U.S. Fish and Wildlife Service Ohio Field Office 4625 Morse Rd, Suite 104 Columbus, OH 43230	09/18/14 via letter	09/18/14 via email	10/9/14 via letter
NPS	Midwest Region	Mark Weekly, Deputy Regional Director	(402) 661- 1526	Mark_Weekley@nps. gov	National Park Service 601 Riverfront Drive Omaha, NE 68102-4226	10/31/14 via letter	10/31/14 via FedEx	
USEPA	NEPA Implementation Section	Kenneth A. Westlake, Chief	(312) 886- 2910	westlake.kenneth@epa. gov	U.S. Environmental Protection Agency, Region 5 77 West Jackson Boulevard Chicago, Illinois 60604-3590	10/31/14 via letter	10/31/14 via FedEx	11/06/14 via phone
NMFS	Office of Protected Resources	Donna Wieting, Director, Office of Protected Resources	(301) 427- 8400	NA	National Marine Fisheries Service 1315 East-West Highway Silver Spring, MD 20910	10/31/14	10/31/14 via FedEx	



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
STATE – C	OHIO							
ОЕРА	Central	Mike Mansour	(614) 644- 3694	mike.mansour@epa.ohi o.gov	Ohio EPA Central Office	12/09/14 meeting	12/09/14 meeting	
ОЕРА	Central	Dave Morehart	(614) 644- 3601	dave.morehart@epa.ohi o.gov	Ohio EPA Central Office	12/09/14 meeting	12/09/14 meeting	
ОЕРА	Northeast District	Ed Fasko	(330) 963- 1161	ed.fasko@epa.ohio.gov	Ohio EPA Northeast District Office	12/10/14 meeting	12/10/14 meeting	
ОЕРА	Northeast District	Jana Gannon	(330) 963- 1261	jana.gannon@epa.ohio. gov	Ohio EPA Northeast District Office	12/10/14 meeting	12/10/14 meeting	
ОЕРА	Northeast District	Kevin Fortune	(330) 963- 1152	kevin.fortune@epa.ohio .gov	Ohio EPA Northeast District Office	12/10/14 meeting	12/10/14 meeting	
OEPA	Akron Regional Air Quality Management District	Sean Vadas	(330) 923- 4891	svadas@schd.org	Akron Regional Air Quality Management District	12/10/14 meeting	12/10/14 meeting	
OEPA	Akron Regional Air Quality Management District	Kelly Kanoza	(330) 812- 3954	kkanoza@schd.org	Akron Regional Air Quality Management District	12/10/14 meeting	12/10/14 meeting	
OEPA	Akron Regional Air Quality Management District	Duane LaClair	(330) 923- 4891	dlaclair@schd.org	Akron Regional Air Quality Management District	12/10/14 meeting	12/10/14 meeting	
OEPA	Toledo Division of Environmental Services	Matt Stanfield	(419) 936- 3938	matthew.stanfield@tole do.oh.gov	Toledo Division of Environmental Services	12/17/14 meeting	12/17/14 meeting	
ODNR	Office of Real Estate	John Kessler, P.E. Assistant Chief	(614) 265- 6621	john.kessler@dnr.state. oh.us	Ohio Department of Natural Resources, Office of Real Estate 2045 Morse Rd., Columbus, OH 43229-6605	09/18/14 via letter	09/18/14 via email	10/31/14 letter via email



	NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts									
Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type		
ODNR	Ohio Coastal Management Program ODNR Office of Coastal Management	Steve Holland, MPA Federal Consistency Administrator	(419) 609- 4104	steven.holland@dnr.stat e.oh.us	ODNR Office of Coastal Management 105 West Shoreline Drive Sandusky, Ohio 44870	12/02/14 via email and phone	12/02/14 via email	12/02/14 via email and phone		
SHPO	Ohio Office of Historic Preservation	Mark Epstein, Department Head, Resource Protection and Review	(614) 298- 2000	mepstein@ohiohistory.o rg	Ohio Historic Preservation Office 800 E. 17th Avenue Columbus, Ohio 43211-2474	11/5/14 via letter	11/5/14 via US mail and email			
STATE - M	IICHIGAN									
MDNR	Wildlife Division	Lori Sargent	(517) 284- 6216	sargentl@michigan.gov	Michigan Department of Natural Resources P.O. Box 30180 Lansing, MI 48909-7680	09/22/14 via letter	09/22/14 via email	09/23/14 via email		
MNFI	Natural Features Inventory	Michael A. Sanders, Rare Species Review Specialist	(517) 284- 6200	sander 75@msu.edu	Michigan State University Extension 3rd Floor Constitution Hall 525 W. Allegan St. Lansing, MI 48933	09/23/14 via letter	09/23/14 via email	10/09/14 letter via email		
MDEQ	Jackson District Office	Ms. Katherine David	(517) 780- 7021	DAVIDK@michigan.gov	301 E. Louis Glick Highway Jackson, Michigan 49201	12/18/14 via letter	12/18/14 via FedEx			
SHPO	Michigan Office of Historic Preservation	Brian D. Conway, State Historic Preservation Officer	(517) 373- 1630	Conwayb1@michigan.go v	Michigan State Housing Development Authority 702 W. Kalamazoo St. P.O. Box 30740 Lansing, Michigan 48909-8240	12/4/14 via letter	12/4/14 via letter			
TRIBES										



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Absentee-Shawnee Tribe of Indians of Oklahoma	Joseph Blanchard, Cultural Preservation Director Tribal Historic Preservation Officer	(405) 275- 4030, ext 203	joseph.blanchard@astri be.com	Absentee-Shawnee Tribe of Indians of Oklahoma 2025 S. Gordon Cooper Drive Shawnee, OK 74801	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation	Michael Wiggins, Chairman	(715) 682- 7111	hrmanager@badriver- nsn.gov	Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation P.O. Box 39 Odanah, WI 54861-0039	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation	Edith Leoso, Tribal Historic Preservation Officer	(715) 682- 7111		Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation P.O. Box 39 Odanah, WI 54861-0039	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Bay Mills Indian Community	Levi Carrick, Sr., Chairman	(906) 248- 3241		Bay Mills Indian Community 12140 W. Lakeshore Drive Brimley, MI 49715	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Bay Mills Indian Community	Paula Carrick, Tribal Historic Preservation Officer	(906) 248- 8458	paulacarrick@baymills.o rg	Bay Mills Indian Community 12140 W. Lakeshore Drive Brimley, MI 49715	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe	Kevin Leecy, Chairman	(218) 757- 3261	kevin.leecy@boisforte- nsn.gov	Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe P.O. Box 16 Nett Lake, MN 55772	12/11/14 via letter	12/11/14 via USPS certified mail	



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe	Rosemary Berens, Tribal Historic Preservation Officer	(218) 757- 3261	rozeberens@yahoo.com	Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe P.O. Box 16 Nett Lake, MN 55772	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Chippewa-Cree Indians of the Rocky Boy's Reservation	Bruce Sunchild, Chairman	(406) 395- 4282	bsunchild@yahoo.com	Chippewa-Cree Indians of the Rocky Boy's Reservation 31 Agency Square Box Elder, MT 59521	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Chippewa-Cree Indians of the Rocky Boy's Reservation	Alvin Windy Boy, Tribal Historic Preservation Officer	(406) 352- 3077	alvin@nei-yahw.com	Chippewa-Cree Indians of the Rocky Boy's Reservation P.O. Box 230 Box Elder, MT 59521	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Citizen Potawatomi Nation	John Barrett, Chairman	(405) 275- 3121	rbarrett@potawatomi.o rg	Citizen Potawatomi Nation 1601 S. Gordon Cooper Drive Shawnee, OK 74801	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Citizen Potawatomi Nation	Kelli Mosteller, Tribal Historic Preservation Officer	(405) 878- 5830	kelli.mosteller@potawat omi.org	Citizen Potawatomi Nation 1601 S. Gordon Cooper Drive Shawnee, OK 74801	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Delaware Nation	C.J. Watkins, Vice President	(405) 247- 2448		Delaware Nation P.O. Box 825 Anadarko, OK 73005	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Delaware Nation	Tamara Francis- Fourkiller, Cultural Preservation Director	(405) 247- 2448, ext 1180	tfrancis@delawarenatio n.com	Delaware Nation P.O. Box 825 Anadarko, OK 73005	10/28/14 via letter	10/28/14 via USPS certified mail	



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Delaware Tribe of Indians	Paula Pechonick, Chief	(918) 336- 5272		Delaware Tribe of Indians 170 N Barbara Ave Bartlesville, OK 74003	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Delaware Tribe of Indians	Dr. Brice Obermeyer, Director, Tribal Historic Preservation Office	(620) 341- 6699	bobermeyer@delawaret ribe.org	Delaware Tribe of Indians Roosevelt Hall, Room 212 1200 Commercial Street Emporia, KS 66801	10/28/14 via letter	10/28/14 via USPS certified mail	11/17/14 via letter
Tribe	Eastern Shawnee Tribe of Oklahoma	Glenna J. Wallace, Chief	(918) 666- 2435	gjwallace@estoo.net	Eastern Shawnee Tribe of Oklahoma P.O. Box 350 Seneca, MO 64865	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Eastern Shawnee Tribe of Oklahoma	Robin Dushane, Tribal Historic Preservation Officer	(918) 666- 2435, ext 247	r.dushane@estoo.net	Eastern Shawnee Tribe of Oklahoma 12705 South 705 Road Wyandotte, OK 74370	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Fond du Lac Band of the Minnesota Chippewa Tribe	Karen Driver, Chairwoman	(218) 878- 2612	karendriver@fdlrez.com	Fond du Lac Band of the Minnesota Chippewa Tribe 1720 Big Lake Road Cloquet, MN 55720	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Fond du Lac Band of the Minnesota Chippewa Tribe	LeRoy Defoe, Tribal Historic Preservation Officer	(218) 878- 7129	leroydefoe@fdlrez.com	Fond du Lac Band of the Minnesota Chippewa Tribe 1720 Big Lake Road Cloquet, MN 55720	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Forest County Potawatomi	Harold Frank, Chairman	(715) 478- 7200		Forest County Potawatomi 5416 Everybody's Rd Crandon, WI 54520	10/28/14 via letter	10/28/14 via USPS certified mail	



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Forest County Potawatomi	Melissa Cook, Tribal Historic Preservation Officer	(800) 960- 5479, ext 7248	melissa.cook@fcpotawa tomi-nsn.gov	Forest County Potawatomi Cultural Center, Library & Museum 8130 Mishkoswen Drive PO Box 340 Crandon, WI 54520	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Grand Portage Band of the Minnesota Chippewa Tribe	Norman Deschampe, Chairman	(218) 475- 2277	norman@grandportage. com	Grand Portage Band of the Minnesota Chippewa Tribe P.O. Box 428 Grand Portage, MN 55605	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Grand Portage Band of the Minnesota Chippewa Tribe	Mary Ann Gagnon, Tribal Historic Preservation Officer	(218) 475- 0111	maryanng@grandportag e.com	Grand Portage Band of the Minnesota Chippewa Tribe P.O. Box 428 Grand Portage, MN 55605	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Grand Traverse Band of Ottawa and Chippewa Indians	Derek J. Bailey, Chairperson	231-534- 7750	derek.bailey@gtindians. com	Grand Traverse Band of Ottawa and Chippewa Indians 2605 North West Bayshore Drive Suttons Bay, MI 49682	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Hannahville Indian Community	Kenneth Meshigaud, Chairperson	(906) 466- 2932		Hannahville Indian Community N14911 Hannahville B1 Rd Wilson, MI 49896	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Keweenaw Bay Indian Community	Donald Shalifoe, Sr. Ogimaa	(906) 353- 6623	tcchris@kbic-nsn.gov	Keweenaw Bay Indian Community 16429 Beartown Road Baraga, MI 49908	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Keweenaw Bay Indian Community	Chris Chosa, Tribal Historic Preservation Officer	(906) 353- 6272		Keweenaw Bay Indian Community 16429 Beartown Road Baraga, MI 49908	12/11/14 via letter	12/11/14 via USPS certified mail	



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin	Michael Isham, Jr. Chairman	(715) 634- 8934	terrikay@cheqnet.net	Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin 13394 West Trapania Road, Building No. 1 Hayward, WI 54843	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin	Jerry Smith, Tribal Historic Preservation Officer	(715) 634- 8934		Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin 13394 West Trapania Road, Building No. 1 Hayward, WI 54843	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin	Tom Maulson, President	(715) 588- 3303		Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin P.O. Box 67 Lac du Flambeau, WI 54538	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin	Melinda Young, Tribal Historic Preservation Officer	(715) 588- 2139		Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin P.O. Box 67 Lac du Flambeau, WI 54538	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Lac Vieux Desert Band of Lake Superior Chippewa Indians	Alan Shively, Chairman	(906) 358- 0137	jim.williams@lvdtribal.c om	Lac Vieux Desert Band of Lake Superior Chippewa Indians P.O. Box 249 Watersmeet, MI 49969	12/11/14 via letter	12/11/14 via USPS certified mail	



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Lac Vieux Desert Band of Lake Superior Chippewa Indians	Giiwegiizhigook way Martin, Tribal Historic Preservation Officer	(906) 358- 4577	gmartin@lvdtribal.com	Lac Vieux Desert Band of Lake Superior Chippewa Indians P.O. Box 249 Watersmeet, MI 49969	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Leech Lake Band of the Minnesota Chippewa Tribe	Carrie Jones, Chairwoman	(218) 335- 8200		Leech Lake Band of the Minnesota Chippewa Tribe 115 6th Street NW Suite E Cass Lake, MN 56633	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Leech Lake Band of the Minnesota Chippewa Tribe	Gina Lemon, Tribal Historic Preservation Officer			Leech Lake Band of the Minnesota Chippewa Tribe 115 6th Street NW Suite E Cass Lake, MN 56633	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Match-e-be-nash- she-wish Band of Potawatomi Indians of Michigan	David Sprague, Chairman	(616) 681- 8830	dsprague@mbpi.org	Match-e-be-nash-she-wish Band of Potawatomi Indians of Michigan P.O. Box 218 Dorr, MI 49323	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Miami Tribe of Oklahoma	George Strack, Tribal Historic Preservation Officer	(918) 542- 1442	gstrack@miamination.co m	Miami Tribe of Oklahoma P.O. Box 1326 Miami, OK 74355	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Mille Lacs Band of the Minnesota Chippewa Tribe	Melanie Benjamin, Chief Executive	(320) 532- 4181		Mille Lacs Band of the Minnesota Chippewa Tribe 43408 Oodena Drive Onamia, MN 56359	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Mille Lacs Band of the Minnesota Chippewa Tribe	Natalie Weyaus, Tribal Historic Preservation Officer	(320) 532- 7450	Mille Lacs Band of the Minnesota Chippewa Tribe 43408 Oodena Drive Onamia, MN 56359		12/11/14 via letter	12/11/14 via USPS certified mail	



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Minnesota Chippewa Tribe	Norman Deschampe, President	(218) 335- 8581		Minnesota Chippewa Tribe P.O. Box 217 Cass Lake, MN 56633	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Miami Tribe of Oklahoma	Douglas Lankford, Chief	(918) 542- 1445	info@miamination.com	Miami Tribe of Oklahoma P.O. Box 1326 Miami, OK 74355	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Nottawaseppi Huron Band of the Potawatomi	Homer Mandoka, Chairman	(269) 729- 5151	hmandoka@nhbpi.com	Nottawaseppi Huron Band of the Potawatomi 2221 1 1/2 Mile Road Fulton, MI 49052	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Nottawaseppi Huron Band of the Potawatomi	Jeff Chivis, Tribal Historic Preservation Officer	(269) 704- 8416	jchivis@nhbpi.com	Nottawaseppi Huron Band of the Potawatomi 1485 Mno-Bmadzewen Way Fulton, MI 49052	12/16/14 via letter	12/16/14 via USPS certified mail	12/4/14 via email and letter
Tribe	Ottawa Tribe of Oklahoma	Ethel Cook, Chief	(918) 542- 6162	adawetribe@sbcglobal.n et	Ottawa Tribe of Oklahoma P.O. Box 110 Miami, OK 74354	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Ottawa Tribe of Oklahoma	Rhonda Dixon, Tribal Historic Preservation Officer	(918) 542- 6162	dixon_rhonda@sbcgloba l.net	Ottawa Tribe of Oklahoma P.O. Box 110 Miami, OK 74354	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Peoria Tribe of Indians of Oklahoma	John P. Froman, Chief	918-540- 4155	jfroman@peoriatribe.co m	Peoria Tribe of Indians of Oklahoma P.O. Box 1527 Miami, OK 74355	10/28/14 via letter	10/28/14 via USPS certified mail	11/7/14 via letter
Tribe	Pokagon Band of Potawatomi Indians	Matthew J. Wesaw, Chairman	(517) 719- 5579	matthew.wesaw@pokag onband-nsn.gov	Pokagon Band of Potawatomi Indians P.O. Box 110 Dowagiac, MI	10/28/14 via letter	10/28/14 via USPS certified mail	



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Pokagon Band of Potawatomi Indians	Mike Zimmerman, Tribal Historic Preservation Officer	(269) 782- 9602	michael.zimmerman@p okagonband-nsn.gov	Pokagon Band of Potawatomi Indians P.O. Box 110 Dowagiac, MI	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Prairie Band of Potawatomi Nation	Steve Ortiz, Chairman	(785) 966- 4000		Prairie Band of Potawatomi Nation 16277 Q Road Mayetta, KS 66509	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Quechan Tribe of the Fort Yuma Indian Reservation	Mike Jackson, President	(760) 572- 0213		Quechan Tribe of the Fort Yuma Indian Reservation P.O. Box 1899 Yuma, AZ 85366	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin	Rose Gurnoe- Soulier, Chairperson	(715) 779- 3700	webmaster@redcliff- nsn.gov	Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin 88385 Pike Road, Hwy 13 Bayfield, WI 54814	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin	Larry Balber, Tribal Historic Preservation Officer	(715) 779- 3650		Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin 88385 Pike Road, Hwy 13 Bayfield, WI 54814	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Red Lake Band of Chippewa Indians	Floyd Jourdain, Chairperson	(218) 679- 3341		Red Lake Band of Chippewa Indians P.O. Box 550 Redlake, MN 56671	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Saginaw Chippewa Indian Tribe of Michigan	Dennis V. Kequom, Chief	(989) 775- 4000	dkequom@sagchip.org	Saginaw Chippewa Indian Tribe of Michigan 7070 East Broadway Road Mt. Pleasant, MI 48858	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Saginaw Chippewa Indian Tribe of Michigan	William Johnson, Curator	(989) 775- 4730	wjohnson@sagchip.org	Ziibwing Center of Anishinabe Culture and Lifeways 6650 East Broadway Road Mt. Pleasant, MI 48858	12/11/14 via letter	12/11/14 via USPS certified mail	



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Sault Ste. Marie Tribe of Chippewa Indians of Michigan	Aaron Payment, Chairperson	(906) 635- 6050	aaronpayment@saulttri be.net	Sault Ste. Marie Tribe of Chippewa Indians of Michigan 523 Ashmun Street Sault Ste. Marie, MI 49783	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Seneca-Cayuga Tribe of Oklahoma	LeRoy Howard, Chief	(918) 542- 6609, ext 19		Seneca-Cayuga Tribe of Oklahoma 23701 South 655 Road Grove, OK 74344	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Seneca-Cayuga Tribe of Oklahoma	Paul Barton, Tribal Historic Preservation Officer	(918) 787- 7979	pbarton@sctribe.com	Seneca-Cayuga Tribe of Oklahoma 23701 South 655 Road Grove, OK 74344	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Seneca Nation of Indians	Beverly Cook, President			Seneca Nation of Indians 90 O:hi'yoh Way Salamanca, NY 14779	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Seneca Nation of Indians	Melissa Bach, Tribal Historic Preservation Officer	(716) 945- 1790, ext 3580	melissa.bach@sni.org	Seneca Nation of Indians 90 O:hi'yoh Way Salamanca, NY 14779	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Shawnee Tribe	Ron Sparkman, Chairperson	(918) 542- 2441	ronded@gmail.com	Shawnee Tribe P.O. Box 189 South Highway 69A, Miami, OK 74355	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Shawnee Tribe	Kim Jumpers, Tribal Historic Preservation Officer	(918) 542- 2441	kim.jumper@shawnee- tribe.com	Shawnee Tribe P.O. Box 189 South Highway 69A, Miami, OK 74355	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Sokaogon Chippewa Community	Garland McGeshick, Chairman	(715) 478- 7504	gaye.graham@scc- nsn.gov	Sokaogon Chippewa Community 3051 Sand Lake Road Crandon, WI 54520	12/11/14 via letter	12/11/14 via USPS certified mail	



Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	St. Croix Chippewa Indians of Wisconsin	Stuart Bearheart, Chairman	(715) 349- 2195	annb@stcroixtribalcente r.com	St. Croix Chippewa Indians of Wisconsin 24663 Angeline Avenue Webster, WI 54893	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Tonawanda Band of Seneca Indians of New York	Darwin Hill, Chief	(716) 542- 4244	tonseneca@aol.com	Tonawanda Band of Seneca Indians of New York P.O. Box 795 7027 Meadville Road Basom, NY 14013	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Turtle Mountain Band of Chippewa Indians of North Dakota	Richard McCloud, Chairman	(701) 477- 2600		Turtle Mountain Band of Chippewa Indians of North Dakota P.O. Box 900 Belcourt, ND 58316	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	White Earth Band of Minnesota Chippewa Tribe	Erma Vizenor, Chairman	(218) 983- 3285	desiraes@whiteearth.co m	White Earth Band of Minnesota Chippewa Tribe P.O. Box 418 White Earth, MN 56591	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	White Earth Band of Minnesota Chippewa Tribe	Renee Lampi, Tribal Historic Preservation Officer	(218) 983- 3263		White Earth Band of Minnesota Chippewa Tribe P.O. Box 418 White Earth, MN 56591	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Wyandotte Nation	Billy Friend, Chief	(918) 678- 2297		Wyandotte Nation 64700 E. Highway 60 Wyandotte, OK 74370	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Wyandotte Nation	Sherri Clemons, Tribal Historic Preservation Officer	(918) 678- 2297, ext 244	sclemons@wyandotte.o rg	Wyandotte Nation 64700 E. Highway 60 Wyandotte, OK 74370	10/28/14 via letter	10/28/14 via USPS certified mail	



NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts Response Initial Contact Office Date/Type Agency **Contact Name Contact Email Contact Address** Contact **Date Sent** Phone Date LOCAL Washtenaw County Office of Melissa Milton-10/27/14 Community & Economic **Washtenaw County** Pung, (734) 222miltonpungm@ewashte 10/27/14 via USPS Development CLG Historic Historic 6878 via letter certified naw.org 110 N. Fourth Ave. Preservation Preservation mail Planner Ann Arbor, MI 48107 Muskingum Watershed **Conservancy District** (330) 556-Boris E. Slogar, 1319 Third St. NW Muskingum 4816 MWCD Watershed P.E., M.P.M. TBD PO Box 349 (866) 363-Conservancy District **Chief Engineer** New Philadelphia, OH 44663-8500 0349



1C2 – Agency Correspondence

FEDERAL

Agency Correspondence



Ms. Donna Wieting Director, Office of Protected Resources National Marine Fisheries Service 1315 East-West Highway Silver Spring, MD 20910

Subject: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Project NMFS, Office of Protected Resources

Dear Ms. Wieting,

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses through eleven (11) counties in Ohio; including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton and three (3) counties in Michigan: Lenawee, Monroe, and Washtenaw. NEXUS is currently investigating a study corridor as generally depicted on attached Figure 1.

NEXUS intends to inform and consult with public and agency stakeholders early in the development process and has held landowner informational meetings in Ohio in October of 2014 and has scheduled meetings in Michigan for early November.

As depicted on Figure 1, the current pipeline route is proposed in the vicinity of Lake Erie and Lake Saint Clair. We are interested in obtaining from the National Marine Fisheries Service any comments or concerns you may have on the proposed Project during this early stage of development so that we can take them into consideration as we proceed with the regulatory permitting process.

NEXUS intends to use the Federal Energy Regulatory Commission's ("FERC") National Environmental Policy Act pre-filing process ("Pre-filing Process"). The Pre-filing Process provides all stakeholders (including federal, state and local agencies, landowners, and local citizens) the opportunity for early cooperation and involvement in evaluating a project prior to filing a formal application with the FERC. The purpose of the Pre-filing Process is to identify,

evaluate and attempt to resolve issues and concerns prior to the filing of formal project applications. This process will require multiple agency meetings, public meetings and documented continuing efforts to identify and address concerns under the direction of the FERC. The public will also have the opportunity to comment on the NEXUS draft environmental resource reports prior to filing the formal FERC application.

By initiating this early agency consultation and involvement, NEXUS intends to assist those agencies that have coordination obligations with the FERC described in its recent order No. 687 concerning the coordination and timing of federally delegated state authorizations in order to comply with the Energy Policy Act of 2005.

Following the Pre-filing Process, NEXUS will file a formal application for review and approval from the FERC, and numerous other agencies. The permit proceedings, which will be conducted by these agencies, will provide additional opportunity for public input and involvement. The FERC application for NEXUS is currently planned to be filed in the last quarter of 2015. All other agency applications will be filed in a similar time frame. NEXUS currently plans that the proposed Project facilities will be fully operational by November 2017. Additional information regarding the FERC Pre-filing Process and FERC approval process can be found at www.ferc.gov.

Additional information such as a GIS SHP files of the Project study corridor to aid in your review of the Project can be provided upon your request.

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

Muhael Lychwaln

cc: Matt Barczyk, Spectra Energy Partners, LP

Kathleen Miller, TRC









Figure 1 - Project Overview Map NEXUS Pipeline Project





Mr. Mark Weekly Deputy Regional Director, Midwest Region National Park Service 601 Riverfront Drive Omaha, NE 68102-4226

Subject: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Project

NPS, Midwest Region

Mr. Weekly,

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses through eleven (11) counties in Ohio; including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton and three (3) counties in Michigan: Lenawee, Monroe, and Washtenaw. NEXUS is currently investigating a study corridor as generally depicted on attached Figure 1.

NEXUS intends to inform and consult with public and agency stakeholders early in the development process and has held landowner informational meetings in Ohio in October of 2014 and has scheduled meetings in Michigan for early November.

As depicted on Figure 1, the current pipeline route is proposed approximate 12.75 miles south of the Cuyahoga National Park in Summit County, Ohio. We are interested in obtaining from the National Park Service any comments or concerns you may have on the proposed Project during this early stage of development so that we can take them into consideration as we proceed with the regulatory permitting process.

NEXUS intends to use the Federal Energy Regulatory Commission's ("FERC") National Environmental Policy Act pre-filing process ("Pre-filing Process"). The Pre-filing Process provides all stakeholders (including federal, state and local agencies, landowners, and local citizens) the opportunity for early cooperation and involvement in evaluating a project prior to filing a formal application with the FERC. The purpose of the Pre-filing Process is to identify,

National Park Service October 30, 2014 Page 2 of 2

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Sincerely,

Michael Lychwala, TRC

Muhael Lychwaln

cc: Matt Barczyk, Spectra Energy Partners, LP

Kathleen Miller, TRC









Figure 1 - Project Overview Map NEXUS Pipeline Project





Mr. Mark Scalabrino
Ohio Regulatory Chief
U.S. Army Corps of Engineers
Buffalo District Office
1776 Niagara Street
Buffalo, New York 14207

Subject: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Project

USACE Buffalo District

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses through eleven (11) counties in Ohio; including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton and three (3) counties in Michigan: Lenawee, Monroe, and Washtenaw. NEXUS is currently investigating a study corridor as generally depicted on attached Figure 1. The following table summarizes the counties crossed in each U.S. Army Corps of Engineers (USACE) District along with estimated crossing distances.

NEXUS USACE Districts Crossed					
USACE District	State	Miles	Counties		
Huntington	ОН	59	Columbiana, Medina, Stark, Summit, Wayne, OH		
Pittsburgh	ОН	9	Columbiana, Stark, OH		
Buffalo	ОН	131	Erie, Fulton, Lorain, Lucas, Medina, Sandusky, Wood, OH		
Detroit	МІ	46	Lenawee, Monroe, Washtenaw, MI		
NEXUS total miles	•	245			

NEXUS intends to inform and consult with public and agency stakeholders early in the development process and has held landowner informational meetings in Ohio in October of 2014 and has scheduled meetings in Michigan for early November. NEXUS intends to use the Federal Energy Regulatory Commission's ("FERC") National Environmental Policy Act pre-filing process ("Pre-filing Process"). The Pre-filing Process provides all stakeholders (including federal, state and local agencies, landowners, and local citizens) the opportunity for early cooperation and involvement in evaluating a project prior to filing a formal application with the

U.S. Army Corps of Engineers October 30, 2014 Page 2 of 2

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To help facilitate the consultation process, TRC will be requesting a meeting to discuss the general scope of the proposed Project and the consultation process with the USACE moving forward. This meeting will be the first of many opportunities to participate in the development and review of the Project. We will be contacting you soon and hope to schedule a meeting at your earliest convenience. Additional information such as a GIS SHP files of the Project study corridor to aid in your review of the Project can also be provided at that time. Because the Project also traverses jurisdictional boundaries of the Detroit, Huntington, and Pittsburg USACE Districts, TRC will be contacting those Districts to initiate communications.

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

Muhael Lychwaln

cc: Matt Barczyk, Spectra Energy Partners, LP

Kathleen Miller, TRC









Figure 1 - Project Overview Map NEXUS Pipeline Project





Mr. Stanley F. Cowton, Jr.
Regulatory Project Manager
U.S. Army Corps of Engineers, Regulatory Office
477 Michigan Avenue, 6th Floor
Detroit, Michigan 48226-2550

Subject: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Project

USACE Detroit District

Dear Mr. Cowton,

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses through eleven (11) counties in Ohio; including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton and three (3) counties in Michigan: Lenawee, Monroe, and Washtenaw. NEXUS is currently investigating a study corridor as generally depicted on attached Figure 1. The following table summarizes the counties crossed in each U.S. Army Corps of Engineers (USACE) District along with estimated crossing distances.

NEXUS USACE Districts Crossed					
USACE District	State	Miles	Counties		
Huntington	ОН	59	Columbiana, Medina, Stark, Summit, Wayne, OH		
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Detroit	МІ	46	Lenawee, Monroe, Washtenaw, MI		
NEXUS total miles		245			

NEXUS intends to inform and consult with public and agency stakeholders early in the development process and has held landowner informational meetings in Ohio in October of 2014 and has scheduled meetings in Michigan for early November. NEXUS intends to use the Federal Energy Regulatory Commission's ("FERC") National Environmental Policy Act pre-filing process ("Pre-filing Process"). The Pre-filing Process provides all stakeholders (including federal, state and local agencies, landowners, and local citizens) the opportunity for early

U.S. Army Corps of Engineers October 30, 2014 Page 2 of 2

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To help facilitate the consultation process, TRC will be requesting a meeting to discuss the general scope of the proposed Project and the consultation process with the USACE moving forward. This meeting will be the first of many opportunities to participate in the development and review of the Project. We will be contacting you soon and hope to schedule a meeting at your earliest convenience. Additional information such as a GIS SHP files of the Project study corridor to aid in your review of the Project can also be provided at that time. Because the Project also traverses jurisdictional boundaries of the Buffalo, Huntington, and Pittsburg USACE Districts, TRC will be contacting those Districts to initiate communications.

Please feel free to contact me if you have any questions, or if you require additional information, by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

cc: Matt Barczyk, Spectra Energy Partners, LP

Kathleen Miller, TRC









Figure 1 - Project Overview Map NEXUS Pipeline Project





Mr. Mark Taylor Chief, Energy Resources Huntington District U.S. Army Corps of Engineers Regulatory Division 502 8th Street Huntington, West Virginia 25701

Subject: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Project

USACE, Huntington District

Dear Mr. Taylor,

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses through eleven (11) counties in Ohio; including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton and three (3) counties in Michigan: Lenawee, Monroe, and Washtenaw. NEXUS is currently investigating a study corridor as generally depicted on attached Figure 1. The following table summarizes the counties crossed in each U.S. Army Corps of Engineers (USACE) District along with estimated crossing distances.

NEXUS USACE Districts Crossed					
USACE District State Miles Counties					
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Pittsburgh	ОН	9	Columbiana, Stark, OH		
Buffalo	ОН	131	Erie, Fulton, Lorain, Lucas, Medina, Sandusky, Wood, OH		
Detroit	MI	46	Lenawee, Monroe, Washtenaw, MI		
NEXUS total miles		245			

NEXUS intends to inform and consult with public and agency stakeholders early in the development process and has held landowner informational meetings in Ohio in October of 2014 and has scheduled meetings in Michigan for early November. NEXUS intends to use the Federal Energy Regulatory Commission's ("FERC") National Environmental Policy Act pre-filing process ("Pre-filing Process"). The Pre-filing Process provides all stakeholders (including

U.S. Army Corps of Engineers October 30, 2014 Page 2 of 2

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By initiating this early agency consultation and involvement, NEXUS intends to assist those agencies that have coordination obligations with the FERC described in its recent order No. 687 concerning the coordination and timing of federally delegated state authorizations in order to comply with the Energy Policy Act of 2005.

Following the Pre-filing Process, NEXUS will file a formal application for review and approval from the FERC, and numerous other agencies. The permit proceedings, which will be conducted by these agencies, will provide additional opportunity for public input and involvement. The FERC application is currently planned to be filed in the last quarter of 2015. All other agency applications will be filed in a similar time frame. NEXUS currently plans that the proposed Project facilities will be fully operational by November 2017. Additional information regarding the FERC Pre-filing Process and FERC approval process can be found at www.ferc.gov.

To help facilitate the consultation process, TRC will be requesting a meeting to discuss the general scope of the proposed Project and the consultation process with the USACE moving forward. This meeting will be the first of many opportunities to participate in the development and review of the Project. We will be contacting you soon and hope to schedule a meeting at your earliest convenience. Additional information such as a GIS SHP files of the Project study corridor to aid in your review of the Project can also be provided at that time. Because the Project also traverses jurisdictional boundaries of the Detroit, Buffalo, and Pittsburg USACE Districts, TRC we will be contacting those Districts to initiate communications.

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

Muhael Lychwaln

cc: Matt Barczyk, Spectra Energy Partners, LP Kathleen Miller, TRC









Figure 1 - Project Overview Map NEXUS Pipeline Project





Mr. Matt Mason
U.S. Army Corps of Engineers, Pittsburgh District
William S. Moorhead Federal Building
1000 Liberty Avenue
Regulatory Branch, Suite 2200
Pittsburgh, Pennsylvania 15222

Subject: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Project

USACE Pittsburgh District

Dear Mr. Mason,

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses through eleven (11) counties in Ohio; including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton and three (3) counties in Michigan: Lenawee, Monroe, and Washtenaw. NEXUS is currently investigating a study corridor as generally depicted on attached Figure 1. The following table summarizes the counties crossed in each U.S. Army Corps of Engineers (USACE) District along with estimated crossing distances.

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USACE District	State	Miles	Counties			
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Detroit	MI	46	Lenawee, Monroe, Washtenaw, MI			
NEXUS total miles		245				

NEXUS intends to inform and consult with public and agency stakeholders early in the development process and has held landowner informational meetings in Ohio in October of 2014 and has scheduled meetings in Michigan for early November. NEXUS intends to use the Federal Energy Regulatory Commission's ("FERC") National Environmental Policy Act pre-filing process ("Pre-filing Process"). The Pre-filing Process provides all stakeholders (including

U.S. Army Corps of Engineers October 30, 2014 Page 2 of 2

federal, state and local agencies, landowners, and local citizens) the opportunity for early cooperation and involvement in evaluating a project prior to filing a formal application with the FERC. The purpose of the Pre-filing Process is to identify, evaluate and attempt to resolve issues and concerns prior to the filing of formal project applications. This process will require multiple agency meetings, public meetings and documented continuing efforts to identify and address concerns under the direction of the FERC. The public will also have the opportunity to comment on the NEXUS draft environmental resource reports prior to filing the formal FERC application.

By initiating this early agency consultation and involvement, NEXUS intends to assist those agencies that have coordination obligations with the FERC described in its recent order No. 687 concerning the coordination and timing of federally delegated state authorizations in order to comply with the Energy Policy Act of 2005.

Following the Pre-filing Process, NEXUS will file a formal application for review and approval from the FERC, and numerous other agencies. The permit proceedings, which will be conducted by these agencies, will provide additional opportunity for public input and involvement. The FERC application is currently planned to be filed in the last quarter of 2015. All other agency applications will be filed in a similar time frame. NEXUS currently plans that the proposed Project facilities will be fully operational by November 2017. Additional information regarding the FERC Pre-filing Process and FERC approval process can be found at www.ferc.gov.

To help facilitate the consultation process, TRC will be requesting a meeting to discuss the general scope of the proposed Project and the consultation process with the USACE moving forward. This meeting will be the first of many opportunities to participate in the development and review of the Project. We will be contacting you soon and hope to schedule a meeting at your earliest convenience. Additional information such as a GIS SHP files of the Project study corridor to aid in your review of the Project can also be provided at that time. Because the Project also traverses jurisdictional boundaries of the Detroit, Huntington, and Buffalo USACE Districts, TRC will be contacting those Districts to initiate communications.

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com Sincerely,

Michael Lychwala, TRC

Nutrael Lychwalu

cc: Matt Barczyk, Spectra Energy Partners, LP

Kathleen Miller, TRC









Figure 1 - Project Overview Map NEXUS Pipeline Project





DEPARTMENT OF THE ARMY

BUFFALO DISTRICT, CORPS OF ENGINEERS 1776 NIAGARA STREET BUFFALO, NEW YORK 14207-3199

C1 Y J909

December 30, 2014

Regulatory Branch

SUBJECT: Nexus Gas Transmission, LRB-2014-1329.

Mr. Michael Lychwala TRC 6 Ashley Drive 1st Floor Scatborough, ME 04074

Dear Mr. Lychwala:

This is in reference to your October 30, 2014 letter to the United States (U.S.) Army Corps of Engineers (Corps) concerning NEXUS Gas Transmission, LLC's joint venture with Spectra Energy and DTE Energy Co. to construct a 245 mile 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. Your proposed project will be located within multiple Corps districts with regulatory responsibilities in Ohio and Michigan. We understand that you have contacted those districts.

Section 404 of the Clean Water Act (CWA) requires that a Department of the Army permit be obtained prior to the discharge of dredged and/or fill material into waters of the U.S., including wetlands. Section 10 of the Rivers and Harbors Act (RHA) of 1899 requires that a Department of the Army permit be obtained for any work in, on, over or under a navigable water.

Based on the project description, the Corps anticipates the proposed project will require authorization under Section 404 of the CWA and/or Section 10 of the RHA. Given that we will likely have regulatory authority over a portion of the proposed work, the Corps welcomes your request for a pre-application meeting.

As stated, the proposed project will cross within multiple Corps districts that are located within the Great Lakes and Ohio River Division and include the Corps Buffalo, Detroit, Huntington and Pittsburgh Districts. In the State of Michigan, the Michigan Department of Environmental Quality (MDEQ) will be the responsible permitting agency having assumed the Section 404 Clean Water Act program from the Corps. Since it appears that the majority of the proposed project is located within the Buffalo District, I have designated Mr. Shawn Blohm as the Corps' point-of-contact for this project. Mr. Blohm can be reached by phone at (330)-923-8214, or at the following email address, shawn a high m@asgcc.army.mil.

The Buffulo District will facilitate the coordination with other Corps districts to ensure

consistency, where possible, on permit requirements, the permit process, and permit decision timeframes. However, each Corp District will retain the responsibility for permitting, compliance and enforcement within their district regulatory boundary.

Additional members of the Corps review team will be:

Ms. Gina Nathan, Detroit District, (313) 226-5383, Processing No. LRE-2014-00895 Ms. Audrey Richter, Huntington District, (304) 399-5257, Processing No. LRH-2014-1098 Mr. Tyler Bintrim, Pittsburgh District, (412) 395-7115, Processing No. LRP-2014-1134

We look forward to meeting with TRC to further discuss this proposed project. If you have any questions, please contact Mr. Blohm at (330) 923-8214.

Sincerely,

for Diane C. Kozlowski Chief, Regulatory Branch

Œ:

Mai Stratte Chiffy (ELIC)

Malden Kank (FIRE)

Ms. Citizer Matthew CELECH

M: Satifiza ŒL39.



Mr. Kenneth A. Westlake, Chief NEPA Implementation Section U.S. Environmental Protection Agency Region 5 77 West Jackson Boulevard Chicago, Illinois 60604-3590

Subject: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Project

EPA, Region 5

Dear Mr. Weekly,

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses through eleven (11) counties in Ohio; including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton and three (3) counties in Michigan: Lenawee, Monroe, and Washtenaw. NEXUS is currently investigating a study corridor as generally depicted on attached Figure 1.

NEXUS intends to inform and consult with public and agency stakeholders early in the development process and has held landowner informational meetings in Ohio in October of 2014 and has scheduled meetings in Michigan for early November.

We are interested in obtaining from the Environmental Protection Agency any comments or concerns you may have on the proposed Project during this early stage of development so that we can take them into consideration as we proceed with development of the Project.

NEXUS intends to use the Federal Energy Regulatory Commission's ("FERC") National Environmental Policy Act pre-filing process ("Pre-filing Process"). The Pre-filing Process provides all stakeholders (including federal, state and local agencies, landowners, and local citizens) the opportunity for early cooperation and involvement in evaluating a project prior to filing a formal application with the FERC. The purpose of the Pre-filing Process is to identify, evaluate and attempt to resolve issues and concerns prior to the filing of formal project

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By initiating this early agency consultation and involvement, NEXUS intends to assist those agencies that have coordination obligations with the FERC described in its recent order No. 687 concerning the coordination and timing of federally delegated state authorizations in order to comply with the Energy Policy Act of 2005.

Following the Pre-filing Process, NEXUS will file a formal application for review and approval from the FERC, and numerous other agencies. The permit proceedings, which will be conducted by these agencies, will provide additional opportunity for public input and involvement. The FERC application for NEXUS is currently planned to be filed in the last quarter of 2015. All other agency applications will be filed in a similar time frame. NEXUS currently plans that the proposed Project facilities will be fully operational by November 2017. Additional information regarding the FERC Pre-filing Process and FERC approval process can be found at www.ferc.gov.

Additional information such as a GIS SHP files of the Project study corridor to aid in your review of the Project can be provided upon your request.

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

Muhael Lychwaln

cc: Matt Barczyk, Spectra Energy Partners, LP

Kathleen Miller, TRC









Figure 1 - Project Overview Map NEXUS Pipeline Project







Telephone Contact Log

NEXUS Gas Transmission, LLC NEXUS Gas Transmission Project

DATE: November 6, 2014

THIS CONVERSATION TOOK PLACE BETWEEN: TRC and Virginia Laszewski, USEPA NEPA Coordinator									
Agency/Organi	zation/Individual Contacted	TRC Representative							
Name / Title:	Virginia Laszewski	Name / Title:	Mike Lychwala, NEXUS Project Manager						
Agency/ Organization:	USEPA NEPA Coordinator	Office Location:	TRC Scarborough Maine Office						
Address:	laszewski.virginia@epa.gov	Subject of Call:	NEXUS Gas Transmission Receipt of Initial Introduction Letter						
Phone:	312-886-7501	CC:	Kathleen Redmond-Miller, TRC Matt Barczyk, Spectra						

THE FOLLOWING WAS DISCUSSED:

Ms. Laszewski called to confirm receipt of the NEXUS project introductory letter sent on October 31, 2014 and had some general questions about the project and its planned regulatory compliance schedule.

Mr. Lychwala explained the project would be Federal Energy Regulatory Commission (FERC) jurisdictional and that NEXUS intends to participate in FERC's pre-filing process that will be initiated in December 2014 through the filing of a "pre-filing" request. He also explained the anticipated filing schedule for NEXUS' 7 c Application to FERC would be in November of 2015. Ms. Laszewski had some general questions about the project and the schedule and thanked TRC for the early contact.



September 22, 2014

Burr Fisher U.S. Fish and Wildlife Service East Lansing Field Office 2651 Coolidge Road East Lansing, MI 48823

Subject: NEXUS Gas Transmission, LLC NEXUS Gas Transmission Project

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses approximately 46-miles through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. NEXUS is investigating a study corridor as generally depicted on attached Figure 1.

Initial review of the potential pipeline corridor indicated that rare, threatened and/or endangered species may be present based on published county lists. Table 1 is attached and lists the rare, threatened and endangered species that have been previously identified in the counties traversed by the pipeline corridor. On behalf of NEXUS, TRC is requesting the assistance of the U.S. Fish and Wildlife Service ("USFWS") to determine if any of these species are known to occur within the one-mile wide area under investigation. This information will assist us in determining a route to potentially avoid and minimize disruption to sensitive habitat and determine potential seasonal or species specific surveys that maybe required during permitting of the Project. Any further comments or survey guidance regarding rare, threatened, endangered or other important species is also welcomed.

To help facilitate the consultation process, TRC requests a meeting to discuss the general scope of the proposed Project and the consultation process with the USFWS moving forward. This meeting will be the first of many opportunities to participate in the development and review of these projects. We will be contacting you soon and hope to schedule a meeting within the next month. Additional information such as a GIS SHP files of the Project study corridor to aid in the review of the Project can also be provided at that time.

U.S. Fish and Wildlife Service September 22, 2014 Page 2 of 3

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

Muhael Lychwaln

cc: Matt Barczyk, Spectra Energy Partners, LP Angela Gardner, TRC



Federally Listed Species Potentially Occurring Within/Near Nexus Project in Michigan									
Common Name	Scientific Name	Status	County Traversed By Project With Species Occurrence						
Indiana bat	Myotis sodalis	Endangered	All Counties						
Northern Long-eared Bat	Myotis septentrionalis	Proposed Endangered	All Counties						
Eastern massasauga	Sistrurus catenatus	Candidate	Lenawee, Washtenaw, Wayne						
Poweshiek skipperling	Oarisma powershiek	Proposed Endangered	Lenawee, Washtenaw						
Rayed bean	Villosa fabalis	Endangered	Lenawee, Monroe, Wayne						
Red Knot	Calidris canutus rufa	Proposed Threatened	Monroe, Wayne						
Karner blue butterfly	Lycaeides melissa samuelis	Endangered	Monroe						
Northern riffleshell	Epioblasma torulosa rangiana	Endangered	Monroe, Wayne						
Snuffbox	Epioblasma triquetra	Endangered	Monroe, Washtenaw						
Eastern prairie fringe orchid	Platanthera leucophae	Threatened	Monroe, Washtenaw, Wayne						
Mitchell's satyr butterfly	Neonympha mitchellii mitchellii	Endangered	Washtenaw						









Figure 1 - Project Overview Map NEXUS Pipeline Project



Gardner, Angela

From: Mensing, Chris <chris_mensing@fws.gov>
Sent: Tuesday, October 14, 2014 3:52 PM

To: Gardner, Angela

Subject: Schedule meeting with USFWS - East Lansing Field Office, MI

Angela,

Thanks for talking with me this afternoon. As we discussed on the phone, we would gladly meet with you and other people involved with the NEXUS pipeline. Could you please send me some dates that would be most convenient for you? I'll forward it on to the appropriate people here to gauge their availability. In the meantime, we will provide a course review of the proposed route and let you know if any areas would require extra attention or additional surveys.

In the meantime, please feel free to contact me if you have any questions.

Sincerely,

Chris

Chris Mensing, Fish and Wildlife Biologist U.S. Fish and Wildlife Service East Lansing Field Office 2651 Coolidge Road, Suite 101 East Lansing, MI 48823 517-351-8316 (office) 517-351-1443 (fax) chris_mensing@fws.gov



United States Department of the Interior

FISH AND WILDLIFF SERVICE East Lansing Field Office (ES) 2651 Coolidge Road, Suite 101 Tast Lansing, Michigan, 48823-6316

December 3, 2014

Michael Lychwala TRC Solutions 6 Ashley Drive, 1st Floor Scarborough, ME 04074

RE: NEXUS Gas Transmissions, LLC, NEXUS Gas Transmission Project

Dear Mr. Lychwala:

We are responding to your letter dated September 22, 2014 regarding plans to construct a natural gas pipeline through four counties in Michigan. The U.S. Fish and Wildlife Service (Service) provides the following comments on the proposed project under the authority of the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401; 16 U.S.C. 661 et seq.) and the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). The action is primarily for the transportation of natural gas, with the pipeline going through Lenawee, Monroe, Washtenaw and Wayne Counties, Michigan.

Federally listed Species in Michigan

Rayed Boan Mossel

The rayed bean mossel (Villosa fabalts) is known to occur in the Floron River and River Raisin, with records higher in the watershed. The rayed bean is a small freshwater mussel about one and one-half-inches long as an adult. The shell can be brown, green or yellow-greenish in coloration with wavy, dark-green lines. Sand or gravels make up the typical substrates this species, often located in headwater creeks, but also in larger rivers. The host for this species of mussel remains unknown.

Northern Riffleshell Mussel

The northern reffleshell massel (Eptablasma tornlosa rangiana) has a historical record for Macon Creek, a tributary to the River Raisin, as well as records of occurrence in the Haron River. This species is considered a moderately sized massel reaching two inches and is sexually dimorphic. The shell of the northern riffleshell is ovate to quadrate in shape and becomes thicker towards the anterior. The color of the shell can be light greenish-yellow to olive green, with narrow, dark, closely-spaced rays. The areas that northern riffleshells are typically found in are parts of large streams or rivers with well-oxygenated waters, therefore, swift moving currents and riffle habitat. Substrates are usually sands and coarse gravels. Several known host fish include banded darter, bluebreast darter, bunded sculpin and introduced German brown trout.

Snuffbox Mussel

In Michigan, smifthox mussels (Eptoblasma triquetra) are known to occur in the Huran River. The snuffbox mussel is a thick shelled and triangular shaped species that is about two inches long, with males slightly larger than feanales (sexually discorphic). Coloration is light, yellowish with numerous dark-green mys that are broken intermediately. They inhabit small to mediate sized rivers but can be found in the larger rivers in Michigan. The snuffbox mussels are associated with sand, gravel and cobble substrate in fast flowing waters. Surveyors will often encounter the species buried in these substrates. The only known host fish in Michigan is the log-perch.

General Considerations for Freshwater Mussels in Michigan

Adult freshwater mussels are a sessile species, with movements likely over tens of meters over their extended life-span once they have settled in a particular area. They are not likely to colonize an area within a short-time span, and surveys for the species are considered to be softneight for five years. Surveys for freshwater mossels in Michigan should follow either the Ohio Mossel Survey Protocol or the West Virginia Mossel Survey Protocol (both available on the interact), with a Michigan Mossel Survey Protocol currently under development and slated for public release in 2015. Surveys must be conducted by individuals holding both a federal and state permit to work with the federally listed species in the state of Michigan. The use of horizontal directional drilling underneath the rivers can preclude the need for surveys.

Mitchell's Satvr Butterfly

The endangered Mitchell's satyr butterfly (Neonympha mitchelli mitchelli) has a historic occurrence element in Washtenaw County and may have populations within the planned pipeline route. Mitchell's satyr butterfly has a limited distribution, occurring at only 19 sites in southern Michigan and two counties in northern Indiana. One of the historic occurred sites in Michigan occurs in Washtenaw County in the vicinity of your proposed pipeline. Mitchell's satyr is listed as codangered under the Act, which means that it is at risk of becoming extinct in the near future. It is also protected by state law (Part 365 of the Michigan Natural Resources and Environmental Protection Act of 1994). The Act provides protection of listed species by prohibiting activities that may result in "take". The term "take" means to barm, harass, pursue, bunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. The take prohibition also extends to habitat where its destruction may lead to the death or injury of a listed species. Individuals, companies, or local agencies who wish to conduct otherwise lawful actions that might result in the incidental take of a species listed as endangered or threatened must first obtain a permit from the U.S. Fish and Wildlife Service.

The primary threat to Mitchell's satyr is loss and disruption of suitable prairie for habitats. Prairie fens are geologically and biologically unique wetland communities found in southern lower Michigan and northern Indiana. Hydrological processes are critical in maintaining prairie fen vegetative structure. Saturated peat is maintained by a constant flow of groundwater that is rich in calcium and magnesium from surrounding glacial deposits. This groundwater often upwells through the peat and forms broad seeps or local springs, an important component of Mitchell's satyr habitat. Mitchell's satyr butterflies are very sensitive to changes in their habitat. In the past, wetland alterations have resulted in the loss of several known populations of Mitchell's satyr and have reduced available habitat at other sites. Even minor changes to their habitat (e.g., groundwater fluctuations of more than a few inches) can have a significant impact by

altering suitable fen vegetation, including an increase in woody plant species and a reduction in suitable host plants. These changes may also after environmental conditions (e.g., homidity) which could lower servival of overwintering Mitchell's satyr caterpillars.

Poweskick Skinperling

The Poweshiek skipperling (Oartsma poweshtek) is a species of butterfly that has disappeared across much of its range; in fact, only a few populations are known to persist in the Midwest. The Poweshiek butterfly was listed as endangered under the ESA in October 2014. This bunerfly lives in prairie habitats, and in Michigan, they are typically found in select wet prairie or fen habitats. Occurrence records exist for Washtenaw county, and consideration of this species should be incorporated into project pluming.

Korner Blue Betterfly

The endangered Karner blue butterfly (Locarides melissa samuelis) may occur near your proposed project. Karner blue butterflies are a wild hapine (Lapinus perennis) dependent species, associated with the savanon and oak—pine barrens ecosystems, as Well as highway and powertine rights-of-way, gaps within forest stands, young forest stands, and trails.

Indiana Bar

In Michigan, summering Indiana bats roost in trees in riparian, bottomland, and upland forests from approximately April through October. Indiana bats may summer in a wide range of habitats, from highly altered landscapes to intact forests. Roost trees vary considerably in size, but those used by Indiana bat maternity colonies are typically greater than 9 inches dbh. Male Indiana bats have been observed roosting in trees as small as 3 inches dbh.

If tree clearing is a proposed action, then the removal of trees should occur between October 1st and March 31st, during the bats' absence from the area. Removing roost trees while the bats are not present on the landscape would avoid direct take of Indiana bats, and any effects to bats returning after April 1 would be less significant during their summer residency period.

Northern Long cared Bat (PROPOSED FOR LISTING)

During the summer, NLEBs typically roost singly or in colonies underneath back or in cavities, crevices, or hollows of both live and dead trees and/or snags (typically >3 inches (bh). This species has also been found roosting in structures, such as harns and sheds, occasionally (particularly when saitable tree roosts are unavailable). These bats forage for insects in upland and lowland woodlots and tree-lined corridors. During the Winter, NLEBs biberinte predominantly in caves and abundanced mine portals.

If tree clearing is a proposed action, then the removal of trees should occur between October 1" and March 31", during the bats' absence from the area. Removing roost trees while the bats are not present on the landscape would avoid direct take of NLI(B), and any effects to bats returning after April 1 would be less significant during their summer residency period.

The NLLB is currently proposed for bising under the Act. United habitat has not been proposed at the tone. Proposed to section 7(a)(4) of the Act. Federal action agencies most confer with the U.S. Fish and Wildlife Service (Service) if their proposed action is likely to jeopardize the continued existence of a species proposed for bising [50 CFR 402.10(a)].

Species proposed for listing are not afforded protections under the Act; however as soon as a listing becomes effective, the prohibitions against "take" and jeopardizing the species' continued existence apply, regardless of an <u>action's stage of completion</u>. The final listing decision for the NLHD is expected in April 2015.

Eastern Prairie Fringed Orchid

The threatened eastern prairie fringed orchid (Planaulura leurophara) may occur near your proposed project. From music prairie to wetlands such as sedge meadows, the eastern prairie fringed orchid can occur in a variety of habitats. In Michigan, occurrences are typically restricted to sandy or peaty lakeshares or hops, They typically are found in areas with direct sunlight and without woody encouragement. The plants can range from eight inches to forty inches in height, with single, spike inflorescences of white Howers that bloom late June into July. Individual plant blooms will last from seven to ten days. A life history trait of this orchid is that it is a percential herb that grows from a subsurface inber. Likely pollinators are bowk-moths (Family Sphingidae) that will visit floral blooms during the day.

Eastern Massasanga Rattlesnake (CANDIDATE SPECIES)

The eastern massasanga rattlesnake occurs in a variety of wetland systems with adjacent upland habitat. Populations in southern Michigan typically use shallow, sedge or grass-dominated wetlands, while those or northern Michigan prefer lowland conferous forests, such as cedar swamps. This species requires open, sunny areas with scattered shade to assist with thermoregulation, but avoids heavily wooded or closed-eanopy areas.

Eastern massasuugas hibernate singly or in small groups in wetlands, frequently in crayfish burrows, close to the groundwater below the frost line, and individuals tend to return to the same hibernaculum each year. The snakes continue to occupy wetlands in the spring and fall, but some move to drier sites in summer. Females give both in Angost and early September and often utilize upland habitats for bearing their young. The home range size for individual snakes varies widely and is dependent on habitat quality.

Bald and Golden Engle Act

Buld cagles and their nests are protected pursuant to the Buld and Golden Eagle Protection Act (Eagle Act) and Migratory Bird Treaty Act (META). Disturbance of cagles should be monthized and any resulting take most be permitted by the US Fish and Wildlife Service (Service). The National Buld Eagle Management Guidelines offer guidance on minimizing my disturbance that may be caused by project activities near

eagle nests. Our records indicate that hald eagles (Halmeetus leucocephalus) may occur along the proposed pipeline route. Specifically, a nest is located within 1,000 feet of the proposed route in Wayne County, T3S, R8E, NW Section 31. In addition, new next sites and/or breeding territories are established each year that may not be reflected in our current records. Therefore, we recommend that you survey the proposed pipeline route for the presence of bald eagle nests. Generally, we request that construction activities within 660 feet of an eagle next be avoided during the eagle's breeding season. Limited permits to disturb nesting eagles and, in some cases, remove nest trees are available from USFWS. Applicants must meet the permit requirements as specified in the Hagle Act and the resulting disturbance or take must be compatible with the ongoing preservation of the species, as determined by the Service. For more information on eagle protections, permit requirements, and to view the Bald Eagle Management Guidelines, please visit http://www.fws.gov/migratorybrids/baldcagle.htm and http://www.fws.gov/midwest/ MidwestHird/eaglepermits. For technical assistance with assessing your project's impacts on bald eagles or applying for a permit, please contact Chris Mensing at 517-351-8316 or christ mensing@fws.gov.

Migratory Birds

Migratory birds are protected under the Migratory Bird Treaty Act, which implements four treaties that provide for the international protection of migratory birds. The Act prohibits the taking, killing, possession, transportation, import and export of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. The word "take" is defined by regulation as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to pursue, hunt, shoot, wound, kill, trap, capture or collect." 50 CFR 10.12.

Clearing of potential brosh, shrubs, trees, and grasslands during the timing of courtship, breeding, and nesting of Michigan migratory bird species should be restricted from March 15 until August 15.

Conclusion:

We agree with the specific species list provided in Table 1 of your September 22, 2014 letter for initial review of species that may occur within the corridor of your proposed pipeline for Michigan. An exception to the list is the Rufa Red Knot, as our current records and the biology of the species suggest it is not likely to occur in the area of the proposed pipeline. If the project plans change or new information about the project becomes available that indicates listed species, proposed species or critical habitat may be affected in a manner or to the extent not previously considered, you should reinitiate consultation with this office. Because endangered species data change continuously, we recommend you revisit our technical assistance website (http://www.fws.gov/midwest/endangered/section7/s7process/index.htm) if more than six months pass prior to commencement of proposed activities.

We appreciate the opportunity to cooperate with the TRC Solutions and Spectra Energy. Transmission, ILC in conserving endangered species. If you have any questions regarding these comments, please contact Jamie Betiaso, of this office, at (\$17) 351-5293. or james bettaso/@fws.gov.

Sincerely.

Action | Scent Hicks Field Supervisor

1/3/11

cc:

Melanie Burdick, EPA, Chicago, IL. Jeff Gosse, USFWS, RG, Bloomington, MN Daniel Kennedy, MDNR, Lansing, MI. Katherine David, MDEQ, Jackson, MI Luke Golden, MDEQ, Jackson, MI Collect O'Keefe, MDEQ, Latsing, MC Keto Gyekis, MDEQ, Lansing, MI.



September 18, 2014

Angela Boyer U.S. Fish and Wildlife Service Ohio Ecological Services Field Office 4625 Morse Rd, Suite 104 Columbus, OH 43230

Subject: NEXUS Gas Transmission, LLC NEXUS Gas Transmission Project

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses approximately 199-miles through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton. NEXUS is investigating a study corridor as generally depicted on attached Figure 1.

Initial review of the potential pipeline corridor indicated that rare, threatened and/or endangered species may be present based on published county lists. Table 1 is attached and lists the rare, threatened and endangered species that have been previously identified in the counties traversed by the pipeline corridor. On behalf of NEXUS, TRC is requesting the assistance of the U.S. Fish and Wildlife Service ("USFWS") to determine if any of these species are known to occur within the one-mile wide area under investigation. This information will assist us in determining a route to potentially avoid and minimize disruption to sensitive habitat and determine potential seasonal or species specific surveys that maybe required during permitting of the Project. Any further comments or survey guidance regarding rare, threatened, endangered or other important species is also welcomed.

To help facilitate the consultation process, TRC requests a meeting to discuss the general scope of the proposed Project and the consultation process with the USFWS moving forward. This meeting will be the first of many opportunities to participate in the development and review of these projects. We will be contacting you soon and hope to schedule this meeting within the next month. Additional information such as a GIS SHP files of the Project study corridor to aid in the review of the Project can also be provided at that time.

U.S. Fish and Wildlife Service September 18, 2014 Page 2 of 3

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

Muhael Lychwaln

cc: Matt Barczyk, Spectra Energy Partners, LP

Angela Gardner, TRC



Table	Table 1- Federally Listed Species Potentially Occurring Within/Near Nexus Project in Ohio											
Common Name	Scientific Name	Status	County Traversed By Project With Species Occurrence									
Indiana bat	Myotis sodalis	Endangered	All Counties									
Northern Long-eared Bat	Myotis septentrionalis	Proposed Endangered	All Counties									
Kirtland's warbler	Dendroica kirtlandii	Endangered	Erie, Lake, Lorain, Lucas, Sandusky									
Piping Plover	Charadrius melodus	Endangered	Erie, Lake									
Red Knot	Calidris canutus rufa	Proposed Threatened	Erie, Lake, Lorain, Lucas, Sandusky									
Eastern massasauga	Sistrurus catenatus	Candidate	Columbiana, Erie, Lucas, Sandusky, Wayne									
Rayed bean	Villosa fabalis	Endangered	Lucas									
Karner blue butterfly	Lycaeides melissa samuelis	Endangered	Lucas									
Eastern prairie fringe orchid	Platanthera leucophae	Threatened	Lucas, Sandusky, Wayne									
Lakeside daisy	Hymenoxys herbacea	Threatened	Erie									









Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014



UNITED STATES DEPARTMENT OF THE INTERIOR U.S. Fish and Wildlife Service Ecological Services Office 4625 Morse Road, Suite 104 Columbus, Ohio 43230 (614) 416-8993 / Fax (614) 416-8994



October 9, 2014.

Michael Lychwala TRC Solutions 6 Ashley Drive, 1" Floor Scarborough, ME 04074

Re: NEXUS Gas Transmissions, LLC, NEXUS Gas Transmission Project

Dear Mr. Lychwala.

TA11,88: 03(15000-2015-TA-0009)

We have received your recent correspondence requesting information about the subject proposal. NEXUS Gas Transmission, LLC is proposing to construct approximately 245 miles of 42 inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS project traverses approximately 199 miles through 11 counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Folton. We are providing comments for only the portion of the project that occurs in Ohio.

There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you infulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The Service recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural haffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize crosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the Indiana bat (Myotis sodalis), a federally listed endangered species. Since first listed as endangered in 1967, their population has declined by nearly 60%. Several factors have contributed to the decline of the Indiana bat, including the loss and degradation of suitable hibernacida, human disturbance during hibernation, pesticides, and the loss and degradation of forested habitat, particularly stands of large, mature trees. Fragmentation of forest habitat may also contribute to declines. During winter, Indiana bats hibernate in caves and abandoned mines.

Nummer habital requirements for the species are not well defined but the following are considered important:

- (1) dead or live trees and snags with peeling or extaliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas;
- (2) live trees (such as shagbark hickory and oaks) which have exfoliating bark;
- (3) stream corridors, riparion areas, and upland woudlots which provide furage sites,

Should habitat exhibiting the characteristics described above be present at the proposed project site and/or the site contains any caves or abandoned mines, we recommend that the babitat and surrounding trees be saved wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if spring/fall surveys are warranted.

Within Carroll, Columbiana, Stark, and Summit countles, the project will result in a small amount of forest clearing relative to the available habitat in the immediately surrounding area. Therefore, we recommend that any unavoidable tree clearing for the project in Carroll, Columbiana, Stark and Summit counties occur only from October 1 through March 31 Following these seasonal tree clearing restrictions should ensure that any effects to Indiana buts are insignificant or discountable.

The project area within Wayne, Medina, Larain, Erie, Sandusky, Wood, Lucas, and Pulton counties appears to have suitable Indiana but habitat. Because summer habitat for Indiana buts is more limited in these counties, the proposed activities could result in significant impacts to this habitat. Female Indiana buts exhibit strong site lidelity to summer roosting and foraging areas, meaning that they return to the same area, and often the same trees, to roost year after year. Because of this, the proposed project may result in indirect adverse effects to the species even if tree clearing is conducted during the winter season. Therefore, we recommend that summer surveys be conducted to determine presence or probable absence of Indiana buts in this partion of the project. The list of qualified Indiana but surveyors for Ohio is attached (Attachment 1).

The proposed project is in the vicinity of several confirmed records of Indiana bats (See Attachment 2). Wherever a known Indiana bat capture buffer intersects the proposed project, we recommend avoiding tree removal and stream corridors, riparian areas, and apland woodlots which provide forage sites, to the maximum extent possible to avoid adversely affecting Indiana bats. At a minimum, marvoidable tree removal should only occur between October 1 and March 31. In addition, further coordination with this office is requested to discuss other potential avoidance and/or minimization measures within this portion of the project. Please note that because Indiana bat presence has already been confirmed in these portions of the project, any additional summer surveys would not constitute presence/absence surveys.

The proposed project lies within the range of the castern prairie fringed orchid (Platauthera leneaphaca), a federally listed threatened species. This tall, showy orchid is found in wet prairies, sedge meadows, and moist road-side ditches. We recommend that the portions of the project located in Wayne and Sandusky counties be examined to determine if suitable habitat

for the orchid is present. If suitable habital is present, we recommend that surveys for this species be conducted when the orchids are in bloom (late June through early July).

The proposed project lies within the range of the **Kirtland's warhler** (*Sctophaga kirtlandii*), a federally listed endangered species. The Kirtland's warbler is a small blue-gray songbird with a bright yellow breast. This species migrates through Ohio in the spring and fall, traveling between its breeding grounds in Michigan, Wisconsin, and Ontario and its wintering grounds in the Bahamas. While migration occurs in a broad front across the entire state, approximately half of all observations in Ohio have occurred within 3 miles of the shore of Lake Frie. During migration, individual birds usually forage in shrub/scrub or forested habitat and may stay in one area for a few days. If clearing of suitable habitat cannot be avoided, to preclude adverse effects to Kirtland's warblers, clearing within 3 miles of the shoreline of Lake Frie should not occur from April 22nd = June 1st, or from August 15th + October 15th.

The proposed project lies within the range of the rayed bean (Villosa fabalis), a federally listed endangered species. The rayed bean is known to occur in Swan Creek, which flows through Fulton and Lucas counties. They are usually found in or near shoal or riffle areas in streams. Substrates (ypically include gravel and sand, and they are often associated with, and buried under the roots of, vegetation, including water willow (Justicia americana) and water millfull (Myriophyllum sp.).

Because the proposed project is crossing Swan Creek in Fulton County, we recommend utilizing Horizontal Directional Drilling (HDD) to construct the pipeline under the creek to avoid all impacts to the stream, thereby avoiding any potential impacts to Swan Creek and to the rayed bean. When horizontal directional drilling, sufficient geotechnical analysis should be performed so as to identify a possible contining layer (bedrock, clay, etc.) that may limit the upward migration of drilling fluids thus reducing the risk of frac-outs. All geotechnical data and the Frac-Out Contingency plan should be sent to this office for review.

If any direct or indirect impacts to Swan Creek may occur from the proposed project, we recommend that a survey be conducted to determine the presence or probable absence of rayed bean mussels in the vicinity of the proposed site. Any survey should be designed and conducted in coordination with the Endangered Species Coordinator for this office. The Ohio Mussel Survey Protocol can be found at the Ohio Department of Natural Resources website: http://wildlife.ohiodnr.gov/licenses-and-permits/specialty-licenses-permits#tabr4. Surveyors must have valid Federal and State permits to survey for federally listed mussels in Ohio.

The proposed project lies within the range of the federally listed endangered Karner blue hutterfly (Lycoeidex metissa samuelis) and piping player (Charadrius metadus), and the federally listed threatened Lakeside daisy (Hymenoxys herbacea) and northern mankshood (Aconitam noveboracense). Due to the project type, size, and location, we do not anticipate adverse effects to any of these species. Should the project design change, or during the term of this action, additional information on listed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

Since there is a federal nexus for the project through FERC, no tree clearing on any portion of the purcel should occur until consultation under section 7 of the Endangered Species Act of 1973, as amended, between the Service and FERC is completed. We recommend that FERC submit to this office a determination of effects to federally listed species for our review and concurrence.

PROPOSED SPECIES COMMENTS: The proposed project has within the range of the **northern long-eared bat** (Myotts septentitionalis), a species that is currently proposed for listing as federally endangered under the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). The final listing decision for the northern long-cared bat will occur no later than April 2, 2015. No critical habitat has been proposed at this time. Recently white-nose syndrome (WNS), a novel fungal pathogen, has caused serious declines in the northern long-cared bat population in the northeastern U.S. WNS has also been documented in Ohio, but the full extent of the impacts from WNS in Ohio is not yet known.

During winter, northern long-cared bats hibernate in caves and abandoned mines. Summer habitat requirements for the species are not well defined but the following are considered important:

- (1) Roosting habitat in dead or live trees and snags with cavities, peeling or exfolinting bark, splittree trook and/or branches, which may be used as maternity roost areas;
- (2) Foraging bubitat in upland and lowland woodlots and tree lined corridors:
- (3) Occasionally they may roost in structures like barns and sheds.

Pursuant to section 7(a)(4) of the ESA, federal action agencies are required to confer with the Service if their proposed action is likely to jeopardize the continued existence of the northero long-eared bat (50 CFR 402.10(a)). Federal action agencies may also voluntarily confer with the Service if the proposed action may affect a proposed species. Nevertheless, species proposed for listing are not afforded protection under the ESA; however as soon as a listing becomes effective, the prohibition against jeopardizing its continued existence and "take" applies regardless of an action's stage of completion. If the federal agency retains my discretionary involvement or control over on-the-ground actions that may affect the species after listing, section 7 applies. Therefore, we recommend that trees exhibiting any of the characteristics listed above, as well as any wooded areas or tree lined corridors be saved wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring surveys are warranted.

The proposed project in Carroll, Columbiana, Stark, and Summit counties is in the vicinity of multiple confirmed records of northern long-cared bats. If no caves or abandoned mines are present and tree removal is unavoidable, any tree removal in Carroll, Columbiana, Stark, and Summit counties should only occur between October 1 and March 31 to avoid impacts to dorthern long-cared bats. Incorporating these conservation measures into your project at this time may avoid significant future project delays should the listing become official.

As noted above, we have recommended that a summer survey be conducted to determine presence of probable absence of Indiana buts in Wayne, Median, Lorain, Eric, Sandusky,

Wood, Lucas, and Folton counties. This survey would also determine presence or probable absence of northern long-cared bats.

The proposed project is in the vicinity of several confirmed records of northern long-cared bats (Attachment 3). Wherever a known indiana bat capture buffer intersects the proposed project, we recommend avoiding tree removal including upland and lowland woodlots and tree lined corridors which provide forage sites, to the maximum extent possible to avoid adversely affecting northern long-cared bats. At a minimum, unavoidable tree removal should only occur between October 1 and March 31. In addition, further coordination with this office is requested to discuss other potential avoidance and/or minimization measures within this portion of the project. Please note that because northern long-cared bat presence has already been confirmed in these portions of the project, any additional summer surveys would not constitute presence/absence surveys.

The proposed project lies within the range of the rufa red knot (Calidris canatus rufa), a species that is currently proposed for listing as federally threatened under the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). Due to the project type, size, and location, we do not anticipate adverse effects to this species. Should the project design change, or during the term of this action, additional information on proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

CANDIDATE SPECIES COMMENTS: The proposed project within Hanover Township, Columbiana County and Townsend Township in Sandusky County lies within the range of the eastern massassuga (Sistraras catenatus), a small, docide rattlesnake that is currently a Federal candidate species. Since designated as a candidate species in 1999, it has declined significantly throughout its range and populations in Ohio that were once throughout glaciated portions of the state, are now small and isolated. The species has been listed by the State of Ohio as endangered since 1996. Several factors have contributed to the decline of the species including habitat loss and fragmentation, indiscriminate killing, collection, gene pool contamination and incompatible land use practices.

Hastern massasaugas use both upland and wetland habitat and these habitats differ by season. During the winter, massasaugas hibernate in low wet areas, primarily in crayfish burrows, but may use other structures. Presence of a water table near the surface is important for a soitable hibernaculum. In the summer, massasaugas use drier, open areas that contain a mix of grasses and forbs such as goldenrods and other prairie plants that may be intermixed with trees or shrubs. Adjoining lowland and upland habitat with variable elevations between are critical for the species to travel back and forth seasonally. Should the proposed project area contain any of the habitat types or features described above, we recommend that a habitat assessment be conducted to determine if suitable habitat for the species exists within the vicinity of the proposed site, Please note that habitat assessments should only be conducted by approved eastern massasauga surveyors (Attachment 4) due to variable habitat types and cryptic nature of the species. Any habitat assessments or surveys should be coordinated with this office.

MIGRATORY BIRD COMMENTS: Executive Order 13186 (E.O.) was signed in Jamairy of 2001. Its purpose is to further the purposes of the migratory bird conventions, the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (BGEPA), the Fish and Wildlife Coordination Act, the Endangered Species Act (ESA), the National Environmental Policy Act (NIPA), and other pertinent statutes. As called for in the E.O., a Memorandum of Understanding (MOU) between FERC and FWS was signed in 2011. The purpose of the MOU focuses on avoiding or minimizing adverse impacts on migratory birds and strengthening migratory bird conservation through enhanced collaboration between the Commission and FWM.

The MOU states that "It is in the interests of both Parties that potential impacts, direct and indirect, are thoroughly assessed and unavoidable impacts are appropriately mitigated." This supports the statement in the E.O. for each agency to ...; "restore and enhance the habitat of migratory birds, as practicable" (Section 3(e)(2)). The definition for mitigation in the MOU is taken from NEPA regulations which includes, "e) compensating for the impact by replacing or providing substitute resources or environments" (40 CFR, Section 1508.20). Region 3 typically uses Habitat Equivalency Analysis (HI(A) to derive mitigation ratios for both temporary and permanent impacts to migratory bird habitat. TD(A takes into account the time it will take to recover impacts to pre-construction conditions in temporarily impacted areas and for replacement of habitat that is permanently impacted. For these reasons, it is important to have a detailed assessment of the types and acres of habitat impacted by construction such as forested habitat (including age classes), grassland and other habitat that may be important to migratory birds. Areas of pipeline construction that impact T&E species will be treated separately but would not be duplicated as migratory bird habitat.

Portions of the proposed project route contain forest cover and may provide habitat for a variety of aesting birds. The typical nesting season for migratory songbirds in the area of the proposed project ranges from April 1 through July 15. The Service encourages any tree removal to occur outside the nesting season to prevent impacts to migratory birds.

We recommend that the permanently open right-of-way (ROW) be planted in native grasses to benefit ground-nesting birds. Native prairie species provide valuable foraging and breeding opportunities. Allowing the ROW to grow between maintenance activities will decrease the impact between the forest interior and the ROW. If the ROW must be mowed on an annual basis we recommend that it be completed only once per year before March 1 or anytime after July 15 to avoid seasons when ground-nesting birds are breeding. A list of suggested native grasses has been included for your convenience (Attachment 5).

The project lies within the range of the **bald eagle** (Haliacetus learneepholus). Bald eagles are protected under the Migratory Bird Treaty Act (16 U.S.C. 703-712; MBTA), and are afforded additional legal protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d; BGEPA). BGEPA prohibits, among other things, the killing and disturbance of eagles. To evaluate your project's potential to affect bald eagles, please visit:

____://www.fws.gov/midwest/MidwestBird/EaglePermits/baeatake/index.html.

Our destabase of nest locations may not be complete because new nests are built each year. Therefore, recommend that the site and surrounding area be an altered to determine if any eagle nests are present. In order to avoid take of bald eagles, we recommend that no tree clearing occur within 560 feet of a bald eagle nest or within any woodlot supporting a treat tree. Further we request that work within 660 feet of a nest or within the direct line-of-site of a nest be restricted from landary 15 through July 51. This will prevent disturbance of the eagles from the egg-laying period until the young fledge, which encompasses their most value able times.

If these recommendations cannot be implemented and take of bald eagles is likely, a bald eagle take permit for this project may be necessary. Further information on eagle take permits can be found at: http://www.fws.gov/midwest/MidwestBird/FaglePermits/index.html.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (45 Stat. 401, as amended: 16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (ESA), as amended, and are consistent with the intern of the National Environmental Policy Act of 1969 and the U.S. Fish and Wildlife Service's Minigation Policy. This latter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Division of Wildlife due to the potential for the project to affect state listed species. Contact Nathan Reardon, Environmental Review Coordinates with the Division of Wildlife, at (614) 255-6741 or at nathan, reardon@dnr.state.oh.us.

Sincerely,

Daniel W. Sparks Acting Field Supervisor

Attachments (5)

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United States Department of the Interior

FASSIAND WILDLIFE SERVICE

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Access 6, 2014

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Areas of known Indiana bat occurrence

Proposed Nexus pipeline (9/29/14)



Areas of known northern long-eared bat occurrence

Proposed Nexus pipeline (9/29/14)



United States Department of the Interior

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January 15, 1.13

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Recommended Native Grasses

We strongly discourage planting invasive ground covers for reclamation/restoration purposes. Invasive species degrade the native biodiversity that is essential for maintaining high quality fish, wildlife, and plant habitats. We recommend planting native grasses and legumes, such as those listed below:

Hig blacetom
Side-cate grama
Canada wild tye
Riverbank wild tye
Virginia wild rye
Switchgrass
Little blacetom
Indian grass
Prairie cardgrass
Partridge pen

Andrapagon gerardii
Bouteloua curtipendula
Elymus canadensis
Elymus ripartus
Elymus virginicus
Panicum virgatum
Schizachyrium scoparium
Sorghastrum nutans
Spartino pectinata
Chamagerista fasciculate

STATE OF OHIO

Agency Correspondence



September 18, 2014

John Kessler Ohio Department of Natural Resources 2045 Morse Rd, BLDG. G-3 Columbus, Ohio 43229-6693

Subject: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Project

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses approximately 199-miles through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton. NEXUS is investigating a study corridor as generally depicted on attached Figure 1.

Initial review of the potential pipeline corridor indicated that rare, threatened and/or endangered species may be present based on published county lists. Table 1 is attached and lists the rare, threatened and endangered species that have been previously identified in the counties traversed by the pipeline corridor. On behalf of NEXUS, TRC is requesting the assistance of Ohio Department of Natural Resources ("ODNR") to determine if any of these species are known to occur within the one-mile wide area under investigation. This information will assist us in determining a route to potentially avoid and minimize disruption to sensitive habitat and determine potential seasonal or species specific surveys that maybe required during permitting of the Project. Any further comments or survey guidance regarding rare, threatened, endangered or other important species is also welcomed.

TRC is also requesting any other applicable information from the ODNR such as state land and parkland locations along the Project corridor.

To help facilitate the consultation process with various departments within the ODNR, TRC requests a meeting to discuss the general scope of the proposed Project and the consultation

Ohio Department of Natural Resources September 18, 2014 Page 2 of 2

process with the ODNR moving forward. This meeting will be the first of many opportunities to participate in the development and review of these projects. We will be contacting you soon and hope to schedule this meeting within the next month. Additional information such as a GIS SHP files of the Project study corridor to aid in the review of the Project can also be provided at that time.

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

cc: Matt Barczyk, Spectra Energy Partners, LP

Angela Gardner, TRC









Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014

	Table of Rare, Threatened, and	Endangered Species to	the State	of Ohio Wil		nces in Cour	nties Traver	sed by NE	XUS			
Common Name	Scientific Name	Columbiana	Stark	Summit	Wayne	Medina	Lorain	Erie	Sandusky	Wood	Lucas	Fulton
Fish and Wildlife Species												
Sharp-shinned Hawk	Accipiter striatus	SC		SC							SC	
Lake Sturgeon	Acipenser fulvescens						E	E			E	
Eastern Cricket Frog	Acris crepitans							SC		SC	SC	
Canada Darner	Aeshna canadensis										E	
Bachman's Sparrow	Aimophila aestivalis										Х	
Blue-spotted Salamander	Ambystoma laterale										Е	
Henslow's Sparrow	Ammadramus henslowii	SC										
Eastern Sand Darter	Ammocrypta pellucida									SC		
Green-winged Teal	Anas crecca			SI					SI		SI	
Gadwall	Anas strepera								SI		SI	
Seepage Dace	Argia bipunctulata		E									
Redhead	Aythya americana										SI	
Upland Sandpiper	Bartramia longicauda			E			E	E	E	E	E	
Silver-bordered Fritilary	Boloria selene										Т	
American Bittern	Botaurus lentiginosus	E		Е	E						E	
Cattle Egret	Bubulcus ibis										E	
Great Egret	Casmerodius albus										SC	
Hermit Thrush	Catharus guttatus			SI			SI					
Graceful Underwing	Catocala gracilis			Е								
Longnose Sucker	Catostomus catostomus							Е				
Lark Sparrow	Chondestes grammacus										E	E
Tiger Beetle	Cicindela hirticollis hirticollis							Т				
Northern Harrier	Cicus cyaneus									E		
Black Tern	Chlidonias niger			Е					E		E	
Sedge Wren	Cistothorus platensis			SC	SC		SC	SC	SC		SC	
Spotted Turtle	Clemmys gutta	Т	T	Т			T	T			Т	
Kirtland's Snake	Clonophis kirtlandii				Т			Т			Т	
Star-nosed Mole	Condylura cristata			SC								
Tiger Spiketail	Cordulegaster erronea	SC				SC						
Eastern Hellbender	Cryptobranchus alleganiensis	E										
PurpleWartyback	Cyclonaias tuberculata										SC	
Unexpected Cycnia	Cycnia inopinatus										E	
Cerulean Warbler	Dendroica cerulea				SC							
Magnolia Warbler	Dendroica magnolia					SI	SI					
Bobolink	Dolichonyx oryzivorus				SC							
Racket-tailed Emerald	Dorocordulia libera			E								
Loggerhead Shrike	E											
Snowy Egret	Egretta thula										E	
Blanding's Turtle	Emydoidea blandingii						T		T		T	T
Boreal Bluet	Enallagma boreale			Т								
Marsh Bluet	Enallagma ebrium			Т								
Lake Chubsucker	Erimyson sucetta			Т	Т							
Muskellunge	Esox masquinongy								SC	SC	SC	
Iowa Darter	Etheostoma exile		E	E								
Two-spotted Skipper	Euphyes bimacula						SC					

Persius Dusky Wing	Eynnis persius									E	
Peregrine Falcon	Falco peregrinus		Т	Т			Т			T	
Western Banded Killifish	Fundulus diaphanus menona			E				E	E	· ·	
Wilson't Snipe	Gallinago delicata	SI		SI			SI		_	SI	
Harlequin Darner	Gomphaeschna furcillata	31		T			3.			31	
Plains Clubtail	Gomphus externus									Е	
Sandhill Crane	Grus canadensis						Е			_	
Bald Eagle	Haliaeetus leucocephalus	F	F	F	F	F	F	F	F	F	
Four-toed Salamander	Hemidactylium scutatum	<u>'</u>	SC	SC	SC		SC	'	SC	<u>'</u>	SC
Frosted Elfin	Incisalia irus		30	30	30		30		30	E	30
Least Bittern	Ixobrychus exilis			Т	Т					T	
Dark-eyed Junco	Junco hyemalis			SI	- '					-	
Chalk-fronted Corporal	Ladona julia			E						E	
Wavy-rayed Lampmussel	Lampsilis fasciola	SC					SC			<u> </u>	
Creek Heelsplitter	Lasmigona compressa	SC			SC		SC		SC	SC	
Frosted Whiteface	Leucorrhinia frigida	30			30		30		30	E	
Eastern Pondmussel							E	E		E	
Black Sandshell	Ligumia nasuta Ligumia recta		+		-	-	T	E		T	
	0						'			1	E
Brown Pinion	Lithophane semiusta									E	E
Karner Blue Butterfly	Lycaeides melissa samuelis										
Purplish Copper	Lycaena helloides			_						E	
Bobcat	Lynx rufus			Т				66	66		
River Redhorse	Moxostoma carinatum							SC	SC		
Greater Redhorse	Moxostoma valenciennesi							Т		Т	T
Indiana bat	Myotis sodalis			E	Е	Е					
Elfin Skimmer	Nannothemis bella			E						1	
Bigmouth Shiner	Notropis dorsalis					Т	Т				
Blackchin Shiner	Notropis heterodon		Х								
Blacknose Shiner	Notropis heterolepis					Х			Х		
Black-crowned Night-heron	Nycticorax nycticorax									Т	
Threehorn Wartyback	Obliquaria reflexa						Т	Т	T	T	
Smooth Greensnake	Opheodrys vernalis			SC	SC						
Riffle Snaketail	Ophiogomphus carolus	T			Т						
Mourning warbler	Oporornis philadelphia			SO							
Pugnose Minnow	Opsopoeodus emiliae			E							
Ruddy Duck	Oxyura jamaicensis			SI						SI	
Eastern Foxsnake	Pantherophis gloydi							SC		SC	
Channel Darter	Percina copelandi	Т					T			Т	
Round Pigtoe	Pleurobema sintoxia									SC	
Paddlefish	Polyodon spathula			Т							
Sora Rail	Porzana carolina	SC		SC	SC			SC		SC	
Prothonotary Warbler	Protonotaria citrea			SC	SC					SC	
Caddisfly	Psilotreta indecisa	Т									
King Rail	Rallus elegans									E	
Virginia Rail	Rallus limicola	SC		SC	SC			SC	SC	SC	
Eastern Massasauga	Sistrurus catenatus	E						E		Е	
Brush-tipped emerald	Somatochlora walshii		Е	E							

Common Tern	Sterna hirundo										Е	
Western Meadowlark	Sturnella neglecta		SI						SI		L	
Badger	Taxidea taxus		31						31			SC
Eastern Box Turtle	Terrapene carolina			SC							SC	30
Bewick's Wren	Thryomanes bewickii			30							E	
Winter Wren	Troglodytes troglodytes	SI		SI							_	
Fawnsfoot	Truncilla donaciformis	31		- 31					Т		Т	
Deertoe	Truncilla truncata								SC	SC	SC	
Barn owl	Tyto alba	Т			Tr		Т		30	30	30	
Folded Satyr	Ufeus plicatus				"		'					E
Golden-winged Warbler	Vermivora chrysoptera			Х			Х				Х	_
Rayed Bean	Villosa fabalis										E	
Canada Warbler	Wilsonia canadensis	SI		SI			SI				L	
Plants	Wilsolia Canadelisis	J 31		JI		<u> </u>	ا ا					l
Northern Monkshood	Aconitum noveboracense		1	E	I	1	1	1	1	1	1	
American Sweet-flag	Acorus americanus		Р	_		P		Р	Р			
Red Baneberry	Actaea rubra		<u>'</u>					'	<u>'</u>		Т	
Mountain-fringe	Adlumia fungosa	Т		Т								
Gattinger's-foxglove	Agalinis gattingeri	·									Т	
Small Purple-foxglove	Agalinis purpurea var. parviflora		Е									
Skinner's-foxglove	Agalinis skinneriana		 							Е	Е	
Rock Serviceberry	Amelanchier sanguinea									T	T	
American Beach Grass	Ammophila breviligulata							Т			Т	
Western Rock-jasmine	Androsace occidentalis									Е	Е	Е
Prairie Thimbleweed	Anemone cylindrica							Т		Т	Т	Т
Shale Barren Pussy-toes	Antennaria virginica	Т										
Lyre-leaved Rock Cress	Arabidopsis lyrata	Е								Е	E	
Southern Hairy Rock Cress	Arabis pycnocarpa var. adpressipilis	Р		Р				Р		Р	Р	
Western Hairy Rock Cress	Arabis pycnocarpa var. pycnocarpa							Х	Х			Х
False Arrow-feather	Aristida necopina										Е	
Purple Triple-awned Grass	Aristida purpurascens							Р			Р	Р
Beach Wormwood	Artemisia campestris							Т			Т	
Blunt-leaved Milkweed	Asclepias amplexicaulis										Р	Р
Canada Milk-vetch	Astragalus canadensis										Т	
Prairie Fern-leaved False Foxglove	Aureolaria pedicularia var. ambigens									Е	Е	
Prairie False Indigo	Baptisia lactea					Р		Р				
Twisted Teeth Moss	Barbula indica							Е				
Swamp Birch	Betula pumila			Т								
Limestone Rock Cress	Boechera grahamii										Х	
Missouri Rock Cress	Boechera missouriensis										Е	
Drummond's Rock Cress	Boechera stricta										Е	
Leathery Grape Fern	Botrychium multifidum	Е									E	
Least Grape Ferm	Botrychium simplex										E	
Prairie Brome	Bromus kalmii										Р	Р
Bug-on-a-stick	Buxbaumia aphylla			Т								
Limestone Savory	Calamintha arkansana							Т	Т		Т	Т
Wild Calla	Calla palustris		Р	Р								
Vernal Water-starwort	Callitriche verna	Т			Т							

Grass-pink	Calopogon tuberosus			Т	Т			Т			Т	
American Cuckoo-flower	Cardamine pratensis var. palustris			Х								
Broad-winged Sedge	Carex alata			P	Р			Р			Р	
Pale Straw Sedge	Carex albolutescens	Р		P			Р				P	
Northern Fox Sedge	Carex alopecoidea										E	
Leafy Tussock Sedge	Carex aquatilis							Т			T	
Drooping Wood Sedge	Carex arctata			Е								
Silvery Sedge	Carex argyrantha			T								
Wheat Sedge	Carex atherodes			P				Р		P	Р	
Howe's Sedge	Carex atlantica ssp. Capillacea		Т	T			Т					
Golden-fruited Sedge	Carex aurea		•	P				Р	Р	P	Р	
Bebb's Sedge	Carex bebbii		P	P				P			P	Р
Bicknell's Sedge	Carex bicknellii		'	'				T		Т	т	'
Tufted Fescue Sedge	Carex brevior							P				Р
Brownish Sedge	Carex brunnescens			Е				- '				'
Bush's Sedge	Carex bushii			T		Т						
Thin-leaved Sedge	Carex cephaloidea			P	Р	P					Р	
Field Sedge	Carex conoidea				'			Т		Т	т	Т
Raven-foot Sedge	Carex crus-corvi							- '		T	'	'
Little Yellow Sedge	Carex cryptolepis							P		-	Р	
Lesser Panicled Sedge	Carex diandra			Т				'			-	
Two-seeded Sedge	Carex disperma			E								
Yellow Sedge	Carex flava		P	P								
Handsome Sedge	Carex formosa		'	- '						E		
Garber's Sedge	Carex garberi							Е		_		
Slender Sedge	Carex lasiocarpa	Р		Р	Р			P			Р	
Slender Sedge	Carex lasiocarpa		P	- '	'		Р	'			-	
Mud Sedge	Carex limosa		Г		Е		Г	Е				
Long's Sedge	Carex Innosa Carex longii										E	
Fire Sedge	Carex lucorum										E	
Fernald's Sedge	Carex merritt-fernaldii										E	
Midland Sedge	Carex mesochorea			Т				Т				
Few-Seeded Sedge	Carex Mesochorea Carex oligosperma		Т	T				'				
Pale Sedge	Carex oilgosperma Carex pallescens		'	P								
Necklace Sedge	Carex projecta	Т		T			Т	Т				
Northern Bearded Sedge	Carex projectu Carex pseudocyperus	'		- '			1	- '			E	
Reflexed Bladder Sedge	Carex retrorsa										E	
Hay Sedge	Carex siccata										E	
Sprengel's Sedge	Carex sprengelii				Т						T	
Straw Sedge	Carex straminea	Р		P	'		P	Р			- '	
Little Green Sedge	Carex viridula	- '		T		 	<u>'</u>	T	Т	 	Т	
Leather-leaf	Chamaedaphne calyculata		P	P		 		'	!	 	<u>'</u>	
Pipsissewa	Chimaphila umbellata	Т	F	T		 				 	Т	Т
Northern Wood-reed	Cinna latifolia	-		E		1				1	'	'
Speckled Wood-lily	Clintonia umbelluta	Т		T				1			1	
Long-bracted Orchid	Coeloglossum viride	'		 				E			E	
Sweet-fern	Comptonia peregrina						-	E		E	E	
Bushy Horseweed	Conyza ramosissima							Р	P	P	P	Р
busily norseweed	Conyza ramosissima		1		ļ		1	P	٢	Р	۲	٢

Spotted Coral-root	Corallorhiza maculata		Р	Р	Р	Р	Р				
Early Coral-root	Corallorhiza trifida			E		· ·					
Bunchberry	Cornus canadensis			E							
Round-leaved Dogwood	Cornus rugosa			P		Р	Р			Р	
Rock-harlequin	Corydalis sempervirens	Т		T		T				T	
Northern Croton	Croton glandulosus	'				<u> </u>				T	
Five-angled Dodder	Cuscuta pentagona								Т	'	E
Pale Umbrella-sedge	Cyperus acuminatus								-	P	_
Low Umbrella-sedge	Cyperus diandrus	P		Р			Р	Р		P	
Schweinitz' Umbrella-sedge	Cyperus schweinitzii	'		'			т т			т	
White's Lady's-slipper	Cypripedium candidum						E	Е		- '	
Showy Lady's-slipper	Cypripedium reginae			Т				L			
Tennessee Bladder Fern	Cystopteris tennesseensis	P		'							
Tufted Hair Grass	Deschampsia cespitosa	Г	P								
Crinkled Hair Grass	Deschampsia flexuosa		Г	Р							
Tansy Mustard	Descurainia pinnata			Г			Р	Р	P	Р	P
Prairie Tick-trefoil	Desmodium illinoense	Х					Р	r	Р	X	r
Sessile Tick-trefoil	Desmodium sessilifolium	^								T	-
	·			Р			Р			P	T P
Northern Panic Grass	Dichanthelium boreale			Р			Р			E	Р
Commons' Panic Grass	Dichanthelium commonsianum								-	E	
Leiberg's Panic Grass	Dichanthelium leibergii						-		Т	-	
Lindheimer's Panic Grass	Dichanthelium lindheimeri			-			T			T	
Southern Hairy Panic Grass	Dichanthelium meridionale			Т			T			T	
Long-panicled Panic Grass	Dichanthelium perlongum									E	_
Early Panic Grass	Dichanthelium praecocius									Е	E
Narrow-headed Panic Grass	Dichanthelium spretum									Е	
Carolina Whitlow-grass	Draba reptans						Т			Т	
Spthulate-leaved Sundew	Drosera intermedia									Е	
Male Fern	Dryopteris filix-mas			Е							
Flat-stemmed Spike-rush	Eleocharis compressa						Р		Р	Р	
Engelmann's Spike-rush	Eleocharis engelmannii									E	
Green Spike-rush	Eleocharis flavescens			T							
Caribbean Spike-rush	Eleocharis geniculata						E				
Ovate Spike-rush	Eleocharis ovata						E				
Few-Flowered Spike-rush	Eleocharis quinqueflora			T							
Slender Spike-rush	Eleocharis tenuis	T		Т			Т			Т	
Green Spike-rus	Eleocharus flavescens		Т				Т				
Bearded Wheat Grass	Elymus trachycaulus			Т						Т	
Fireweed	Epilobium angustifolium	E								Е	
Simple Willow-herb	Epilobium strictum	Т	Т	Т							
Woodland Horsetail	Equisetum sylvaticum			Р		Р					
Variegated Scouring-rush	Equisetum variegatum			Е						Е	
Tawny Cotton-grass	Eriophorum virginicum		Т	Т	Т						
Green Cotton-grass	Eriophorum viridicarinatum		Р	Р							
Rattlesnake-master	Eryngium yuccifolium									Р	
Seaside Spurge	Euphorbia polygonifolia					Р	Р			Р	
Great Lakes Goldenrod	Euthamia remota						Т			Т	
Mountain Bindweed	Fallopia cilinodis			Е							

Bog Bedstraw	Galium labradoricum	Т	Т								
Prairie Gentian	Gentiana puberulenta								Е	Е	
Soapwort Gentian	Gentiana saponaria								_	E	
Fringed Gentian	Gentianopsis crinita			Р			Р			<u>-</u> Р	Р
Small Fringed Gentian	Gentianopsis procera		Р	P		Р	·			P	P
Bicknell's Crane's-bill	Geranium bicknellii									E	
Water Avens	Geum rivale			Р							
Sharp-glumed Manna Grass	Glyceria acutiflora		Р	P		Р					
Round-fruited Hedge-hyssop	Gratiola virginiana						Т				
Common Oak Fern	Gymnocarpium dryopteris	E				Е	E			E	
Rough Pennyroyal	Hedeoma hispida	-				_	P	Р	P	P	P
Plains Frostweed	Helianthemum bicknellii			Р			P	'	P	P	P
Canada Frostweed	Helianthemum canadense			T			-		T	T	'
Ashy Sunflower	Helianthus mollis			<u>'</u>			Т		'	'	
Porcupine Grass	Hesperostipa spartea								Е	E	E
Long-bearded Hawkweed	Hieracium longipilum								_ L		E
Canada Hawkweed	Hieracium umbellatum								Т	Т	
Beach-heather	Hudsonia tomentosa								'	X	
Northern St. John's-wort	Hypericum boreale	+	Т	Т						^	
Canada St. John's-wort			1	E			E			E	
Least St. John's-wort	Hypericum canadense			E			E			Е	
Kalm's St. John's-wort	Hypericum gymnanthum Hypericum kalmianum						T	Т		Т	
Leafy Blue Flag	Iris brevicaulis						T	'		T	
, ,							P	P		P	
Alpine Rush	Juncus alpinoarticulatus									Р	
Baltic Rush	Juncus balticus		Р	Р	Р		P T	Р			
Diffuse Rush	Juncus diffusissimus									T	
Greene's Rush	Juncus greenei						T		T	Т	T
Flat-leaved Rush	Juncus platyphyllus		E				E				
Ground Juniper	Juniperus communis			E		Е					
June Grass	Koeleria macrantha									Е	
Virginia Dwarf-dandelion	Krigia virginica								Т	T	T
Tamarack	Larix laricina		Р	Р							
Yellow Vetchling	Lathyrus ochroleucuc					E				E	
Round-fruited Pinweed	Lechea intermedia		Р	Р	Р	Р				Р	
Thyme-leaved Pinweed	Lechea minor								T	T	T
Leggett's Pinweed	Lechea pulchella		T	Р	Р				T	T	
Hairy Pinweed	Lechea villosa		Р	Р						Р	Р
Scaly Blazing-star	Liatris squarrosa			Р						Р	
Wood Lily	Lilium philadelphicum			Е					E	E	
Old-field Toadflax	Linaria canadensis									E	
Drummond's Dwarf Bulrush	Lipocarpha drummondii									E	
Dwarf Bulrush	Lipocarpha micrantha						T			T	
Plains Puccoon	Lithospermum caroliniense								T	T	T
Wild Lupine	Lupinus perennsi			Р					Р	Р	Р
Southern Woodrush	Lusula bulbosa	Т		Т							
Northern Appressed Club-moss	Lycopodiella subappressa									Е	
Cow-wheat	Melampyrum lineare			Т		Т				Т	
Bunchflower	Melanthium virginicum				T						

Buckbean	Menyanthes trifoliata			Т	Т							
Rock Sandwort	Minuartia michauxii			-	-			Р			Р	
Grove Sandwort	Moehringia lateriflora								Р	Р		
Dotted Horsemint	Monarda punctata									Е	Е	Е
One-flowered Wintergreen	Moneses uniflora										Х	
Plains Muhlenbergia	Muhlebergia cuspidata										Е	
Bayberry	Myrica pensylvanica			Е								
American Water-milfoil	Myriophyllum sibiricum		Е				Е	Е	Е			
Green Water-milfoil	Myriophyllum verticillatum			Х								
Bullhead-lily	Nuphar variegata			Е							E	
Cleland's Evening-primrose	Oenothera clelandii										E	
Oakes' Evening Primrose	Oenothera oakesiana							Р			Р	
Northern Adder's-tongue	Ophioglossum pusillum										Е	
Common Prickly Pear	Opuntia humifusa							Р		Р	Р	Р
Balsom Squaw-weed	Packera paupercula							Т	Т			
Philadephia Panic Grass	Panicum philadelphicum							E			Е	
Tuckerman's Panic Grass	Panicum tuckermanii			E				Е			Е	
Downy White Beard-tongue	Penstemon pallidus											Т
Coarse Smartweed	Persicaria robustior			Р								
Long Beech Fern	Phegopteris connectilis	Р		Р		Р	Р					
Mountain Phlox	Phlox latifolia										Е	Е
American Reed Grass	Phragmites australis ssp. Americanus			Р				Р			Р	
Mountain-rice	Piptatherum racemosum						Р					
Lurking Leskea	Plagiothecium latebricola				Т							
Yellow Fringed Orchid	Platanthera ciliaris										Т	
Prairie Fringed Orchid	Platanthera leucophaea				Т				Т		Т	
Small Purple Fringed Orchid	Platanthera psycodes	Р			Р						Р	
Weak Spear Grass	Poa saltuensis ssp. Languida		Р	Р			Р			Р	Р	
Rose Pogonia	Pogonia ophioglossoides			Т	Т						Т	
Cross-leaved Milkwort	Polygala cruciata										E	
Gay-wings	Polygala paucifolia										E	
Racemed Milkwort	Polygala polygama										Т	Т
Balsam Poplar	Populus balsamifera										E	
Bowman's-root	Porteranthus trifoliatus	Т										
Grass-like Pondweed	Potamogeton gramineus			Е							Е	
Floating Pondweed	Potamogeton natans			Р				Р			Р	
Spotted Pondweed	Potamogeton pulcher			Т								
Richardson's Pondweed	Potamogeton richardsonii			Т				T				
Flat-stemmed Pondweed	Potamogeton zosteriformis		Т	Т								
Marsh Five-finger	Potentilla palustris		Р	Р	Р						Р	
Bushy Cinquefoil	Potentilla paradoxa							Т			Т	
Rough Rattlesnake-root	Prenanthes aspera							E				
Prairie Rattesnake-root	Prenanthes racemosa							Р	Р	Р	Р	Р
Canada Plum	Prunus nigra									Е	Е	
Sand Cherry	Prunus pumila var. cuneata										Е	
Hairy Mountain-mint	Pycnanthemum verticillatum var. pilosum										T	T
Green-flowered Wintergreen	Pyrola chlorantha									-	E	
Early Buttercup	Ranunculus fascicularis	Т						T		T	Т	

Virginia Meadow-beauty	Rhexia virginica		Р	Р		1	I	Р			Р	
Pinxter-flower	Rhododendron periclymendoides	Т	<u> </u>	'							'	
White Beak-rush	Rhynchospora alba		Р	Р	Р							
Tall Grass-like Beak-rush	Rhynchospora recognita		<u> </u>	'	'						Е	
Smooth Rose	Rosa blanda						Р	Р		P	_	Р
Wapato	Sagittaria cuneata						<u> </u>	-	Т		Т	- '
Grass-leaved Arrowhead	Sagittaria graminea								'		E	+
Deer's-tonge Arrowhead	Sagittaria rigida		Р	Р	Р			P	Р		Р	+
Hoary Willow	Salix candida	P	'	P	'			P			'	+
Blue-leaved Willow	Salix myricoides			P				P			P	
Bog Willow	Salix pedicellaris		E	E				-			'	+
Slender Willow	Salix petiolaris			T						Т	Т	
Autumn Willow	Salix serissima	P	P	P						'	'	
Pitcher-plant	Sarracenia purpurea	г	T	T	Т							+
Scheuchzeria	Scheuchzeria palustris		1	'	E							
Olney's Three-square	Schoenoplectus americanus		+		E	-	+				E	+
Smith's Bulrush	Schoenoplectus americanus Schoenoplectus smithii	+	+					Т			E	
Swaying-rush	Schoenoplectus smitnii Schoenoplectus subterminalis		+	E	-	-	+	'				+
Few-flowered Nut-rush	Schoenopiectus subterminalis Scleria pauciflora			E						P	Р	Р
Tall Nut-rush	Scleria triglomerata							P		P	P	P
Canada Buffalo-berry	Shepherdia canadensis			Р			Р	P		Р	Р	P
Carolina Catchfly	Silene caroliniana ssp. Pensylvanica	Т		T			P	Р				-
Atlantic Blue-eyed-grass	Sisyrinchium atlanticum	- '		1							E	-
, ,	,							Т	Т		T	
Northern Blue-eyed-grass	Sisyrinchium montanum							T	l l		l l	
Narrow-leaved Blue-eyed-grass	Sisyrinchium mucronatum							T			_	-
Showy Goldenrod	Solidago speciosa			_			-			Т	Т	Т
Leafy Goldenrod	Solidago squarrosa			T			Т	T				
Keeled Bur-reed	Sparganium androcladum											
Shore-growing Peat Moss	Sphagnum riparium		E	E						_	_	<u> </u>
Prairie Wedge Grass	Sphenopholis obtusata var. obtusata		-				<u> </u>		T	Т	T	<u> </u>
Shinning Ladies'-tresses	Spiranthes lucida			P			Р	P	Р	_	Р	
Great Plains Ladies-tresses	Spiranthes magnicamporum			Р				Р		Р	Р	
Hooded Ladies'-tresses	Spiranthes romanzoffiana		Т									
Drummond's Aster	Symphyotrichum drummondii		Т								Т	
Bushy Aster	Symphyotrichum dumosum			Т			Т	T			Т	
Lakeside Daisy	Tetraneuris herbacea							Е				
Arbor Vitae	Thuja occidentalis						Р					
False Asphodel	Triantha glutinosa		Р	Р								
Seaside Arrow-grass	Triglochin maritimum		1	Т								ļ
Marsh Arrow-grass	Triglochin palustris		Р	Р			1	Р	Р			ļ
Three-birds Orchid	Triphora trianthophora									Р		Р
Rock Elm	Ulmus thomasii						1	Р		Р		Р
Flat-leaved Bladderwort	Utricularia intermedia		Т	Т								<u> </u>
Lesser Bladderwort	Utricularia minor	Т	1	Т			1					<u> </u>
Small Cranberry	Vaccinium oxycoccos		Т	Т			1					
Prairie Ironweed	Vernonia fasciculata							E		E		
Missouri Ironweed	Vernonia missurica		1				1				Е	
Highbush-cranberry	Viburnum opulus var. americanum		Т	Т								

Lance-leaved Violet	Viola lanceolata					Р		Р	
Northern Bog Violet	Viola nephrophylla					Т	Т		
Birdfoot Violet	Viola pedata								T
Wolffiella	Wolffiella gladiata		Р	Р					
Twisted Yellow-eyed-grass	Xyris torta					Т		Т	
White Wand-lily	Zigadenus elegans	Р							
Wild Rice	Zizania aquatica	Т	Т					Т	

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October 31, 2014

Michael Lychwala TRC Solutions 6 Ashley Drive 1st Floor Scarborough, ME 04074

Re: 14-768; Nexus Gas Transmission Project

Project: NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Company is proposing to construct approximately 245 miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan.

Location: The project is located in Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton Counties, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Natural Heritage Database: A review of the Natural Heritage Database produced the following comments.

The Natural Heritage Database has data within your project area and is included in the attached shapefiles. The review was based on the project area you specified in your request and performed using the shapefile you provided to us. Records searched date from 1980. This data is provided to inform you of features present within your project area. Additional comments on some of the features may be found in pertinent sections below. Data layers included are for data, sensitive species, managed areas, scenic rivers, and conservation sites.

Records included in the data layer may be for rare plants and animals, geologic features, high quality plant communities, and other ecological features. Fields included are scientific and common names, state and federal statuses (when applicable), date of most recent observation, and whether the record is located within a managed area or conservation site.

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; A = species recently added to state inventory, status not yet determined; X = presumed extirpated in Ohio; FE = federal endangered, FT = federal threatened, FSC = federal species of concern, and FC = federal candidate species.

There are a few species considered as sensitive for which we do not give out an exact location. They are not within the data layer but are included in the sensitive species data layer which shows a general location.

The managed areas layer shows boundaries for state, federal, county, non-profit, private and sites under other types of ownership that are protected and managed for their natural resources. Please be aware that this layer may not be complete, and we are continually updating it as additional information becomes available to us.

The layer for scenic rivers shows the designated portions of state and national scenic rivers. Your project may cross a designated scenic river. Additional comments on this aspect will be forwarded in 7 to 10 days.

The conservation sites layer shows areas deemed by the Natural Heritage Program to be high quality natural areas not currently under formal protection. They may, for example, harbor one or more rare species, be an outstanding example of a plant community, or have geologically significant features, etc. These sites may be in private ownership and our listing of them does not imply permission for access.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The ODNR Natural Heritage Database has multiple records within one mile of the proposed pipeline corridor for the spotted turtle (*Clemmys guttata*), a state threatened species. These records can be found within the provided "sensitive_species" shapefile. Much of the pipeline corridor is within the range of the spotted turtle. This species prefers fens, bogs and marshes, but is also known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. The DOW recommends that a habitat suitability survey be conducted to determine if suitable spotted turtle habitat is present along the project route. The DOW recommends that the habitat suitability survey be conducted by one of the herpetologists from the provided "Approved Herpetologists" list. If suitable habitat is found to be present along the project route, the DOW recommends that a presence/absence survey be conducted. The results of any habitat suitability survey and any subsequent presence/absence survey can be submitted to Nathan Reardon, DOW Compliance Coordinator, at nathan.reardon@dnr.state.oh.us.

The ODNR Natural Heritage Database has multiple records within one mile of the proposed pipeline corridor for the Blanding's Turtle (*Emydoidea blandingii*), a state threatened species. These records can be found within the provided "sensitive_species" shapefile. Much of the pipeline corridor is within the range of the Blanding's Turtle. This species inhabits marshes, ponds, lakes, streams, wet meadows, and swampy forests. Although essentially aquatic, the Blanding's turtle will travel over land as it moves from one wetland to the next. The DOW recommends that a habitat suitability survey be conducted to determine if suitable Blanding's turtle habitat is present along the project route. The DOW recommends that the habitat suitability survey be conducted by one of the herpetologists from the provided "Approved Herpetologists" list. If suitable habitat is found to be present along the project route, the DOW recommends that a presence/absence survey be conducted. The results of any habitat suitability survey and any subsequent presence/absence survey can be submitted to Nathan Reardon, DOW Compliance Coordinator, at nathan.reardon@dnr.state.oh.us.

The ODNR Natural heritage Database has records within one mile of the project site for the barn owl (*Tyto alba*), a state threatened species. These records can be found within the provided "sensitive_species" shapefile. Impacts to barns, silos and other old and abandoned structures should be avoided to avoid impacts to this species.

The ODNR Natural Heritage Database has multiple records within one mile of the proposed pipeline corridor for the Indiana bat (Myotis sodalis), a state and federally endangered species. These records can be found within the provided "sensitive species" shapefile. Because these records have already established presence, additional presence/absence surveys are not warranted to detect probable absence within the capture buffers. The following species of trees have relatively high value as potential Indiana bat roost trees: Shagbark hickory (Carya ovata), Shellbark hickory (Carya laciniosa), Bitternut hickory (Carya cordiformis), Black ash (Fraxinus nigra), Green ash (Fraxinus pennsylvanica), White ash (Fraxinus americana), Shingle oak (Quercus imbricaria), Northern red oak (Quercus rubra), Slippery elm (Ulmus rubra), American elm (Ulmus americana), Eastern cottonwood (Populus deltoides), Silver maple (Acer saccharinum), Sassafras (Sassafras albidum), Post oak (Ouercus stellata), and White oak (Ouercus alba). Indiana bat habitat consists of suitable trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. If suitable trees occur within the project area, the Division of Wildlife recommends that these trees be conserved. If suitable habitat occurs on the project area and trees must be cut, the Division of Wildlife recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the Division of Wildlife recommends a net survey be conducted between June 1 and August 15, prior to cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, the project is not likely to impact this species.

The ODNR Natural Heritage Database has multiple records within one mile of the proposed pipeline corridor for the upland sandpiper (*Bartramia longicauda*), a state endangered bird. These records can be found within the provided "data" shapefile. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The ODNR Natural Heritage Database has records within one mile of the proposed pipeline corridor for the chalk-fronted corporal (*Ladona julia*), a state endangered dragonfly, the elfin skimmer (*Nannothemis bella*), a state endangered dragonfly, the marsh bluet (*Enallagma ebrium*), a state threatened damselfly,

and the racket-tailed emerald (*Dorocordulia libera*), a state endangered dragonfly. These records can be found within the provided "data" shapefile. Impacts to wetlands should be avoided and/or minimized to the fullest extent possible to avoid impacts these species.

The ODNR Natural Heritage Database has records within one mile of the proposed pipeline corridor for the plains clubtail (*Gomphus externus*), a state endangered dragonfly. These records can be found within the provided "data" shapefile. Impacts to medium to large size streams with sand and gravel substrates should be avoided and/or minimized to the fullest extent possible to avoid impacts this species.

The project is within the range of the lake sturgeon (*Acipenser fulvescens*), a state endangered fish and a federal species of concern, the spotted gar (*Lepisosteus oculatus*), a state endangered fish, the pugnose minnow (*Opsopoeodus emiliae*), a state endangered fish, the Iowa darter (*Etheostoma exile*), a state endangered fish, the mountain brook lamprey (*Ichthyomyzon greeleyi*), a state endangered fish, the western banded killifish (*Fundulus diaphanus menona*), a state endangered fish, the pugnose minnow (*Opsopoeodus emiliae*), a state endangered fish, the lake chubsucker (*Erimyzon sucetta*), a state threatened fish, the Greater Redhorse (*Moxostoma valenciennesi*), a state threatened fish, the channel darter (*Percina copelandi*), a state threatened fish, and the bigmouth shiner (*Notropis dorsalis*), a state threatened fish.

Below (Table 1.) provides the in-water work restrictions and where they apply.

Figure 1. Statewide In-Water Work Restriction Periods and Locations

Location	Restricted Period			
Percid streams (1)	March 15 – June 30			
Salmonid streams (2)	September 15 – June 30			
Other streams (3)	April 15 – June 30			

- 1. Great Miami River (dam south of New Baltimore to mouth), Hocking River (lower section), Little Miami River (lower section), Maumee River (split dam at Mary Jane Thurston State Park and Providence Park in Grand Rapids to mouth), Maumee Bay, Muskingum River (Devola Dam No.2 off S.R. 60 north of Marietta to mouth), Ohio River (entire reach), Portage River (entire reach), Sandusky River (mouth to the first dam), Sandusky Bay, Scioto River (lower section), Toussaint River (entire reach).
- 2. Arcola Creek (entire reach), Ashtabula River (Hadlock Rd. to mouth), Ashtabula Harbor, Aurora Branch of the Chagrin River (RM 0.38 to mouth), Big Creek ((Grand River drainage basin) Girdled Road to mouth), Chagrin River (Chagrin Falls to mouth), Cold Creek (entire reach), Conneaut Creek (entire reach), Conneaut Harbor, Corporation Creek ((Chagrin River RM 0.27) entire reach), Cowles Creek (entire reach), Ellison Creek ((Grand River drainage basin) entire reach), Euclid Creek (entire reach), Grand River (dam at Harpersfield Covered Bridge Park (just upstream of the S.R. 534 bridge) to mouth), Fairport Harbor, Gulley Brook ((Chagrin River RM 5.54) entire reach), Indian Creek (entire reach), Kellogg Creek ((Grand River drainage basin) entire reach), Paine Creek ((Grand River drainage basin) entire reach), Paine Creek ((Grand River drainage basin) from Paine Falls to mouth), Rocky River (Cedar Point Rd. (East Branch-West Branch confluence) to mouth), Smokey Run ((Conneaut Creek RM 3.5) entire reach), Turkey Creek (entire reach), Vermilion River (dam at Wakeman upstream of the US 20 & SR 60 bridge to mouth), Ward Creek ((Chagrin River RM 1.0) entire reach), Wheeler Creek (entire reach), Whitman Creek (entire reach).

3. Class III Primary Headwater streams (watershed </= 1 square mile), EWH, CWH, WWH, or stream reaches with T &E species. Includes Lake Erie & bays not listed above. Special conditions (such as occurrence of T &E species) may mandate local variation of restrictions.

Note: To determine the defined beneficial use designation for a stream and project segment, refer to: www.epa.state.oh.us/dsw/rules/3745 1.aspx#1use.

The project is within the range of the rayed bean (Villosa fabalis), a state endangered and federally endangered mussel species, the eastern pondmussel (Ligumia nasuta), a state endangered mussel, and the threehorn wartyback (*Obliquaria reflexa*), a state threatened mussel. This project must not have an impact on freshwater native mussels in the project area. This applies to both listed and non-listed species. Per the Ohio Mussel Survey Protocol (2014), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 10² miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. This is further explained within the Ohio Mussel Survey Protocol. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, as a last resort, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. Please submit any mussel assessment/survey to Nathan Reardon, DOW Compliance Coordinator, at nathan.reardon@dnr.state.oh.us. The Ohio Mussel Survey Protocol (2014) can be found at:

http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/licenses%20&%20permits/OH%20Mussel%20Survey%20Protocol%20-%20April%202014.pdf

The project route is within the range of the eastern massasauga (*Sistrurus catenatus*), a state endangered species and a federal candidate snake species. The eastern massasauga uses a range of habitats including wet prairies, fens, and other wetlands, as well as drier upland habitat. The DOW recommends that a habitat suitability survey be conducted to determine if suitable Eastern massasauga habitat is present along the project route. The DOW recommends that the habitat suitability survey be conducted by one of the herpetologists from the provided "Approved Herpetologists" list. If suitable habitat is found to be present along the project route, the DOW recommends that a presence/absence survey be conducted. The results of any habitat suitability survey and any subsequent presence/absence survey can be submitted to Nathan Reardon, DOW Compliance Coordinator, at nathan.reardon@dnr.state.oh.us.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. This long-lived, entirely aquatic salamander inhabits perennial streams with large flat rocks. In-water work in hellbender streams can reduce availability of large cover rocks and can destroy hellbender nests and/or kill adults and juveniles. The contribution of additional sediment to hellbender streams can smother large cover rocks and gravel/cobble substrate (used by juveniles), making them unsuitable for refuge and nesting. Projects that contribute to altered flow regimes (e.g., by increasing areas of impervious surfaces or modifying the floodplain) can also adversely affect hellbender habitat. Due to the location, and that there is no in-water work proposed in a perennial stream known to contain the eastern hellbender, this project is not likely to impact this species.

The project is within the range of the blue-spotted salamander (*Ambystoma laterale*), a state endangered species. Due to the location, this project is not likely to impact this species.

The project is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, this project is not likely to impact this species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the sandhill crane (*Grus canadensis*), a state endangered species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 to September 1. If this habitat will not be impacted, the project is not likely to have an impact on this species.

The project is within the range of the trumpeter swan (*Cygnus buccinator*), a state endangered bird. Trumpeter swans prefer large marshes and lakes ranging in size from 40 to 150 acres. They like shallow wetlands one to three feet deep with a diverse mix of plenty of emergent and submergent vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to June 15. If this habitat will not be impacted, the project is not likely to have an impact on this species.

The project is within the range of the Kirtland's warbler (*Setophaga kirtlandii*), a state endangered and federally endangered bird species. This species migrates through Ohio in the spring and fall, traveling between its breeding grounds in Michigan, Wisconsin, and Ontario and its wintering grounds in the Bahamas. Migration is energetically demanding for birds of all species. During stop-over, birds are often faced with the need to acquire food in a short period of time, in unfamiliar surroundings, and while avoiding predators and competing with other migrants and resident birds for limited resources.

While migration occurs in a broad front across the entire state, approximately half of all observations in Ohio have occurred within 3 miles of the shore of Lake Erie. During migration, individual birds usually forage in shrub/scrub or forested habitat and may stay in one area for a few days. Because so much of the southern Lake Erie shoreline is already developed, and stopover habitat is already so fragmented, the DOW recommends that this stopover habitat, (i.e. shrub/scrub or forested area), within three miles of the shoreline be preserved whenever possible. If clearing of suitable habitat cannot be avoided, to preclude adverse effects to Kirtland's warblers, clearing within 3 miles of the shoreline of Lake Erie should be avoided from April 22nd – June 1st, and from August 15th – October 15th.

The project is within the range of the piping plover (*Charadrius melodus*), a state endangered and federally endangered bird species. This species does not nest in the state but does utilize stopover habitat as it migrates through the region. Therefore, the project is not likely to have an impact on this species.

The project is within the range of the common tern (*Sterna hirundo*), a state endangered bird. The preferred nesting sites of common terns are natural or man-made islands that are free of mammalian predators and human disturbance. They will also utilize mainland beaches and dredge disposal areas but only when islands are unavailable. The common tern nests in colonies. Their eggs are laid in a grass-lined depression in the sand. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to August 1. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the king rail (*Rallus elegans*), a state endangered bird. Nests for this species are deep bowls constructed out of grass and usually hidden very well in marsh vegetation. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to August 1. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus cyaneus*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 15 to August 1. If this habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to June 30. If this habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the black tern (*Chlidonias niger*), a state endangered bird. The black tern prefers large, undisturbed inland marshes with fairly dense vegetation and pockets of open water. They nest in various kinds of marsh vegetation but cattail marshes are generally favored. Nests are built on top of muskrat houses or on top of floating vegetation. If this type of habitat will be impacted, construction should be avoided in this habitat from April 1 to June 30 to reduce impacts to this species. If this type of habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the purplish copper (*Lycaena helloides*), a state endangered butterfly. Due to the location, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the Karner blue (*Lycaeides Melissa samuelis*), a state endangered and federally endangered butterfly. Due to the location, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the Canada darner (*Aeshna canadensis*), a state endangered dragonfly, the Hine's emerald (*Somatochlora hineana*), a state and federally endangered dragonfly, the seepage dancer (*Argia bipunctulata*), a state endangered dragonfly, and the brush-tipped emerald (*Somatochlora walshii*), a state endangered dragonfly. Impacts to wetlands should be avoided and/or minimized to the fullest extent possible to avoid impacts to these species.

The project is in the range of the Persius dusky wing (*Erynnis persius*), a state endangered butterfly, the karner blue (*Lycaeides melissa samuelis*), a state and federally endangered butterfly, and the frosted elfin

(*Incisalia irus*), a state endangered butterfly. These species are found only in oak savanna habitat. Impacts to oak savanna habitat should be avoided to avoid impact to these species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

Parks and Recreation: The Division of Parks and Recreation offers the following comment.

If any of the Division of Parks and Recreation's managed property is accessed or utilized for the proposed project, a real estate agreement must be fully executed prior to anything taking place on the division's property. It may take 6 months to have a fully executed agreement if one is required. Please contact Tara Paciorek, the Department's oil and Gas Coordinator, at 614-265-6661 should you believe an agreement is necessary.

Forestry: Additional comments from the Division of Forestry may be offered.

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler ODNR Office of Real Estate 2045 Morse Road, Building E-2 Columbus, Ohio 43229-6693 John.Kessler@dnr.state.oh.us

Approved Herpetologist

Kent Bekker 542 Centerfield Drive Maumee, Ohio 43537 kbekker@gmail.com 419.376.4384

Jeff Davis 625 Crescent Road Hamilton, Ohio 45013 ohiofrogs@gmail.com 513.868.3154

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Jordan, Stephenie

From: Holland, Steven < Steven.Holland@dnr.state.oh.us>

Sent: Tuesday, December 02, 2014 9:52 AM

To: Redmond-Miller, Kathleen **Cc:** Lychwala, Michael; Kessler, John

Subject: RE: Nexus Gas Pipeline Project and Lake Erie CZM Area Crossing

Attachments: Consistency Certification.pdf

Hello Kathleen,

Thanks for contacting us regarding Federal Consistency for the proposed project. First, I wanted to let you know what the Ohio Coastal Management Program has listed in the program document regarding projects that are subject to Federal Consistency reviews if they are located in Ohio's designated coastal area (coastal zone). They are as follows:

Federal Energy Regulatory Commission

- Licenses, renewals or amendments to licenses for nonfederal hydroelectric projects and primary transmission lines under Sections 3(11), 4(e), and 15 of the Federal Power Act (16 U.S.C. 796 (11), 797 (11), and 808).
- Orders for interconnection of electric transmission facilities under Section 202(b) of the Federal Power Act (15 U.S.C. 824 a (b)).
- Certificates for the construction and operation of interstate natural gas pipeline facilities, including both pipelines and terminal facilities under Section 7 (c) of the Natural Gas Act (15 U.S.C. 717 f (c)).
- Permission and approval for the abandonment of natural gas pipeline facilities under Section 7 (b) of the Natural Gas Act (15 U.S.C. 717 f(b)).
- Regulation of gas pipelines, and licensing of import and export of natural gas pursuant to the Natural Gas Act (15 U.S.C. 717) and the Energy Reorganization Act of 1974.
- Exemptions from prohibition orders.

I do not know if the Certificate of Public Convenience and Necessity falls into one of these categories. If so, the project would be subject to a Federal Consistency review. If not, a Federal Consistency review would be required if the federal agency believes the project will have reasonably foreseeable effects on any use or resource of Ohio's designated coastal area.

To begin a review, we would need to receive a copy of the federal permit application as well as a signed Consistency Certification [attached]. I realize that in some cases the "permit application" can be quite voluminous. If that is the case, we can accept a summary document along with maps showing the project's location.

If you have questions or wish to discuss the project, I'd be happy to call you at a time that is convenient for you. Just let me know. Thanks.

Steve Holland, MPA
Federal Consistency Administrator
Ohio Coastal Management Program
ODNR Office of Coastal Management
105 West Shoreline Drive

Sandusky, Ohio 44870 (419) 609-4104

Website: http://coastal.ohiodnr.gov

Grants Viewer: https://gis.ohiodnr.gov/website/ocm/grants

Notice: Ohio has a very broad public records law. Most written communications to or from Office of Coastal Management employees regarding Office of Coastal Management business are public records available to the public and media. Your e-mail communication may be subject to public disclosure.

From: Kessler, John

Sent: Monday, December 01, 2014 3:10 PM

To: Redmond-Miller, Kathleen

Cc: Lychwala, Michael; Holland, Steven

Subject: RE: Nexus Gas Pipeline Project and Lake Erie CZM Area Crossing

Hi Kathleen. Steve Holland and I had a chance to discuss your project. He will be in touch to provide guidance on the coastal consistency review. Thank you for contacting us on this matter.

John

John Kessler, P.E. Environmental Services Administrator Office of Real Estate Ohio Department of Natural Resources 2045 Morse Rd., Columbus, OH 43229-6605

phone: 614-265-6621

email: john.kessler@dnr.state.oh.us

From: Redmond-Miller, Kathleen [mailto:KRedmond-Miller@trcsolutions.com]

Sent: Monday, December 01, 2014 11:27 AM

To: Kessler, John **Cc:** Lychwala, Michael

Subject: RE: Nexus Gas Pipeline Project and Lake Erie CZM Area Crossing

Hi John,

That sounds good. I did call Steve Howland last week and left a voicemail (he was out of the office). I got his name from the CZM website. Thanks very much for your efforts to coordinate internally and to let us know how best to proceed with coordination.

Best regards, Kathleen

Kathleen Redmond-Miller Project Manager/Senior Scientist



6 Ashley Drive, 1st Floor, Scarborough, ME 04074 T: 207.274.2602 | F: 207.274.9293 | C: 207.400.2529

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From: Kessler, John [mailto:John.Kessler@dnr.state.oh.us]

Sent: Monday, December 01, 2014 11:20 AM

To: Redmond-Miller, Kathleen

Cc: Lychwala, Michael

Subject: RE: Nexus Gas Pipeline Project and Lake Erie CZM Area Crossing

Hi Kathleen. Please allow me to discuss this with our Office of Coastal Management and then we will get back in touch with you to try and answer any questions and offer technical assistance.

John

John Kessler, P.E. Environmental Services Administrator Office of Real Estate Ohio Department of Natural Resources 2045 Morse Rd., Columbus, OH 43229-6605

phone: 614-265-6621

email: john.kessler@dnr.state.oh.us

From: Redmond-Miller, Kathleen [mailto:KRedmond-Miller@trcsolutions.com]

Sent: Tuesday, November 25, 2014 9:50 AM

To: Kessler, John **Cc:** Lychwala, Michael

Subject: Nexus Gas Pipeline Project and Lake Erie CZM Area Crossing

Hi John,

I understand from your voicemail message that you're out of the office until Monday. I wanted to follow up on the voicemail that I left you this morning with some additional information about the Nexus Gas Pipeline project and the Lake Erie Coastal Zone Management Area. Based on the below map from the ODNR's on-line viewer, the Nexus project will cross the CZM area boundary just south of Highway I-80E/I-90W (crossing distance ~8392 feet as shown below). The project is currently proposing to cross the Sandusky River using the Horizontal Directional Drill pipeline crossing method, therefore, no in-stream work is proposed within the CZM area. However, there will likely be, depending on the length of the HDD (which is currently in the design phase in consultation with a geotechnical contractor), some traditional open trench pipeline construction within the CZM area. The project is still in its early stages of development and we would like to better understand the CZM consistency determination process with ODNR and its associated timing. The project will require issuance of a Certificate of Public Convenience and Necessity from the Federal Energy Regulatory Commission (FERC Certificate) which is considered a "federal action" in accordance with the National Environmental Policy Act. If you could give me a call back at your earliest convenience at 207.274.2602 and when you have a few minutes to discuss, it would be very much appreciated.

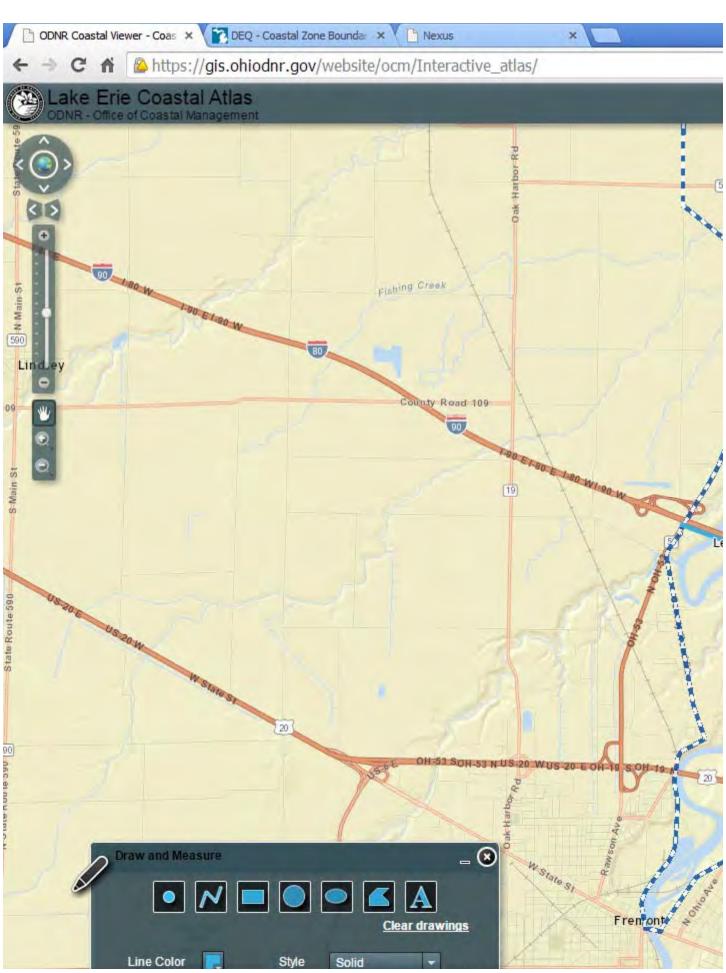
Best regards, Kathleen

Kathleen Redmond-Miller Project Manager/Senior Scientist



6 Ashley Drive, 1st Floor, Scarborough, ME 04074 T: 207.274.2602 | F: 207.274.9293 | C: 207.400.2529

<u>LinkedIn | Twitter | Blog | www.trcsolutions.com</u>







Telephone Contact Log

NEXUS Gas Transmission, LLC NEXUS Gas Transmission Project

DATE: December 2, 2014

Agency/Organi	zation/Individual Contacted	Т	RC Representative
Name / Title:	Steve Holland, Federal Consistency Administrator	Name / Title:	Kathleen R. Miller/TRC Nexus DPM
Agency/ Organization:	Ohio Coastal Management Program, ODNR Office of Coastal Management	Office Location:	Scarborough, ME
Address:	105 West Shoreline Drive Sandusky, Ohio 44870	Subject of Call:	CZM Consistency Determination Process
Phone:	(419) 609-4104 Holland, Steven Steven. Holland@dnr.state.oh.us	CC:	Matt Barczyk, Nexus Gas Transmission Mike Lychwala, TRC

THE FOLLOWING WAS DISCUSSED:

Mr. Holland called in response to an email inquiry I sent in reference to the Nexus Gas Transmission Project and the Lake Erie Coastal Zone Management (CZM) consistency determination process. Mr. Holland was familiar with the Nexus project based on conversations with John Kessler, the Ohio Department of Natural Resources' (ODNR) Environmental Services Administrator. I confirmed with Mr. Holland that the Nexus project would require a Certificate for construction and operation of an interstate natural gas pipeline facility (under Section 7c of the Natural Gas Act) from the Federal Energy Regulatory Commission (FERC). I explained that Nexus would be using FERC's pre-filing process and asked if he was familiar with how it works. I explained that Nexus would likely be making its initial filing with FERC at the end of January 2015 and that the overall project is approximately 250 miles long while the segment that traverses the Lake Erie CZM area is only approximately 8,400 feet long. Also, it's likely the Sandusky River would be crossed using a horizontal direction drill that would avoid in-stream construction activities. Mr. Howland indicated that any activities listed ODNR's regulations as requiring a federal consistency determinations would require a CZM review even if there is no in-stream work proposed.

I asked if it would be acceptable for Nexus to make its filing for the CZM consistency determination ahead of filing its full 7c application with FERC and if the application could focus only on the segment that crosses the Lake Erie CZM boundary. He responded this would be acceptable as long as the application materials are complete and there is low probability the alignment would change in the CZM area (which would require an additional review). He also suggested that the U.S. Army Corps of Engineers be informed of the CZM consistency review as they will need the CZM consistency determination in order to issue their permit.

I asked if he could provide a best estimate for the **ODNR's** CZM consistency review time. He responded that federal regulations allow for six months but he thought it could be completed in one to two months. I thanked him for his time and indicated that we would contact him if our plans change or if we have additional questions.



Title: 20141209 Spectra Ohio EPA Central Office - NEXUS - Meeting Notes

By:DJ Wheeler, John BinsMeeting Date:12/09/2014Client:Spectra Energy PartnersProject #:143601.0141

Agenda

1. During the meeting, John Bins and DJ Wheeler presented the PowerPoint "2014_1208_NEXUS_Air Permitting"

2. John and DJ discussed additional details regarding the project scope and schedule.

Participants

- Ohio EPA Central Office
 - Mike Mansour, Senior Environmental Specialist (MM) in person
 - > Central Office contact for the Akron Regional Air Quality Management District and NW District Office
 - Dave Morehart (DM) in person
 - > Central Office contact for the NE District Office
- Trinity (TCI)
 - John Bins (JB) in person
 - DJ Wheeler (DW) in person

Meeting Discussions

- > JB and DW used the PowerPoint slides to provide a general overview of the purpose and scope of the NEXUS Gas Transmission Project. MM and DM raised the following questions during these discussions. JB and DW provided responses if readily available.
 - At what point does Spectra Energy assume control of the natural gas (i.e., will any of the natural gas originate from production or midstream operations owned and operated by Spectra Energy)?
 - What diameter of pipe will be used?
 - > JB and DW explained that two scenarios were currently under consideration: 42 inch pipe or 36 inch pipe.
 - How does Spectra Energy determine the route that the pipeline will follow?
 - At what depth below ground will the pipeline be installed?
 - At what pressure will the NEXUS pipeline operate?
- IB and DW proceeded to explain that the NEXUS Gas Transmission Project will involve three (3) separate permitting actions for three (3) separate compressor stations in Columbiana, Medina, and Fulton Counties potentially including the following emissions sources.
 - Natural gas-fired combustion turbines rated at approximately 18,000 hp
 - Storage vessels
 - Equipment leaks
 - Liquid loading
 - Gas releases
 - Generators
 - Heaters

- > JB and DW also explained that the NEXUS Gas Transmission Project may involve valve sites and metering and regulating stations considered separate from, adjacent with, or part of the three (3) compressor stations. These smaller sites typically include the following emissions sources.
 - Storage vessels
 - Equipment leaks
 - Liquid loading
 - Gas releases
 - Heaters
- MM and DM inquired as to whether these facilities would trigger major PSD permitting requirements.
 - JB and DW explained that current, preliminary emissions estimates suggest that none of the aforementioned permitting exercises will trigger PSD. JB further clarified that these estimates are based on preliminary performance targets that will be verified by the manufacturers (e.g., 9 ppm NO_X).
- MM and DM inquired as to any of the aforementioned emissions sources would qualify for permitting exemptions. JB and DW responded that Trinity and Spectra Energy will review the final manufacturer's specifications and emission rates to determine whether any units qualify for any of the following exemptions.
 - De Minimis exemption for emissions less than 10 lb/day
 - Permanent exemptions provided in OAC 3745-31-03
 - Permit-by-Rule expedited permitting as provided in OAC 3745-31-03
- > JB and DJW presented the following project schedule.
 - December 2014 preliminary project meetings with air permitting agencies
 - February 2015 pre-permit strategy meetings with air permitting agencies
 - July 2015 submit final applications for all sites
- MM inquired as to whether the air permitting effort would involve a public hearing. JB and DW responded that Spectra Energy will evaluate the need for a public hearing after the final design specifications and emission rates have been established.
- MM and DM suggested that it may be beneficial to provide an email summary of the final design specifications, once available.
- MM responded to an inquiry from JB that Spectra Energy could potentially pursue expedited permitting procedures wherein agency overtime is billed directly to Spectra Energy as part of the permit fee.
 - Note Trinity has not historically used these procedures. MM will confirm with Mike Hopkins (Ohio EPA's Assistant Chief of Permitting) whether these procedures will be available to Spectra Energy.
- > DW/JB explained that Spectra Energy and Trinity would appreciate the opportunity to review and comment upon whichever of the requested permits is the first to reach draft issuance. The final terms of this permit could be used as a template for the other sites, as appropriate.
 - MM specifically recommended working with the NW District Office to draft the initial set of terms.
- IB and DW opened the floor for final questions and closed the meeting

Action Items

- 1. Ohio EPA
 - Follow up with Mike Hopkins regarding the expedited permitting procedures. Mike responded very promptly with the following statement the next morning after the meeting;

"I spoke with Mike Hopkins, Assistant Chief of Permitting, concerning the subject matter above and it is generally something that we would consider on a case by case basis as there is currently no policy that addresses that issue (as I am told there had been one instance where such request was made and approved). If there is going to be special circumstances that will require that permit processing be sped up beyond what is normal, please bring it to my attention for consideration. "

2. Trinity/Spectra Energy

- a. Provide answers to general project questions.
 - 1) At what point does Spectra assume control of the gas in the pipeline?
 - 2) At what depth and pressure do the pipelines operate?
- b. Consider sending an email with final project details if available prior to the February 2015 meetings.





Title: 20141210 Spectra Akron Regional Air Quality Management District - NEXUS - Meeting Notes

By: DJ Wheeler, John Bins Meeting Date: 12/10/2014

Client: Spectra Energy Partners Project #: 143601.0141

Agenda

 During the meeting, John Bins and DJ Wheeler presented the PowerPoint "2014_1208_NEXUS_Air Permitting"

2. John and DJ discussed additional details regarding the project scope and schedule.

Participants

- Akron Regional Air Quality Management District
 - Sean Vadas (SV) in person
 - Kelly Kanoza, Air Quality Engineer, (KK) in person
 - Duane LaClair, Engineering Supervisor, (DL) in person
- Trinity (TCI)
 - John Bins (JB) in person
 - DJ Wheeler (DW) in person

Meeting Discussions

- JB and DW used the PowerPoint slides to provide a general overview of the purpose and scope of the NEXUS Gas Transmission Project. These discussions were largely similar to those presented to Ohio EPA's Central Office on 12/9/14. Following is a list of questions and discussions unique to the 12/10/14 meeting with the Akron Regional Air Quality Management District.
- SV, KK, and DL are confident that the permit terms for the Medina Compressor Station will be issued Draft Final through a 30-day public comment period despite the fact that the project will constitute a minor permitting action. Interested parties may also request a public hearing during this 30-day public comment period. SV explained that the Akron Regional Air Quality Management District had instituted this policy due to substantial public pressure from within the District's jurisdiction (particularly Medina County). SV recommended that Spectra Energy voluntarily request a public hearing to coincide with the public comment period to avoid further permitting delays associated with the scheduling of a public hearing.
- > SV explained that KK would be the primary permit engineer for the application filed for the Medina Compressor Station.
- > SV inquired as to whether Spectra Energy was planning to control gas releases using a flare and expressed that similar pipeline facilities in Medina County had generated a significant number of complaints during flaring of gas releases.
- > SV, KK, and DL expressed that noise, visibility, and public complaints may be a significant concern if the Medina Compressor Station is sited in close proximity to cities or residences.
- KK inquired as to which entity owns and operates the Kensington Plant. SV inquired as to how the Kensington Plant was currently distributing its natural gas.
- KK expressed that Spectra Energy should review permit issuance and construction schedules to confirm that Spectra will be ready to undertake a continuing program of construction within 18 months of permit issuance. SV clarified that Spectra Energy could request an extension, if necessary.

Action Items

- 1. Trinity/Spectra Energy
 - a. Identify the entity currently operating the Kensington Plant. Clarify the current means of distributing gas from the Kensington Plant.
 - b. Determine whether Spectra Energy should submit a request for a public hearing to coincide with the public comment period that SV, KK, and DL maintain will be required for this permitting action. Also consider whether Spectra Energy should request public hearings for the NEXUS sites that are not within the jurisdiction of the Akron Regional Air Quality Management District.
 - c. Consider sending an email with final project details if available prior to the February 2015 meetings.





Title: 20141210 Spectra Ohio EPA Northeast District Office - NEXUS - Meeting Notes

By:DJ Wheeler, John BinsMeeting Date:12/10/2014Client:Spectra Energy PartnersProject #:143601.0141

Agenda

 During the meeting, John Bins and DJ Wheeler presented the PowerPoint "2014_1208_NEXUS_Air Permitting"

2. John and DJ discussed additional details regarding the project scope and schedule.

Participants

- Ohio EPA Northeast District Office
 - Ed Fasko, Environmental Supervisor (EF) in person
 - Kevin Fortune, Environmental Specialist, (KF) in person
 - Jana Gannon, Environmental Specialist, (JG) in person
- Trinity (TCI)
 - John Bins (JB) in person
 - DJ Wheeler (DW) in person

Meeting Discussions

- JB and DW used the PowerPoint slides to provide a general overview of the purpose and scope of the NEXUS Gas Transmission Project. These discussions were largely similar to those presented to Ohio EPA's Central Office on 12/9/14. Following is a list of questions and discussions unique to the 12/10/14 meeting with Ohio EPA's Northeast District Office.
- JG expressed that the Northeast District Office has historically permitted pigging emissions as a separate emission unit from gas releases at compressor stations.
 - Note JG may have been referring to upstream and midstream compressor stations which may be handling gases with greater VOC concentrations than the gases handled by Spectra Energy. Trinity recommends pursuing the traditional permitting approach for pigging emissions (i.e., represent pigging emissions as part of facility-wide gas releases).
- ▶ JG, KF, and EF specifically inquired as to whether the NEXUS Gas Transmission Project would involve tie-ins to any existing pipelines (e.g., at the Kensington Plant) that would result in gas releases during the construction operations associated with the tie-in. The Northeast District Office has not historically issued permits for these activities, but the agency is nevertheless curious as to whether the NEXUS Gas Transmission Project will involve these tie-in construction emissions.
- ▶ JG, KF, and EF recommended that Spectra Energy consider factors such as odor and noise when siting the facilities associated with the NEXUS Gas Transmission Project.
- JG, KF, and EF inquired as to whether a separate-source determination would be necessary for the Columbiana Compressor Station and the Kensington Plant.
- ▶ JG, KF, and EF recommended that Spectra Energy submit applications electronically through Air Services to expedite the permitting process.

Action Items

- 1. Trinity/Spectra Energy
 - a. Provide answers to specific project questions.
 - 1) Will the project involve emissions from gas releases during any construction activities necessary to connect to existing lines?
 - 2) Will a separate-source determination be required for the Columbiana Compressor Station and the Kensington Plant?
 - b. Consider sending an email with final project details if available prior to the February 2015 meetings.





Title: 20141217 Spectra Toledo Division Of Environmental Services - NEXUS - Meeting Notes

By:DJ Wheeler, John BinsMeeting Date:12/17/2014Client:Spectra Energy PartnersProject #:143601.0141

Agenda

1. During the meeting, Sabino Gomez, John Bins, and DJ Wheeler presented the PowerPoint "2014_1208_NEXUS_Air Permitting"

2. Sabino, John, and DJ discussed additional details regarding the project scope and schedule.

Participants

- Toledo Division of Environmental Services
 - Karen Granata, Administrator (KG) in person
 - Matt Stanfield, Staff Professional Engineer, (MS) in person
 - Mary Lehman Schmidt, Professional Engineer, (ML) in person
- Trinity (TCI)
 - John Bins (JB) via teleconference
 - DJ Wheeler (DW) in person
- Spectra Energy (Spectra)
 - Sabino Gomez (SG) via teleconference

Meeting Discussions

- SG, JB, and DW used the PowerPoint slides to provide a general overview of the purpose and scope of the NEXUS Gas Transmission Project. These discussions were largely similar to those presented to Ohio EPA's Central Office on 12/9/14. Following is a list of questions and discussions unique to the 12/17/14 meeting with the Toledo Division of Environmental Services.
- MS explained that he would be the primary permit engineer for the application filed for the Lucas County Compressor Station if the station will be located near Waterville, OH.
- ➤ KG inquired as to whether Spectra Energy had quantified the positive economic development associated with the NEXUS Gas Transmission Project (e.g., creation of jobs, investment of funds). As Administrator she sometimes gets requests from the "politicians" concerning economic impacts.
 - SG and JB explained that long-term employment opportunities would be limited given that these compressor stations and pipeline facilities do not typically require on-site staff. However, the initial construction effort will involve the utilization of local construction unions with whom Spectra has already initiated discussions. The NEXUS Gas Transmission Project will also constitute a significant source of tax revenue for the community. The FERC regulatory review process will also include a review of potential positive economic impacts.

Action Items

- 1. Trinity/Spectra Energy
 - a. Consider sending an email with final project details if available prior to the February 2015 meetings.



Via U.S. Mail and Email

November 5, 2014

Mr. Mark Epstein Department Head, Resource Protection and Review Ohio Historic Preservation Office 800 E. 17th Avenue Columbus, Ohio 43211-2474

Subject: <u>NEXUS Gas Transmission</u>, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Mr. Epstein:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is seeking authorization from the Federal Energy Regulatory Commission (FERC) pursuant to Section 7(c) of the Natural Gas Act to construct, own, and operate the proposed NEXUS Gas Transmission Project (Project). NEXUS is proposing to construct and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The project will include approximately 199-miles through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

We are currently briefing federal, state, and local officials on the proposed Project. In addition, we will be continually meeting with individual landowners and other stakeholders to identify any initial concerns that they may have and to seek their input regarding this early stage of the proposed Project.

Beginning in late September 2014, NEXUS representatives began field survey work for the Project and representatives of your office were briefed on details of the project in a meeting conducted at the Ohio Historic Preservation Office (OHPO) between TRC Environmental Corp. (TRC) and Dr. David Snyder on October 16, 2014. In order to accurately respond to anticipated questions and concerns about the NEXUS Project, NEXUS needs to begin collecting the necessary data to evaluate and design the potential project facilities. To that end, on behalf of NEXUS, TRC respectfully requests the initiation of consultation with your office in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470, as amended) and its implementing regulations (36 CFR 800). To assist in our cultural resource investigations, we request your review of the attached location map of facilities location, as well as the additional information outlined in Attachments 1 and 2. Information concerning Native American consultation has been provided to the Shawnee, Delaware, Seneca, Potawatomi, Miami, Wyandotte, Peoria, and Ottawa tribes and nations, but we would also appreciate your thoughts concerning any additional Native American consultation that might be appropriate for the Project.

NEXUS's intent is to inform and consult with stakeholders early in the development of the Project. NEXUS intends to utilize the FERC's National Environmental Policy Act pre-filing process (Pre-filing Process). The Pre-filing Process provides all stakeholders (federal, state and local agencies, landowners, and local citizens) the opportunity for early cooperation and involvement in evaluating a project prior to filing a formal application with the FERC. The purpose of the Pre-filing Process is to identify, evaluate, and attempt to resolve issues and concerns prior to the filing of formal project applications. This process will require multiple agency meetings, public meetings, and the documentation of continuing efforts to identify and address concerns under the direction of the FERC. The public will then have the opportunity to comment on NEXUS's draft environmental resource reports prior to the filing of a formal FERC application. NEXUS will also be filing for various additional federal and state permits during this process. By initiating this early agency consultation and involvement, NEXUS also intends to assist those agencies that have coordination obligations with the FERC described in its order No. 687 concerning the coordination and timing of federally delegated state authorizations in order to comply with the Energy Policy Act of 2005.

Following the Pre-filing Process, NEXUS will file a formal application for review and approval from the FERC and numerous other agencies. The permit proceedings, which will be conducted by these agencies, will provide additional opportunity for public input and involvement. NEXUS plans to request authorization from the FERC to participate in its pre-filing process in the fourth quarter 2014. NEXUS will file a formal application for review and approval from the FERC, as well as permit applications with other relevant state and federal agencies. The Draft Resource Report are currently planned to be filed in the third quarter 2015, and the FERC application is currently planned to be filed in the fourth quarter 2015. All other agency applications will be filed in a similar time frame. NEXUS proposes that the Project will be fully operational in December 2017. Additional information regarding the FERC Pre-filing Process and FERC approval process can be found at www.ferc.gov.

We look forward to working with you during the environmental review process. Please contact me at (919) 414-3420, or (919) 530-8446 x224, or via e-mail at tmillis@trcsolutions.com if you have questions or require additional information.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis

Tracy L. Millis

Senior Archaeologist

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation

Attachment

ATTACHMENT 1

PROPOSED ARCHAEOLOGICAL SURVEY STRATEGY

As shown on the attached map, the proposed NEXUS Pipeline Project will consist of approximately 199-miles through eleven (11) counties in Ohio (Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton), and four newly constructed compressor stations.

The following paragraphs provide information on TRC's proposed archaeological field strategy for the Project. For all Project facilities, background research will be conducted at the OHPO, the State of Ohio Archives, the Library of the Ohio Historical Society, and using the OHPO Online Mapping System. All site locations as provided in OHPO Online Mapping System will be cross-checked and corrected as necessary according to original site reports.

Proposed Pipeline Corridor

The proposed Project will consist of construction of approximately 199-miles of 42-inch pipeline that generally will be parallel to existing gas pipeline or transmission utility corridors (Figure 1). The proposed workspace areas and limits of the proposed study corridor for the NEXUS Project will be 300 feet wide, including 150 feet to the east and west of the proposed centerline. The specific configuration of the proposed right-of-way (ROW) and easement have not been finalized, but in order to provide maximum flexibility, the project study corridor will be wider than the permanent ROW easement.

Archaeological fieldwork for the NEXUS Project will be accomplished following the procedures outlined in the OHPO's *Archaeology Guidelines* and will include shovel testing in all areas of 15 percent or less slope that do not exhibit evidence of severe prior disturbance. TRC proposes to survey six transects for the portions of the proposed Route that require shovel testing. All areas classified as less than 15 percent slope will be surveyed at 50 foot (15-m) intervals. Low probability areas that are greater than 15 percent slope will be visually inspected through a pedestrian reconnaissance for rock overhangs, shelters, and caves.

All shovel tests will be 50×50 cm units and will be excavated in 10 cm arbitrary levels within natural strata, following OHPO guidelines. The soil will be screened through $\frac{1}{4}$ -inch hardware cloth. All identified sites in the project area will be delineated up to the boundary of the study corridor. Shovel test intervals will be reduced to 7.5 m in order to accurately assess the nature of the soils and the contextual integrity of the cultural deposits to allow an informed decision regarding recommendations of site eligibility.

Access Roads and Additional Facilities

In the event that access roads or other ancillary facilities are proposed for the Project, TRC will survey any previously unsurveyed areas using the field methods discussed above. In the event that access roads or other facilities have been previously approved for other projects, TRC will provide documentation of that information to OHPO.

Please let us know if this documentation/reporting strategy is acceptable to your office.

ATTACHMENT 2

PROPOSED HISTORIC STRUCTURES SURVEY STRATEGY

TRC will conduct a historic structures survey within the Project's Area of Potential Effects (APE) to identify all structures that appear to be 50 years old or older and have the potential to be visually connected to the proposed Project. Federal regulations define an APE as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist" (36 CRF Part 800.16[d] or CFR 2009b). For this project, the APE is regarded as the area following or paralleling the proposed Route or any properties immediately adjacent to the Route, including any resources that might be potentially impacted by blasting or determined to be any area within view of the proposed above-ground construction or clearing of vegetation. Viewsheds to and from the Project will be terminated where vegetation and/or topography obstructs lines of sight.

The historic structures survey will consist of four tasks: 1) Background research; 2) Field survey; 3) Evaluation, and 4) Report. The historic structures survey will be conducted according to all relevant State and Federal guidelines.

- 1) Background Research: TRC will conduct background research in person and using the Ohio Online Mapping System to identify all previously recorded and designated historic architectural resources within the Project APE. These will include all resources listed in or determined eligible for listing in the National Register of Historic Places (NRHP) or as a National Historic Landmark (NHL) and all previously identified architectural resources and districts, including any cemeteries, historic districts, and rural historic landscapes. TRC will also review relevant historic materials such as published histories of the project area, previous cultural resource studies of the project area, and historic maps and atlases. The research will provide the basis for a historical overview of the project area to be included in the final report.
- 2) Field Survey: TRC will conduct a field survey to locate, map, and photograph the historic resources identified during the background research phase. Information will be updated on any resources surveyed more than seven (7) years ago. Based on a visual exterior inspection and information obtained from the review of historic maps, TRC will map and photograph any previously unidentified historic resources 50 years old or older. Fieldwork will include completion of Ohio Historic Inventory (OHI) Forms, along with digital and film photographic documentation to include one or more views of the surveyed individual resources and representative views of buildings and streetscapes within any historic districts or historic landscapes in the Project APE. The resources will be mapped on the appropriate USGS quad maps.
- 3) Evaluation: Based on the background research and fieldwork phase, TRC will evaluate the surveyed resources for eligibility for listing in the NRHP, individually or as part of one or more historic districts. TRC will base its assessment in accordance with guidelines contained in National Register Bulletin 24, *Guidelines for Local Surveys: A Basis for Preservation Planning* (Derry et al. 1985). If OHPO feels any of the surveyed resources require additional investigation to determine NRHP eligibility, an Intensive level survey will occur including interior inspection (if requested by OHPO), additional photography, and site-specific historic research.
- 4) <u>Historic Structures Survey Report</u>: The results of this fieldwork will be compiled and presented as a chapter in the cultural resources report that will be submitted during the Section 106 review

process. This report will also include the historic context for the project area. The report will include TRC's recommendations on NRHP eligibility based on the NRHP criteria and integrity standards. The surveyed resources will be coded to a map of the Project area. Finally, the report will include an assessment of any anticipated effects, both direct and indirect, from the proposed Project. This report will be submitted to OHPO for review and concurrence with TRC's recommendations.

Please let us know if this documentation/reporting strategy is acceptable to your office.

REFERENCES

Derry, Ann, H. Ward Jandl, Carol D. Shull, and Jan Thorman
1985 National Register Bulletin 24, Guidelines for Local Surveys: A Basis for Preservation
Planning. National Park Service, Washington, D.C.







Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014

STATE OF MICHIGAN

Agency Correspondence



PRE-APPLICATION MEETING REQUEST

The Department of Environmental Quality's (DEQ) Land and Water Management Division (LWMD) has established a voluntary process for meeting with staff prior to submitting a permit application under Part 301, Inland Lakes and Streams, and Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. If you would like to request a pre-application meeting with LWMD staff, please submit the following information to your local LWMD district office:

- 1. The Pre-application Meeting Request Form. You must provide all requested information to allow us to process your request.
- 2. A map indicating the location of your project site (a county map or one obtained from an internet mapping system, is acceptable). This map should include all streets, roads, intersections, highways, and a north arrow.
- 3. If the applicant is not the property owner, a letter from the landowner authorizing the DEQ to meet with the applicant and/or agent and enter the property described on this form for the purposes of the pre-application meeting.
- 4. The appropriate fee (as shown below), paid using credit card or electronic check.
- 5. A preliminary site plan, if available.

Please keep in mind that providing any other available information may allow staff to better evaluate your project. Other information that may be helpful in LWMD's review includes photographs of the site, aerial photos, more detailed site plans, etc. You may also provide a draft permit application. (The permit application is available at www.michigan.gov/jointpermit.)

Indicate on the form whether you wish to meet in the district office or at the project site. A current district contact information map may be viewed on the DEQ Web site above. Please submit the form and appropriate fee to the address provided on the Web site for your local district office, or you may also submit the form to: Department of Environmental Quality, Land and Water Management Division, Permit Consolidation Unit, P.O. Box 30204, Lansing, Michigan 48909-7704.

Staff of the LWMD will contact you to schedule a meeting at a mutually convenient time. Meetings will be scheduled as soon as staff time and/or weather conditions allow. A meeting may be rescheduled if you provide at least 24 hours advance notice. If you need to cancel a pre-application meeting, you may do so up to 24 hours (not including weekends or holidays) prior to the scheduled meeting with a full refund. No refund will be given if the meeting is canceled by you with less than 24 hours notice.

FEES

TYPE OF PRE-APPLICATION MEETING	FEE
Single-family residential lot less than 1 acre in size	
Meeting in district office	No Charge
Meeting on site	\$ 100.00
Other pre-application meeting in district office	\$ 150.00
Other meeting on project site	
First acre or portion of acre of project area	\$ 250.00
Each additional acre or portion of acre	\$ 50.00
Maximum	\$1,000.00
Example: 4.7 acres = \$250 + (4 x \$50) = \$450.	

DEPARTMENT OF ENVIRONMENTAL QUALITY LAND AND WATER MANAGEMENT DIVISION PRE-APPLICATION MEETING REQUEST

DEQ FILE NOFOR OFFICIAL	USE

Applicant	Property Owner				
Applicant NEXUS Gas Transmission, LLC	Property Owner: NEXUS Gas Transmisison , LLC				
Address 5400 Westheimer Ct.	Address (linear pipeline project)				
City: Houston State: TX 2677056-43215	City State Zip				
Phone: 713.627.5635 Fax:	Phono: Fax				
Email: MRBarczyk@spectroenergy.com	Email:				
Agent (if applicable)					
Agent: Michael Lychwala	Company TRC Sulptions, Inc.				
Address. 6 Ashle- Drive					
	Maine Zp: 04024				
Phono:207_3E_1E39 Fax 207.879.9	9293 Email MLychwala@tresolutions.com				
Site location					
Address. See attached NEXUS Location Map	Township/City: Zip				
County Lenawee, Monroe, Washtenaw	ange Section.				
Project Name NEXUS Gas Transmission Project					
Directions (nearest major intersection and directions from major inte	resection): See attached NEXUS Overview Map.				
PRE-APPLICATION MEETING REQUEST					
The meeting is requested at the Project site.	or X DEQ district office				
2. DEQ staff should contact					
3. Is the proposed project a single family residential lot one agre or less in size? ☐ Yes ☑ No					
GENERAL INFORMATION					
Project description (use additional sheets if necessary): The NEXUS Gas Transmission Project is an approximately 250					
	peline originating in Columbiana. County Ohio; and traversing				
Monroe, Lenawee, and Washtenaw Counties. Mich Estimated total project area (acres):	igan for approximately 50 miles.				
Will wetlends be involved? (No, Unsure) Circle one	Estimated acreage of impact TBD				
Has a wetland defineation been conducted? (₹≋) No.) Circle one ——————————————————————————————————					
Will Inland lakes and streams be involved? (No. Unsure) Circle one Waterbody name TBD,					
Will floodplains be involved? (See No. Unsure) Circle or	n a				
Other resources Involved (Critical Dunes, High Risk Eresion Areas, etc.) TBD					
SIGNATURE					
t hereby certify that I am familiar with the information contained in this application, that it is true end accurate. I understand that there are penalties for submitting false information and that any finding pursuant to this request may be revoked if information on this request is untrue. Signed 12/29/2014					

	DEQ MEETING REPORT - FOR OFFICIAL USE
DEQ FILE NUMBER	
MEETING HELD	ATTENDEES
Date	
Location	
	
STAFE COMMENTS	
STAFF COMMENTS	
	IIT UNDER PART 301, INLAND LAKES AND STREAMS, THE NATURAL RESOURCES AND ENVIRONMENTAL
The Department of Environmental Quality has determined	ned that:
application.	umber at the top of this form when submitting a permit
A permit is not required. (This can only be determined)	ermined for meetings on the project site.)
☐ It can not be determined whether a permit is requ	uired given the information presented.
	ans prepared by and ation provided at the time of this meeting only. Provided that the ermination is binding for a period of two years from the date of
DEQ Staff Signature	Date
THIS DOCUMENT IS NOT A PERMIT Staff can not in will be issued. The DEQ cannot make a decision regard provided in the final permit application, and, in some in to a public notice of the project. Therefore, staff cannot advance of a permit application. They can, however, g	ndicate during a pre-application meeting whether or not a permit arding a permit until it has considered all of the information instances, has also considered comments received in response of legally tell you whether your project will be authorized in give you information that will improve the likelihood that it will they may also be able to identify issues which will be of

Receipt

DEQ Joint Permit Ap

Payment Receipt

Merchant: DEQ Joint Permit Ap

Merchant City/State: Lansing, MI

Merchant Location Code: 00001

Payment Status: Success

Payment Date: 12/29/2014

Confirmation Number: 14122954133188

Billing Address: Kathleen R. Miller

18 Mallard Drive Gorham, ME 04038 (207) 400-2529

E-Mail Address: KRedmond-Miller@trcsolutions.com

Total Amount: 150.00 USD

Convenience Fee Amount: 3.00 USD

Card Type: VISA Account #: x3006

Authorization Code: 06501C

Reference: NEXUS Gas Transmission, LLC,5400

Westheimer Ct., Houston, TX, 43215

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December 18, 2014

Ms. Katherine David
Michigan Department of Environmental Quality
Jackson District Office
301 E. Louis Glick Highway
Jackson, Michigan 49201

Subject: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Project

Michigan Department of Environmental Quality

Dear Ms. David,

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 250-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses through eleven (11) counties in Ohio; including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton and three (3) counties in Michigan: Lenawee, Monroe, and Washtenaw. NEXUS is currently investigating a study corridor as generally depicted on attached Figure 1.

NEXUS intends to inform and consult with public and agency stakeholders early in the development process and has held landowner informational meetings in Ohio in October 2014 and in Michigan in November 2014. NEXUS intends to use the Federal Energy Regulatory Commission's ("FERC") National Environmental Policy Act pre-filing process ("Pre-filing Process"). The Pre-filing Process provides all stakeholders (including federal, state and local agencies, landowners, and local citizens) the opportunity for early cooperation and involvement in evaluating a project prior to filing a formal application with the FERC. The purpose of the Pre-filing Process is to identify, evaluate and attempt to resolve issues and concerns prior to the filing of formal project applications. This process will require multiple agency meetings, public meetings and documented continuing efforts to identify and address concerns under the direction of the FERC. The public will also have the opportunity to comment on the NEXUS draft environmental resource reports prior to filing the formal FERC application.

By initiating this early agency consultation and involvement, NEXUS intends to assist those agencies that have coordination obligations with the FERC described in its recent order No. 687 concerning the coordination and timing of federally delegated state authorizations in order to comply with the Energy Policy Act of 2005.

MDEQ December 18, 2014 Page 2 of 2

Following the Pre-filing Process, NEXUS will file a formal application for review and approval from the FERC, and numerous other agencies. The permit proceedings, which will be conducted by these agencies, will provide additional opportunity for public input and involvement. The FERC application is currently planned to be filed in the last quarter of 2015. All other agency applications will be filed in a similar time frame. NEXUS currently plans that the proposed Project facilities will be fully operational by November 2017. Additional information regarding the FERC Pre-filing Process and FERC approval process can be found at www.ferc.gov.

To help facilitate the consultation process, TRC will be requesting a meeting to discuss the general scope of the proposed Project. This meeting will be the first of many opportunities to participate in the development and review of the Project. We will be contacting you soon and hope to schedule a meeting at your earliest convenience. Additional information such as a GIS SHP files of the Project study corridor to aid in your review of the Project can also be provided at that time.

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1739 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

cc: Matt Barczyk, Spectra Energy Partners, LP Timothy Gehring, TRC – Ann Arbor, MI Kathleen Miller, TRC – Scarborough, ME







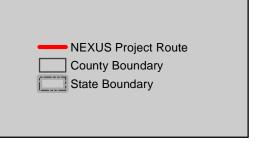


Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014



September 22, 2014

Lori Sargent (sargentl@michigan.gov)
Wildlife Division
Michigan Department of Natural Resources
P.O. Box 30180
Lansing, MI 48909-7680

Subject: NEXUS Gas Transmission, LLC NEXUS Gas Transmission Project

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses approximately 46-miles through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. NEXUS is investigating a study corridor as generally depicted on attached Figure 1.

Initial review of the potential pipeline corridor indicated that rare, threatened and/or endangered species may be present based on published county lists by the Michigan Natural Features Inventory. On behalf of NEXUS, TRC is requesting the assistance of the Michigan Department of Natural Resources ("DNR") to determine if any of the species are known to occur within the one-mile wide area under investigation. This information will assist us in determining a route to potentially avoid and minimize disruption to sensitive habitat and determine potential seasonal or species specific surveys that maybe required during permitting of the Project. Any further comments or survey guidance regarding rare, threatened, endangered or other important species is also welcomed.

To help facilitate the consultation process, TRC requests a meeting to discuss the general scope of the proposed Project and the consultation process with the DNR moving forward. This meeting will be the first of many opportunities to participate in the development and review of these projects. We will be contacting you soon and hope to schedule this meeting within the next month. Additional information such as a GIS SHP files of the Project study corridor to aid in the review of the Project can also be provided at that time.

Michigan Department of Natural Resources September 22, 2014 Page 2 of 2

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

cc: Matt Barczyk, Spectra Energy Partners, LP

Angela Gardner, TRC







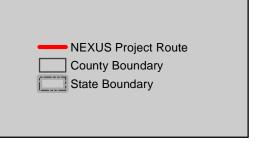


Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014

Common Name	Scientific Name	Lenawee	Monroe	Washtenaw	Wayne
Fish and Wildlife Species				•	<u> </u>
Lake sturgeon	Acipenser fulvescens				Т
Blanchard's Cricket Frog	Acris crepitans blanchardi	Т	T	Т	
Corylus dagger moth	Acronicta falcula	SC			
Corylus dagger moth	Acronicta falcula			SC	
Elktoe	Alasmidonta marginata		SC	SC	SC
Slippershell	Alasmidonta viridis		Т	Т	Т
Smallmouth salamander	Ambystoma texanum		E	E	E
Eastern sand darter	Ammocrypta pellucida	Т	T		Т
Henslow's sparrow	Ammodramus henslowii	E		E	E
Grasshopper Sparrow	Ammodramus savannarum		SC	SC	SC
Dusted skipper	Atrytonopsis hianna		SC		
Gold moth	Basilodes pepita	SC			
Pipevine swallowtail	Battus philenor	SC		SC	SC
American bittern	Botaurus lentiginosus			SC	
Red-shouldered hawk	Buteo lineatus			Т	Т
Swamp metalmark	Calephelis mutica			SC	
Land Snail	Catinella protracta			E	
Magdalen underwing	Catocala illecta	SC			
Robinson's underwing	Catocala robinsoni				SC
Campeloma spire snail	Cincinnatia cincinnatiensis	SC	SC	SC	SC
Marsh wren	Cistothorus palustris	SC	SC	SC	SC
Spotted turtle	Clemmys guttata	Т		Т	Т
Redside dace	Clinostomus elongatus	E		E	E
Kirtland's snake	Clonophis kirtlandii	E		Е	
Lake herring	Coregonus artedi			T	
Least shrew	Cryptotis parva			Т	
Least Shrew	Cryptotis parva			Т	
Purple wartyback	Cyclonaias tuberculata	Т	Т	Т	Т
Trumpeter swan	Cygnus buccinator			Т	
Cerulean warbler	Dendroica cerulea			Т	Т
Prairie warbler	Dendroica discolor			E	

Domed disc	Discus patulus			SC	
Pine imperial moth	Eacles imperialis pini		SC		
Blanding's turtle	Emydoidea blandingii	SC	SC	SC	SC
Northern riffleshell	Epioblasma torulosa rangiana	Е	E		E
Snuffbox	Epioblasma triquetra	a triquetra E E		E	
Creek chubsucker	Erimyzon claviformis	Е	E		
Wild indigo duskywing	Erynnis baptisiae		SC	SC	
Orangethroat darter	Etheostoma spectabile		SC	SC	
Dukes' skipper	Euphyes dukesi	Т	Т	Т	Т
Peregrine Falcon	Falco peregrinus		E	E	E
Northern hairstreak	Fixsenia favonius ontario	SC			SC
Leafhopper	Flexamia reflexus	SC	SC	SC	
Common moorhen	Gallinula chloropus		Т	Т	Т
Lambda snaggletooth	Gastrocopta holzingeri			E	
Bald eagle	Haliaeetus leucocephalus	SC	SC	SC	SC
Barrens buckmoth	Hemileuca maia		SC	SC	SC
Smokey rubyspot	Hetaerina titia	SC	SC	SC	SC
Riley's lappet moth	Heteropacha rileyana	SC			
Mooneye	Hiodon tergisus				Т
Frosted elfin	Incisalisa irus		Т		
Least Bittern	Ixobrychus exilis		Т	Т	Т
Wavyrayed lampmussel	Lampsilis fasciola	Т	Т	Т	Т
Spotted gar	Lepisosteus oculatus			SC	
Angular spittlebug	Lepyronia angulifera	SC		SC	
Eastern pondmussel	Ligumia nasuta		E		E
Black sandshell	Ligumia recta	E	E	E	E
Virginia flax	Linum virginianum			Т	
Purple twayblade	Liparis liliifolia			SC	SC
Karner blue butterfly	Lycaeides melissa samuelis		Т		
Silver chub	Macrhybopsis storeriana		SC		SC
Copper button	Mesomphix cupreus		SC	SC	SC
Woodland vole	Microtus pinetorum			SC	
River redhorse	Moxostoma carinatum				Т
Indiana bat	Myotis sodalis	E		E	E

Mitchell's satyr	Neonympha mitchellii mitchellii	E		Е	E
American burying beetle	Nicrophorus americanus	canus X			
Bigeye chub	Notropis amblops	Х			
Pugnose shiner	Notropis anogenus	E		E	E
Silver shiner	Notropis photogenis	is photogenis E E			
Brindled madtom	Noturus miurus	SC	SC	SC	SC
Northern madtom	Noturus stigmosus			E	E
Evening Bat	Nycticeius humeralis	Т			
Black-crowned night-heron	Nycticorax nycticorax		SC		
Black-crowned night-heron	Nycticorax nycticorax				SC
Poweshiek skipperling	Oarisma poweshiek	Т			
Poweshiek skipperling	Oarisma poweshiek			Т	
Threehorn wartyback	Obliquaria reflexa		E		E
Tamarack tree cricket	Oecanthus laricis	SC		SC	
Pugnose minnow	Opsopoeodus emiliae		E		E
Depressed ambersnail	Oxyloma peoriense			SC	
Eastern fox snake	Pantherophis gloydi		Т		Т
Gray ratsnake	Pantherophis spiloides	SC		SC	
Blazing star borer	Papaipema beeriana		SC	SC	
Maritime sunflower borer	Papaipema maritima		SC		
Culvers root borer	Papaipema sciata		SC	SC	
Silphium borer moth	Papaipema silphii		Т	Т	
Regal fern borer moth	Papaipema speciosissima	SC			
Channel darter	Percina copelandi		E		E
River darter	Percina shumardi		E		E
Wilson's phalarope	Phalaropus tricolor		SC		
Southern redbelly dace	Phoxinus erythrogaster	Е		E	
Southern redbelly dace	Phoxinus erythrogaster		E		
Greater European pea clam	Pisidium amnicum				SC
Ornamanted peaclam	Pisidium cruciatum			SC	
A fingernail clam	Pisidium simplex				SC
Round pigtoe	Pleurobema sintoxia	SC	SC	SC	SC
Brown Walker	Pomatiopsis cincinnatiensis	SC	SC	SC	SC
Red-legged spittlebug	Prosapia ignipectus	SC		SC	

Prothonotary warbler	Protonotaria citrea				SC
Kidney shell	Ptychobranchus fasciolaris	s fasciolaris SC		SC	
Kidney shell	Ptychobranchus fasciolaris		SC	SC	
Widespread column	Pupilla muscorum			SC	
Gravel pyrg	Pyrgulopsis letsoni		SC	E	
King rail	Rallus elegans		E		E
Queen snake	Regina septemvittata		SC		
Sauger	Sander canadensis		Т		Т
Louisiana waterthrush	Seiurus motacilla			Т	
Salamander mussel	Simpsonaias ambigua	E	E		E
Eastern massasauga	Sistrurus catenatus catenatus	SC		SC	SC
Regal fritillary	Speyeria idalia	E		E	E
River fingernail clam	Sphaerium fabale	SC		SC	
Dickcissel	Spiza americana		SC	SC	SC
Forster's tern	Sterna forsteri				Т
Common tern	Sterna hirundo		Т		Т
Western meadowlark	Sturnella neglecta				SC
Laura's snaketail	Stylurus laurae			SC	SC
Elusive snaketail	Stylurus notatus				SC
Russet-tipped clubtail	Stylurus plagiatus		SC		SC
Eastern box turtle	Terrapene carolina carolina	SC	SC	SC	
Purple Liliput	Toxolasma lividus		Е		
Lilliput	Toxolasma parvus	E	E		
Lilliput	Toxolasma parvus				E
Fawnsfoot	Truncilla donaciformis		Т		Т
Deertoe	Truncilla truncata	SC			SC
Barn owl	Tyto alba		E		
Paper pondshell	Utterbackia imbecillis		SC	SC	SC
Trumpet vallonia	Vallonia parvula		SC		
Flat dome	Ventridens suppressus			SC	
Ellipse	Venustaconcha ellipsiformis			SC	
Rayed bean	Villosa fabalis	E	E		E
Rainbow	Villosa iris	SC	SC	SC	SC
Epioblasma obliquata perobliqua	White catspaw		E		E

Hooded warbler	ooded warbler Wilsonia citrina			SC	SC
Plants	·				
Climbing fumitory	Adlumia fungosa	SC	SC		SC
Gattinger's gerardia	Agalinis gattingeri		E		
Beaked agrimony	Agrimonia rostellata	Т		Т	
Hairy angelica	Angelica venenosa	SC	SC	SC	SC
Banded globe	Anguispira kochi			SC	
Missouri rock-cress	Arabis missouriensis var. deamii		SC		SC
Three-awned grass	Aristida longespica		Т		Т
Virginia snakeroot	Aristolochia serpentaria	Т		Т	Т
Western mugwort	Artemisia ludoviciana	Т			
Western mugwort	Artemisia ludoviciana			Т	
Tall green milkweed	Asclepias hirtella		Т		Т
Purple milkweed	Asclepias purpurascens	Т	Т	Т	
Sullivant's milkweed	Asclepias sullivantii	Т	Т	Т	Т
Willow aster	Aster praealtus	SC	SC	SC	SC
Canadian milk vetch	Astragalus canadensis	Т		Т	
Cooper's milk vetch	Astragalus neglectus			SC	
White or prairie false indigo	Baptisia lactea	SC	SC	SC	
Murray birch	Betula murrayana			SC	
Gray birch	Betula populifolia				SC
Side-oats grama grass	Bouteloua curtipendula			E	
Satin brome	Bromus nottowayanus	SC		SC	
Prairie indian-plantain	Cacalia plantaginea	SC			
Swamp metalmark	Calephelis mutica	SC			SC
Wild hyacinth	Camassia scilloides	Т	Т		Т
Sedge	Carex albolutescens	SC			
Sedge	Carex conjuncta	SC			
Raven's-foot sedge	Carex crus-corvi		E		
Davis's Sedge	Carex davisii	SC	SC	SC	
Fescue sedge	Carex festucacea		SC	SC	
False hop sedge	Carex lupuliformis			Т	
Sedge	Carex seorsa			Т	
Sedge	Carex squarrosa	SC	SC	SC	SC

Hairy-fruited sedge	Carex trichocarpa	SC		SC	
American chestnut	Castanea dentata		Е		E
Dwarf hackberry	Celtis tenuifolia	SC		SC	
Field Chickweed	Cerastium velutinum				Х
Purple turtlehead	Chelone obliqua			E	
Knotweed dodder	Cuscuta polygonorum	SC	SC		
Ram's head lady's-slipper	Cypripedium arietinum			SC	
White lady slipper	Cypripedium candidum	Т			
White lady slipper	Cypripedium candidum			Т	
Mullein-foxglove	Dasistoma macrophylla				
Beak grass	Diarrhena obovata	Т	Т		Т
Leiberg's panic grass	Dichanthelium leibergii		Т	Т	
Round-seed panic-grass	Dichanthelium polyanthes	E			
Creeping whitlow grass	Draba reptans			Т	
Purple coneflower	Echinacea purpurea			Х	
Engelmann's spike rush	Eleocharis engelmannii	SC			SC
Horsetail spike rush	Eleocharis equisetoides			SC	
Spike Rush	Eleocharis geniculata			Х	
Spike Rush	Eleocharis radicans			Х	
Small love grass	Eragrostis pilosa	SC		SC	SC
Wahoo	Euonymus atropurpurea	SC		SC	SC
Hollow-stemmed Joe-pye weed	Eupatorium fistulosum	Т			
Upland boneset	Eupatorium sessilifolium			Т	
Tinted spurge	Euphorbia commutata				Т
Pumpkin ash	Fraxinus profunda				Т
Umbrella-grass	Fuirena pumila			Т	
Showy orchis	Galearis spectabilis	Т		Т	Т
White gentian	Gentiana flavida			Е	
Downy gentian	Gentiana puberulenta			E	
Stiff gentian	Gentianella quinquefolia		Т	Т	Т
Pale avens	Geum virginianum	SC		SC	SC
Whiskered sunflower	Helianthus hirsutus	SC		SC	
Downy sunflower	Helianthus mollis		Т		
Dwarf-bulrush	Hemicarpha micrantha		SC	SC	

Smooth rose-mallow	Hibiscus laevis		Х		
Green violet	Hybanthus concolor	SC		SC	SC
Goldenseal	Hydrastis canadensis	Т	Т	Т	Т
Gentian-leaved St. John'swort	Hypericum gentianoides		SC		SC
Round-fruited St. John'swort	Hypericum sphaerocarpum	ricum sphaerocarpum E			
Whorled pogonia	Isotria verticillata			T	
Twinleaf	Jeffersonia diphylla	SC		SC	SC
Short-fruited rush	Juncus brachycarpus		Т		Т
Vasey's rush	Juncus vaseyi				Т
Water willow	Justicia americana		Т	T	Т
Woodland lettuce	Lactuca floridana	Т	Т		Т
Least pinweed	Lechea minor		Х	Х	
Leggett's pinweed	Lechea puchella		Т		
Conobea	Leucospora multifida		SC		SC
Plains blazing star	Liatris squarrosa				Х
Purple twayblade	Liparis liliifolia	SC			
Broad-leaved puccoon	Lithospermum latifolium	SC		SC	
Northern prostrate clubmoss	Lycopodiella margueritae			T	
Northern appressed clubmoss	Lycopodiella subappressa			SC	SC
Virginia water-horehound	Lycopus virginicus	Т			Т
Swamp candles	Lysimachia hybrida				Х
Newman's brocade	Meropleon ambifusca				SC
Virginia bluebells	Mertensia virginica	E			
Yellow globelet	Mesodon clausus	SC	SC		
Proud globe	Mesodon elevatus		Т		
Proud globelet	Mesodon pennsylvanicus		SC		SC
Winged monkey flower	Mimulus alatus				Х
Red mulberry	Morus rubra	Т	Т	Т	Т
Mat muhly	Muhlenbergia richardsonis			Т	
Northern bayberry	Myrica pensylvanica			Т	
American lotus	Nelumbo lutea		Т		Т
Hickorynut	Obovaria olivaria		E	Е	E
Round hickorynut	Obovaria subrotunda	E	E		E
Southeasterrn adder's-tongue	Ophioglossum vulgatum	E	_		

Violet wood sorrel	Oxalis violacea		Х		
Ginseng	Panax quinquefolius		Т	T	Т
Low-forked chickweed	Paronychia fastigiata	X			
Pale beard tongue	Penstemon pallidus	SC		SC	
Pale beard tongue	Penstemon pallidus			SC	
Wild bean	Phaseolus polystachios				Х
Wideflower phlox	Phlox ovata	E			
Yellow fringed orchid	Platanthera ciliaris		E	E	
Prairie white-fringed orchid	Platanthera leucophaea		E	E	E
Bog bluegrass	Poa paludigena			Т	
Jacob's ladder	Polemonium reptans	Т		Т	
Cross-leaved milkwort	Polygala cruciata		SC		SC
Swamp cottonwood	Populus heterophylla	E		Е	
Sand cinquefoil	Potentilla paradoxa		Т		Т
Nodding rattlesnake-root	Prenanthes crepidinea				Т
Nodding mandarin	Prosartes maculata				Х
Alleghany plum	Prunus alleghaniensis var. davisii	SC			
Hairy mountain mint	Pycnanthemum pilosum		Т		
Shumard's oak	Quercus shumardii		SC		SC
Prairie buttercup	Ranunculus rhomboideus			Т	
Meadow beauty	Rhexia virginica				SC
Bald-rush	Rhynchospora scirpoides			Т	
Hairy wild petunia	Ruellia humilis			Т	Т
Smooth ruellia	Ruellia strepens	E			
Rosepink	Sabatia angularis			Т	
Arrowhead	Sagittaria montevidensis		Т		Т
Canadian burnet	Sanguisorba canadensis			E	E
Clinton's bulrush	Scirpus clintonii			SC	SC
Few-flowered nut rush	Scleria pauciflora				E
Tall nut rush	Scleria triglomerata		SC	SC	SC
Forest skullcap	Scutellaria ovata	Т			
Fire pink	Silene virginica				Е
Rosinweed	Silphium integrifolium			Т	
Compass plant	Silphium laciniatum			Т	Т

Cup plant	Silphium perfoliatum T T T		Т	Т	
Blue-eyed-grass	Sisyrinchium hastile				Х
Smooth carrion-flower	Smilax herbacea				SC
Lesser ladies'-tresses	Spiranthes ovalis			Т	
Prairie dropseed	Sporobolus heterolepis	SC		SC	
Trailing wild Bean	Strophostyles helvula		SC	SC	SC
Virginia spiderwort	Tradescantia virginiana	sc sc			
False pennyroyal	Trichostema brachiatum	Т			
Prairie trillium	Trillium recurvatum				Т
Toadshade	Trillium sessile	Т		Т	
Edible valerian	Valeriana edulis var. ciliata	Т		Т	
Corn salad	Valerianella umbilicata		Т		
Black haw	Viburnum prunifolium	SC			
Wisteria	Wisteria frutescens				Т
Wild rice	Zizania aquatica var. aquatica		Т	Т	Т

Lychwala, Michael

From: Sargent, Lori (DNR) <SargentL@michigan.gov>

Sent: Tuesday, September 23, 2014 9:17 AM

To: Lychwala, Michael

Subject: RE: NEXUS Transmission, LLC - NEXUS Project

The Michigan Department of Natural Resources (DNR) is, unfortunately, no longer able to conduct Environmental Reviews (ER) and ceased acceptance of review requests September 16, 2011. Funding for the program was not included in the state budget for the fiscal year that begins October 1 and issuance of clearance letters will no longer be done. Project review requests can be sent to Michigan Natural Features Inventory (MNFI), a program of Michigan State University Extension.

After Oct. 1, MNFI will review projects for potential impacts to endangered species, but there will now be a cost to the requestor for MNFI's services. For information on environmental reviews or to request environmental reviews after October 1, 2011, go to MNFI website at http://mnfi.anr.msu.edu/. Requests will no longer be accepted through the DNR Endangered Species Assessment web site.

Endangered species and wetland laws remain in place. Under Part 365 of Public Act 451 people are not allowed to take or harm any endangered or threatened of fish, plants or wildlife. The DNR will still be responsible for issuing permits and enforcement relative to the take of endangered and threatened species.

If you have any questions, please e-mail me at Sargentl@michigan.gov. Thank you.

Lori Sargent DNR Wildlife Division PO Box 30444 Lansing, MI 48909 517-284-6216

SargentL@michigan.gov

Did you know 60 threatened and 59 endangered animals call Michigan home at some point in their lives? 2014 marks the 40th anniversary of Michigan's Endangered Species Act. Go to <u>www.michigan.gov/wildlife</u> for more information.

From: Lychwala, Michael [mailto:MLychwala@trcsolutions.com]

Sent: Monday, September 22, 2014 5:07 PM

To: Sargent, Lori (DNR)

Subject: NEXUS Transmission, LLC - NEXUS Project

Good Afternoon,

On behalf of NEXUS Gas Transmission, LLC (NEXUS), which is a joint venture between Spectra Energy and DTE Energy Co, TRC is requesting to conduct consultation with the MDNR. NEXUS is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses approximately 46-miles through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne.

I have attached an initial consultation request letter that includes a general map of the Project location. Due to the scale of the project, we would like to come in and meet with the MDNR to introduce the Project and go over the basic scope,

schedule and consultation process. We have some public informational meetings during the first two weeks of October that the project will be hosting in the evenings. We were hoping it might be possible to stop by your office during one of those days if your schedule allows. We can also provide a shapefile at that time and also plan complete the Michigan Natural Features Inventory data request process.

If you have any questions or what to talk about anything prior to a meeting please don't hesitate to give me a call or send an e-mail. I look forward to working with the MDNR on this Project.

Thanks,

Michael Lychwala Office Practice Leader Planning, Permitting, and Licensing



6 Ashley Drive, Scarborough, ME 04074 T: 207-274-2603 | F: 207.879.9293 | C: 207.232.1739

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Gardner, Angela

From: Gardner, Angela

Sent: Tuesday, September 23, 2014 12:23 PM

To: 'schools@msu.edu'
Cc: Lychwala, Michael

Subject: NEXUS Transmission, LLC-NEXUS Project Information Request

Attachments: MI_Natural_Features_Inventory_Nexus_9232014.pdf; Nexus_1mi_Survey_Area.zip

Dear Mr. Schools,

Please see the attached request for an enhanced review of the proposed NEXUS Project. A SHP file of the study corridor in which the request covers is attached to this email. If you have any questions or require further information, please contact me at 716-796-8071 or via email at agardner@trcsolutions.com. I greatly appreciate your time and attention to this request.

Kind Regards,

Angela Gardner Biologist



2801 Wehrle Drive Suite 8, Williamsville, NY 14221 T: 716.204.9543 | C: 716.796.8071 | F: 716.204.9545

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September 23, 2014

Ed Schools (schools@msu.edu)
Michigan Natural Features Inventory
3rd Floor Constitution Hall
525 W. Allegan St.
Lansing, MI 48933

Subject: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Project

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co. is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses approximately 46-miles through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. NEXUS is investigating a study corridor as generally depicted on attached Figure 1.

Initial review of the potential pipeline corridor indicated that rare, threatened and/or endangered species may be present based on published county lists. On behalf of NEXUS, TRC is requesting the assistance of the Michigan Natural Features Inventory ("MNFI") to determine if any of these species are known to occur within the one-mile wide area under investigation. This information will assist us in determining a route to potentially avoid and minimize disruption to sensitive habitat and determine potential seasonal or species specific surveys that maybe required during permitting of the Project. Any further comments or survey guidance regarding rare, threatened, endangered or other important species is also welcomed.

To help facilitate our review of the study corridor and assist NEXUS in determining potential pipeline routes, TRC requests an Enhanced Review of our study corridor. If possible, we kindly request SHP files of the location of sensitive or occupied habitats and locations of species observed within our study corridor. All information provided will be treated as confidential and not for public use. A GIS SHP file of the Project study corridor will be provided to the MNFI to aid in this request.

Michigan Natural Features Inventory September 23, 2014 Page 2 of 2

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (716) 796-8071 or via email at agardner@trcsolutions.com

Sincerely,

Angela Gardner, TRC

angels Gardner

Biologist

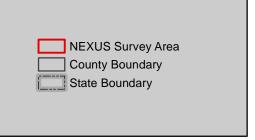
cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC









NEXUS Pipeline Project Survey Area



9/16/2014

Jordan, Stephenie

From: Gardner, Angela

Sent: Monday, October 13, 2014 8:18 AM

To: Lychwala, Michael; Carr, Rachel N.; Gravel, Jonathan; Redmond-Miller, Kathleen

Subject: FW: Rare Species Enhanced Review Request- NEXUS Pipeline Project

Attachments: RSR_1536_Response_Letter.pdf; NEXUS Gas Project Overview map enhanced

review.pdf; NEXUS Gas Project Local Map 1.pdf; NEXUS Gas Project Local Map 2.pdf

See that attached for the RTE species the route crosses in Michigan.

Rachel-I am working on getting SHP files of the occurrences. I will keep you posted if I can get them.

From: Michael Sanders [mailto:sander75@msu.edu]

Sent: Thursday, October 09, 2014 4:06 PM

To: Gardner, Angela

Subject: RE: Rare Species Enhanced Review Request- NEXUS Pipeline Project

Hi Angela,

Attached are the results and associated maps for the Rare Species Review of the NEXUS pipeline project. Please let me know if you have questions or comments.

Thank you,

Mike Sanders

Michael A. Sanders Environmental Review Specialist/Zoologist Michigan Natural Features Inventory PO Box 13036 Lansing, MI 48901-3036 517-284-6215 sander75@msu.edu

From: Gardner, Angela [mailto:AGardner@trcsolutions.com]

Sent: Wednesday, October 01, 2014 4:11 PM

To: mnfi@msu.edu Cc: Lychwala, Michael

Subject: Rare Species Enhanced Review Request- NEXUS Pipeline Project

Hello-

I sent that attached request to Mr. Ed Schools on September 23rd in regards to the NEXUS Pipeline project. Mr. Schools has not responded to date and I am in need of an expedited request. (I am aware of the add cost for the expedited request and am accepting of the cost.) As such, I am submitting my request to the MNFI's general mailbox as well. For MNFI's convenience, I have attached a SHP file of our study corridor.

If you have any questions or need further information regarding this request, please contact me at this email address or by phone at 716-796-8071.

Thank you for your time.

Angela Gardner Project Manager/Biologist



2801 Wehrle Drive Suite 8, Williamsville, NY 14221 T: 716.204.9543 | C: 716.796.8071 | F: 716.204.9545

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Ms. Angela Gardner Project Manager/Biologist TRC 2801 Wehrle Drive, Suite 8 Williamsville, NY 14221 October 9, 2014

Re: Rare Species Review #1536 – NEXUS Pipeline project – 46 miles of pipeline involving 4 Michigan counties.

Hello:

The location for the proposed project was checked against known localities for rare species and unique natural features, which are recorded in the Michigan Natural Features Inventory (MNFI) natural heritage database. This continuously updated database is a comprehensive source of existing data on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. Records in the database indicate that a qualified observer has documented the presence of special natural features. The absence of records in the database for a particular site may mean that the site has not been surveyed. The only way to obtain a definitive statement on the status of natural features is to have a competent biologist perform a complete field survey.

Under Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection, "a person shall not take, possess, transport, ...fish, plants, and wildlife indigenous to the state and determined to be endangered or threatened," unless first receiving an Endangered Species Permit from the Michigan Department of Natural Resources (MDNR), Wildlife Division. Responsibility to protect endangered and threatened species is not limited to the lists below. Other species may be present that have not been recorded in the database.



MSU EXTENSION

Michigan Natural Features Inventory

PO Box 13036 Lansing MI 48901

(517) 284-6200 Fax (517) 373-9566

mnfi.anr.msu.edu

According to the natural heritage database several legally protected species have been documented within 1 mile of the project site. Therefore, it is **likely** that negative impacts will occur. Keep in mind this response represents a desktop review of the natural heritage database and that **MNFI cannot fully evaluate this project without visiting the project site.** MNFI offers several levels of Rare Species Reviews, including field surveys which I would be happy to discuss with you.

Sincerely,

Michael A. Sanders Rare Species Review Specialist Michigan Natural Features Inventory Comments for Rare Species Review #1536: It is important to note that it is the applicant's responsibility to comply with both state and federal threatened and endangered species legislation. Therefore, if a state listed species occurs at a project site, and you think you need an endangered species permit please contact: Lori Sargent, Nongame Wildlife Biologist, Wildlife Division, Michigan Department of Natural Resources, P.O. Box 30444, Lansing, MI 48909, 517-284-6216, or SargentL@michigan.gov. If a federally listed species is involved and, you think a permit is needed, please contact Barb Hosler, Endangered Species Program, U.S. Fish and Wildlife Service, East Lansing office, 517-351-6326, or Barbara Hosler@fws.gov.

The state and federally endangered **rayed bean** (*Villosa fabalis*) has been known to occur in the Raisin River in section 6 of T7SR4E. This mussel is known to occur in fine mud substrates and riffles among roots of aquatic vegetation. Limits of the breeding season are not known but gravid specimens have been found in May.

The state threatened **purple milkweed** (*Asclepias purpurascens*) has been known to occur in section 28 of T6SR5E just north of Laberdee Road. This plant grows to about 3 ft tall and features red/purple flowers. Purple milkweed grows in dry woodlands (especially oak,) dry thickets, shores, and in prairies. Flowering occurs from May through July.

The state threatened **slippershell mussel** (*Alasmidonta viridis*) has been known to occur in the North Branch Macon Creek in section 4 of T5SR6E. Slippershell mussels typically inhabit creeks and the headwaters of rivers in sandy or gravel substrates, but it is occasionally found in muddy substrates. Glochidia, the parasitic larval stage of the mussel, are released from May to mid-July. Freshwater mussels require a fish host to complete their life cycle. Eggs are fertilized and develop into larvae within the gills of the female mussel. These larvae, called glochidia, are released into the water and must attach to a suitable fish host to survive and transform into the adult mussel. Host fish in Michigan include the **johnny darter** (*Etheostoma nigrum*) and **mottled sculpin** (*Cottus bairdii*). The slippershell mussel is likely a long-term breeder, holding the larvae internally for about a year. Dates of spawning are unknown.

The state threatened **Blanchard's cricket frog** (*Acris crepitans blanchardi*) has been known to occur near where the project crosses Belleville Lake in section 24 of T3SR7E. Blanchard's cricket frogs inhabit the more open edges of permanent ponds, bogs, lakes, and slow-moving streams or rivers. Where aquatic vegetation is abundant, the frogs are often seen on floating algae mats and water lily leaves; sparsely vegetated mud flats and muddy or sandy shorelines are also favored habitats. Cricket frogs prefer warmer temperatures and breed mid- to late May through July. They eat a wide variety of small terrestrial and aquatic insects and other invertebrates. They will feed on the shore, at the water's surface, or while submerged.

Special concern species and natural communities are not protected under endangered species legislation but efforts should be taken to minimize any or all impacts. Species classified as special concern are species whose numbers are getting smaller in the state. If these species continue to decline they would be recommended for reclassification to threatened or endangered status.

Please consult MNFI's Rare Species Explorer for additional information regarding the listed species: http://mnfi.anr.msu.edu/explorer/search.cfm.

Table 1: Legally protected species within 1.0 miles of RSR #1536

SNAME	SCOMNAME	FIRSTOBS	LASTOBS	USESA	SPROT	GRANK	SRANK	ELCAT
Carex seorsa	Sedge	1994 .	1994-06-22		Т	G4	S2	Plant
Cryptotis parva	Least shrew	1955 ·	1955-WINT		Т	G5	S1S2	Animal
Justicia americana	Water willow	1956	1981-08-23		Т	G5	S2	Plant
Panax quinquefolius	Ginseng	1925	1925-05-06		Т	G3G4	S2S3	Plant
Speyeria idalia	Regal fritillary	1890	1931-09-06		E	G3	SH	Animal
Ruellia humilis	Hairy wild petunia	1931	1931-08-04		Т	G5	S1	Plant
Gentiana flavida	White gentian	1926	1926-09-29		Е	G4	S1	Plant
Cyclonaias tuberculata	Purple wartyback	1925	1925-07-19		Т	G5	S2S3	Animal
Villosa fabalis	Rayed bean		1941-08-07	E	Е	G2	S1	Animal
Astragalus canadensis	Canadian milk vetch	1916	1916-07-22		Т	G5	S1S2	Plant
Neonympha mitchellii mitchellii	Mitchell's satyr	1931	1931	LE	E	G1G2T1T2	S1	Animal
Silphium perfoliatum	Cup plant	1979	1995		Т	G5	S2	Plant
Alasmidonta viridis	Slippershell	2000-2001	2000-2001		Т	G4G5	S2S3	Animal
Acris crepitans blanchardi	Blanchard's cricket frog	1996	2005-08-26		Т	G5T5	S2S3	Animal
Asclepias purpurascens	Purple milkweed	1999-09-05	1999-09-05		Т	G5?	S2	Plant
Toxolasma parvus	Lilliput	1932-10-24	1932-10-25		Е	G5	SNR	Animal
Obovaria subrotunda	Round hickorynut		1930		Е	G4	S1	Animal
Cyclonaias tuberculata	Purple wartyback	1931-04-16			Т	G5	S2S3	Animal
Lampsilis fasciola	Wavyrayed lampmussel	1932			Т	G5	S2	Animal
Ligumia recta	Black sandshell	1932-10-25	1932-10-25		Е	G5	SNR	Animal
Alasmidonta viridis	Slippershell	1927	1942-07-09		Т	G4G5	S2S3	Animal
Silphium laciniatum	Compass plant	1924	1928-06-27		Т	G5	S1S2	Plant
Nycticeius humeralis	Evening bat	2006-05	2007-08-16		Т	G5	SNA	Animal
Myotis sodalis	Indiana bat	2004-07-29	2007-08-16	LE	E	G2	S1	Animal

Table 2: Special Concern Species and other Rare Natural Features within 1.0 miles of RSR #1536

SNAME	SCOMNAME	FIRSTOBS	LASTOBS	USESA	SPROT	GRANK	SRANK	ELCAT
Carex davisii	Davis's sedge	1939	1939-07-10		SC	G4	S3	Plant
Baptisia lactea	White or prairie false indigo	1924	1924		SC	G4Q	S3	Plant
Calephelis mutica	Swamp metalmark	1931	1954		SC	G3	S1S2	Animal
Calephelis mutica	Swamp metalmark	1930	1930		SC	G3	S1S2	Animal
Stylurus laurae	Laura's snaketail	1933	1933-08		SC	G4	S1S2	Animal
Angelica venenosa	Hairy angelica		1924-PRE		SC	G5	S3	Plant
Jeffersonia diphylla	Twinleaf	1924	1924		SC	G5	S3	Plant
Mesic Southern Forest	Rich Forest, Central Midwest Type	1985	1985-12-07			G2G3	S3	Community
Erynnis baptisiae	Wild indigo duskywing	1939	1939		SC	G5	S2S3	Animal
Battus philenor	Pipevine swallowtail	1931	1934		SC	G5	S1S2	Animal
Etheostoma spectabile	Orangethroat darter	1978-07-26	1978-07-26		SC	G5	S3	Animal
Haliaeetus leucocephalus	Bald eagle	2002	2005-05-10		SC	G5	S4	Animal
Ammodramus savannarum	Grasshopper sparrow	2004	2007-06-06		SC	G5	S3S4	Animal
Utterbackia imbecillis	Paper pondshell	1932-10-24	1932-10-25		SC	G5	SNR	Animal
Utterbackia imbecillis	Paper pondshell	1932-10-25	1932-10-25		SC	G5	SNR	Animal
Hybanthus concolor	Green violet	1870	1919-06-01		SC	G5	S3	Plant
Geum virginianum	Pale avens	1895	1895-08-20		SC	G5	S1S2	Plant
Alasmidonta marginata	Elktoe	1932-10-25	1932-10-25		SC	G4	S2S3	Animal
Villosa iris	Rainbow	1942-07-09	1942-07-09		SC	G5Q	S2S3	Animal
Villosa iris	Rainbow	1932-10-25	1932-10-25		SC	G5Q	S2S3	Animal

Codes to accompany Tables 1 and 2:

State Protection Status Code Definitions (SPROT)

E: Endangered
T: Threatened
SC: Special concern

Global Heritage Status Rank Definitions (GRANK)

The priority assigned by <u>NatureServe</u>'s national office for data collection and protection based upon the element's status throughout its entire world-wide range. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

G1 = critically imperiled globally because of extreme rarity (5 or fewer occurrences range-wide or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.

G2 = imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.

G3: Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single western state, a physiographic region in the East) or because of other factor(s) making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.

G4: Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G5: Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

Q: Taxonomy uncertain

State Heritage Status Rank Definitions (SRANK)

The priority assigned by the Michigan Natural Features Inventory for data collection and protection based upon the element's status within the state. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

S1: Critically imperiled in the state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation in the state.

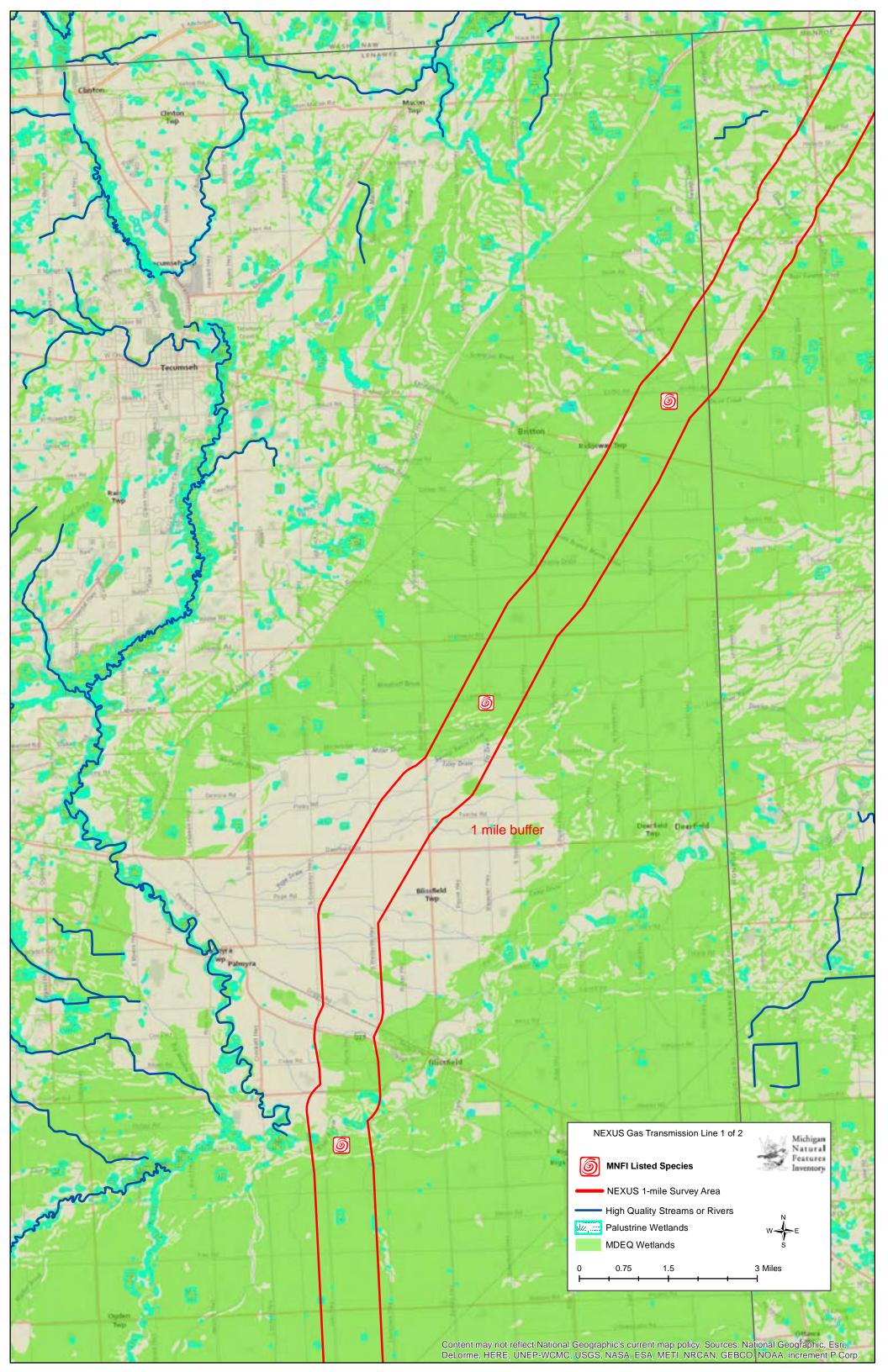
S2: Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.

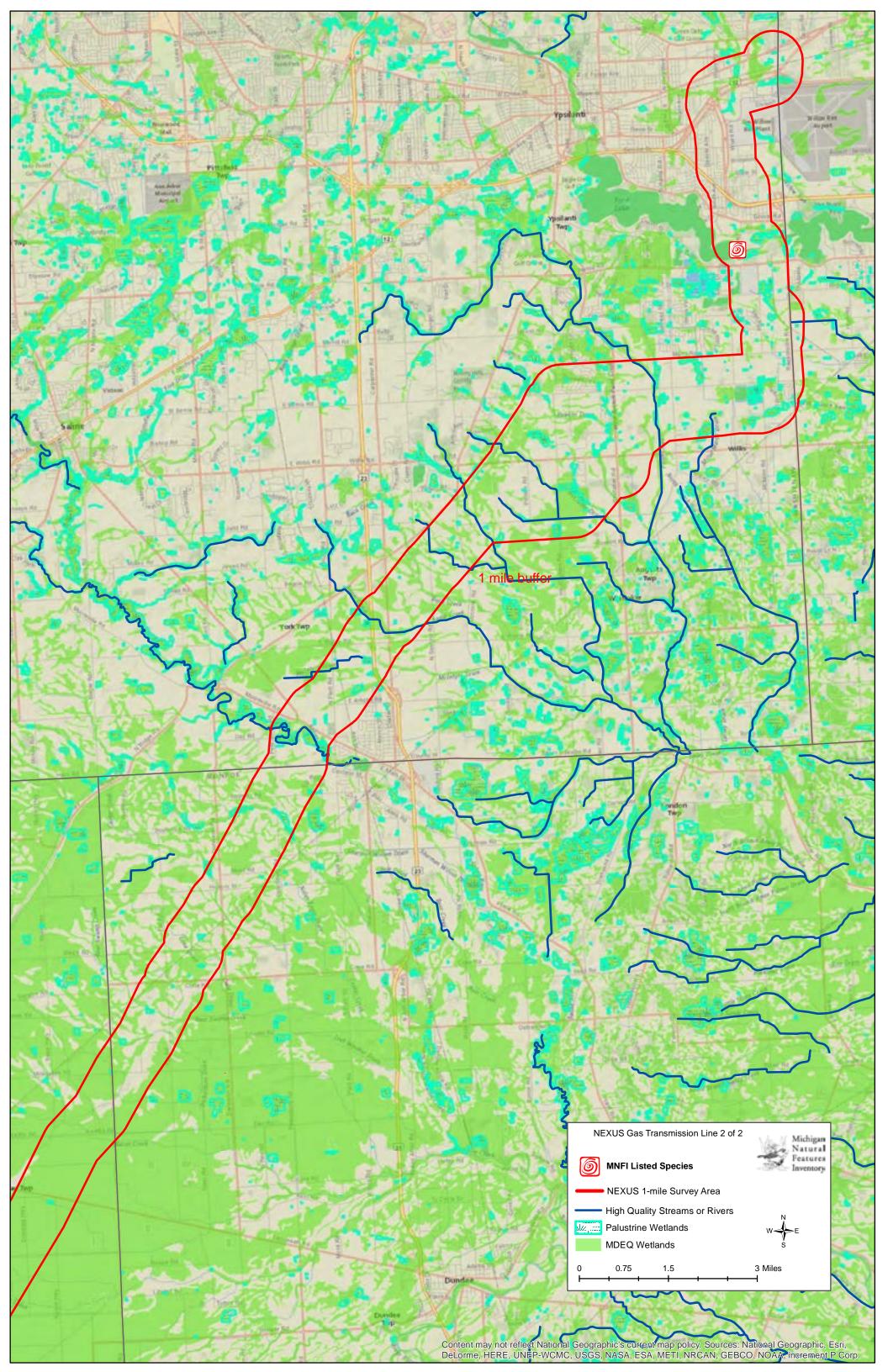
S3: Rare or uncommon in state (on the order of 21 to 100 occurrences).

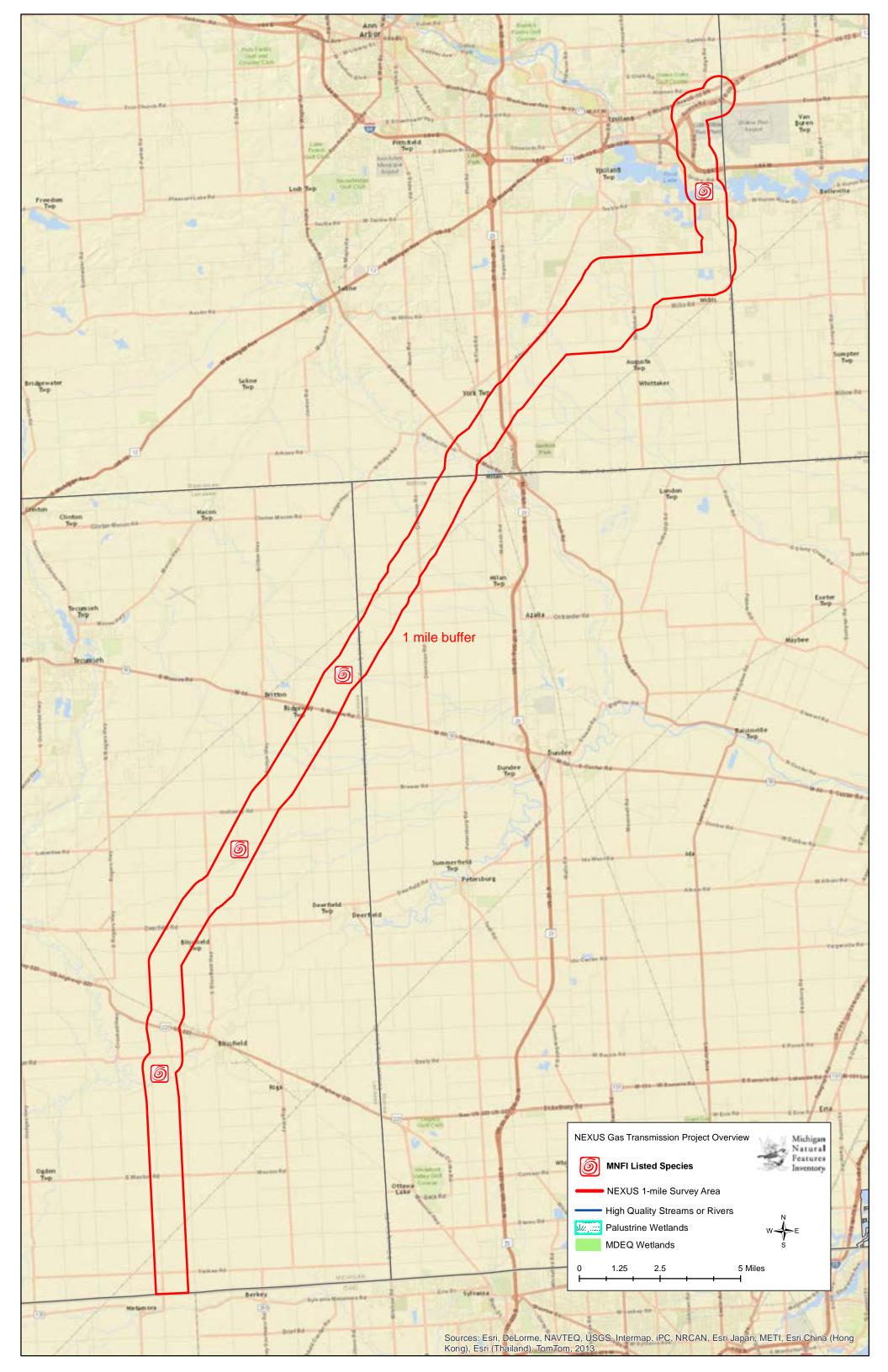
S4 = apparently secure in state, with many occurrences.

S5 = demonstrably secure in state and essentially ineradicable under present conditions.

SX = apparently extirpated from state.









Via U.S. Mail

December 4, 2014

Mr. Brian D. Conway State Historic Preservation Officer State Historic Preservation Office Michigan Library and Historical Center Box 30740 702 West Kalamazoo Street Lansing, Michigan, 48909-8240

Subject: <u>NEXUS Gas Transmission</u>, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Mr. Conway:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is seeking authorization from the Federal Energy Regulatory Commission (FERC) pursuant to Section 7(c) of the Natural Gas Act to construct, own, and operate the proposed NEXUS Gas Transmission Project (Project). NEXUS is proposing to construct and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The project will include approximately 46-miles through three (3) counties in Michigan, including Lenawee, Monroe, and Washtenaw. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

We are currently briefing federal, state, and local officials on the proposed Project. In addition, we will be continually meeting with individual landowners and other stakeholders to identify any initial concerns that they may have and to seek their input regarding this early stage of the proposed Project.

Beginning in late September 2014, NEXUS representatives began field survey work for the Project and representatives of your office were briefed on details of the project in a meeting conducted at the Michigan Historical Center (MHC) between TRC Environmental Corp. (TRC), Commonwealth Cultural Resources Group (CCRG) and Dr. Dean Anderson on October 8, 2014. In order to accurately respond to anticipated questions and concerns about the NEXUS Project, NEXUS needs to begin collecting the necessary data to evaluate and design the potential project facilities. To that end, on behalf of NEXUS, TRC respectfully requests the initiation of consultation with your office in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470, as amended) and its implementing regulations (36 CFR 800). To assist in our cultural resource investigations, we request your review of the attached location map of facilities location. Information concerning Native American consultation has been

Mr. Conway Michigan State Historic Preservation Office December 4, 2014

provided to the Shawnee, Delaware, Seneca, Potawatomi, Miami, Wyandotte, Peoria, and Ottawa tribes and nations, but we would also appreciate your thoughts concerning any additional Native American consultation that might be appropriate for the Project.

NEXUS's intent is to inform and consult with stakeholders early in the development of the Project. NEXUS intends to utilize the FERC's National Environmental Policy Act pre-filing process (Pre-filing Process). The Pre-filing Process provides all stakeholders (federal, state and local agencies, landowners, and local citizens) the opportunity for early cooperation and involvement in evaluating a project prior to filing a formal application with the FERC. The purpose of the Pre-filing Process is to identify, evaluate, and attempt to resolve issues and concerns prior to the filing of formal project applications. This process will require multiple agency meetings, public meetings, and the documentation of continuing efforts to identify and address concerns under the direction of the FERC. The public will then have the opportunity to comment on NEXUS's draft environmental resource reports prior to the filing of a formal FERC application. NEXUS will also be filing for various additional federal and state permits during this process. By initiating this early agency consultation and involvement, NEXUS also intends to assist those agencies that have coordination obligations with the FERC described in its order No. 687 concerning the coordination and timing of federally delegated state authorizations in order to comply with the Energy Policy Act of 2005.

Following the Pre-filing Process, NEXUS will file a formal application for review and approval from the FERC and numerous other agencies. The permit proceedings, which will be conducted by these agencies, will provide additional opportunity for public input and involvement. NEXUS plans to request authorization from the FERC to participate in its pre-filing process in the fourth quarter 2014. NEXUS will file a formal application for review and approval from the FERC, as well as permit applications with other relevant state and federal agencies. The Draft Resource Report are currently planned to be filed in the third quarter 2015, and the FERC application is currently planned to be filed in the fourth quarter 2015. All other agency applications will be filed in a similar time frame. NEXUS proposes that the Project will be fully operational in December 2017. Additional information regarding the FERC Pre-filing Process and FERC approval process can be found at www.ferc.gov.

We look forward to working with you during the environmental review process. Please contact me at (919) 414-3420, or (919) 530-8446 x224, or via e-mail at tmillis@trcsolutions.com if you have questions or require additional information.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis

Tracy L. Millis Senior Archaeologist

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation

Attachment





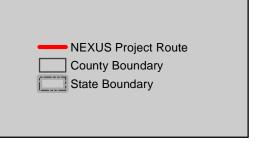


Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014

TRIBES

Correspondence



October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4350

George Blanchard Governor Absentee-Shawnee Tribe of Oklahoma 2025 S. Gordon Cooper Drive Shawnee, OK 74801

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Governor Blanchard:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

As a proposed interstate natural gas transmission system, NEXUS has requested authorization with the Federal Energy Regulatory Commission (FERC) to participate in the FERC Pre-Filing Review Process for the NEXUS Pipeline Project. The Pre-Filing Review Process will initiate the FERC's review of the project in order to satisfy the requirements of the National Environmental Policy Act (NEPA). As part of the FERC Pre-Filing Review Process, the FERC, with input from cooperating agencies and other stakeholders, will analyze environmental impacts, alternatives, and mitigation measures as a prelude to submittal of NEXUS's application and the development of the FERC's Environmental Impact Statement for the Project.

In addition to facilitating preparation of the NEPA documentation for the Project, the Pre-Filing Review Process will also facilitate compilation of technically consistent reports, exhibits and other documentation to support consultation requests and applications to federal and state resource management agencies for clearances, approvals, and permits. The Draft Resource

Report are currently planned to be filed in the third quarter 2015, and the FERC application is currently planned to be filed in the fourth quarter 2015. All other agency applications will be filed in a similar time frame. NEXUS proposes that the project facilities in Ohio and Michigan will have an in-service date of December 2017.

Following FERC guidance, NEXUS is assisting the FERC in meeting its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended. TRC, under contract to Spectra Energy, is also providing assistance in the Section 106 process, and we respectfully request your input regarding the potential of the Project to affect significant cultural resources, including archaeological sites, burials, and traditional cultural properties so that these may be addressed prior to any ground-disturbing activities. TRC is also consulting with the Ohio Historic Preservation Office and the Michigan Historic Preservation Office about the project and will be completing the necessary archaeological and historic structures surveys as required under Section 106. While the regulations for implementing Section 106 of the National Historic Preservation Act (at 36 CFR 800) allow companies or consultants to gather information, the FERC will be ultimately responsible for determinations.

Although NEXUS is seeking your input regarding potential cultural resource concerns for the Project, the FERC (not NEXUS) is responsible for government-to-government consultations with tribal governments. After the initiation of FERC's involvement, the FERC will contact tribal governments through issuance of a Notice of Intent to Produce an Environmental Document and/or individual letters to tribes. If you would like to communicate directly with the FERC natural gas archaeological staff to discuss its cultural resource review and consultation processes, please feel free to contact Paul Friedman, Senior Technical Expert in Cultural Resources, Office of Energy Projects, at 202-502-8059 (email: paul.friedman@ferc.gov).

For your convenience, a response form has been attached to this letter so that you may easily communicate your concerns to me at TRC. Should you have any questions regarding this information, please do not hesitate to call me at (919) 530-8446, ext. 224, or via e-mail at tmillis@trcsolutions.com.

Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Joseph Blanchard, Absentee-Shawnee Tribe of Oklahoma Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

George Blanchard Governor Absentee-Shawnee Tribe of Oklahoma 2025 S. Gordon Cooper Drive Shawnee, OK 74801		
We have no concerns or co.	mments regarding the	NEXUS Pipeline Project.
We have the following con- Project.	cerns or comments reg	arding the NEXUS Pipeline
Name (Signature)	TITLE	
<u> </u>	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist

Chapel Hill, NC 27517





50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4367

Joseph Blanchard Tribal Historic Preservation Officer Absentee-Shawnee Tribe of Oklahoma 2025 S. Gordon Cooper Drive Shawnee, OK 74801

RE: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Mr. Blanchard:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

As a proposed interstate natural gas transmission system, NEXUS has requested authorization with the Federal Energy Regulatory Commission (FERC) to participate in the FERC Pre-Filing Review Process for the NEXUS Pipeline Project. The Pre-Filing Review Process will initiate the FERC's review of the project in order to satisfy the requirements of the National Environmental Policy Act (NEPA). As part of the FERC Pre-Filing Review Process, the FERC, with input from cooperating agencies and other stakeholders, will analyze environmental impacts, alternatives, and mitigation measures as a prelude to submittal of NEXUS's application and the development of the FERC's Environmental Impact Statement for the Project.

In addition to facilitating preparation of the NEPA documentation for the Project, the Pre-Filing Review Process will also facilitate compilation of technically consistent reports, exhibits and other documentation to support consultation requests and applications to federal and state resource management agencies for clearances, approvals, and permits. The Draft Resource

Report are currently planned to be filed in the third quarter 2015, and the FERC application is currently planned to be filed in the fourth quarter 2015. All other agency applications will be filed in a similar time frame. NEXUS proposes that the project facilities in Ohio and Michigan will have an in-service date of December 2017.

Following FERC guidance, NEXUS is assisting the FERC in meeting its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended. TRC, under contract to Spectra Energy, is also providing assistance in the Section 106 process, and we respectfully request your input regarding the potential of the Project to affect significant cultural resources, including archaeological sites, burials, and traditional cultural properties so that these may be addressed prior to any ground-disturbing activities. TRC is also consulting with the Ohio Historic Preservation Office and the Michigan Historic Preservation Office about the project and will be completing the necessary archaeological and historic structures surveys as required under Section 106. While the regulations for implementing Section 106 of the National Historic Preservation Act (at 36 CFR 800) allow companies or consultants to gather information, the FERC will be ultimately responsible for determinations.

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For your convenience, a response form has been attached to this letter so that you may easily communicate your concerns to me at TRC. Should you have any questions regarding this information, please do not hesitate to call me at (919) 530-8446, ext. 224, or via e-mail at tmillis@trcsolutions.com.

Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: George Blanchard, Absentee-Shawnee Tribe of Oklahoma Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Joseph Blanchard Tribal Historic Preservation Officer Absentee-Shawnee Tribe of Oklahoma 2025 S. Gordon Cooper Drive Shawnee, OK 74801	ι	
We have no concerns or	r comments regarding the	NEXUS Pipeline Project.
We have the following of Project.	concerns or comments re	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME	_	
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp.		

Fax (919) 530-8525 tmillis@tresolutions.com Senior Archaeologist

Chapel Hill, NC 27517

50101 Governors Drive, Suite 250





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4947

Michael Wiggins Chairman Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation P. O. Box 39 Odanah, WI 54861-0039 Edith Leoso Tribal Historic Preservation Officer Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation P. O. Box 39 Odanah, WI 54861-0039

RE: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Pipeline Project
Section 106 Consultation

Dear Chairman Wiggins and Ms. Leoso:

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Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Michael Wiggins	Edith Leoso		
Chairman	Tribal Historic Preservation Officer Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River		
Bad River Band of the Lake Superior Tribe			
of Chippewa Indians of the Bad River			
Reservation	Reservation		
P. O. Box 39	P. O. Box 39		
Odanah, WI 54861-0039	Odanah, WI	54861-0039	
We have no concerns or comm	nents regarding the N	NEXUS Pipeline Project.	
We have the following concer Project.	rns or comments rega	rding the NEXUS Pipeline	
NAME (SIGNATURE)	TITLE	DATE	
Printed Name			
Please return this completed form to:			
Tracy L. Millis			
TRC Environmental Corp.			
50101 Governors Drive, Suite 250			

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist

Chapel Hill, NC 27517





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4930

Levi Carrick, Sr. Chairman Bay Mills Indian Community 12140 W. Lakeshore Dr. Brimley, MI 49715 Paula Carrick Tribal Historic Preservation Officer Bay Mills Indian Community 12140 W. Lakeshore Dr. Brimley, MI 49715

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Carrick and Ms. Carrick:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC - NEXUS Gas Transmission Pipeline Project

Levi Carrick, Sr. Chairman Bay Mills Indian Community 12140 W. Lakeshore Dr. Brimley, MI 49715	Paula Carrick Tribal Historic Preservation Officer Bay Mills Indian Community 12140 W. Lakeshore Dr. Brimley, MI 49715	
We have no concerns or cor	mments regarding the	NEXUS Pipeline Project.
We have the following conc Project.	eerns or comments reg	arding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4923

Kevin Leecy Chairman Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe P.O. Box 16 Nett Lake, MN 55772 Rosemary Berens Tribal Historic Preservation Officer Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe P.O. Box 16 Nett Lake, MN 55772

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Leecy and Ms. Berens:

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Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

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NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Kevin Leecy Chairman Boise Forte Band (Nett Lake) of the Minnesota Chippewa Tribe P.O. Box 16 Nett Lake, MN 55772	Tribal Histo Boise Forte Minnesota C P.O. Box 16	Rosemary Berens Tribal Historic Preservation Officer Boise Forte Band (Nett Lake) of the Minnesota Chippewa Tribe P.O. Box 16 Nett Lake, MN 55772	
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We have the following conc Project.	eerns or comments reg	arding the NEXUS Pipeline	
Name (Signature)	TITLE		
PRINTED NAME			
Please return this completed form to:			
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517			

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4916

Bruce Sunchild Chairman Chippewa-Cree Indians of the Rocky Boy's Reservation 31 Agency Sq Box Elder, MT 59521-8818

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Sunchild:

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Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Alvin Windy Boy, Chippewa-Cree Indians of the Rocky Boy's Reservation Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Bruce Sunchild		
Chairman Chippewa-Cree Indians		
of the Rocky Boy's Reservation		
31 Agency Sq Box Elder, MT 59521-8818		
Box Eluci, W11 37321-8616		
We have no concerns or com	nments regarding the	NEXUS Pipeline Project.
We have the following conce Project.	erns or comments reg	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		
Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4909

Alvin Windy Boy Tribal Historic Preservation Officer Chippewa-Cree Indians of the Rocky Boy's Reservation P. O. Box 230 Elder, MT 59521

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Mr. Windy Boy:

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Bruce Sunchild, Chippewa-Cree Indians of the Rocky Boy's Reservation

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Alvin Windy Boy Tribal Historic Pres Chippewa-Cree Inc of the Rocky Boy's P. O. Box 230 Elder, MT 59521	lians		
We	have no concerns or	comments regarding the N	NEXUS Pipeline Project.
We Proj		concerns or comments rega	arding the NEXUS Pipeline
Name (Signaturi	7)	– TITLE	
	<u></u>	-	DAIE
PRINTED NAME			
Please return this c	ompleted form to:		
Tracy L. M	illis onmental Corp.		
	ernors Drive, Suite 2	250	

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist

Chapel Hill, NC 27517





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4480

John Barrett Chairman Citizen Potawatomi Nation 1601 S. Gordon Cooper Drive Shawnee, OK 74801

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Barrett:

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As a proposed interstate natural gas transmission system, NEXUS has requested authorization with the Federal Energy Regulatory Commission (FERC) to participate in the FERC Pre-Filing Review Process for the NEXUS Pipeline Project. The Pre-Filing Review Process will initiate the FERC's review of the project in order to satisfy the requirements of the National Environmental Policy Act (NEPA). As part of the FERC Pre-Filing Review Process, the FERC, with input from cooperating agencies and other stakeholders, will analyze environmental impacts, alternatives, and mitigation measures as a prelude to submittal of NEXUS's application and the development of the FERC's Environmental Impact Statement for the Project.

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Following FERC guidance, NEXUS is assisting the FERC in meeting its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended. TRC, under contract to Spectra Energy, is also providing assistance in the Section 106 process, and we respectfully request your input regarding the potential of the Project to affect significant cultural resources, including archaeological sites, burials, and traditional cultural properties so that these may be addressed prior to any ground-disturbing activities. TRC is also consulting with the Ohio Historic Preservation Office and the Michigan Historic Preservation Office about the project and will be completing the necessary archaeological and historic structures surveys as required under Section 106. While the regulations for implementing Section 106 of the National Historic Preservation Act (at 36 CFR 800) allow companies or consultants to gather information, the FERC will be ultimately responsible for determinations.

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For your convenience, a response form has been attached to this letter so that you may easily communicate your concerns to me at TRC. Should you have any questions regarding this information, please do not hesitate to call me at (919) 530-8446, ext. 224, or via e-mail at tmillis@trcsolutions.com.

Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Kelli Mosteller, Citizen Potawatomi Nation Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

John Barrett Chairman Citizen Potawatomi Nation 1601 S. Gordon Cooper Drive Shawnee, OK 74801		
We have no concerns or con	nments regarding th	e NEXUS Pipeline Project.
We have the following concerning Project.	erns or comments re	egarding the NEXUS Pipeline
Name (Signature)	TITLE	
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4497

Kelli Mosteller Tribal Historic Preservation Officer Citizen Potawatomi Nation 1601 S. Gordon Cooper Drive Shawnee, OK 74801

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Ms. Mosteller:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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Sincerely,

TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: John Barrett, Citizen Potawatomi Nation

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Kelli Mosteller Tribal Historic Preservation Officer Citizen Potawatomi Nation 1601 S. Gordon Cooper Drive Shawnee, OK 74801		
We have no concerns or com	nments regarding the	e NEXUS Pipeline Project.
We have the following conce Project.	erns or comments re	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	
TVAME (SIGNATURE)	THEE	DAIL
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4411

C. J. Watkins Vice President Delaware Nation P. O. Box 825 Anadarko, OK 73005

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Vice President Watkins:

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Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Tamara Francis-Fourkiller, Delaware Nation
Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

C. J. Watkins Vice President Delaware Nation P. O. Box 825 Anadarko, OK 73005		
We have no concerns or com	nments regarding the	NEXUS Pipeline Project.
We have the following concerning Project.	erns or comments re	garding the NEXUS Pipeline
Name (Signature)	TITLE	
	TILE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





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919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4428

Tamara Francis-Fourkiller Cultural Preservation Director Delaware Nation P. O. Box 825 Anadarko, OK 73005

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Ms. Francis-Fourkiller:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: C. J. Watkins, Delaware Nation

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Tamara Francis-Fourkiller		
Cultural Preservation Director		
Delaware Nation		
P. O. Box 825		
Anadarko, OK 73005		
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We have the following conce Project.	erns or comments reg	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis		
TRC Environmental Corp.		
50101 Governors Drive, Suite 250		
Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4398

Paula Pechonick Chief Delaware Tribe of Indians 170 N. Barbara Ave Bartlesville, OK 74003

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chief Pechonick:

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Dr. Brice Obermeyer, Delaware Tribe of Indians Matt Barczyk, Spectra Energy Partners, LP Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



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Paula Pechonick Chief Delaware Tribe of Indians 170 N. Barbara Ave Bartlesville, OK 74003		
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We have the following conce Project.	erns or comments re	egarding the NEXUS Pipeline
Name (Signature)	TITLE	DATE
PRINTED NAME		
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Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





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919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4404

Dr. Brice Obermeyer Director, Tribal Historic Preservation Office Delaware Tribe of Indians Roosevelt Hall, Room 212 1200 Commercial Street Emporia, KS 66801

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Dr. Obermeyer:

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TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millio

Cc: Paula Pechonick, Delaware Tribe of Indians

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Dr. Brice Obermeyer		
Director, Tribal Historic Preserv	vation Office	
Delaware Tribe of Indians		
Roosevelt Hall, Room 212		
1200 Commercial Street		
Emporia, KS 66801		
We have no cond	cerns or comments regarding the N	NEXUS Pipeline Project.
We have the foll Project.	owing concerns or comments rega	rding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed for	rm to:	
•		
Tracy L. Millis		
TRC Environmental Co	rp.	

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist

Chapel Hill, NC 27517

50101 Governors Drive, Suite 250





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4336

Glenna J. Wallace Chief Eastern Shawnee Tribe of Oklahoma P.O. Box 350 Seneca, MO 64865

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chief Wallace:

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For your convenience, a response form has been attached to this letter so that you may easily communicate your concerns to me at TRC. Should you have any questions regarding this information, please do not hesitate to call me at (919) 530-8446, ext. 224, or via e-mail at tmillis@trcsolutions.com.

Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Robin Dushane, Eastern Shawnee Tribe of Oklahoma Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Glenna J. Wallace Chief Eastern Shawnee Tribe of Oklahoma P.O. Box 350 Seneca, MO 64865		
We have no concerns or com	nments regarding the 1	NEXUS Pipeline Project.
We have the following concerning Project.	erns or comments rega	arding the NEXUS Pipeline
NAME (CLONATIVEDE)	Troy p	Diggs
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist

Chapel Hill, NC 27517





50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4343

Robin Dushane Tribal Historic Preservation Officer Eastern Shawnee Tribe of Oklahoma 127705 South 705 Road Wyandotte, OK 74370

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Ms. Dushane:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

As a proposed interstate natural gas transmission system, NEXUS has requested authorization with the Federal Energy Regulatory Commission (FERC) to participate in the FERC Pre-Filing Review Process for the NEXUS Pipeline Project. The Pre-Filing Review Process will initiate the FERC's review of the project in order to satisfy the requirements of the National Environmental Policy Act (NEPA). As part of the FERC Pre-Filing Review Process, the FERC, with input from cooperating agencies and other stakeholders, will analyze environmental impacts, alternatives, and mitigation measures as a prelude to submittal of NEXUS's application and the development of the FERC's Environmental Impact Statement for the Project.

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Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Glenna J. Wallace, Eastern Shawnee Tribe of Oklahoma Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Robin Dushane Tribal Historic Preservation Officer Eastern Shawnee Tribe of Oklahoma 127705 South 705 Road Wyandotte, OK 74370		
We have no concerns or	comments regarding the	NEXUS Pipeline Project.
We have the following co	oncerns or comments reg	arding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
Printed Name	•	
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp.		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist

Chapel Hill, NC 27517

50101 Governors Drive, Suite 250





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4893

Karen Driver Chairwoman Fond du Lac Band of the Minnesota Chippewa Tribe 1720 Big Lake Rd. Cloquet, MN 55720 LeRoy Defoe Tribal Historic Preservation Officer Fond du Lac Band of the Minnesota Chippewa Tribe 1720 Big Lake Rd Cloquet, MN 55720

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairwoman Driver and Mr. Defoe:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC - NEXUS Gas Transmission Pipeline Project

Karen Driver Chairwoman		ric Preservation Officer
Fond du Lac Band of the Minnesota Chippewa Tribe 1720 Big Lake Road	Fond du Lac of the Minne 1720 Big La	esota Chippewa Tribe
Cloquet, MN 55720	Cloquet, MN	
We have no concerns or con	nments regarding the	NEXUS Pipeline Project.
We have the following conc Project.	erns or comments reg	arding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist

Chapel Hill, NC 27517

TRC Environmental Corp.

50101 Governors Drive, Suite 250





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4503

Harold Frank Chairman Forest County Potawatomi 5416 Everybody's Road Crandon, WI 54520

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Frank:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Melissa Cook, Forest County Potawatomi Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Harold Frank Chairman Forest County Potawatomi 5416 Everybody's Road Crandon, WI 54520		
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We have the following co	oncerns or comments reg	garding the NEXUS Pipeline
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PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 25 Chapel Hill, NC 27517	50	

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4510

Melissa Cook Tribal Historic Preservation Officer Forest County Potawatomi Cultural Center, Library, and Museum 8130 Mishkoswen Drive P. O. Box 340 Crandon, WI 54520

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Ms. Cook:

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Sincerely,

TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millio

Cc: Harold Frank, Forest County Potawatomi

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Melissa Cook Tribal Historic Preservation Officer Forest County Potawatomi Cultural Center, Library, and Museum 8130 Mishkoswen Drive P. O. Box 340 Crandon, WI 54520		
We have no concerns or c	comments regarding the	NEXUS Pipeline Project.
We have the following co Project.	oncerns or comments reg	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
Printed Name		
Please return this completed form to:		

Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4886

Norman Deschampe Chairman Grand Portage Band of the Minnesota Chippewa Tribe P. O. Box 428 Grand Portage, MN 55605-0428 Mary Ann Gagnon Tribal Historic Preservation Officer Grand Portage Band of the Minnesota Chippewa Tribe P. O. Box 428 Grand Portage, MN 55605-0428

RE: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Pipeline Project
Section 106 Consultation

Dear Chairman Deschampe and Ms. Gagnon:

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Sincerely,

TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC - NEXUS Gas Transmission Pipeline Project

Grand Portage Band of the Minnesota Chippewa Tribe P. O. Box 428 P. O. Box 428 Grand Portage, MN 55605-0428 We have no concerns or comments regarding the NEXUS Pipeline Project. We have the following concerns or comments regarding the NEXUS Pipeline Project. Title Project. NAME (SIGNATURE) Title Date Printed Name Please return this completed form to: Tracy L. Millis	Norman Deschampe	Mary Ann (
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Tracy L. Millis	PRINTED NAME			
	Please return this completed form to:			
	Tracy I Millis			
	TRC Environmental Corp.			

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist

Chapel Hill, NC 27517

50101 Governors Drive, Suite 250





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4879

Derek J. Bailey Chairperson Grand Traverse Band of Ottawa and Chippewa Indians 2605 N. West Bayshore Drive Suttons Bay, MI 49682

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairperson Bailey:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

As a proposed interstate natural gas transmission system, NEXUS has requested authorization with the Federal Energy Regulatory Commission (FERC) to participate in the FERC Pre-Filing Review Process for the NEXUS Pipeline Project. The Pre-Filing Review Process will initiate the FERC's review of the project in order to satisfy the requirements of the National Environmental Policy Act (NEPA). As part of the FERC Pre-Filing Review Process, the FERC, with input from cooperating agencies and other stakeholders, will analyze environmental impacts, alternatives, and mitigation measures as a prelude to submittal of NEXUS's application and the development of the FERC's Environmental Impact Statement for the Project.

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resource management agencies for clearances, approvals, and permits. The Draft Resource Report are currently planned to be filed in the third quarter 2015, and the FERC application is currently planned to be filed in the fourth quarter 2015. All other agency applications will be filed in a similar time frame. NEXUS proposes that the project facilities in Ohio and Michigan will have an in-service date of December 2017.

Following FERC guidance, NEXUS is assisting the FERC in meeting its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended. TRC, under contract to Spectra Energy, is also providing assistance in the Section 106 process, and we respectfully request your input regarding the potential of the Project to affect significant cultural resources, including archaeological sites, burials, and traditional cultural properties so that these may be addressed prior to any ground-disturbing activities. TRC is also consulting with the Ohio Historic Preservation Office and the Michigan Historic Preservation Office about the project and will be completing the necessary archaeological and historic structures surveys as required under Section 106. While the regulations for implementing Section 106 of the National Historic Preservation Act (at 36 CFR 800) allow companies or consultants to gather information, the FERC will be ultimately responsible for determinations.

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For your convenience, a response form has been attached to this letter so that you may easily communicate your concerns to me at TRC. Should you have any questions regarding this information, please do not hesitate to call me at (919) 530-8446, ext. 224, or via e-mail at tmillis@trcsolutions.com.

Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Derek J. Bailey Chairperson Grand Traverse Band of Ottawa and Chippewa Indians 2605 N. West Bayshore Drive Suttons Bay, MI 49682		
We have no concerns or c	omments regarding the	NEXUS Pipeline Project.
We have the following co Project.	ncerns or comments re	garding the NEXUS Pipeline
Name (Signature)	TITLE	
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 25 Chapel Hill, NC 27517	0	

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4527

Kenneth Meshigaud Chairperson Hannahville Indian Community N14911 Hannahville B1 Road Wilson, MI 49896

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairperson Meshigaud:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Kenneth Meshigaud Chairperson Hannahville Indian Community N14911 Hannahville B1 Road Wilson, MI 49896		
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We have the following conce Project.	rns or comments reg	garding the NEXUS Pipeline
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PRINTED NAME		
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Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4855

Donald Shalifoe, Sr. Ogimaa Keweenaw Bay Indian Community 16429 Beartown Rd. Baraga, MI 49908 Chris Chosa Tribal Historic Preservation Officer Keweenaw Bay Indian Community 16429 Beartown Rd. Baraga, MI 49908

RE: NEXUS Gas Transmission, **LLC**

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Ogimaa Shalifoe and Mr. Chosa:

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millio

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Donald Shalifoe, Sr. Ogimaa Keweenaw Bay Indian Community 16429 Beartown Rd. Baraga, MI 49908		ric Preservation Officer Bay Indian Community own Rd.
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PRINTED NAME		
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Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		
Fax (919) 530-8525		

tmillis@trcsolutions.com Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4848

Michael Isham, Jr. Chairman Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin 13394 West Trapania Rd, Building 1 Hayward, WI 54843 Jerry Smith Tribal Historic Preservation Officer Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin 13394 West Trapania Rd, Building 1 Hayward, WI 54843

RE: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Pipeline Project
Section 106 Consultation

Dear Chairman Isham and Mr. Smith:

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Thank you in advance for your response, and I look forward to hearing from you.

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Semoi Menacologist

Cc: Matt Barczyk, Spectra Energy Partners, LP Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Michael Isham, Jr. Chairman Lac Courte Orielles Band of Lake Superior Chippewa Indians of Wisconsin 13394 West Trapania Rd, Building 1 Hayward, WI 54843	Lac Courte Chippewa I	oric Preservation Officer Orielles Band of Lake Superior Indians of Wisconsin Trapania Rd, Building 1 VI 54843
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We have the following concern Project.	ns or comments reg	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
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Tracy L. Millis TRC Environmental Corp.		
50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		
Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist		





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 8378 4831

Tom Maulson President Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin P. O. Box 67 Lac du Flambeau, WI 54538-0067 Melinda Young Tribal Historic Preservation Officer Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin P. O. Box 67 Lac du Flambeau, WI 54538-0067

RE: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Pipeline Project
Section 106 Consultation

Dear President Maulson and Ms. Young:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Tom Maulson President	Melinda You	ing ric Preservation Officer
Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau	Lac du Flam Chippewa In	beau Band of Lake Superior dians of the Lac du Flambeau
Reservation of Wisconsin		of Wisconsin
P. O. Box 67	P. O. Box 67	
Lac du Flambeau, WI 54538-0067	Lac du Fiam	beau, WI 54538-0067
We have no concerns or cor	nments regarding the l	NEXUS Pipeline Project.
We have the following conc Project.	erns or comments rega	arding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
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Please return this completed form to:		
•		
Tracy L. Millis		
TRC Environmental Corp.		
50101 Governors Drive Suite 250		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist

Chapel Hill, NC 27517





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4824

Alan Shively Chairman Lac Vieux Desert Band of Lake Superior Chippewa Indians P. O. Box 249 Watersmeet, MI 49969 giiwegiizhigookway Martin Tribal Historic Preservation Officer Lac Vieux Desert Band of Lake Superior Chippewa Indians P. O. Box 249 Watersmeet, MI 49969

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Shively and Ms. Martin:

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Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Alan Shively Chairman Lac Vieux Desert Band of Lake Superior Chippewa Indians P. O. Box 249 Watersmeet, MI 49969	Tribal Histori Lac Vieux De	rior Chippewa Indians 9
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Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4817

Carri Jones Chairwoman Leech Lake Band of the Minnesota Chippewa Tribe 115 6th Street NW, Ste E Cass Lake, MN 56633 Gina Lemon Tribal Historic Preservation Officer Leech Lake Band of the Minnesota Chippewa Tribe 115 6th Street NW, Ste E Cass Lake, MN 56633

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

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Following FERC guidance, NEXUS is assisting the FERC in meeting its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended. TRC, under contract to Spectra Energy, is also providing assistance in the Section 106 process, and we respectfully request your input regarding the potential of the Project to affect significant cultural resources, including archaeological sites, burials, and traditional cultural properties so that these may be addressed prior to any ground-disturbing activities. TRC is also consulting with the Ohio Historic Preservation Office and the Michigan Historic Preservation Office about the project and will be completing the necessary archaeological and historic structures surveys as required under Section 106. While the regulations for implementing Section 106 of the National Historic Preservation Act (at 36 CFR 800) allow companies or consultants to gather information, the FERC will be ultimately responsible for determinations.

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For your convenience, a response form has been attached to this letter so that you may easily communicate your concerns to me at TRC. Should you have any questions regarding this information, please do not hesitate to call me at (919) 530-8446, ext. 224, or via e-mail at tmillis@trcsolutions.com.

Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC - NEXUS Gas Transmission Pipeline Project

Carri Jones Chairwoman Leech Lake Band of the Minnesota Chippewa Tribe 115 6 th Street NW, Ste E Cass Lake, MN 56633	Leech Lake Chippewa T	Band of the Minnesota Tribe et NW, Ste E
We have no concerns or com	ments regarding the	NEXUS Pipeline Project.
We have the following conce Project.	erns or comments reg	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		
Fax (919) 530-8525		

tmillis@trcsolutions.com
Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4800

David Sprague Chairman Match-e-be-nash-she-wish Band of Potawatomi Indians of Michigan P. O. Box 218 Dorr, MI 49323

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Sprague:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

David Sprague Chairman Match-e-be-nash-she-wish Band of Potawatomi Indians of Michigan P. O. Box 218 Dorr, MI 49323		
We have no concerns or co	mments regarding the	NEXUS Pipeline Project.
We have the following cond Project.	cerns or comments re	garding the NEXUS Pipeline
Name (Signature)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4558

Douglas Lankford Chief Miami Tribe of Oklahoma P. O. Box 1326 Miami, OK 74355

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chief Lankford:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: George Strack, Miami Tribe of Oklahoma Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Douglas Lankford Chief Miami Tribe of Oklahoma P. O. Box 1326 Miami, OK 74355		
We have no concerns or con	nments regarding th	e NEXUS Pipeline Project.
We have the following conc Project.	erns or comments re	egarding the NEXUS Pipeline
Name (Signature)	TITLE	
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4565

George Strack Tribal Historic Preservation Officer Miami Tribe of Oklahoma P. O. Box 1326 Miami, OK 74355

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Mr. Strack:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: Douglas Lankford, Miami Tribe of Oklahoma

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

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Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4794

Melanie Benjamin Chief Executive Mille Lacs Band of the Minnesota Chippewa Tribe 43408 Oodena Drive Onamia, MN 56359 Natalie Weyaus Tribal Historic Preservation Officer Mille Lacs Band of the Minnesota Chippewa Tribe 43408 Oodena Drive Onamia, MN 56359

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chief Executive Benjamin and Ms. Weyaus:

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

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Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Melanie Benjamin Chief Executive Mille Lacs Band of the Minnesota Chippewa Tribe 43408 Oodena Drive Onamia, MN 56359	Natalie Weyaus Tribal Historic Preservation Officer Mille Lacs Band of the Minnesota Chippewa Tribe 43408 Oodena Drive Onamia, MN 56359	
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Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist

©TRC



December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4787

Norman Deschampe President Minnesota Chippewa Tribe P.O. Box 217 Cass Lake, MN 56633

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear President Deschampe:

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millio

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

ments regarding the 1	NEXUS Pipeline Project.
erns or comments reg	arding the NEXUS Pipeline
TITLE	DATE

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4862

Homer Mandoka Chairman Nottawaseppi Huron Band of the Potawatomi 2221 1 ½ Mile Rd. Fulton, MI 49052

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Mandoka:

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Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millio

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Homer Mandoka		
Chairman Nattawaseppi Huron Band of the Potawator 2221 1 ½ Mile Rd	ni	
Fulton, MI 49052		
We have no concerns or con	nments regarding the	NEXUS Pipeline Project.
We have the following concerning Project.	erns or comments re	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	
PRINTED NAME		
Diagram 41.		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250		
Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





December 16, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8380 0005

Jeff Chivis Tribal Historic Preservation Officer Nottawaseppi Huron Band of the Potawatomi 1485 Mno-Bmadzewen Way Fulton, MI 49052

RE: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Mr. Chivis:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

As a proposed interstate natural gas transmission system, NEXUS has requested authorization with the Federal Energy Regulatory Commission (FERC) to participate in the FERC Pre-Filing Review Process for the NEXUS Pipeline Project. The Pre-Filing Review Process will initiate the FERC's review of the project in order to satisfy the requirements of the National Environmental Policy Act (NEPA). As part of the FERC Pre-Filing Review Process, the FERC, with input from cooperating agencies and other stakeholders, will analyze environmental impacts, alternatives, and mitigation measures as a prelude to submittal of NEXUS's application and the development of the FERC's Environmental Impact Statement for the Project.

Following FERC guidance, NEXUS is assisting the FERC in meeting its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended. TRC, under contract to Spectra Energy, is also providing assistance in the Section 106 process, and we respectfully request your input regarding the potential of the Project to affect significant cultural resources, including archaeological sites, burials, and traditional cultural properties so that these may be addressed prior to any ground-disturbing activities. TRC is also consulting with the Ohio Historic Preservation Office and the Michigan Historic Preservation Office about the project and will be completing the necessary archaeological and historic structures surveys as required under Section 106. While the regulations for implementing Section 106 of the National Historic Preservation Act (at 36 CFR 800) allow companies or consultants to gather information, the FERC will be ultimately responsible for determinations.

Although NEXUS is seeking your input regarding potential cultural resource concerns for the Project, the FERC (not NEXUS) is responsible for government-to-government consultations with tribal governments. After the initiation of FERC's involvement, the FERC will contact tribal governments through issuance of a Notice of Intent to Produce an Environmental Document and/or individual letters to tribes. If you would like to communicate directly with the FERC natural gas archaeological staff to discuss its cultural resource review and consultation processes, please feel free to contact Paul Friedman, Senior Technical Expert in Cultural Resources, Office of Energy Projects, at 202-502-8059 (email: paul.friedman@ferc.gov).

For your convenience, a response form has been attached to this letter so that you may easily communicate your concerns to me at TRC. Should you have any questions regarding this information, please do not hesitate to call me at (919) 530-8446, ext. 224, or via e-mail at tmillis@trcsolutions.com.

Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millio

Cc: Homer Mandoka, Nottawaseppi Huron Band of the Potawatomi

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Jeff Chivis Tribal Historic Preservation Officer Nottawaseppi Huron Band of the Potawator 1485 Mno-Bmadzewen Way Fulton, MI 49052	mi	
We have no concerns or con	nments regarding the	NEXUS Pipeline Project.
We have the following conc Project.	erns or comments reg	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	
Printed Name		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4572

Ethel Cook Chief Ottawa Tribe of Oklahoma P. O. Box 110 Miami, OK 74354

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chief Cook:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Rhonda Dixon, Ottawa Tribe of Oklahoma Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Ethel Cook		
Chief Ottawa Tribe of Oklahoma		
P. O. Box 110		
Miami, OK 74354		
We have no concerns or com	nments regarding th	ne NEXUS Pipeline Project.
We have the following concerning Project.	erns or comments r	regarding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis		
TRC Environmental Corp.		
50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4589

Rhonda Dixon Tribal Historic Preservation Officer Ottawa Tribe of Oklahoma P. O. Box 110 Miami, OK 74354

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Ms. Dixon:

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Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: Ethel Cook, Ottawa Tribe of Oklahoma

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Rhonda Dixon Tribal Historic Preservation Officer Ottawa Tribe of Oklahoma P. O. Box 110 Miami, OK 74354		
We have no concerns or com	ments regarding th	e NEXUS Pipeline Project.
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NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4534

John P. Froman Chief Peoria Tribe of Indians of Oklahoma P. O. Box 1527 Miami, OK 74355

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chief Froman:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

John P. Froman		
Chief Peoria Tribe of Indians of Oklahoma P. O. Box 1527 Miami, OK 74355		
Wildilli, OK 74333		
We have no concerns or com	ments regarding the	NEXUS Pipeline Project.
We have the following conce Project.	erns or comments re	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
riease return unis completed form to.		
Tracy L. Millis TRC Environmental Corp.		
50101 Governors Drive, Suite 250		
Chapel Hill, NC 27517		

tmillis@trcsolutions.com Senior Archaeologist

Fax (919) 530-8525





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4619

Matthew J. Wesaw Chairman Pokagon Band of Potawatomi Indians P. O. Box 110 Dowagiac, MI 49047

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Wesaw:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Mike Zimmerman, Pokagon Band of Potawatomi Indians

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Matthew J. Wesaw Chairman		
Pokagon Band of Potawatomi Indians		
P. O. Box 110		
Dowagiac, MI 49047		
We have no concerns or com	ments regarding the	NEXUS Pipeline Project.
We have the following conce Project.	erns or comments reg	garding the NEXUS Pipeline
		
NAME (SIGNATURE)	TITLE	DATE
Printed Name		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Changl Hill NC 27517		
Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4626

Mike Zimmerman Tribal Historic Preservation Officer Pokagon Band of Potawatomi Indians P. O. Box 110 Dowagiac, MI 49047

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Mr. Zimmerman:

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TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: Matthew J. Wesaw, Pokagon Band of Potawatomi Indians

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Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Mike Zimmerman		
Tribal Historic Preservation Officer		
Pokagon Band of Potawatomi Indians		
P. O. Box 110		
Dowagiac, MI 49047		
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W 1		i d Mexica B. I.
We have the following conce	rns or comments reg	garding the NEXUS Pipeline
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NAME (SIGNATURE)	TITLE	DATE
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PRINTED NAME		
Please return this completed form to:		
rease return this completed form to.		
Tracy L. Millis		
TRC Environmental Corp.		
50101 Governors Drive, Suite 250		
Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4541

Steve Ortiz Chairman Prairie Band of Potawatomi Nation 16277 Q Road Mayetta, KS 66509

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Ortiz:

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Steve Ortiz Chairman Prairie Band of Potawatomi Nation 16277 Q Road Mayetta, KS 66509		
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Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4770

Mike Jackson President Quechan Tribe of the Fort Yuma Indian Reservation P.O. Box 1899 Yuma, AZ 85366

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear President Jackson:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

As a proposed interstate natural gas transmission system, NEXUS has requested authorization with the Federal Energy Regulatory Commission (FERC) to participate in the FERC Pre-Filing Review Process for the NEXUS Pipeline Project. The Pre-Filing Review Process will initiate the FERC's review of the project in order to satisfy the requirements of the National Environmental Policy Act (NEPA). As part of the FERC Pre-Filing Review Process, the FERC, with input from cooperating agencies and other stakeholders, will analyze environmental impacts, alternatives, and mitigation measures as a prelude to submittal of NEXUS's application and the development of the FERC's Environmental Impact Statement for the Project.

In addition to facilitating preparation of the NEPA documentation for the Project, the Pre-Filing Review Process will also facilitate compilation of technically consistent reports, exhibits and other documentation to support consultation requests and applications to federal and state resource management agencies for clearances, approvals, and permits. The Draft Resource

Report are currently planned to be filed in the third quarter 2015, and the FERC application is currently planned to be filed in the fourth quarter 2015. All other agency applications will be filed in a similar time frame. NEXUS proposes that the project facilities in Ohio and Michigan will have an in-service date of December 2017.

Following FERC guidance, NEXUS is assisting the FERC in meeting its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended. TRC, under contract to Spectra Energy, is also providing assistance in the Section 106 process, and we respectfully request your input regarding the potential of the Project to affect significant cultural resources, including archaeological sites, burials, and traditional cultural properties so that these may be addressed prior to any ground-disturbing activities. TRC is also consulting with the Ohio Historic Preservation Office and the Michigan Historic Preservation Office about the project and will be completing the necessary archaeological and historic structures surveys as required under Section 106. While the regulations for implementing Section 106 of the National Historic Preservation Act (at 36 CFR 800) allow companies or consultants to gather information, the FERC will be ultimately responsible for determinations.

Although NEXUS is seeking your input regarding potential cultural resource concerns for the Project, the FERC (not NEXUS) is responsible for government-to-government consultations with tribal governments. After the initiation of FERC's involvement, the FERC will contact tribal governments through issuance of a Notice of Intent to Produce an Environmental Document and/or individual letters to tribes. If you would like to communicate directly with the FERC natural gas archaeological staff to discuss its cultural resource review and consultation processes, please feel free to contact Paul Friedman, Senior Technical Expert in Cultural Resources, Office of Energy Projects, at 202-502-8059 (email: paul.friedman@ferc.gov).

For your convenience, a response form has been attached to this letter so that you may easily communicate your concerns to me at TRC. Should you have any questions regarding this information, please do not hesitate to call me at (919) 530-8446, ext. 224, or via e-mail at tmillis@trcsolutions.com.

Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millio

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Mike Jackson		
President	·•	
Quechan Tribe of the Fort Yuma Indian Res P.O. Box 1899	servation	
Yuma, AZ 85366		
1 4114, 112 00000		
We have no concerns or com	nments regarding the	NEXUS Pipeline Project.
We have the following conce Project.	erns or comments reg	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
IKINIEDINAME		
Please return this completed form to:		
Tracy L. Millis		
TRC Environmental Corp.		
50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		
Chaper 11111, 110 2/31/		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4763

Rose Gurnoe-Soulier Chairperson Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin 88385 Pike Rd., Hwy 13 Bayfield, WI 54814 Larry Balber Tribal Historic Preservation Officer Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin 88385 Pike Rd., Hwy 13 Bayfield, WI 54814

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairperson Gurnoe-Soulier and Mr. Balber:

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Sincerely,

TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Rose Gurnoe-Soulier Chairperson Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin 88385 Pike Rd., Hwy 13 Bayfield, WI 54814	Red Cliff Ba	ric Preservation Officer nd of Lake Superior dians of Wisconsin Rd., Hwy 13
We have no concerns or cor	mments regarding the N	NEXUS Pipeline Project.
We have the following conc Project.	eerns or comments rega	arding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4756

Floyd Jourdain Chairperson Red Lake Band of Chippewa Indians P. O. Box 550 Redlake, MN 56671

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairperson Jourdain:

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

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Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Floyd Jourdain		
Chairperson		
Red Lake Band of Chippewa Indians		
P. O. Box 550		
Redlake, MN 56671		
We have no concerns or com	ments regarding the	NEXUS Pipeline Project.
We have the following conce	erns or comments reg	garding the NEXUS Pipeline
Project.		on m8
NAME (CLONATUDE)	TITLE	
NAME (SIGNATURE)	HILE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis		
TRC Environmental Corp.		
50101 Governors Drive, Suite 250		
Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4633

Dennis V. Kequom Chief Saginaw Chippewa Indian Tribe of Michigan 7070 East Broadway Road Mt. Pleasant, MI 48858

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chief Kequom:

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Tracy L. Millis Senior Archaeologist

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Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Dennis V. Kequom Chief		
Saginaw Chippewa Indian Tribe of Michiga 7070 East Broadway Road	n	
Mt. Pleasant, MI 48858		
We have no concerns or com	ments regarding th	ne NEXUS Pipeline Project.
We have the following conce Project.	erns or comments r	egarding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis		
TRC Environmental Corp. 50101 Governors Drive, Suite 250		
Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4749

William Johnson Curator Saginaw Chippewa Indian Tribe of Michigan Ziibwing Center of Anishinabe Culture and Lifeways 6650 East Broadway Road Mt. Pleasant, MI 48858

RE: NEXUS Gas Transmission, LLC
NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Mr. Johnson:

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Tracy L. Millis

Senior Archaeologist

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Cc: Matt Barczyk, Spectra Energy Partners, LP

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Figure 1 - Project Overview Map NEXUS Pipeline Project



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William Johnson Curator Saginaw Chippewa Indian Tribe of Michiga Ziibwing Center of Anishinabe Culture and 6650 East Broadway Road		
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Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

tmillis@trcsolutions.com
Senior Archaeologist

Fax (919) 530-8525





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4732

Aaron Payment Chairperson Sault Ste. Marie Tribe of Chippewa Indians of Michigan 523 Ashmun St. Sault Ste. Marie, MI 49783

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairperson Payment:

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Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Aaron Payment Chairperson Sault Ste. Marie Tribe of Chippewa Indians 523 Ashmun St. Sault Ste. Marie, MI 49783	of Michigan	
We have no concerns or com	nments regarding the	NEXUS Pipeline Project.
We have the following conce Project.	erns or comments reg	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	
PRINTED NAME		
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Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





November 12, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4671

Maurice John President Seneca Nation of Indians 90 O:hi'yoh Way Salamanca, NY 14779

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear President John:

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Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Melissa Bach, Seneca Nation of Indians Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Maurice John President Seneca Nation of Indians 90 O:hi'yoh Way Salamanca, NY 14779		
We have no concerns or con	nments regarding the	NEXUS Pipeline Project.
We have the following conc Project.	erns or comments re	garding the NEXUS Pipeline
Name (Signature)	TITLE	
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4466

Melissa Bach Tribal Historic Preservation Officer Seneca Nation of Indians 90 O:hi'yoh Way Salamanca, NY 14779

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Ms. Bach:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

As a proposed interstate natural gas transmission system, NEXUS has requested authorization with the Federal Energy Regulatory Commission (FERC) to participate in the FERC Pre-Filing Review Process for the NEXUS Pipeline Project. The Pre-Filing Review Process will initiate the FERC's review of the project in order to satisfy the requirements of the National Environmental Policy Act (NEPA). As part of the FERC Pre-Filing Review Process, the FERC, with input from cooperating agencies and other stakeholders, will analyze environmental impacts, alternatives, and mitigation measures as a prelude to submittal of NEXUS's application and the development of the FERC's Environmental Impact Statement for the Project.

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Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: Beverly Cook, Seneca Nation of Indians

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









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PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4435

LeRoy Howard Chief Seneca-Cayuga Tribe of Oklahoma 23701 South 655 Road Grove, OK 74334

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chief Howard:

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Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Paul Barton, Seneca-Cayuga Tribe of Oklahoma Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

LeRoy Howard Chief Seneca-Cayuga Tribe of Oklahoma 23701 South 655 Road		
Grove, OK 74334		
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We have the following conce Project.	erns or comments reg	garding the NEXUS Pipeline
Name (Signature)	TITLE	
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Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





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919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4442

Paul Barton Tribal Historic Preservation Officer Seneca-Cayuga Tribe of Oklahoma 23701 South 655 Road Grove, OK 74334

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Mr. Barton:

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Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: LeRoy Howard, Seneca-Cayuga Tribe of Oklahoma

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



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We have the following conce Project.	rns or comments re	egarding the NEXUS Pipeline
Name (Signature)	TITLE	
PRINTED NAME		21112
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist

©TRC



October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4374

Ron Sparkman Chairperson Shawnee Tribe P. O. Box 189 South Highway 69A Miami, OK 74355

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairperson Sparkman:

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TRC Environmental Corp.

Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: Kim Jumpers, Shawnee Tribe

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



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Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





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919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4381

Kim Jumpers Tribal Historic Preservation Officer Shawnee Tribe P. O. Box 189 South Highway 69A Miami, OK 74355

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Ms. Jumpers:

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Tracy L. Millis

Senior Archaeologist

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Cc: Ron Sparkman, Shawnee Tribe

Matt Barczyk, Spectra Energy Partners, LP

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NAME (SIGNATURE)	TITLE	DATE
PRINTED NAME	_	
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp.		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist

Chapel Hill, NC 27517

50101 Governors Drive, Suite 250





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4725

Garland McGeshick Chairman Sokaogon Chippewa Community 3051 Sand Lake Rd. Crandon, WI 54520

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

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NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Garland McGeshick Chairman Sokaogon Chippewa Community 3051 Sand Lake Rd. Crandon, WI 54520		
We have no concerns or com	ments regarding the	NEXUS Pipeline Project.
We have the following conce Project.	erns or comments re	garding the NEXUS Pipeline
NAME (SIGNATURE)	TITLE	
PRINTED NAME		
Please return this completed form to:		
Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4178

Stuart Bearheart Chairman St. Croix Chippewa Indians of Wisconsin 24663 Angeline Ave Webster, WI 54893

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Bearheart:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

As a proposed interstate natural gas transmission system, NEXUS has requested authorization with the Federal Energy Regulatory Commission (FERC) to participate in the FERC Pre-Filing Review Process for the NEXUS Pipeline Project. The Pre-Filing Review Process will initiate the FERC's review of the project in order to satisfy the requirements of the National Environmental Policy Act (NEPA). As part of the FERC Pre-Filing Review Process, the FERC, with input from cooperating agencies and other stakeholders, will analyze environmental impacts, alternatives, and mitigation measures as a prelude to submittal of NEXUS's application and the development of the FERC's Environmental Impact Statement for the Project.

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Report are currently planned to be filed in the third quarter 2015, and the FERC application is currently planned to be filed in the fourth quarter 2015. All other agency applications will be filed in a similar time frame. NEXUS proposes that the project facilities in Ohio and Michigan will have an in-service date of December 2017.

Following FERC guidance, NEXUS is assisting the FERC in meeting its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended. TRC, under contract to Spectra Energy, is also providing assistance in the Section 106 process, and we respectfully request your input regarding the potential of the Project to affect significant cultural resources, including archaeological sites, burials, and traditional cultural properties so that these may be addressed prior to any ground-disturbing activities. TRC is also consulting with the Ohio Historic Preservation Office and the Michigan Historic Preservation Office about the project and will be completing the necessary archaeological and historic structures surveys as required under Section 106. While the regulations for implementing Section 106 of the National Historic Preservation Act (at 36 CFR 800) allow companies or consultants to gather information, the FERC will be ultimately responsible for determinations.

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For your convenience, a response form has been attached to this letter so that you may easily communicate your concerns to me at TRC. Should you have any questions regarding this information, please do not hesitate to call me at (919) 530-8446, ext. 224, or via e-mail at tmillis@trcsolutions.com.

Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millio

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

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Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4473

Darwin Hill Chief Tonawanda Band of Seneca Nation P. O. Box 795 7027 Meadville Road Basom, NY 14013

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chief Hill:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation









Figure 1 - Project Overview Map NEXUS Pipeline Project



NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Darwin Hill		
Chief Tonawanda Band of Seneca Nation		
P. O. Box 795		
7027 Meadville Road		
Basom, NY 14013		
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We have the following cond Project.	cerns or comments rega	arding the NEXUS Pipeline
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PRINTED NAME		
Please return this completed form to:		
· ·		
Tracy L. Millis		
TRC Environmental Corp. 50101 Governors Drive, Suite 250		

Fax (919) 530-8525 tmillis@trcsolutions.com Senior Archaeologist

Chapel Hill, NC 27517





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4701

Richard McCloud Chairman Turtle Mountain Band of Chippewa Indians of North Dakota P. O. Box 900 Belcourt, ND 58316

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman McCloud:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation

Enclosure – Location Map, Response Form









Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014

COMMENT FORM FOR NATIVE AMERICAN CONCERNS

NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Richard McCloud					
Chairman					
Turtle Mountain Band of Chippewa Indians	S				
of North Dakota					
P. O. Box 900					
Belcourt, ND 58316					
We have no concerns or con	We have no concerns or comments regarding the NEXUS Pipeline Project.				
We have the following conc Project.	erns or comments re	garding the NEXUS Pipeline			
N. (O. r.					
NAME (SIGNATURE)	TITLE	DATE			
PRINTED NAME					
Places nature this convenieted forms to:					
Please return this completed form to:					
Tracy L. Millis					
TRC Environmental Corp.					
50101 Governors Drive, Suite 250					
Chapel Hill, NC 27517					

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





December 11, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4695

Erma Vizenor Chairman White Earth Band of Minnesota Chippewa Tribe P. O. Box 418 White Earth, MN 56591 Renee Lampi Tribal Historic Preservation Officer White Earth Band of Minnesota Chippewa Tribe P. O. Box 418 White Earth, MN 56591

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chairman Vizenor and Ms. Lampi:

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Thank you in advance for your response, and I look forward to hearing from you.

Sincerely,

TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation

Enclosure – Location Map, Response Form









Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014

COMMENT FORM FOR NATIVE AMERICAN CONCERNS

NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Erma Vizenor Chairman White Earth Band of Minnesota Chippewa Tribe P. O. Box 418 White Earth, MN 56591	Renee Lampi Tribal Historic Preservation Officer White Earth Band of Minnesota Chippewa Tribe P. O. Box 418 White Earth, MN 56591		
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Tracy L. Millis TRC Environmental Corp. 50101 Governors Drive, Suite 250 Chapel Hill, NC 27517			

Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4596

Billy Friend Chief Wyandotte Nation 64700 E. Highway 60 Wyandotte, OK 74370

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Chief Friend:

NEXUS Gas Transmission, LLC (NEXUS), a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct, own, and operate approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project (Project) traverses through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton, and through four (4) counties in Michigan, including Lenawee, Washtenaw, Monroe, and Wayne. The Project is also anticipated to include four newly constructed compressor stations along the Ohio portion of the proposed route. The Project study corridor is shown on the attached General Location Map.

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TRC Environmental Corp.

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Sherri Clemons, Wyandotte Nation

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation

Enclosure – Location Map, Response Form









Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014

COMMENT FORM FOR NATIVE AMERICAN CONCERNS

NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

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Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 28, 2014

U.S. POSTAL SERVICE, CERTIFIED MAIL

Tracking Number 7014 0150 0000 8378 4602

Sherri Clemons Tribal Historic Preservation Officer Wyandotte Nation 64700 E. Highway 60 Wyandotte, OK 74370

RE: NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Dear Ms. Clemons:

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Tracy L. Millis

Senior Archaeologist

Tracy L. Millis

Cc: Billy Friend, Wyandotte Nation

Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation

Enclosure – Location Map, Response Form









Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014

COMMENT FORM FOR NATIVE AMERICAN CONCERNS

NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Sherri Clemons Tribal Historic Preservation Officer Wyandotte Nation 64700 E. Highway 60 Wyandotte, OK 74370		
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Fax (919) 530-8525 <u>tmillis@trcsolutions.com</u> Senior Archaeologist





Delaware Tribe Historic Preservation Office

1200 Commercial Street Roosevelt Hall, Room 212 Emporia, KS 66801 (620) 340-0111

bobermeyer@delawaretribe.org

November 17 2014

TRC Environmental Corp. Attn: Tracy L. Millis 50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

Re: NEXUS Gas Transmission Pipeline Project Section 106 Consultation

Dear Tracy L. Millis,

Thank you for informing the Delaware Tribe regarding the above referenced project. Although we are unaware of any locations with cultural or religious significance within your project area, given the project's location it is our recommendation that you conduct an archaeological field survey that includes subsurface testing in archaeologically sensitive areas. After this survey is completed, we would appreciate a copy of the report so that we may reevaluate the project and its potential impact on archaeological and human remains.

Should this project inadvertently uncover an archaeological site and/or human remains, even after an archaeological survey, we request that the project activities be postponed until the appropriate state agencies and the Delaware Tribe are consulted. We appreciate your cooperation and should you have any questions, feel free to contact me by phone at (620) 340-0111 or e-mail at bobermeyer@delawaretribe.org.

Bue Oberneyer

Brice Obermeyer

Delaware Tribe Historic Preservation Office

1200 Commercial Street

Roosevelt Hall, Room 212

Emporia, KS 66801



December 4, 2014

Tracy L. Millis Senior Archaeologist TRC Environmental Corp.

RE: NEXUS Gas Transmission Pipeline Project

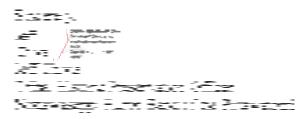
Dear Tracy Millis,

Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, the Tribe's THPO office has reviewed the undertaking referenced above.

The number of archaeological sites, in addition to the potential presence of any known Native American Traditional Cultural Properties, Sacred Sites, or other Significant Properties within the project area(s), are too numerous to list here at this time. I am requesting that upon completion of your background research with the Ohio and Michigan State Historic Preservation Offices on the archaeological and historic structures present within the project area, you provide me with copies of the reports from both Ohio and Michigan. It will be most expedient for me to see these reports before I comment any further on any other significant sites or properties within the project areas.

Furthermore, I would like to have a copy of your "Plan of Action" (POA) policy which details your procedures to follow in the case of any inadvertent discoveries. I would also like more information on the methodology and techniques you will employ to construct this pipeline and the amount (and types) of earth-moving activities involved in this project.

Please contact me at 269-704-8416 or at jehivis@nhbpi.com if you have any questions or if the scope of work changes in any way. Thank you for providing us the opportunity to review this project and I will be looking forward to consulting with you throughout the duration of this project.



PEORIA TRIBE OF INDIANS OF OKLAHOMA



118 S. Eight Tribes Trail (918) 540-2535 FAX (918) 540-2538 P.O. Box 1527 MIAMI, OKLAHOMA 74355 CHIEF John P. Froman

SECOND CHIEF Jason Dollarhide

November 7, 2014

Tracy L. Millis Senior Archaeologist TRC Environmental Corp. 5101 Governor's Drive, Suite 250 Chapel Hill, NC 27517

Re: NEXUS Gas Transmission LLC

NEXUS Gas Transmission Pipeline Project

Section 106 Consultation

Thank you for providing notice of the referenced project. The Peoria Tribe of Indians of Oklahoma is unaware of any documentation directly linking Indian Religious Sites to the proposed project location. There appear to be no objects of cultural significance or artifacts linked to our tribe located on or near the project location.

Though six of the eleven counties in Ohio were ceded to the U.S. by the Peoria and other tribes, the Peoria Tribe unaware of items covered under NAGPRA (Native American Graves Protection and Repatriation Act) to be associated with the proposed project site. These items include: funerary or sacred objects; objects of cultural patrimony; or ancestral human remains.

The Peoria Tribe has no objection at this time to the proposed pipeline project. If, however, at any time items are discovered which fall under the protection of NAGPRA, the Peoria Tribe requests immediate notification and consultation. In addition state, local and tribal authorities should be advised as to the findings and construction halted until consultation with all concerned parties has occurred.

Thank you,

Cynthia Stacy

Special Projects Manager/NAGPRA

Cypatra Stack

Millis, Tracy

From: Marcus Winchester < Marcus.Winchester@PokagonBand-nsn.gov>

Sent: Wednesday, November 26, 2014 4:27 PM

To: Millis, Tracy

Subject: NEXUS Gas Transmission Section 106

Greetings Ms. Millis,

The Pokagon Band of Potawatomi is interested in consulting on this project. Please allow us some more time to review our records before proceeding in the consultation process. Thank you.

Sincerely,

Marcus Winchester Tribal Historic Preservation Officer

Pokegnek Bodewadmik

Pokagon Band of Potawatomi PO Box 180 • 58620 Sink Road Dowagiac, MI 48620 (269) 462-4224 desk • (269) 783-9269 mobile (269) 782-1817 fax www.PokagonBand-nsn.gov



LOCAL

Agency Correspondence



50101 Governor's Drive Suite 250 Chapel Hill, NC 27517

919.530.8446 PHONE 919.530.8525 FAX

www.TRCsolutions.com

October 27, 2014

Washtenaw County Historic Preservation Melissa Milton-Pung Washtenaw County Office of Community & Economic Development 110 N. Fourth Ave. Ann Arbor, MI 48107

RE: NEXUS Gas Pipeline, Certified Local Government (CLG) Coordination, Michigan

Dear Ms. Milton-Pung:

On behalf of NEXUS Gas Transmission, LLC (NEXUS), TRC Environmental Corporation (TRC) and Commonwealth Cultural Resources Group (CCRG) are seeking comments on the NEXUS Gas Transmission Project (Project). As you may know, the NEXUS Project is a potential interstate pipeline project that is a joint venture between Spectra Energy and DTE Energy Co. This project will provide dedicated natural gas transportation services for power generation needs starting in December 2017. This project will also enhance the availability and reliability of natural gas supplies in the Midwest region.

NEXUS is currently evaluating several options for the pipeline path. Generally, the project begins near Kensington, Ohio, and continues through Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton counties, Ohio; and Lenawee, Washtenaw, Monroe, and Wayne counties, Michigan before ending near Willow Run, Michigan. TRC is assisting NEXUS with environmental documentation and permitting coordination, and along with CCRG has commenced cultural resource background studies and field research for the project. The preliminary pipeline route is illustrated on the attached Project Location Map.

At the suggestion of the Federal Energy Regulatory Commission, and in compliance with 36 CFR 800.4(a)(iii) and 800.1(c)(2)(iii), NEXUS is consulting with Washtenaw County as a CLG to notify you of this project and obtain your opinion of potential projects effects on historic structures, sacred areas, archaeological sites, burial grounds, or other areas of special sensitivity to you or members of your community. In addition, archaeological testing in consultation with the Ohio and Michigan State Historic Preservation Offices (SHPOs) is planned along the entire area where ground-disturbing activities will take place. Aside from the archaeological investigations, a historic structures survey is planned along the entire route in order to assess potential visual impacts to historic structures from the pipeline corridor or ancillary facilities.

Please provide us with your comments as soon as possible so that we may take them into account. In addition, if you know of any additional groups that might be interested in participating in this process beyond those listed as CLGs, please let us know.

Your comments may be mailed or faxed to us at TRC's Chapel Hill office (see address above), or provided via email to tmillis@trcsolutions.com. To facilitate your response a response form is also enclosed.

Thank you for your time and consideration. We look forward to hearing from you.

Sincerely,

Tracy L. Millis Senior Archaeologist

Tracy L. Millis

Cc: Matt Barczyk, Spectra Energy Partners, LP

Michael Lychwala, TRC Environmental Corporation

Chris Espenshade, Commonwealth Cultural Resources Group

Enclosure – Location Map, Response Form









Figure 1 - Project Overview Map NEXUS Pipeline Project



9/11/2014

COMMENT FORM FOR CLG CONCERNS NEXUS Gas Transmission, LLC – NEXUS Gas Transmission Pipeline Project

Washtenaw County Historic Preservation		
Melissa Milton-Pung Washtenaw County Office of Community & F 110 N. Fourth Ave.	Economic Development	
Ann Arbor, MI 48107		
We have no concerns or com	ments regarding the NEX	US Pipeline Project.
We have the following concer	rns or comments regarding	g the NEXUS Pipeline Project.
NAME (SIGNATURE)	TITLE	<u></u>
NAME (SIGNATURE)	IIILE	DATE
PRINTED NAME		
Please return this completed form or provide y	your correspondence to:	
Tracy L. Millis TRC Environmental Corporation		
50101 Governors Drive, Suite 250 Chapel Hill, NC 27517		

Fax (919) 530-8525

tmillis@trcsolutions.com
Senior Archaeologist





NEXUS Gas Transmission, LLC

NEXUS Gas Transmission Project (NEXUS Project)

Public and Agency Participation Plan

January 2015

Table of Contents

1.	Plar	n Purpose	, 1
	1.1.	Project Description	1
	1.2.	Values and Principles	2
	1.3.	Management Commitment	2
2.	Pro	ject Development	. 3
	2.1.	NEXUS Project Team	4
	2.2.	Team Training	4
	2.3.	Route/Corridor Planning	. 5
	2.4.	Map	. 5
3.	Pub	· lic Participation	. 5
		Public Outreach	
	3.1	.1. Identification of Issues	6
	3.1	.2. Resolution of Issues	. 7
	3.1	.3. Response to Comments	. 7
	3.1	.4. Communication Protocol	. 7
	3.2.	Access to Land	. 7
	3.2	.1. Land Agent Contacts	. 7
	3.3.	Identification of Stakeholders	7
	3.3		
	3.3	.2. Public Officials	8
	3.3	.3. Community and Public Interest Groups and Non-governmental Organizations	8
	3.3		
	3.3	.5. Federal, State, and Local Agencies	8
	3.4.	Agency Permits/Approvals	
4.		semination of Information	
	4.1.	Website Development	8
	4.1	.1. Accessibility	9
	4.1	.2. Maintenance	9
	4.1	.3. Interactive Capabilities	9
	4.2.	Federal, State and Local Agency Communications	
		Stakeholder Notification of FERC Pre-Filing Participation Letters	
	4.4.	Voluntary Landowner Informational Meetings	9
	4.5.	Landowner Invitations to Voluntary Landowner Informational Meetings	
	4.6.	Public Libraries for Filings	
	4.7.	Updates of Information	10
	4.8.	Filings with FERC	
5.	NEX	(US Project Schedule	
6.		orting 1	

APPENDICES

Appendix A: Project Overview Map

Appendix B: Stakeholder List -- Landowners

Appendix C: Stakeholder List -- Non-Landowners - Federal, State and Local

Agencies

Appendix D: Agency Permits and Approvals

Appendix E: Stakeholder List -- Non-Landowners - Public Officials,

Community and Public Interest Groups and Non-governmental

Organizations

Appendix F: Examples of Home Pages for Websites

Appendix G: Sample Letters

Appendix H: List of Voluntary Landowner Informational Meetings

Note: Spectra Energy Partners, LP and DTE Energy are lead developers of the NEXUS Gas Transmission Project

1. Plan Purpose

The purpose of this Public and Agency Participation Plan is to identify stakeholders and potential issues related to the proposed NEXUS Gas Transmission Project (NEXUS Project or Project) early in the development process; determine appropriate and effective methods of communication with stakeholders; identify responsible parties and adhere to communication protocols, and document the public consultation process.

NEXUS Gas Transmission, LLC (NEXUS) is dedicated to seeking greater involvement from affected stakeholder groups early in the planning process so those who are interested may participate in the decision making process throughout development of the Project.

Our goal is to achieve consensus and agreements among the stakeholders reaching mutually acceptable project designs. We believe early and collaborative stakeholder involvement leads to project designs that minimize impacts to landowners, communities and the environment while enabling us to develop more comprehensive and complete applications submitted to regulatory agencies and the Federal Energy Regulatory Commission (FERC).

1.1. Project Description

The NEXUS Project will create, through the use of greenfield pipeline and capacity on existing systems, a new path to deliver gas from the prolific Marcellus and Utica shale plays to markets in the upper Midwest and Ontario, Canada, specifically delivering gas into existing infrastructure in Michigan and in Ontario. The NEXUS Project will create a new pipeline system and additional firm pipeline capacity necessary to transport 1.5 billion cubic feet ("bcf") of natural gas per day.

The NEXUS Project will provide the U.S. Midwest and eastern Canadian regions with a unique opportunity to secure a cost effective, domestically produced source of energy to support both current demand and future growth, for clean burning natural gas. It will allow abundant regional natural gas supplies from the Appalachian basin to flow reliably into Ohio, Michigan, Chicago and the Dawn Ontario markets, helping to meet the increasing demand while lowering energy costs.

The NEXUS Project's proposed facilities consist of construction of approximately 250 miles of up to 42-inch diameter natural gas pipeline; installation of up to four new compressor units; construction of four new meter stations; and installation of new launcher and receiver facilities.

1.2. Values and Principles

Our core values guide our stakeholder outreach programs and activities as well as the work of our employees and contractors.

In conducting our business, we value our stakeholders by:

- ✓ **Stewardship** Demonstrating a commitment to environmental responsibility and vibrant communities.
- ✓ Respect for the Individual Embracing diversity and inclusion, enhanced by openness, sharing, trust, leadership, teamwork and involvement.
- ✓ Integrity Ethically and honestly doing what we say we will do.
- ✓ Win-Win Relationships Having relationships that focus on the creation of value for all parties.
- ✓ Initiative Having the courage, creativity and discipline to lead change and shape the future.

While these values guide our stakeholder outreach approach, we tailor our activities for each project, ensuring that our dialogue with stakeholders is open, transparent and meaningful.

Our Stakeholder Engagement Principles, developed to guide our interactions, are as follows:

- We will be respectful of and considerate to all stakeholders.
- We will engage with those affected by our business.
- We will consider stakeholder-identified issues in our decision-making process.
- We will provide timely and accurate communications using accessible information and language.
- We will be transparent in our processes and communications.

Having established principles and knowing where, when and how to engage with external stakeholders is critical to our business success.

1.3. Management Commitment

Overview

Our stakeholder outreach activities are endorsed by our executive management team. We have communication plans that provide our employees the "who, what, where and when" protocols when conducting business.

To ensure effective dialogue with our stakeholders, we rely on one-on-one discussions, face-to-face meetings, open houses, websites, legal notices, media outreach and individual letters sent via mail.

Project Development Stakeholder Outreach

During project development, stakeholder consultation is critical because many people along the proposed and existing pipeline route may not be familiar with natural gas pipelines or our company.

The key criteria inherent in implementing a successful stakeholder consultation plan are the ability and knowledge to explain a project's benefits and its potential impacts; to respond to questions, concerns and issues; and, whenever possible, to mitigate potential impacts. In order to sustain a successful program, we seek, involve, inform and respond to stakeholders by implementing the planning process early, with open and collaborative activities. We execute our plans by engaging in and sustaining understandable, accurate and timely dialogue with our stakeholders. This process guides us toward building and maintaining winwin relationships.

The NEXUS Project has evolved as market demands and our customers' needs change and will require Federal, state, and local regulatory reviews and will be subject to government approvals.

Our mission is to work with Project stakeholders to define an acceptable project design. Our vision is to involve affected landowners, other interested citizens, public officials and government agencies early in the Project planning process to determine the proposed route. It is imperative to us that our employees and Project team understand the importance of public participation. The underpinnings of this plan are to inform, listen to, and record stakeholders' ideas and knowledge of the area and environment. Our values and principles include a commitment to being honest and open and following through with stakeholders' concerns and issues.

We manage all projects and operations in a manner that protects the environment and the health and safety of employees, customers, contractors and the public. Protection of human life is of highest priority, and actions undertaken to protect the environment or our assets must reflect this philosophy. We rely on each employee and contractor to support and actively participate in our environmental, health and safety program.

2. Project Development

The NEXUS Project team has been discussing the purpose and need for the Project with landowners, agencies, public officials and other stakeholders. We explain supply and demand, energy reliability, pipeline construction, operations and safety, and the need for the Project during opportunities such as voluntary landowner informational meetings, public open houses and other meetings that include all stakeholders (e.g., county commission meetings, home owner association meetings, etc.). In identifying issues important to landowners and other stakeholders, we seek assistance from federal and state agencies, commissions, the Energy Information

Administration and regional and local entities. In addition to sharing information about the benefits of the NEXUS Project, we seek to understand stakeholder issues and concerns, such as, Project construction activity alignment with landowners', community and business activities, environmental needs, right-of-way requirements, etc.

As part of determining potential stakeholders for the NEXUS Project's preliminary and proposed routes, we identified and are continually communicating with the following:

- Ohio and Michigan Governors; federal, state, county and local public officials
- Federal, state and local permitting agencies and groups
- Energy agencies
- FERC staff
- Landowners
- Federal and state land managers
- Non-governmental organizations
- Community and public interest groups

We continue to identify other stakeholders interested in the Project.

Proper documentation is made with regard to conversations, meetings, and phone/visitor logs so that tracking of calls, visits, emails and/or letters received as well as issue(s)/concern(s) raised from initial contacts are addressed and resolved. Our goal is to be responsive to all participating agencies, landowners and stakeholders.

2.1. **NEXUS Project Team**

The NEXUS Project Team includes representatives from engineering, right-of-way, legal, environmental, stakeholder outreach, public relations, government relations, operations, regulatory affairs, and business development.

2.2. Team Training

All facets of the NEXUS public outreach and consultation process are discussed with and supported by the NEXUS Project Team.

Our land agents and survey crews participate in Public Consultation Training. The training includes appropriate communication, participation and documentation practices with stakeholders.

All land agents are trained in project-appropriate research methods with regard to determining property ownership and legal descriptions. All have received training on negotiating skills that include effective listening. Effective listening skills are a vital part of the stakeholder/agent communication process. In addition, all land agents have extensive training in contracting and documentation, including fact checking and quality control.

2.3. Route/Corridor Planning

The proposed pipeline route/corridor is selected based upon engineering, construction, environmental and stakeholder considerations that include:

- Maximizing use of existing corridors
- Utilizing streets, industrial/commercial parking lots, edges of properties
- Minimizing residential and business impacts
- Minimizing interference with future development
- Minimizing disruptions during construction
- Avoiding environmental impacts where possible
- Minimizing unavoidable environmental impacts

The pipeline facilities will be installed is in accordance with U.S. Department of Transportation classifications and regulations.

2.4. Map

A Project Overview Map is included in Appendix A.

3. Public Participation

We believe public participation strengthens our connection with people living and working near the pipeline and is critical to the successful completion of the Project.

During the early development stages of the Project we involve many landowners located within an initial 600-foot-wide "study corridor" comprising the preliminary and alternate routes. We mail landowners Project description letters and request survey permission; telephone landowners and follow up with face-to-face meetings. We hold voluntary landowner informational meetings; host public open houses and meetings with community and civic organizations; and will participate in FERC's National Environmental Policy Act (NEPA) Scoping Meetings. We also contact and meet with local and state public officials.

During these meetings, we respond to stakeholders' questions and for those questions that require research, we commit to responding in a timely fashion. We are taking care to respond in easy to understand terms and to provide stakeholders with comprehensive answers to their questions. We provide a toll free number and invite stakeholders to call at any time throughout the development process if new questions arise. We also invite them to visit both the Spectra Energy and NEXUS Project websites for the duration of the Project:

NEXUS Project website:

http://nexusgastransmission.com

Spectra Energy website:

http://www.spectraenergy.com/Operations/New-Projects-and-Our-Process/New-Projects-in-US/NEXUS-Gas-Transmission

3.1. Public Outreach

NEXUS will be implementing and coordinating public outreach activities during the FERC Pre-Filing Process as well as following the filing of the Certificate application. There are a number of separate components to our stakeholder outreach efforts, including the following:

- Developing our philosophy of outreach and stating our commitment
- Ensuring landowner, government and agency participation
- Training company representatives and land agents
- Providing a toll free number and website for easy access
- Developing and implementing a Public and Agency Participation Plan
- Collecting data and responding to stakeholders
- Having a plan for potential mitigation and compensation

3.1.1. Identification of Issues

Landowner

Throughout the development, construction and operation of the NEXUS Project, we emphasize the importance of landowner and community communications.

We sent letters to landowners providing them with information on the Project and requesting permission to survey. We will also send letters to stakeholders informing them of the FERC Pre-Filing Process, including the assigned Project docket number, FERC Scoping Meetings and information on the Resource Reports, as well as the locations of libraries where the Resource Reports will be made available for viewing. This communication with affected stakeholders will continue once we submit our certificate application to FERC.

Further, we held 9 voluntary Landowner Informational Meetings in October and November 2014 in communities with proposed facilities. To announce the Landowner Informational Meetings, we mailed letters to landowners and public officials.

Additionally, the Project has received coverage from local media outlets interested in the scope, schedule, permitting, potential stakeholder impacts and opportunities for engagement.

Sample letters are included in Appendix G.

See Appendix H for a list of voluntary landowner informational meetings. We will continue to provide updates to the meeting information as necessary.

Environmental

Pipeline projects and its operations typically involve working with the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, state departments of environmental protection, state departments of natural resources and the State Historic Preservation Offices. Knowing that developing the NEXUS Project may result in impacts to resources, we engaged these and other federal, state and regional agencies seeking guidance on specific issues early in the development process. Appendix C provides a list of Federal, state, and local agencies contacted on the NEXUS project to date.

3.1.2. Resolution of Issues

To date, stakeholder meetings and communications, which were designed to inform, communicate and listen to feedback, have resulted in several modifications to the proposed route.

Resolutions of issues are documented in our database and updated on an ongoing basis.

3.1.3. Response to Comments

Project Team representatives are documenting all comments and responding as appropriate.

3.1.4. **Communication Protocol**

Pre-Filing and post-certificate application activities are part of a coordinated plan involving many facets of the Project and team. Stakeholder communication is coordinated on a weekly basis, or more frequently, as needed.

3.2. Access to Land

Initial notifications to affected landowners were mailed in August 2014, and were followed by subsequent letters requesting survey permission.

Sample letters are included in Appendix G.

3.2.1. Land Agent Contacts

Contacts have been made with more than 2,700 landowners living along the 600-foot wide study corridor of the preliminary route. This number is expected to be greatly reduced through the survey and route selection process.

3.3. Identification of Stakeholders

3.3.1. Landowners

See Appendix B for a list of landowners and Appendix G for sample letters.

3.3.2. Public Officials

Contacts have been made and/or briefings have been held with affected public officials beginning in September 2014.

See Appendix E for a list of public officials.

3.3.3. Community and Public Interest Groups and Non-governmental Organizations

Contacts have been made and/or briefings have been held with community and public interest groups and non-governmental organizations.

See Appendix E for a list of community and public interest groups and non-governmental organizations.

3.3.4. **Media**

Information has been and will be provided to media outlets upon request.

3.3.5. Federal, State, and Local Agencies

Initial contacts and meetings with affected government officials and agencies were conducted in fall 2014. A Project overview was provided at the meetings. Since that time, we have kept and will remain in contact with these officials and agencies.

See Appendix C for a list of federal, state and local agencies and Appendix G for sample letters.

3.4. Agency Permits/Approvals

A table listing the required permits and approvals and their estimated regulatory timeframes may be found in Appendix D.

4. Dissemination of Information

4.1. Website Development

A targeted Project page on the Spectra Energy website was launched in June 2013, and a standalone website for the NEXUS Project was launched in July 2013. The websites provide visitors with a toll free telephone number to obtain information and/or ask questions about the Project. This website was designed to be more interactive and to provide easy to understand and frequent updates.

Appendix F provides a sample of the NEXUS Project pages.

4.1.1. Accessibility

The NEXUS Project websites provide stakeholders with information about the company, as well as facts about the Project, regulatory process, virtues of natural gas, pipeline operations, safety and maintenance, and Frequently Asked Questions. A toll free telephone contact number was established to assist stakeholders with their questions and comments.

In addition, we ensure information is disseminated, as requested by stakeholders, since not all stakeholders have access to the Internet.

4.1.2. Maintenance

The webmaster maintains the website and manages web-based stakeholder inquiries.

4.1.3. **Interactive Capabilities**

The website houses a "Contact Us" section, which includes a web/email form. This allows stakeholders to request information about the Project, and we will respond within three (3) business days.

4.2. Federal, State and Local Agency Communications

Consultation letters were mailed to the identified federal, state and local permitting agencies with jurisdiction over the Project. We maintain contact with the permitting agencies and respond to all requests for information we receive from them.

See Appendix C for a list of agencies and Appendix G for sample letters.

4.3. Stakeholder Notification of FERC Pre-Filing Participation

All stakeholders will be notified by letter in the event that FERC approves the NEXUS Project to participate in the Pre-Filing process. These letters will be signed by the NEXUS Project's team members accountable for specific stakeholder groups.

4.4. Voluntary Landowner Informational Meetings

In October and November 2014, NEXUS conducted 9 voluntary Landowner Informational Meetings in convenient locations for affected landowners. NEXUS subject matter experts hosted meetings in Ohio and Michigan.

At the voluntary landowner informational meetings and public open house meetings, information was available regarding all aspects of the Project, pipeline operations, safety and our company. Sign-in sheets documented the names and contact information for participants in order to allow for follow-up, as appropriate, with affected landowners.

See Appendix H for a list of voluntary Landowner Informational Meetings.

4.5. Landowner Invitations to Voluntary Landowner Informational Meetings

Letters inviting landowners to voluntary Landowner Informational Meetings were distributed prior to the meetings.

See Appendix G for sample letters to landowners.

4.6. Public Libraries for Filings

To ensure filings are accessible and convenient, we will place draft environmental resource reports in the public libraries of each community where proposed facilities are located. Routine checks of the libraries will be conducted to ensure the information remains available. The FERC certificate application along with final resource reports will also be filed in these public libraries.

4.7. Updates of Information

Updates will be approved by our Project Manager and disseminated to stakeholders in a timely manner. Methods of dissemination of information to stakeholders include U.S. mail, hand-delivery, email, Project website and/or telephone calls.

4.8. Filings with FERC

The NEXUS Project Application will meet all FERC requirements.

5. NEXUS Project Schedule

Conduct Landowner Informational Meetings October - November 2014

Request Pre-Filing initiation December 2014
Submit Draft Resource Reports 1 & 10 (Description & Alternatives) January 2015

Conduct Open Houses / FERC Scoping Meetings January - April 2015

Submit Draft Resource Reports

File FERC Certificate Application

June 2015

November 2015

Submit Federal and State Permit Applications October - December 2015

FERC issues Certificate

Submit Implementation Plan

Receive Final Agency Clearances

Start Major Construction

Place Project into Service

November 2016

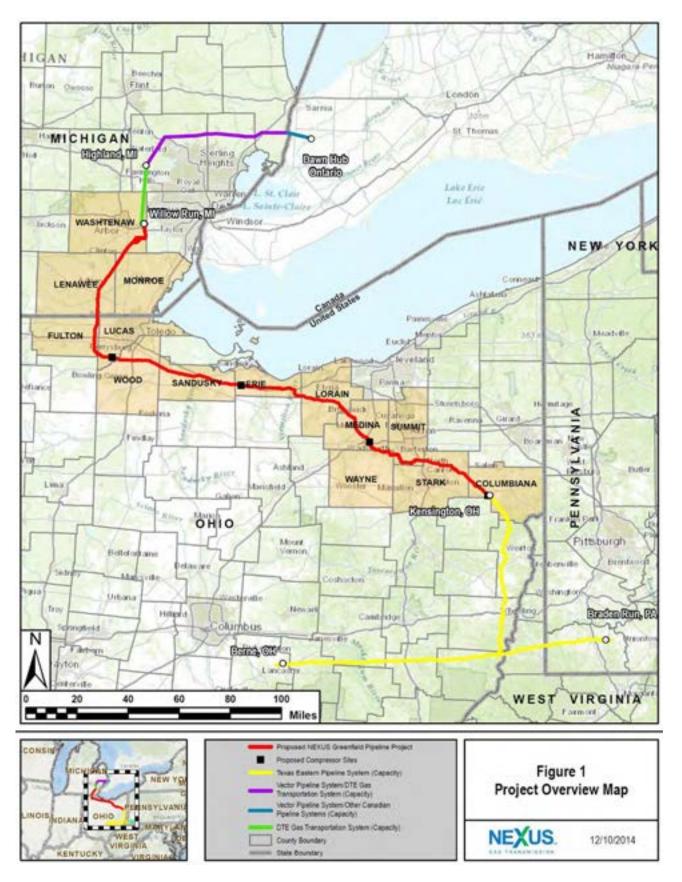
January 2017

November 2017

6. Reporting

All FERC, federal, state and local government reporting will be timely and respectful of requirements. An official list of contacts within each stakeholder group has been developed to effectively and efficiently provide copies of reports and updates, as warranted.

Appendix A: Project Overview Map



Appendix B: Stakeholder List – Landowners

CONTAINS PRIVILEGED INFORMATION— DO NOT RELEASE FILED UNDER SEPARATE COVER

Appendix C: Stakeholder List -- Non-Landowners Federal, State and Local Agencies

Append	Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts									
Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type		
FEDERA	L									
FERC	Office of Energy Projects Division of Gas- Environment and Engineering Gas Branch 1	Joanne Wachholder, FERC Project Manager	TBD	Joanne.Wachholder@ ferc.gov	FERC Office of Energy Projects Division of Gas- Environment and Engineering Gas Branch 1 888 First Street, NE Washington, D.C. 20426 office 6J-06					
USACE	USACE Pittsburgh District (Northern Pittsburgh District)	Matt Mason, Regulatory Branch	(412) 395-7129	Matthew.R.Mason@usa ce.army.mil	Pittsburgh District Corps of Engineers William S. Moorhead Federal Building 1000 Liberty Avenue Regulatory Branch, Suite 2200 Pittsburgh, PA 15222	10/31/14 via letter	10/31/14 via FedEx	12/30/14 via letter from Buffalo District		
USACE	Huntington District	Mark Taylor, Chief, Energy Resources	(304) 399-5610	MARK.A.TAYLOR@usac e.army.mil	Huntington District Regulatory Division 502 8th Street Huntington, WV 25701	10/31/14 via letter	10/31/14 via FedEx	12/30/14 via letter from Buffalo District		
USACE	Buffalo District	Mark Scalabrino Ohio Regulatory Chief	(800) 833-6390	TBD	Buffalo District Office 1776 Niagara St. Buffalo, NY 14207	10/31/14 via letter	10/31/14 via FedEx	12/30/14 via letter		
USACE	Detroit District	Stanley F. Cowton, Jr., Regulatory Project Manager	(313) 226-2219	stanley.f.cowton@usac e.army.mil	USACE, Regulatory Office 477 Michigan Avenue, 6th Floor Detroit, Michigan 48226-2550	10/31/14 via letter	10/31/14 via FedEx	12/30/14 via letter from Buffalo District		

Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
USFWS	East Lansing Michigan Field Office	Chris Mensing, Fish and Wildlife Biologist	(517) 351-8316	chris_mensing@fws.go v	East Lansing Field Office 2651 Coolidge Road East Lansing, MI 48823	10/14/14 via phone	10/14/14 via email	10/14/14 via email
USFWS	East Lansing Michigan Field Office	Burr Fisher, Wildlife Biologist	(517) 351-8286	Burr_fisher@fws.com	East Lansing Field Office 2651 Coolidge Road East Lansing, MI 48823	09/22/14 via letter	09/22/14 via email	12/3/14 via letter
USFWS	Ohio Field Office	Angela Boyer, Endangered Species Coordinator	(614) 416-8993 x22	angela_boyer@fws.gov	U.S. Fish and Wildlife Service Ohio Field Office 4625 Morse Rd, Suite 104 Columbus, OH 43230	09/18/14 via letter	09/18/14 via email	10/9/14 via letter
NPS	Midwest Region	Mark Weekly, Deputy Regional Director	(402) 661-1526	Mark_Weekley@nps. gov	National Park Service 601 Riverfront Drive Omaha, NE 68102-4226	10/31/14 via letter	10/31/14 via FedEx	
USEPA	NEPA Implementation Section	Kenneth A. Westlake, Chief	(312) 886-2910	westlake.kenneth@epa. gov	U.S. Environmental Protection Agency, Region 5 77 West Jackson Boulevard Chicago, Illinois 60604-3590	10/31/14 via letter	10/31/14 via FedEx	11/06/14 via phone
NMFS	Office of Protected Resources	Donna Wieting, Director, Office of Protected Resources	(301) 427-8400	NA	National Marine Fisheries Service 1315 East-West Highway Silver Spring, MD 20910	10/31/14	10/31/14 via FedEx	

12/02/14

via email

and phone

12/02/14

via email

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
STATE -	ОНІО							
ОЕРА	Central	Mike Mansour	(614) 644-3694	mike.mansour@epa.ohi o.gov	Ohio EPA Central Office	12/09/14 meeting	12/09/14 meeting	
ОЕРА	Central	Dave Morehart	(614) 644-3601	dave.morehart@epa.oh io.gov	Ohio EPA Central Office	12/09/14 meeting	12/09/14 meeting	
ОЕРА	Northeast District	Ed Fasko	(330) 963-1161	ed.fasko@epa.ohio.gov	Ohio EPA Northeast District Office	12/10/14 meeting	12/10/14 meeting	
ОЕРА	Northeast District	Jana Gannon	(330) 963-1261	jana.gannon@epa.ohio. gov	Ohio EPA Northeast District Office	12/10/14 meeting	12/10/14 meeting	
OEPA	Northeast District	Kevin Fortune	(330) 963-1152	kevin.fortune@epa.ohi o.gov	Ohio EPA Northeast District Office	12/10/14 meeting	12/10/14 meeting	
OEPA	Akron Regional Air Quality Management District	Sean Vadas	(330) 923-4891	svadas@schd.org	Akron Regional Air Quality Management District	12/10/14 meeting	12/10/14 meeting	
OEPA	Akron Regional Air Quality Management District	Kelly Kanoza	(330) 812-3954	kkanoza@schd.org	Akron Regional Air Quality Management District	12/10/14 meeting	12/10/14 meeting	
OEPA	Akron Regional Air Quality Management District	Duane LaClair	(330) 923-4891	dlaclair@schd.org	Akron Regional Air Quality Management District	12/10/14 meeting	12/10/14 meeting	
OEPA	Toledo Division of Environmental Services	Matt Stanfield	(419) 936-3938	matthew.stanfield@tol edo.oh.gov	Toledo Division of Environmental Services	12/17/14 meeting	12/17/14 meeting	
ODNR	Office of Real Estate	John Kessler, P.E. Assistant Chief	(614) 265-6621	john.kessler@dnr.state. oh.us	Ohio Department of Natural Resources, Office of Real Estate 2045 Morse Rd., Columbus, OH 43229-6605	09/18/14 via letter	09/18/14 via email	10/31/14 letter via email

steven.holland@dnr.sta

te.oh.us

Ohio Coastal

Management

Program

ODNR Office of

Coastal

Management

ODNR

Steve Holland,

MPA

Federal

Consistency

Administrator

(419)

609-4104

43229-6605

ODNR Office of Coastal

Management

105 West Shoreline Drive

Sandusky, Ohio 44870

12/02/14

via email

and phone

Append	Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts										
Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type			
SHPO	Ohio Office of Historic Preservation	Mark Epstein, Department Head, Resource Protection and Review	(614) 298-2000	mepstein@ohiohistory. org	Ohio Historic Preservation Office 800 E. 17th Avenue Columbus, Ohio 43211-2474	11/5/14 via letter	11/5/14 via US mail and email				
STATE -	MICHIGAN										
MDNR	Wildlife Division	Lori Sargent	(517) 284-6216	sargentl@michigan.gov	Michigan Department of Natural Resources P.O. Box 30180 Lansing, MI 48909-7680	09/22/14 via letter	09/22/14 via email	09/23/14 via email			
MNFI	Natural Features Inventory	Michael A. Sanders, Rare Species Review Specialist	(517) 284-6200	sander75@msu.edu	Michigan State University Extension 3rd Floor Constitution Hall 525 W. Allegan St. Lansing, MI 48933	09/23/14 via letter	09/23/14 via email	10/09/14 letter via email			
MDEQ	Jackson District Office	Ms. Katherine David	(517) 780-7021	DAVIDK@michigan.gov	301 E. Louis Glick Highway Jackson, Michigan 49201	12/18/14 via letter	12/18/14 via FedEx				
SHPO	Michigan Office of Historic Preservation	Brian D. Conway, State Historic Preservation Officer	(517) 373- 1630	Conwayb1@michigan.g ov	Michigan State Housing Development Authority 702 W. Kalamazoo St. P.O. Box 30740 Lansing, Michigan 48909-8240	12/4/14 via letter	12/4/14 via letter				
TRIBES											
Tribe	Absentee-Shawnee Tribe of Indians of Oklahoma	Joseph Blanchard, Cultural Preservation Director Tribal Historic Preservation Officer	(405) 275-4030, ext 203	joseph.blanchard@astri be.com	Absentee-Shawnee Tribe of Indians of Oklahoma 2025 S. Gordon Cooper Drive Shawnee, OK 74801	10/28/14 via letter	10/28/14 via USPS certified mail				

Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation	Michael Wiggins, Chairman	(715) 682-7111	hrmanager@badriver- nsn.gov	Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation P.O. Box 39 Odanah, WI 54861-0039	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation	Edith Leoso, Tribal Historic Preservation Officer	(715) 682-7111		Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation P.O. Box 39 Odanah, WI 54861-0039	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Bay Mills Indian Community	Levi Carrick, Sr., Chairman	(906) 248-3241		Bay Mills Indian Community 12140 W. Lakeshore Drive Brimley, MI 49715	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Bay Mills Indian Community	Paula Carrick, Tribal Historic Preservation Officer	(906) 248-8458	paulacarrick@baymills. org	Bay Mills Indian Community 12140 W. Lakeshore Drive Brimley, MI 49715	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe	Kevin Leecy, Chairman	(218) 757-3261	kevin.leecy@boisforte- nsn.gov	Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe P.O. Box 16 Nett Lake, MN 55772	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe	Rosemary Berens, Tribal Historic Preservation Officer	(218) 757-3261	rozeberens@yahoo.com	Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe P.O. Box 16 Nett Lake, MN 55772	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Chippewa-Cree Indians of the Rocky Boy's Reservation	Bruce Sunchild, Chairman	(406) 395- 4282	bsunchild@yahoo.com	Chippewa-Cree Indians of the Rocky Boy's Reservation 31 Agency Square Box Elder, MT 59521	12/11/14 via letter	12/11/14 via USPS certified mail	

Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Chippewa-Cree Indians of the Rocky Boy's Reservation	Alvin Windy Boy, Tribal Historic Preservation Officer	(406) 352- 3077	alvin@nei-yahw.com	Chippewa-Cree Indians of the Rocky Boy's Reservation P.O. Box 230 Box Elder, MT 59521	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Citizen Potawatomi Nation	John Barrett, Chairman	(405) 275-3121	rbarrett@potawatomi. org	Citizen Potawatomi Nation 1601 S. Gordon Cooper Drive Shawnee, OK 74801	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Citizen Potawatomi Nation	Kelli Mosteller, Tribal Historic Preservation Officer	(405) 878-5830	kelli.mosteller@potawa tomi.org	Citizen Potawatomi Nation 1601 S. Gordon Cooper Drive Shawnee, OK 74801	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Delaware Nation	C.J. Watkins, Vice President	(405) 247-2448		Delaware Nation P.O. Box 825 Anadarko, OK 73005	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Delaware Nation	Tamara Francis- Fourkiller, Cultural Preservation Director	(405) 247-2448, ext 1180	tfrancis@delawarenati on.com	Delaware Nation P.O. Box 825 Anadarko, OK 73005	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Delaware Tribe of Indians	Paula Pechonick, Chief	(918) 336- 5272		Delaware Tribe of Indians 170 N Barbara Ave Bartlesville, OK 74003	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Delaware Tribe of Indians	Dr. Brice Obermeyer, Director, Tribal Historic Preservation Office	(620) 341- 6699	bobermeyer@delaware tribe.org	Delaware Tribe of Indians Roosevelt Hall, Room 212 1200 Commercial Street Emporia, KS 66801	10/28/14 via letter	10/28/14 via USPS certified mail	11/17/14 via letter
Tribe	Eastern Shawnee Tribe of Oklahoma	Glenna J. Wallace, Chief	(918) 666-2435	gjwallace@estoo.net	Eastern Shawnee Tribe of Oklahoma P.O. Box 350 Seneca, MO 64865	10/28/14 via letter	10/28/14 via USPS certified mail	

Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Eastern Shawnee Tribe of Oklahoma	Robin Dushane, Tribal Historic Preservation Officer	(918) 666-2435, ext 247	r.dushane@estoo.net	Eastern Shawnee Tribe of Oklahoma 12705 South 705 Road Wyandotte, OK 74370	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Fond du Lac Band of the Minnesota Chippewa Tribe	Karen Driver, Chairwoman	(218) 878- 2612	karendriver@fdlrez.com	Fond du Lac Band of the Minnesota Chippewa Tribe 1720 Big Lake Road Cloquet, MN 55720	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Fond du Lac Band of the Minnesota Chippewa Tribe	LeRoy Defoe, Tribal Historic Preservation Officer	(218) 878- 7129	leroydefoe@fdlrez.com	Fond du Lac Band of the Minnesota Chippewa Tribe 1720 Big Lake Road Cloquet, MN 55720	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Forest County Potawatomi	Harold Frank, Chairman	(715) 478-7200		Forest County Potawatomi 5416 Everybody's Rd Crandon, WI 54520	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Forest County Potawatomi	Melissa Cook, Tribal Historic Preservation Officer	(800) 960-5479, ext 7248	melissa.cook@fcpotaw atomi-nsn.gov	Forest County Potawatomi Cultural Center, Library & Museum 8130 Mishkoswen Drive PO Box 340 Crandon, WI 54520	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Grand Portage Band of the Minnesota Chippewa Tribe	Norman Deschampe, Chairman	(218) 475- 2277	norman@grandportage. com	Grand Portage Band of the Minnesota Chippewa Tribe P.O. Box 428 Grand Portage, MN 55605	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Grand Portage Band of the Minnesota Chippewa Tribe	Mary Ann Gagnon, Tribal Historic Preservation Officer	(218) 475- 0111	maryanng@grandportag e.com	Grand Portage Band of the Minnesota Chippewa Tribe P.O. Box 428 Grand Portage, MN 55605	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Grand Traverse Band of Ottawa and Chippewa Indians	Derek J. Bailey, Chairperson	231-534- 7750	derek.bailey@gtindians. com	Grand Traverse Band of Ottawa and Chippewa Indians 2605 North West Bayshore Drive Suttons Bay, MI 49682	12/11/14 via letter	12/11/14 via USPS certified mail	

Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Hannahville Indian Community	Kenneth Meshigaud, Chairperson	(906) 466-2932		Hannahville Indian Community N14911 Hannahville B1 Rd Wilson, MI 49896	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Keweenaw Bay Indian Community	Donald Shalifoe, Sr. Ogimaa	(906) 353-6623	tcchris@kbic-nsn.gov	Keweenaw Bay Indian Community 16429 Beartown Road Baraga, MI 49908	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Keweenaw Bay Indian Community	Chris Chosa, Tribal Historic Preservation Officer	(906) 353-6272		Keweenaw Bay Indian Community 16429 Beartown Road Baraga, MI 49908	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin	Michael Isham, Jr. Chairman	(715) 634-8934	terrikay@cheqnet.net	Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin 13394 West Trapania Road, Building No. 1 Hayward, WI 54843	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin	Jerry Smith, Tribal Historic Preservation Officer	(715) 634-8934		Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin 13394 West Trapania Road, Building No. 1 Hayward, WI 54843	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin	Tom Maulson, President	(715) 588- 3303		Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin P.O. Box 67 Lac du Flambeau, WI 54538	12/11/14 via letter	12/11/14 via USPS certified mail	

Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin	Melinda Young, Tribal Historic Preservation Officer	(715) 588- 2139		Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin P.O. Box 67 Lac du Flambeau, WI 54538	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Lac Vieux Desert Band of Lake Superior Chippewa Indians	Alan Shively, Chairman	(906) 358- 0137	jim.williams@lvdtribal. com	Lac Vieux Desert Band of Lake Superior Chippewa Indians P.O. Box 249 Watersmeet, MI 49969	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Lac Vieux Desert Band of Lake Superior Chippewa Indians	Giiwegiizhigoo kway Martin, Tribal Historic Preservation Officer	(906) 358- 4577	gmartin@lvdtribal.com	Lac Vieux Desert Band of Lake Superior Chippewa Indians P.O. Box 249 Watersmeet, MI 49969	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Leech Lake Band of the Minnesota Chippewa Tribe	Carrie Jones, Chairwoman	(218) 335- 8200		Leech Lake Band of the Minnesota Chippewa Tribe 115 6th Street NW Suite E Cass Lake, MN 56633	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Leech Lake Band of the Minnesota Chippewa Tribe	Gina Lemon, Tribal Historic Preservation Officer			Leech Lake Band of the Minnesota Chippewa Tribe 115 6th Street NW Suite E Cass Lake, MN 56633	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Match-e-be-nash- she-wish Band of Potawatomi Indians of Michigan	David Sprague, Chairman	(616) 681-8830	dsprague@mbpi.org	Match-e-be-nash-she-wish Band of Potawatomi Indians of Michigan P.O. Box 218 Dorr, MI 49323	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Miami Tribe of Oklahoma	George Strack, Tribal Historic Preservation Officer	(918) 542-1442	gstrack@miamination.c om	Miami Tribe of Oklahoma P.O. Box 1326 Miami, OK 74355	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Mille Lacs Band of the Minnesota Chippewa Tribe	Melanie Benjamin, Chief Executive	(320) 532- 4181		Mille Lacs Band of the Minnesota Chippewa Tribe 43408 Oodena Drive Onamia, MN 56359	12/11/14 via letter	12/11/14 via USPS certified mail	

Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Mille Lacs Band of the Minnesota Chippewa Tribe	Natalie Weyaus, Tribal Historic Preservation Officer	(320) 532- 7450		Mille Lacs Band of the Minnesota Chippewa Tribe 43408 Oodena Drive Onamia, MN 56359	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Minnesota Chippewa Tribe	Norman Deschampe, President	(218) 335-8581		Minnesota Chippewa Tribe P.O. Box 217 Cass Lake, MN 56633	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Miami Tribe of Oklahoma	Douglas Lankford, Chief	(918) 542-1445	info@miamination.com	Miami Tribe of Oklahoma P.O. Box 1326 Miami, OK 74355	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Nottawaseppi Huron Band of the Potawatomi	Homer Mandoka, Chairman	(269) 729-5151	hmandoka@nhbpi.com	Nottawaseppi Huron Band of the Potawatomi 2221 1 1/2 Mile Road Fulton, MI 49052	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Nottawaseppi Huron Band of the Potawatomi	Jeff Chivis, Tribal Historic Preservation Officer	(269) 704-8416	jchivis@nhbpi.com	Nottawaseppi Huron Band of the Potawatomi 1485 Mno-Bmadzewen Way Fulton, MI 49052	12/16/14 via letter	12/16/14 via USPS certified mail	12/4/14 via email and letter
Tribe	Ottawa Tribe of Oklahoma	Ethel Cook, Chief	(918) 542-6162	adawetribe@sbcglobal. net	Ottawa Tribe of Oklahoma P.O. Box 110 Miami, OK 74354	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Ottawa Tribe of Oklahoma	Rhonda Dixon, Tribal Historic Preservation Officer	(918) 542-6162	dixon_rhonda@sbcglob al.net	Ottawa Tribe of Oklahoma P.O. Box 110 Miami, OK 74354	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Peoria Tribe of Indians of Oklahoma	John P. Froman, Chief	918-540- 4155	jfroman@peoriatribe.c om	Peoria Tribe of Indians of Oklahoma P.O. Box 1527 Miami, OK 74355	10/28/14 via letter	10/28/14 via USPS certified mail	11/7/14 via letter
Tribe	Pokagon Band of Potawatomi Indians	Matthew J. Wesaw, Chairman	(517) 719-5579	matthew.wesaw@poka gonband-nsn.gov	Pokagon Band of Potawatomi Indians P.O. Box 110 Dowagiac, MI	10/28/14 via letter	10/28/14 via USPS certified mail	

Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Pokagon Band of Potawatomi Indians	Mike Zimmerman, Tribal Historic Preservation Officer	(269) 782-9602	michael.zimmerman@p okagonband-nsn.gov	Pokagon Band of Potawatomi Indians P.O. Box 110 Dowagiac, MI	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Prairie Band of Potawatomi Nation	Steve Ortiz, Chairman	(785) 966-4000		Prairie Band of Potawatomi Nation 16277 Q Road Mayetta, KS 66509	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Quechan Tribe of the Fort Yuma Indian Reservation	Mike Jackson, President	(760) 572-0213		Quechan Tribe of the Fort Yuma Indian Reservation P.O. Box 1899 Yuma, AZ 85366	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin	Rose Gurnoe- Soulier, Chairperson	(715) 779- 3700	webmaster@redcliff- nsn.gov	Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin 88385 Pike Road, Hwy 13 Bayfield, WI 54814	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin	Larry Balber, Tribal Historic Preservation Officer	(715) 779- 3650		Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin 88385 Pike Road, Hwy 13 Bayfield, WI 54814	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Red Lake Band of Chippewa Indians	Floyd Jourdain, Chairperson	(218) 679-3341		Red Lake Band of Chippewa Indians P.O. Box 550 Redlake, MN 56671	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Saginaw Chippewa Indian Tribe of Michigan	Dennis V. Kequom, Chief	(989) 775-4000	dkequom@sagchip.org	Saginaw Chippewa Indian Tribe of Michigan 7070 East Broadway Road Mt. Pleasant, MI 48858	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Saginaw Chippewa Indian Tribe of Michigan	William Johnson, Curator	(989) 775-4730	wjohnson@sagchip.org	Ziibwing Center of Anishinabe Culture and Lifeways 6650 East Broadway Road Mt. Pleasant, MI 48858	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Sault Ste. Marie Tribe of Chippewa Indians of Michigan	Aaron Payment, Chairperson	(906) 635-6050	aaronpayment@saulttr ibe.net	Sault Ste. Marie Tribe of Chippewa Indians of Michigan 523 Ashmun Street Sault Ste. Marie, MI 49783	12/11/14 via letter	12/11/14 via USPS certified mail	

Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Seneca-Cayuga Tribe of Oklahoma	LeRoy Howard, Chief	(918) 542-6609, ext 19		Seneca-Cayuga Tribe of Oklahoma 23701 South 655 Road Grove, OK 74344	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Seneca-Cayuga Tribe of Oklahoma	Paul Barton, Tribal Historic Preservation Officer	(918) 787-7979	pbarton@sctribe.com	Seneca-Cayuga Tribe of Oklahoma 23701 South 655 Road Grove, OK 74344	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Seneca Nation of Indians	Beverly Cook, President			Seneca Nation of Indians 90 O:hi'yoh Way Salamanca, NY 14779	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Seneca Nation of Indians	Melissa Bach, Tribal Historic Preservation Officer	(716) 945-1790, ext 3580	melissa.bach@sni.org	Seneca Nation of Indians 90 O:hi'yoh Way Salamanca, NY 14779	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Shawnee Tribe	Ron Sparkman, Chairperson	(918) 542-2441	ronded@gmail.com	Shawnee Tribe P.O. Box 189 South Highway 69A, Miami, OK 74355	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Shawnee Tribe	Kim Jumpers, Tribal Historic Preservation Officer	(918) 542-2441	kim.jumper@shawnee- tribe.com	Shawnee Tribe P.O. Box 189 South Highway 69A, Miami, OK 74355	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Sokaogon Chippewa Community	Garland McGeshick, Chairman	(715) 478-7504	gaye.graham@scc- nsn.gov	Sokaogon Chippewa Community 3051 Sand Lake Road Crandon, WI 54520	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	St. Croix Chippewa Indians of Wisconsin	Stuart Bearheart, Chairman	(715) 349- 2195	annb@stcroixtribalcent er.com	St. Croix Chippewa Indians of Wisconsin 24663 Angeline Avenue Webster, WI 54893	12/11/14 via letter	12/11/14 via USPS certified mail	

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
Tribe	Tonawanda Band of Seneca Indians of New York	Darwin Hill, Chief	(716) 542-4244	tonseneca@aol.com	Tonawanda Band of Seneca Indians of New York P.O. Box 795 7027 Meadville Road Basom, NY 14013	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Turtle Mountain Band of Chippewa Indians of North Dakota	Richard McCloud, Chairman	(701) 477- 2600		Turtle Mountain Band of Chippewa Indians of North Dakota P.O. Box 900 Belcourt, ND 58316		12/11/14 via USPS certified mail	
Tribe	White Earth Band of Minnesota Chippewa Tribe	Erma Vizenor, Chairman	(218) 983- 3285	desiraes@whiteearth.c om	White Earth Band of Minnesota Chippewa Tribe P.O. Box 418 White Earth, MN 56591	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	White Earth Band of Minnesota Chippewa Tribe	Renee Lampi, Tribal Historic Preservation Officer	(218) 983- 3263		White Earth Band of Minnesota Chippewa Tribe P.O. Box 418 White Earth, MN 56591	12/11/14 via letter	12/11/14 via USPS certified mail	
Tribe	Wyandotte Nation	Billy Friend, Chief	(918) 678-2297		Wyandotte Nation 64700 E. Highway 60 Wyandotte, OK 74370	10/28/14 via letter	10/28/14 via USPS certified mail	
Tribe	Wyandotte Nation	Sherri Clemons, Tribal Historic Preservation Officer	(918) 678-2297, ext 244	sclemons@wyandotte.o rg	Wyandotte Nation 64700 E. Highway 60 Wyandotte, OK 74370	10/28/14 via letter	10/28/14 via USPS certified mail	
LOCAL								
CLG	Washtenaw County Historic Preservation	Melissa Milton- Pung, Historic Preservation Planner	(734) 222-6878	miltonpungm@ewasht enaw.org	Washtenaw County Office of Community & Economic Development 110 N. Fourth Ave. Ann Arbor, MI 48107	10/27/14 via letter	10/27/14 via USPS certified mail	

Appendix C - NEXUS Project Stakeholder List – Non-Landowners Federal, State, and Local Agency Contacts

Agency	Office	Contact Name	Contact Phone	Contact Email	Contact Address	Initial Contact Date	Date Sent	Response Date/Type
MWCD	Muskingum Watershed Conservancy District	Boris E. Slogar, P.E., M.P.M. Chief Engineer	(330) 556-4816 (866) 363-8500	TBD	Muskingum Watershed Conservancy District 1319 Third St. NW PO Box 349 New Philadelphia, OH 44663- 0349			

Appendix D: Agency Permits and Approvals

Appendix D - NI	EXUS Project Agency Permits a	nd Approvals	
Agency	Assumed Permit/Approval/ Consultation	Assumed Approval Timeline	Assumed Studies Needed to Support Applications
FEDERAL			
Federal Energy Regulatory Commission (FERC)	> Certificate of Public Convenience and Necessity - Section 7(c) of the Natural Gas Act requires preparation of an ER (consisting of 12 Resource Reports) to be included with the Section 7(c) application. Spectra Energy is proposing to use FERC's Pre-filing Process which will involve conducting public open houses, preparation of responses to comments received on the Project, and preparation of draft and final Resource Reports. Following submittal of the ER, support activities include responding to FERC staff data requests, reviewing FERC's EIS and preparing the Implementation Plan. > Assessment of environmental impacts under the National Environmental Policy Act (42 USC SS 4221 at the Care Action of the Project (42 USC SS 4221 at the Care Action of Text (42 USC SS 4221 at the Care Action	Approval Process: Approximately 23 months – assumes an Environmental Impact Statement (EIS)	> Pre-filing Notice Letter > Pre-filing Environmental Reports > Response to public comments > Formal filing of Environmental Reports > Data Request Response > Implementation Plan
U.S. Army Corps of Engineers (USACE) (Buffalo, Pittsburgh, Huntington, & Detroit Districts)	§§ 4321 et seq., 18 CFR Part 380) > Section 404 of the Clean Water Act (CWA), Section 10 of the Rivers and Harbors Act	Approval Process: 12–24 months Concurrent with the FERC EIS	 Nationwide or Individual Permit applications depending on the results of agency consultations and anticipated impact thresholds. Delineate and map wetlands and waterbodies and quantify area of temporary and permanent wetland impacts. Develop procedures to avoid, minimize and mitigate impacts to wetlands and waterbodies. USACE Jurisdictional Determination (JD) data forms for wetland and waterbody crossings, if necessary

Agency	Assumed Permit/Approval/ Consultation	Assumed Approval Timeline	Assumed Studies Needed to Support Applications
U.S. Department of Interior Fish and Wildlife Service (USFWS); Midwest Region 3 (Columbus, Ohio and East Lansing, Michigan Field offices)	> Consultation under Section 7 Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA)	Approval Process: 23 months concurrent with FEIS process	 > Threatened and Endangered (T&E) species surveys. > Specialized protected species surveys (e.g., Indiana bat; northern longeared bat). > Prepare separate Biological Assessment (BA) evaluating impacts to T&E species and habitat, if required. > Develop procedures to avoid, minimize, and mitigate impacts to T&E species and habitat. > Develop T&E species protection and monitoring plans (e.g., Indiana bat; northern long-eared bat).
U.S. Department of Interior National Park Service (NPS)	> Wabash Cannonball Trail historically significant segments	Approval Process: Unknown but expected to be concurrent with other processes	> Consultation letter will be prepared requesting comments
U.S. Department of Agriculture Natural Resource Conservation Service	> Restoration Consultation and potential Agricultural Impact Mitigation Agreement.	Approval Process: 6–12 months	> Coordinate with USDA on agricultural impacts and procedures.
U.S. Environmental Protection Agency (USEPA) (Region 3)	 Review of USACE (CWA) applications with 404(c) authority for wetland permits issued by the USACE Review Section 10 applicability Delegated state oversight and review of NPDES permit program for discharges of hydrostatic test water in Ohio and Michigan Review of any major source air permit issued by OEPA 	Approval Process: Oversight of Federal and state agency review	 Coordinate with USEPA on review of USACE CWA applications, applicability and permit process. Coordinate with USEPA on review of DEIS, FEIS and NEPA process.
U.S. Department of Transportation, Federal Aviation Administration	> Determination of No Hazard may be required for communication towers greater than 200 feet above ground level	60 to 90 days depending on complexity of identified potential hazards	 Coordinate with FAA, Department of Defense, and National Telecommunications Information Administration (NTIA) to determine potential for conflicts with existing facilities. Perform required impact assessments (if required) Coordinate with agencies a file required permit applications

Agency	Assumed Permit/Approval/ Consultation	Assumed Approval Timeline	Assumed Studies Needed to Support Applications
Advisory Council on Historic Preservation and Consultation with Native American Tribes	> Section 106 Consultation, NHPA consultation with Native American tribes with ties to the Project area to obtain comments or concerns regarding potential impacts to traditional Native American cultural or historic properties. To ensure compliance, FERC will consult directly with the Advisory Council.	Approval Process: 12+ months of consultation concurrent with FEIS process. Approval through the FEIS Process.	> Native American tribes in the Project area will be identified and consultation letters to each tribe will be prepared, requesting comments on the Project
National Marine Fisheries Service	> Potential consultation pursuant to the Magnuson-Stevens Fisheries Conservation and Management Act for potential impacts to essential fish habitat	Approval Process: 12+ months of consultation concurrent with FEIS process. Approval through the FEIS Process.	> Essential Fish Habitat Assessment
STATE			
Ohio Power Siting Board (OPSB)	> Potential Consultation and Intervener Status in FERC Process	Potential intervener in the FERC Process	Limited consultation to ensure understanding of the Project scope and schedule. Establish a positive relationship with the OPSB to help streamline the overall process.
Ohio Department of Natural Resources (ODNR), Division of Wildlife	> State listed species consultation.	Consultation: 12-18 months depending on identified species and survey requirements	 Protected species surveys, as required after consultation with ODNR. Specialized protected species surveys (e.g., Indiana bat, northern longeared bat) Consultation regarding state listed species affected by the Project that may require consideration.
ODNR, Division of Soil and Water Conservation	> Agricultural Impact Mitigation Agreement ("AIMA")	Approval Process: TBD – may or may not be required	> Development of agreement
ODNR, Office of Coastal Management	> Coastal Zone Consistency Determination for work within the Lake Erie Coastal Zone Management Area	Statutory review time allows ODNR 6 months for review.	 Evaluate activities proposed within the mapped Lake Erie Coastal Zone Management area boundary to confirm they will be performed ir compliance with the "enforceable policies" of Ohio's approved coastal management program File application and certify in writing that proposed activities are in compliance with the enforceable policies of Ohio's approved coastal management program

Agency	Assumed Permit/Approval/ Consultation	Assumed Approval Timeline	Assumed Studies Needed to Support Applications
Ohio Environmental Protection Agency (OEPA), Division of Surface Water	 Section 401 Water Quality Certification NPDES General Permit for Discharge of Hydrostatic Test Water FERC regulated pipelines are exempted from the NPDES application process (but still must comply with federal construction stormwater discharge standards) Isolated Wetlands Permit, if required. 	Consultation and Approval Process: Initial pre-filing consultation and 6 months for approval after acceptance of the application	 Delineation and mapping of wetlands and quantification of acreage Mitigation plans for wetland losses exceeding 1/10 acre (including temporary impacts), and also for conversion of forested wetland to scrub-shrub/emergent wetland.
OEPA, Division of Air Pollution Control	 Major/minor source permits to install and operate depending on compressor station horsepower requirements. Possible minor source permits to install and operate for meter station air emissions. 	Approval Process: 6-18 months	 > Air quality dispersion modeling may be required for compressor stations. > Top down BACT analysis for any pollutants above significance thresholds. > State BAT analysis required for pollutants exceeding 10 TPY.
Ohio Historical Society (Ohio State Historic Preservation Office [SHPO])	> NHPA, Section 106 Consultation	Consultation and Approval Process which starts after surveys complete: 20 months total	 Phase I survey to identify historically or archeologically significant properties. Phase II studies to determine eligibility for inclusion of properties on the National Register of Historic (or Archeological) Places, after identification at the Phase I level. Phase III mitigation for National Register properties impacted by the Project, if required after Phase II is completed. Mitigation of sites can take 6-9 months or longer. Historic structure assessment, linear resources, viewsheds should also be included, Memorandum of Agreements and tribal consultation will typically be done by FERC, but can add considerably to the time. If there is a time constraint, then some work should be completed by the Applicant. Unanticipated Discoveries Plan
Ohio Department of Transportation (ODOT)	> State road, highway, or interstate crossing permits	Approval Process: 4-6 months	Information concurrent with other applications.
Various railroad, transmission line,	> Railroad, transmission line, and other right-of-way crossing negotiations.	Approval Process: 4-12 months	Information concurrent with other applications.

Agency	Assumed Permit/Approval/ Consultation	Assumed Approval Timeline	Assumed Studies Needed to Support Applications
and other right-of- way owners.			
Michigan Department of Natural Resources (MDNR), Wildlife Division	State listed species consultation.	Consultation: 12-18 months depending on identified species and survey requirements	 > Protected species surveys. > Consultation regarding state listed species affected by the Project that may require conservation plans.
MDNR	Public Lands consultation > Permit to Use State Lands	Approval Process: 3-6 months	Information concurrent with other applications.
Michigan Department of Environmental Quality (MDEQ), Water Resources Division	Joint Permit consultation > MDEQ/USACE Joint Permit for impacts to wetlands, inland lakes, streams and floodplains > NPDES Permit for Storm Water Discharge from Construction Activities > Water Withdrawal Authorization	Approval Process: 6 – 12 months	> Delineation and mapping of wetlands and waters of the state and quantification of impacts. Mapping of floodplains and quantification of impacts.
MDEQ, Air Quality Division	> Possible permit to install for facility meter station air emissions	Approval Process: 4-12 months	TBD
Michigan State Housing and Development Authority (MSHDA) -State Historic and Preservation Office (SHPO)	NHPA, Section 106 Consultation	Consultation and Approval Process which starts after surveys complete: 20 months total	 Phase I survey to identify historically or archeologically significant properties. Phase II studies to determine eligibility for inclusion of properties on the National Register of Historic (or Archeological) Places, if required. Phase III mitigation for National Register properties impacted by the Project, if required. Unanticipated Discoveries Plan
Michigan Department of Transportation (MDOT)	State road, highway, or interstate crossing permits	Approval Process: 4–12 months	Information concurrent with other applications.
LOCAL			
Various railroad, transmission line, and other right-of- way owners.	Railroad, transmission line, and other right-of-way crossing negotiations	Approval Process: 4-12 months	Information concurrent with other applications.

Agency Assumed Permit/Approval/ Consultation		Assumed Approval Timeline	Assumed Studies Needed to Support Applications		
General Concerns of Counties/Cities	> Drain Crossing Permits and Soil Erosion & Sedimentation Control Permits	Approval Process: TBD	Information concurrent with other applications.		
Lenawee County, Michigan	> County Drain ROW Permits > Soil Erosion & Sedimentation Control Permit	Approval Process: 1-3 months	Information concurrent with other applications.		
Monroe County, Michigan	> County Drain ROW Permits > Soil Erosion & Sedimentation Control Permit	Approval Process: 1-3 months	Information concurrent with other applications.		
Washtenaw County, Michigan	> County Drain ROW Permits > Soil Erosion & Sedimentation Control Permit	Approval Process: 1-6 months	Information concurrent with other applications.		

Appendix E: Stakeholder List -- Non-Landowners - Public Officials, Community and Public Interest Groups and Non- governmental Organizations

<u>Public Officials – Michigan</u>

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
David	Stimpson	Lenawee	County Commissioner		301 North Main Street	Adrian	MI	49221
Edwin "Jack"	Branch	Lenawee	County Commissioner		301 North Main Street	Adrian	MI	49221
Jim	Driskill	Lenawee	County Commissioner		301 North Main Street	Adrian	MI	49221
Cletus	Smith	Lenawee	County Commissioner		301 North Main Street	Adrian	MI	49221
Karol	Bolton	Lenawee	County Commissioner		301 North Main Street	Adrian	MI	49221
Terry	Collins	Lenawee	County Commissioner		301 North Main Street	Adrian	MI	49221
John	Tuckerman	Lenawee	County Commissioner		301 North Main Street	Adrian	MI	49221
Ralph	Tillotson	Lenawee	County Commissioner		301 North Main Street	Adrian	MI	49221
Chris	Wittenbach	Lenawee	County Commissioner		301 North Main Street	Adrian	MI	49221
Martin	Marshall	Lenawee	County Administrator		301 North Main Street	Adrian	MI	49221
Bruce	Caswell	Lenawee	State Senator		P.O. Box 30036	Lansing	MI	48909
Mike	Shirkey	Lenawee	State Representative		P.O. Box 30014	Lansing	MI	48909
Nancy	Jenkins	Lenawee	State Representative		P.O. Box 30014	Lansing	MI	48909
Richard	Marks	Lenawee	Town Supervisor	Ogden Township	10526 Pence Hwy	Blissfield	MI	49228
Russell	Mead	Lenawee	Trustee	Ogden Township	10052 Crockett Hwy	Blissfield	MI	49228
Mark	Vandenbusche	Lenawee	Trustee	Ogden Township	6672 E. Weston Rd.	Blissfield	MI	49228
Jim	Isley	Lenawee	Town Supervisor	Palmyra Township	2683 Grosvenor Highway	Palmyra	MI	49268

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Steve	Papenhagen	Lenawee	Trustee	Palmyra Township	5765 Palmyra Road	Palmyra	MI	49268
Perry	Pooley	Lenawee	Trustee	Palmyra Township	4594 Ogden Highway	Adrian	MI	49221
Al	Navarro	Lenawee	Town Supervisor	Blissfield Township	120 S. Lane Street P.O. Box 58	Blissfield	MI	49228
Kris	Ruhl	Lenawee	Trustee	Blissfield Township	120 S. Lane Street P.O. Box 58	Blissfield	MI	49228
Devon	Gilson-Pitts	Lenawee	Trustee	Blissfield Township	120 S. Lane Street P.O. Box 58	Blissfield	MI	49228
Ron	Cousino	Lenawee	Town Supervisor	Deerfield Township	392 East River Street	Deerfield	MI	49238
Keith	Kapnick	Lenawee	Trustee	Deerfield Township	1645 N Stearns Road	Deerfield	MI	49238
Daniel	Witt	Lenawee	Trustee	Deerfield Township	2352 Stearns Road	Deerfield	MI	49238
Lee	Wagner	Lenawee	Town Supervisor	Macon Township	9620 Smith Road	Tecumseh	MI	49286
David	Wielfaert	Lenawee	Trustee	Macon Township	12922 Milwaukee Road	Britton	MI	49229
Ed	Clark	Lenawee	Trustee	Macon Township	11852 Tecumseh- Macon Road	Clinton	MI	49236
Robert	Downing	Lenawee	Town Supervisor	Ridgeway Township	6666 North County Line Highway	Britton	MI	49229
Marc	Brown	Lenawee	Trustee	Ridgeway Township	7583 Hendershot Highway	Tecumseh	MI	49286
Daniel	Prielipp	Lenawee	Trustee	Ridgeway Township	4651 Downing Road	Britton	MI	49229
David	Hoffman	Monroe	County Commissioner		125 East Second Street	Monroe	MI	48161
Mark	Brant	Monroe	County Commissioner		4929 Blue Bush	Monroe	MI	48162
Al	Potratz	Monroe	County Commissioner		4848 S. Huron River	Flat Rock	MI	48134
Dan	Donahue	Monroe	County Commissioner		733 E. Hurd Road	Monroe	MI	48161
Jason	Turner	Monroe	County Commissioner		125 East Second Street	Monroe	MI	48161
Jerry	Oley	Monroe	County Commissioner		125 East Second Street	Monroe	MI	48161
Gary	Wilmoth	Monroe	County Commissioner		3635 Luna Pier Road	Erie	MI	48133
Mark	Ellsworth	Monroe	County Commissioner		1421 Winding Way	Temperance	MI	48182

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Michael	Bosanac	Monroe	County Administrator		125 East Second Street	Monroe	MI	48161
J. Henry	Lievens	Monroe	County Commissioner		125 East Second Street	Monroe	MI	48161
Randy	Richardville	Monroe	State Senator		P.O. Box 30036	Lansing	MI	48909
Phil	Heath	Monroe	Town Supervisor	Milan Township	16444 Cone Road	Milan	MI	48160
Olga	Mancik	Monroe	Trustee	Milan Township	16444 Cone Road	Milan	MI	48160
Bob	Dopkowski	Monroe	Trustee	Milan Township	1644 Cone Road	Milan	MI	48160
Kent	Martinez-Kratz	Washtenaw	County Commissioner		6980 Old Forge Court	Chelsea	MI	48118
Dan	Smith	Washtenaw	County Commissioner		328 N. Pointe Drive	Whitmore Lake	MI	48189
Alicia	Ping	Washtenaw	County Commissioner		307 N Harris	Saline	MI	48104
Felicia	Brabec	Washtenaw	County Commissioner		220 North Main Street	Ann Arbor	MI	48104
Ruth Ann	Jamnick	Washtenaw	County Commissioner		7776 Lake Crest Drive	Ypsilanti	MI	48197
Ronnie	Peterson	Washtenaw	County Commissioner		1146 Rue Willette Blvd	Ypsilanti	MI	48198
Andy	LaBarre	Washtenaw	County Commissioner		2411 Meadowridge Crt	Ann Arbor	MI	48105
Yousef	Rabhi	Washtenaw	County Commissioner		1255 Kensington Drive	Ann Arbor	MI	48104
Conan	Smith	Washtenaw	County Commissioner		234 Eighth	Ann Arbor	MI	48103
Verna	McDaniel	Washtenaw	County Administrator		220 North Main Street	Ann Arbor	MI	48104
Adam	Zemke	Washtenaw	State Representative		P.O. Box 30014	Lansing	MI	48909
David	Rutledge	Washtenaw	State Representative		P.O. Box 30014	Lansing	MI	48909
Rebekah	Warren	Washtenaw	State Senator		P.O. Box 30036	Lansing	MI	48909
John	Stanowski	Washtenaw	Town Supervisor	York Township	11560 Stony Creek Road	Milan	MI	48160
Jill	Hargrove	Washtenaw	Trustee	York Township	11560 Stony Creek Road	Milan	MI	48160
Brian	Iott	Washtenaw	Trustee	York Township	11560 Stony Creek Road	Milan	MI	48160
Jane	Kartje	Washtenaw	Trustee	York Township	11560 Stony Creek Road	Milan	MI	48160
Dan	Pichla	Washtenaw	Trustee	York Township	11560 Stony Creek Road	Milan	MI	48160

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Pete	Hafler	Washtenaw	Supervisor	Augusta Township	P.O. Box 100	Whittaker	MI	48190
Cath	Howard	Washtenaw	Trustee	Augusta Township	P.O. Box 100	Whittaker	MI	48190
Joe	Keefe	Washtenaw	Trustee	Augusta Township	P.O. Box 100	Whittaker	MI	48190
Judy	Thornton	Washtenaw	Trustee	Augusta Township	P.O. Box 100	Whittaker	MI	48190
Ira	Todd	Washtenaw	Trustee	Augusta Township	P.O. Box 100	Whittaker	MI	48190
Larry	Doe	Washtenaw	Treasurer	Ypsilanti Township	7200 South Huron River Drive	Ypsilanti	MI	48197
Brenda	Stumbo	Washtenaw	Trustee	Ypsilanti Township	7200 South Huron River Drive	Ypsilanti	MI	48197
Jean	Hall Currie	Washtenaw	Trustee	Ypsilanti Township	7200 South Huron River Drive	Ypsilanti	MI	48197
Mike	Martin	Washtenaw	Trustee	Ypsilanti Township	7200 South Huron River Drive	Ypsilanti	MI	48197
Scott	Martin	Washtenaw	Trustee	Ypsilanti Township	7200 South Huron River Drive	Ypsilanti	MI	48197
Stan	Eldridge	Washtenaw	Trustee	Ypsilanti Township	7200 South Huron River Drive	Ypsilanti	MI	48197
Tim	Walberg	Lenawee, Monroe, Washtenaw	US Representative		110 First Street, Suite 2	Jackson	MI	49201
John	Dingell	Washtenaw	US Representative		19855 West Outer Drive, Suite 103-E	Dearborn	MI	48124
Debbie	Stabenow		US Senator		221 West Lansing Road, Suite 100	East Lansing	MI	48823
Carl	Levin		US Senator		477 Michigan Avenue, Suite 1860	Detroit	MI	48823
Rick	Snyder		Governor		P. O. Box 30013	Lansing	MI	48909

<u>Public Officials – Ohio</u>

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Jeffrey	Ohler	Carroll	County Commissioner	879 Courtview Dr.		Carrollton	ОН	44615
Thomas	Wheaton	Carroll	County Commissioner	4082 Perth Rd. SE		Carrollton	ОН	44615
Robert	Wirkner	Carroll	County Commissioner	2072 Brenner Rd. NE		Carrollton	ОН	44615
Curtis	Frase	Carroll	East Township Trustee	8156 Mark Rd. NE		Kensington	ОН	44427
Richard	Miller	Carroll	East Township Trustee	5210 Meadow Rd. NE		Kensington	ОН	44427
Russell	Shipley	Carroll	East Township Trustee	9099 Apollo Rd. NE		Kensington	ОН	44427
Andy	Thompson	Carroll	State Representative	77 South High Street		Columbus	ОН	43215
Gregory	Carver	Columbiana	Knox Township Trustee	4038 Homeworth Rd.		Homeworth	ОН	44634
Sara	Crawford	Columbiana	Knox Township Trustee	26026 Hartley Rd.		Beloit	ОН	44609
Benjamin	Pidgeon	Columbiana	Knox Township Trustee	27625 SR 62		Beloit	ОН	44609
Dale	Lowmiller	Columbiana	West Township Trustee	23980 SR 172		Minerva	ОН	44657
Richard	McClellan	Columbiana	West Township Trustee	22502 McDaniel Rd.		Minerva	ОН	44657
Glenn	Whiteleather	Columbiana	West Township Trustee	8008 Essick Rd.		Minerva	ОН	44657
Steve	Kraus	Erie	State Representative	77 South High Street		Columbus	ОН	43215
Rick	Jeffrey	Erie	Auditor	247 Columbus Ave.	Room 210	Sandusky	ОН	44870
Mathew	Old	Erie	Berlin Township Trustee	12101 St. Rt. 61		Berlin Heights	ОН	44814
Tadd	Smith	Erie	Berlin Township Trustee	12101 St. Rt. 61		Berlin Heights	ОН	44814
John	Zarvis	Erie	Berlin Township Trustee	P.O. Box 216		Berlin Heights	ОН	44814
Thomas	Ferrell, Jr.	Erie	Commissioner	2900 Columbus Ave.		Sandusky	ОН	44870
Bill	Monaghan	Erie	Commissioner	2900 Columbus Ave.		Sandusky	ОН	44870
Patrick	Shenigo	Erie	Commissioner	2900 Columbus Ave.		Sandusky	ОН	44870
John	Farschman	Erie	Engineer	2700 Columbus Ave.		Sandusky	ОН	44870

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Raymond "Skip"	Halliwell	Erie	Florence Township Trustee	11011 Chapel St.		Wakeman	ОН	44889
John	Krumweide	Erie	Florence Township Trustee	11011 Chapel St.		Wakeman	ОН	44889
Orville	Sayler	Erie	Florence Township Trustee	11011 Chapel St.		Wakeman	ОН	44889
Ron	Brown	Erie	Groton Township Trustee	1820 Bogart Rd.		Huron	ОН	44839
Roger	Rowland	Erie	Groton Township Trustee	1820 Bogart Rd.		Huron	ОН	44839
Roger	Russell	Erie	Groton Township Trustee	1820 Bogart Rd.		Huron	ОН	44839
Daniel	Frederick	Erie	Milan Township Trustee	1518 St. Rt 113		Milan	ОН	44846
Michael	Kegarise	Erie	Milan Township Trustee	1518 St. Rt 113		Milan	ОН	44846
Jim	Verbridge	Erie	Milan Township Trustee	1518 St. Rt 113		Milan	ОН	44846
Sparky	Weilnau	Erie	Milan Township Trustee	1518 St. Rt. 113		Milan	ОН	44846
Scott	Leber	Erie	Oxford Township Trustee	11104 Ransom Rd.		Monroeville	ОН	44847
Michael	Parker	Erie	Oxford Township Trustee	11104 Ransom Rd.		Monroeville	ОН	44847
James	Stewart	Erie	Oxford Township Trustee	11104 Ransom Rd.		Monroeville	ОН	44847
Barbara	Sessler	Erie	Recorder	247 Columbus Ave.	Suite 225	Sandusky	ОН	44870
Randy	Gardner	Erie	State Senator	1 Capitol Square		Columbus	ОН	43215
Vond	Hall	Fulton	Administrator	152 S. Fulton St. #270		Wauseon	ОН	43567
Thomas	Herr Jr.	Fulton	Amboy Township Trustee	2650 Co. Rd. S		Metamora	ОН	43540
Richard	Raab	Fulton	Amboy Township Trustee	2650 Co. Rd. S		Metamora	ОН	43540
Jeff	Simon	Fulton	Amboy Township Trustee	2650 Co. Rd. S		Metamora	ОН	43540
Brett	Kolb	Fulton	Auditor	152 S. Fulton St.	Suite 165	Wauseon	ОН	43567
Paul	Barnaby	Fulton	Commissioner	152 S. Fulton St.	Suite 270	Wauseon	ОН	43567
Bill	Rufenacht	Fulton	Commissioner	152 S. Fulton St.	Suite 270	Wauseon	ОН	43567

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Perry	Rupp	Fulton	Commissioner	152 S. Fulton St.	Suite 270	Wauseon	ОН	43567
Cheryl	Geer	Fulton	Council, Village of Metamora	P.O. Box 299		Metamora	ОН	43540
John	Hudik	Fulton	Council, Village of Metamora	P.O. Box 299		Metamora	ОН	43540
Karon	Lane	Fulton	Council, Village of Metamora	P.O. Box 299		Metamora	ОН	43540
Ned	Monroe	Fulton	Council, Village of Metamora	P.O. Box 299		Metamora	ОН	43540
Suzie	Stough	Fulton	Council, Village of Metamora	P.O. Box 299		Metamora	ОН	43540
Ken	Wysong	Fulton	Council, Village of Metamora	P.O. Box 299		Metamora	ОН	43540
Frank	Onweller	Fulton	Engineer	9120 Co. Rd. 14		Wauseon	ОН	43567
Scott	Gillen	Fulton	Fulton Township Trustee	1613 Co. Rd. N		Swanton	ОН	43558
Joe	Gombash	Fulton	Fulton Township Trustee	9241 Co. Rd. 1		Swanton	ОН	43558
David	Pilliod	Fulton	Fulton Township Trustee	125 Woodside Drive		Swanton	ОН	43558
Gary	Loar	Fulton	Mayor, Village of Metamora	P.O. Box 299		Metamora	ОН	43540
Sandra	Barber	Fulton	Recorder	152 S. Fulton St.	Suite 175	Wauseon	ОН	43567
Roy	Miller	Fulton	Sheriff	129 Courthouse Plaza		Wauseon	ОН	43567
Lynn	Wachtmann	Fulton	State Representative	77 South High Street		Columbus	ОН	43215
Cliff	Hite	Fulton	State Senator	1 Capitol Square		Columbus	ОН	43215
Ron	Holdeman	Fulton	Swancreek Township Trustee	5565 Co. Rd. D		Delta	ОН	43515
Rick	Kazmierczak	Fulton	Swancreek Township Trustee	5565 Co. Rd. D		Delta	ОН	43515
Pamela	Moore	Fulton	Swancreek Township Trustee	5565 Co. Rd. D		Delta	ОН	43515
Charlene	Lee	Fulton	Treasurer	152 S. Fulton St.	Suite 155	Wauseon	ОН	43567
Jim	Cordes	Lorain	Administrator	226 Middle Ave.		Elyria	ОН	44035
Eric	Norenerg	Lorain	City Manager	85 S. Main Street		Oberlin	ОН	44074
Ted	Kalo	Lorain	Commissioner	226 Middle Avenue	Fourth Floor	Elyria	ОН	44035
Lori	Kokoski	Lorain	Commissioner	226 Middle Avenue	Fourth Floor	Elyria	ОН	44035

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Matt	Lundy	Lorain	Commissioner	226 Middle Avenue	Fourth Floor	Elyria	ОН	44035
Scott	Broadwell	Lorain	Council, City of Oberlin	85 South Main Street		Oberlin	ОН	44074
Bryan	Burgess	Lorain	Council, City of Oberlin	85 South Main Street		Oberlin	ОН	44074
Sharon	Fairchild-Soucy	Lorain	Council, City of Oberlin	85 South Main Street		Oberlin	ОН	44074
Elizabeth	Meadows	Lorain	Council, City of Oberlin	85 South Main Street		Oberlin	ОН	44074
Sharon	Pearson	Lorain	Council, City of Oberlin	85 South Main Street		Oberlin	ОН	44074
Kristin	Peterson	Lorain	Council, City of Oberlin	85 South Main Street		Oberlin	ОН	44074
Ron	Rimbert	Lorain	Council, City of Oberlin	85 South Main Street		Oberlin	ОН	44074
Ken	Carney	Lorain	Engineer	247 Hadaway Street		Elyria	ОН	44035
Jean	Haight	Lorain	Grafton Township Trustee	17109 Avon Belden Rd.	PO Box 100	Grafton	ОН	44044
Dan	Miller	Lorain	Grafton Township Trustee	17109 Avon Belden Rd.	PO Box 100	Grafton	ОН	44044
Carl	Wesemeyer	Lorain	Grafton Township Trustee	17109 Avon Belden Rd.	PO Box 100	Grafton	ОН	44044
Ronald	Baumann	Lorain	Henrietta Township Trustee	10413 Vermilion Road		Oberlin	ОН	44074
Howard	Born III	Lorain	Henrietta Township Trustee	10413 Vermilion Road		Oberlin	ОН	44074
Joseph	Knoble	Lorain	Henrietta Township Trustee	10413 Vermilion Road		Oberlin	ОН	44074
Gary	Burnett	Lorain	LaGrange Township Trustee	42251 Route 303		LaGrange	ОН	44044
Douglas	Gardner	Lorain	LaGrange Township Trustee	16433 Indian Hollow Road		Grafton	ОН	44044
Rita	Tompkins Canfield	Lorain	LaGrange Township Trustee	15815 Diagonal Road		LaGrange	ОН	44044
Patti	Brubaker	Lorain	New Russia Township Trustee	45440 Butternut Ridge Road		Oberlin	ОН	44074
Jack	Hoyt	Lorain	New Russia Township Trustee	45440 Butternut Ridge Road		Oberlin	ОН	44074
John	Piwinski	Lorain	New Russia Township Trustee	45440 Butternut Ridge Road		Oberlin	ОН	44074
Mark	Diedrick	Lorain	Pittsfield Township Trustee	16940 State Route 58		Oberlin	ОН	44074
Mark	McConnell	Lorain	Pittsfield Township Trustee	16940 State Route 58		Oberlin	ОН	44074

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Forrest	Mohrman	Lorain	Pittsfield Township Trustee	16940 State Route 58		Oberlin	ОН	44074
Paul	Stammitti	Lorain	Sheriff	9896 Murray Ridge Rd.		Elyria	ОН	44035
Terry	Boose	Lorain	State Representative	77 South High Street		Columbus	ОН	43215
Dan	Ramos	Lorain	State Representative	77 South High Street		Columbus	ОН	43215
Gayle	Manning	Lorain	State Senator	1 Capitol Square		Columbus	ОН	43215
Jim	Jordan	Lorain	U.S. House of Representatives	1524 Longworth House Office Building		Washington	DC	20515
Barb	Bruno	Lucas	Council, Village of Waterville	25 North Second St.		Waterville	ОН	43566
Micheline	Krise	Lucas	Council, Village of Waterville	25 North Second St.		Waterville	ОН	43566
Charles	Larkins	Lucas	Council, Village of Waterville	25 North Second St.		Waterville	ОН	43566
Tim	Pedro	Lucas	Council, Village of Waterville	25 North Second St.		Waterville	ОН	43566
John	Rozic	Lucas	Council, Village of Waterville	25 North Second St.		Waterville	ОН	43566
Jim	Valtin	Lucas	Council, Village of Waterville	25 North Second St.		Waterville	ОН	43566
Keith	Earley	Lucas	Engineer	1049 S. McCord Road		Holland	ОН	43528
Lori	Brodie	Lucas	Mayor, Village of Waterville	25 North Second St.		Waterville	ОН	43566
Phil	Copeland	Lucas	Recorder	One Government Center	Suite 700	Toledo	ОН	43604
John	Tharp	Lucas	Sheriff	1622 Spielbusch Ave.		Toledo	ОН	43604
Wade	Kapszukiewicz	Lucas	Treasurer	One Government Center	Suite 500	Toledo	ОН	43604
Les	Disher	Lucas	Waterville Township Trustee	621 Farnsworth Road		Waterville	ОН	43566
Robert	Hertzfeld	Lucas	Waterville Township Trustee	621 Farnsworth Road		Waterville	ОН	43566
A. Leslie	Disher	Lucas	Waterville Township Trustee	621 Farnsworth Road		Waterville	ОН	43566
Lynda	Bowers	Medina	Lafayette Township Trustee	6776 Wedgewood Road		Medina	ОН	44256
Michael	Costello	Medina	Lafayette Township Trustee	6776 Wedgewood Road		Medina	ОН	44256

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Bryon	Macron	Medina	Lafayette Township Trustee	6776 Wedgewood Road		Medina	ОН	44256
Dennis	Horvath	Medina	Litchfield Township Trustee	9256 Norwalk Road		Litchfield	ОН	44253
Michael	Pope	Medina	Litchfield Township Trustee	9256 Norwalk Road		Litchfield	ОН	44253
Nancy	Wargo	Medina	Litchfield Township Trustee	9256 Norwalk Road		Litchfield	ОН	44253
Sally	Albrecht	Medina	Montville Township Trustee	3077 Blue Heron Trace		Medina	ОН	44256
Ronald	Bischof	Medina	Montville Township Trustee	3227 Rustic Valley Dr.		Medina	ОН	44256
Jeff	Brandon	Medina	Montville Township Trustee	5184 Glenmore Way		Medina	ОН	44256
Robert	Engler	Medina	Wadsworth Township Trustee	263 Wall Road		Doylestown	ОН	44230
James	Gardner	Medina	Wadsworth Township Trustee	8069 Hartman Road		Wadsworth	ОН	44281
Kevin	Keiper	Medina	Wadsworth Township Trustee	9450 Mennonite Road		Wadsworth	ОН	44281
Colene	Conley	Medina	York Township Trustee	6609 Norwalk Road		Mallet Creek	ОН	44256
Richard	Monroe	Medina	York Township Trustee	6609 Norwalk Road		Mallet Creek	ОН	44256
William	Pavlick	Medina	York Township Trustee	6609 Norwalk Road		Mallet Creek	ОН	44256
John	Antesberger	Sandusky	Riley Township Trustee	1062 N. CR 220		Fremont	ОН	43420
Gary	Overmyer	Sandusky	Riley Township Trustee	3420 CR 231		Fremont	ОН	43420
David	Sachs	Sandusky	Riley Township Trustee	997 N. CR 198		Fremont	ОН	43420
Paul	Lotycz	Sandusky	Sandusky Township Trustee	710 N. Stone St.		Fremont	ОН	43420
Gilbert	Overmyer	Sandusky	Sandusky Township Trustee	1749 CR 142		Fremont	ОН	43420
Michael	Willis	Sandusky	Sandusky Township Trustee	351 W. CR 73		Fremont	ОН	43420
Kyle	Overmyer	Sandusky	Sheriff	2323 Countryside Dr.		Fremont	ОН	43420
Glenn	Baker	Sandusky	Washington Township Trustee	211 Lynn Street		Lindsey	ОН	43442
Harold	Overmyer	Sandusky	Washington Township Trustee	1612 W. CR 109		Fremont	ОН	43420
Robert	Reed	Sandusky	Washington Township Trustee	2721 CR 92		Lindsey	ОН	43442

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Kenneth	Green	Sandusky	Woodville Township Trustee	4680 CR 44		Woodville	ОН	43469
William	Hammer	Sandusky	Woodville Township Trustee	505 Water Street		Woodville	ОН	43469
Paul	Heineman	Sandusky	Woodville Township Trustee	731 Fort Findlay Rd.		Woodville	ОН	43469
Brant	Luther	Stark	Administrator	110 Central Plaza S #240		Canton	ОН	44702
Thomas M.	Bernabei	Stark	County Commissioner	2745 Dunkeith Dr., NW		Canton	ОН	44708
Janet Weir	Creighton	Stark	County Commissioner	7711 Bucknell Cir., NW		North Canton	ОН	44720
Richard	Regula	Stark	County Commissioner	8020 Erie Ave., SW		Navarre	ОН	44662
Keith	Bennett	Stark	County Engineer	266 Creekside Circle, NE		North Canton	ОН	44720
John	Arnold	Stark	Lake Township Trustee	2725 Aylesbury St., NW		North Canton	ОН	44720
Ellis	Erb	Stark	Lake Township Trustee	1477 Lake O Pines St., NE		Hartville	ОН	44632
Galen Lee	Stoll	Stark	Lake Township Trustee	2690 Rita Street, NE		Hartville	ОН	44632
Kenneth	Eddleman	Stark	Marlboro Township Trustee	10351 Marlboro Ave., NE		Louisville	ОН	44641
John	Hagan	Stark	Marlboro Township Trustee	11301 Marlboro Ave., NE		Alliance	ОН	44601
Wayne	Schillig	Stark	Marlboro Township Trustee	10750 Marlboro Ave., NE		Alliance	ОН	44601
Lou	Johnson	Stark	Nimishillen Township Trustee	9821 Louisville St., NE		Louisville	ОН	44641
Mike	Lynch	Stark	Nimishillen Township Trustee	P.O. Box 181		Louisville	ОН	44641
Lisa	Shafer	Stark	Nimishillen Township Trustee	6590 Winter Street, NE		Louisville	ОН	44641
Christina	Hagan	Stark	State Representative	77 South High Street		Columbus	ОН	43215
Scott	Oelslager	Stark	State Senator	1 Capitol Square		Columbus	ОН	43215
Mort	Dehoff	Stark	Washington Township Trustee	5789 Beechwood Ave.		Alliance	ОН	44601
Paul	Delpuppo	Stark	Washington Township Trustee	8701 Byrd Ave., NE		Alliance	ОН	44601
Randy	Rodgers	Stark	Washington Township Trustee	15874 Bowman St., NE		Homeworth	ОН	44634

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Christopher	Humphrey	Summit	City Of Green Council- At-Large	Green Administration Building	1755 Town Park Blvd. PO Box 278	Green	ОН	44232
Gerard	Neugebauer	Summit	City Of Green Council- At-Large	Green Administration Building	1755 Town Park Blvd. PO Box 278	Green	ОН	44232
Joel	Reed	Summit	City Of Green Council- At-Large	Green Administration Building	1755 Town Park Blvd. PO Box 278	Green	ОН	44232
Harold	Gehm	Summit	City Of New Franklin Council-At-Large	New Franklin Administration Building	5611 Manchester Rd.	Akron	ОН	44319
Judy	Jones	Summit	City Of New Franklin Council-At-Large	New Franklin Administration Building	5611 Manchester Rd.	Akron	ОН	44319
Andrea	Norris	Summit	City Of New Franklin Council-At-Large	New Franklin Administration Building	5611 Manchester Rd.	Akron	ОН	44319
Tim	Crawford	Summit	County Council	175 South Main Street		Akron	ОН	44308
Paula	Prentice	Summit	County Council	175 South Main Street		Akron	ОН	44308
Alan	Brubaker	Summit	County Engineer	538 E South Street		Akron	ОН	44311
Russell	Pry	Summit	County Executive	175 S. Main Street	7th Floor	Akron	ОН	44308
Dick	Norton	Summit	Mayor, City of Green	Central Administration Building	1755 Town Park Blvd. PO Box 278	Green	ОН	44232
Al	Bollas	Summit	Mayor, City of New Franklin	New Franklin Administration Building	5611 Manchester Rd.	Akron	ОН	44319
Tony	DeVitis	Summit	State Representative	77 South High Street		Columbus	ОН	43215
Marilyn	Slaby	Summit	State Representative	77 South High Street		Columbus	ОН	43215
Tom	Sawyer	Summit	State Senator	1 Capitol Square		Columbus	ОН	43215
Sandra	Kurt	Summit	Council-At-Large	175 South Main Street	7th Floor	Akron	ОН	44308
John	Donofrio	Summit	Council-At-Large	175 South Main Street	7th Floor	Akron	ОН	44308
Ilene	Shapiro	Summit	Council-At-Large	175 South Main Street	7th Floor	Akron	ОН	44308

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Tim	Ryan	Summit	U.S. House of Representatives	1421 Longworth House Office Building		Washington	DC	20515
Jim	Renacci	Summit	U.S. House of Representatives	130 Cannon House Office Building		Washington	DC	20515
Frank	LaRose	Summit	State Senator	1 Capitol Square		Columbus	ОН	43215
Lenny	Broome	Wayne	Chippewa Township Trustee	12714 Mark Path		Doylestown	ОН	44230
Roberta	Gleason	Wayne	Chippewa Township Trustee	14228 Galehouse Rd.		Doylestown	ОН	44230
Robert	Macgregor	Wayne	Chippewa Township Trustee	11980 Whitman Rd.		Doylestown	ОН	44230
Patrick	Herron	Wayne	County Administrator	428 West Liberty St.		Wooster	ОН	44691
Jim	Carmichael	Wayne	County Commissioner	1429 Moore Rd.		Wooster	ОН	44691
Ann	Obrecht	Wayne	County Commissioner	7849 Columbus Rd.		Shreve	ОН	44676
Scott	Wiggam	Wayne	County Commissioner	316 E. Beverly Rd.		Wooster	ОН	44691
Roger	Terrill	Wayne	County Engineer	3151 West Old Lincoln Way		Wooster	ОН	44691
Terry	Lindeman	Wayne	Mayor, City of Doylestown	24 S. Portage St.		Doylestown	ОН	44230
Ron	Amstutz	Wayne	State Representative	77 South High Street		Columbus	ОН	43215
Michael	Sibbersen	Wood	Auditor	One Courthouse Square	5th Floor	Bowling Green	ОН	43402
Lisa	Heft	Wood	Clerk, Village of Haskins	100 N Church St.	PO Box 182	Haskins	ОН	43525
James	Carter	Wood	Commissioner	One Courthouse Square	5th Floor	Bowling Green	ОН	43402
Dori	Herringshaw	Wood	Commissioner	One Courthouse Square	5th Floor	Bowling Green	ОН	43402
Joel	Kuhlman	Wood	Commissioner	One Courthouse Square	5th Floor	Bowling Green	ОН	43402
Helen	Bonnough	Wood	Council, Village of Haskins	100 N Church St.	PO Box 182	Haskins	ОН	43525
Ashley	Pearl Brooks	Wood	Council, Village of Haskins	100 N Church St.	PO Box 182	Haskins	ОН	43525
Nancy	Perry	Wood	Council, Village of Haskins	100 N Church St.	PO Box 182	Haskins	ОН	43525
Julienne	Snyder	Wood	Council, Village of Haskins	100 N Church St.	PO Box 182	Haskins	ОН	43525

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Phillip	Tipton	Wood	Council, Village of Haskins	100 N Church St.	PO Box 182	Haskins	ОН	43525
Ray	Huber	Wood	Engineer	One Courthouse Square		Bowling Green	ОН	43402
Paul	Gies	Wood	Mayor, Village of Haskins	100 N Church St.	PO Box 182	Haskins	ОН	43525
Jim	Bostdorff	Wood	Middleton Township Trustee	P.O. Box 206		Haskins	ОН	43525
Penny	Getz	Wood	Middleton Township Trustee	P.O. Box 206		Haskins	ОН	43525
Fred	Vetter	Wood	Middleton Township Trustee	P.O. Box 206		Haskins	ОН	43525
Julie	Baumgardner	Wood	Recorder	One Courthouse Square	5th Floor	Bowling Green	ОН	43402
Mark	Wasylyshyn	Wood	Sheriff	One Courthouse Square	5th Floor	Bowling Green	ОН	43402
Jill	Engle	Wood	Treasurer	One Courthouse Square	5th Floor	Bowling Green	ОН	43402
Matt	Brinker	Wood	Troy Township Trustee	311 Krotzer Ave.	P.O. Box 128	Luckey	ОН	43443
Stephen	Levorchick	Wood	Troy Township Trustee	311 Krotzer Ave.	P.O. Box 128	Luckey	ОН	43443
Ken "Skip"	Recker	Wood	Troy Township Trustee	311 Krotzer Ave.	P.O. Box 128	Luckey	ОН	43443
Isaac	Bailey	Wood	Webster Township Trustee	8138 Middleton Pike		Bowling Green	ОН	43402
Mark	Bushman	Wood	Webster Township Trustee	8138 Middleton Pike		Bowling Green	ОН	43402
Jim	Cajka	Wood	Webster Township Trustee	8138 Middleton Pike		Bowling Green	ОН	43402
Tim	Brown	Wood	State Representative	77 South High Street		Columbus	ОН	43215
Bob	Latta	Wood	U.S. House of Representatives	2448 Rayburn House Office Building		Washington	DC	20515
John	Kasich		Ohio Governor	77 South High Street		Columbus	ОН	43215
Bill	Johnson		U.S. House of Representatives	317 Cannon House Office Building		Washington	DC	20515
Sherrod	Brown		U.S. Senate	713 Hart Senate Office Building		Washington	DC	20515
Rob	Portman		U.S. Senate	448 Russell Senate Office Building		Washington	DC	20515

<u>Public Officials – Compressor Stations</u>

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Michael	Halleck	Columbiana	County Commissioner	2096 Country Side Dr.		Salem	ОН	44460
James	Hoppel	Columbiana	County Commissioner	50499 Calcutta Smith Ferry Rd.		E Liverpool	ОН	43920
Timothy	Weigle	Columbiana	County Commissioner	49498 England Dr.		E Palestine	ОН	44413
Bert	Dawson	Columbiana	County Engineer	50487 Fisher Ave.		E Liverpool	ОН	43920
Robert	Manfull	Columbiana	Trustee, Hanover Township	29209 Manfull Lake Rd.		Kensington	ОН	44427
Mancil	Ridgeway	Columbiana	Trustee, Hanover Township	10554 Mechanicstown Rd.		Hanoverton	ОН	44423
John	Zehentbauer	Columbiana	Trustee, Hanover Township	10786 Lindesmith Rd.	P.O. Box 304	Hanoverton	ОН	44423
Nick	Barborak	Columbiana	State Representative	77 South High Street		Columbus	ОН	43215
Joe	Schiavoni	Columbiana	Senator	1 Capitol Square		Columbus	ОН	43215
Laura	Lloyd-Jenkins	Lucas	Administrator	One Government Center #870		Toledo	ОН	43604
Anita	Lopez	Lucas	Auditor	One Government Center	Suite 600	Toledo	ОН	43604
Carol	Contrada	Lucas	Commissioner	One Government Center	Suite 800	Toledo	ОН	43604
Pete	Gerken	Lucas	Commissioner	One Government Center	Suite 800	Toledo	ОН	43604
Tina	Skeldon Wozniak	Lucas	Commissioner	One Government Center	Suite 800	Toledo	ОН	43604
Lee	Bialecki	Lucas	Providence Township	13257 Perry Road		Grand Rapids	ОН	43522
Steve	Kendall	Lucas	Providence Township	13257 Perry Road		Grand Rapids	ОН	43522
Cody	Mastin	Lucas	Providence Township	13257 Perry Road		Grand Rapids	ОН	43522
Barbara	Sears	Lucas	State Representative	77 South High Street		Columbus	ОН	43215
Adam	Friedrick	Medina	Commissioner	144 North Broadway St.	Suite 201	Medina	ОН	44256

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
Patricia	Geissman	Medina	Commissioner	144 North Broadway St.	Suite 201	Medina	ОН	44256
Stephen	Hambley	Medina	Commissioner	144 North Broadway St.	Suite 201	Medina	ОН	44256
Mike	Salay	Medina	Engineer	791 West Smith Road		Medina	ОН	44256
Steve	Fulton	Medina	Trustee, Guilford Township	8701 Hubbard Valley Rd.		Seville	ОН	44273
Robert	Rohrer	Medina	Trustee, Guilford Township	8612 Yoder Rd.		Wadsworth	ОН	44281
Glenn	Sheller	Medina	Trustee, Guilford Township	9027 Skypark Drive		Wadsworth	ОН	44281
Steve	Hambley	Medina	State Representative	77 South High Street		Columbus	ОН	43215
Dave	Hall	Medina	State Representative	77 South High Street		Columbus	ОН	43215
Larry	Obhof	Medina	Senator	1 Capitol Square		Columbus	ОН	43215
Bob	Gibbs	Medina	Congressman, U.S. House of Representatives	329 Cannon House Office Building		Washington	DC	20515
Bob	Gibbs		Congressman, Canton, OH Office	110 Central Plaza South		Canton	ОН	44702
Warren	Brown	Sandusky	Administrator	622 Croghan Street		Fremont	ОН	43420
Jerri	Miller	Sandusky	Auditor	100 N. Park Ave.	Suite 228	Fremont	ОН	43420
Dan	Polter	Sandusky	Commissioner	622 Croghan St.		Fremont	ОН	43420
Charles	Schwochow	Sandusky	Commissioner	622 Croghan St.		Fremont	ОН	43420
Terry	Thatcher	Sandusky	Commissioner	622 Croghan St.		Fremont	ОН	43420
James	Moyer	Sandusky	Engineer	2500 West State St.		Fremont	ОН	43420
Colleen	Carmack	Sandusky	Recorder	100 N. Park Ave.	Suite 217	Fremont	ОН	43420
Bill	Reineke	Sandusky	State Representative	77 South High Street		Columbus	ОН	43215
Jean	Leber	Sandusky	Trustee, Townsend Township	1736 N. County Rd. 294		Clyde	ОН	43410
Bruce	Meggitt	Sandusky	Trustee, Townsend Township	1736 N. County Rd. 294		Clyde	ОН	43410
Paul	Warner	Sandusky	Trustee, Townsend Township	1736 N. County Rd. 294		Clyde	ОН	43410
Irma	Celestino	Sandusky	Treasurer	100 N. Park Ave.	Suite 227	Fremont	ОН	43420

NEXUS Project Public and Agency Participation Plan January 2015

First Name	Last Name	County	Position	Address 1	Address 2	City	State	Zip Code
John	Boehner		Speaker of House, U.S. House of Representatives	1011 Longworth House Office Building		Washington	DC	20515
John	Boehner		Butler County Office	7969 Cincinnati- Dayton Road	Suite B	West Chester	ОН	45069

Community and Public Interest Groups and Non-governmental Organizations

Organization	Contact First Name	Contact Last Name	Address 1	Address 2	City	State	Zip
Appalachian Partnership for Economic Growth	Dorinda	Byers	35 Public Square	PO Box 456	Nelsonville	ОН	45764
Black Swamp Conservancy	Rob	Krain	132 W 2nd St.		Perrysburg	OH	43551
Bowling Green Chamber of Commerce	Earlene	Kilpatrick	PO Box 31		Bowling Green	ОН	43402
Canton Regional Chamber of Commerce	Dennis	Saunier	222 Market Ave N		Canton	ОН	44702
Clear Water, Inc	Cindy	Drill					
Cleveland Building and Construction Trades Council	Terry	Joyce	3250 Euclid Avenue	Suite 280	Cleveland	ОН	44115
Conservation Action Project	Bill	Rohrs			Napoleon	OH	43545
Development Finance Authority of Summit County – Port Authority	Chris	Burnham	47 N. Main Street	Suite 407	Akron	ОН	44308
Eastern Gateway Community College	Mark	Ciccarelli	4000 Sunset Blvd		Steubenville	ОН	43952
Erie County Economic Development Corp	Peter	Zaehringer	247 Columbus Ave.		Sandusky	ОН	44870
Firelands Land Conservancy Project	Kate	Pilacky					
Fulton County Economic Development	Matt	Gilroy	123 Courthouse Plaza	Suite 2	Wauseon	ОН	43567
Great Lakes Innovation and Development Institute	Tracy	Green	151 Innovation Drive	Suite 210	Elyria	ОН	44035
Greater Akron Chamber of Commerce	Daniel	Colantone	1 Cascade Plz, # 17		Akron	ОН	44308
Heart of the Lakes Center for Land Conservation Policy	Julie	Stoneman	P.O. Box 1128		Bay City	MI	48706
International Union of Operating Engineers Local 18			3515 Prospect Ave.		Cleveland	ОН	44115
JobsOhio	David	Mustine	41 S High Street, #1500		Columbus	OH	43215
Legacy Land Conservancy	Susan	Lackey	1100 N. Main Street	Suite 203	Ann Arbor	MI	48104
Lorain County Community College	Lisa	Delp	1005 Abbe Rd. N.		Elyria	ОН	44035
Lucas County Economic Development Corp.	Ford	Weber	2 Maritime Plaza		Toledo	ОН	43604

Organization	Contact First Name	Contact Last Name	Address 1	Address 2	City	State	Zip
Lucas County Soil and Water Conservation District			130-A West Dudley		Maumee	ОН	43537
MAGNET	Linda	Barita	1768 East 25th Street		Cleveland	ОН	44114
Maumee River Advisory Council	Marcus	Ricci	1435 West Twp Rd. 38		Tiffin	ОН	44883
Maumee River Basin Partnership of Local Governments	Robert	Vargo	115 West Washington Street		Indianapolis	IN	46204
Maumee Valley Heritage Corridor	Lori	Gates	5100 W Central Ave		Toledo	ОН	43615
Medina County Economic Development Corp	Bethany	Dentler	144 N. Broadway St.		Medina	ОН	44256
Northeast Ohio Trade and Economic Development Consortium	Ron	DeBarr	PO Box 5190		Kent	ОН	44242
Northwest State Community College	Thomas	Stucky	22600 Ohio 34		Archbold	ОН	43502
Ohio AFL-CIO	Tim	Burga	395 East Broad Street		Columbus	ОН	43215
Ohio Association of Community Colleges	Jack	Hershey	175 S. 3rd St., #560		Columbus	ОН	43215
Ohio Chamber of Commerce	Beau	Euton	230 E Town St.		Columbus	ОН	43215
Ohio Farm Bureau	Dale	Arnold	280 North High St.	6th Floor	Columbus	ОН	43215
Ohio Township Association	Matt	DeTemple	6500 Taylor Road		Blacklick	ОН	43004
Owens Community College	Mike	Bower	3200 Bright Rd.		Findlay	ОН	45840
Pro Football Hall Fame	Pete	Frierle	2121 George Halas Dr. NW		Canton	ОН	44708
Regional Growth Partnership	Dean	Monske	300 Madison Ave.		Toledo	ОН	43604
Sandusky County Chamber of Commerce	Angie	Morelock	101 S Front St.		Fremont	ОН	43420
Sandusky County Economic Development Corp.	Kay	Reiter	2511 Countryside Drive	Suite C	Fremont	ОН	43420
Sandusky River Advisory Council	Robert	Vargo	1435 West Twp Rd. 38		Tiffin	ОН	44883
Sandusky River Watershed Coalition	Cindy	Brookes	219 South Front Street	PO Box 590	Fremont	ОН	43420
Sandusky State Scenic River	Robert	Vargo			Tiffin	ОН	44883
Southeast Michigan Land Conservancy	Jill	Lewis	8383 Vreeland Rd.		Superior Twp.	MI	48198
Stark Development Board	Steve	Paquette	116 Cleveland Ave. NW		Canton	ОН	44702
Stark State Community College	Irene	Motts	6200 Frank Ave. NW		North Canton	OH	44720

NEXUS Project Public and Agency Participation Plan January 2015

Organization	Contact First Name	Contact Last Name	Address 1	Address 2	City	State	Zip
Team Lorain County	Steve	Morey	226 Middle Ave.		Elyria	ОН	44035
TeamNEO	Paul	Boulier	737 Bolivar Rd.		Cleveland	OH	44115
Terra Community College	Jerome	Webster	2830 Napoleon Rd.		Fremont	ОН	43420
Toledo Regional Chamber of Commerce	Wendy	Gramza	300 Madison Ave.		Toledo	ОН	43604
Wayne County Economic Development Council	Rodney	Crider	542 E. Liberty St.		Wooster	ОН	44691
Western Lake Erie Water Keeper	Sandy	Bihn	3900 N. Summit Bldg. 2		Toledo	ОН	43611
Western Reserve Land Conservancy	Kendrick	Chittock	3850 Chagrin River Rd.		Moreland Hills	ОН	44022
Wood County Economic Development Commission	Wade	Gottschalk	639 S Dunbridge Rd.		Bowling Green	ОН	43402
Work in Northeast Ohio Council	Al	Catani	445 W Liberty St.	Suite 225	Medina	ОН	44256

Community and Public Interest Groups and Nongovernmental Organizations

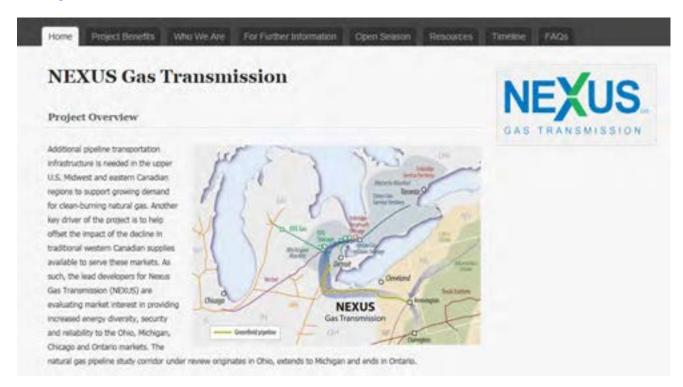
NEXUS Gas Transmission, LLC has identified numerous non-governmental organizations along the proposed pipeline route. We will be engaged with these groups as appropriate and will continue to supplement the list as contact is made. These groups may be associated with businesses, environmental resources or community groups and NEXUS engagement efforts will be coordinated with the Project subject matter experts.

These groups include:

- State and local Chambers of Commerce
- Community members
- Labor associations
- Economic Development Authorities
- Educational Institutions
- Natures preservation organizations
- Local/regional environmental organizations
- River groups and partnerships

Appendix F: Examples of Home Pages for Websites

www.nexusgastransmission.com



www.spectraenergy.com/Operations/New-Projects-and-Our-Process/New-Projects-in-US/NEXUS-Gas-Transmission



Appendix G: Sample Letters

200 Corporate Center Drive, Suite 350 Coraopolis, PA 15108



August 11, 2014

«Salutation» «First_Name» «Last_Name» «CorporationTrust» «Address_» «City», «State» «Zip»

Re: Proposed NEXUS Gas Transmission (NEXUS) Project
Property located in: <u>«Property County» County, «Property State»</u>

Dear Landowner:

With the growing demand for reliable energy sources with fewer emissions, DTE Energy Co. ("DTE Energy") and Spectra Energy Corp ("Spectra Energy"), the lead developers of the NEXUS Gas Transmission Project ("NEXUS"), recently began evaluating an interstate natural gas pipeline expansion project that will increase energy supply diversity, security and reliability in the U.S. Midwest and Ontario, Canada. DTE Energy and Spectra Energy are two of the leading energy service and infrastructure companies in North America with more than a century of combined experience in developing infrastructure projects to meet the energy needs of North America in a safe, reliable and responsible manner.

NEXUS's efforts to develop a new natural gas transportation system will benefit the U.S. Midwest Region and the Dawn natural gas trading hub in Southwestern Ontario, Canada. Ultimately, this Project will help to meet the growing environmental need for cleaner and more affordable fuels for regional power generation and for industrial and commercial customers, as well as home heating and domestic use as early as the fourth quarter of 2017.

The purpose of this letter is to introduce the proposed NEXUS Project to you. We have enclosed a Frequently Asked Questions document that provides more detail about this proposal.

To help us refine our proposed pipeline route, Project representatives have begun collecting and evaluating existing information necessary to determine the pipeline path with the least overall impact while balancing constructability concerns. The proposed geographic area under evaluation includes a newly-constructed pipeline that will extend from eastern Ohio to an interconnection with the existing natural gas pipeline grid in southeastern Michigan. The new construction in Michigan will be limited to the segment between the Ohio/Michigan border and the existing DTE Gas system near Willow Run, Michigan. From Willow Run, the NEXUS Project will utilize both existing and expansion capacity on the DTE Gas transportation system and the Vector Pipeline System to directly access Michigan markets, Chicago and the Dawn, Ontario Hub. A map is included that provides you with the general study corridor under consideration.

Page 2

You are receiving this letter because your property may be within or very near the routing study corridor being considered for the Project and for that reason we will soon send an additional letter to you related to our survey needs and practices. These civil, environmental and cultural resources survey activities are required to thoroughly evaluate a pipeline route in balancing environmental, engineering and landowner concerns. The surveys will be coordinated with the appropriate municipal officials and performed in a minimal amount of time with the goal of little to no inconvenience to landowners.

We have begun meeting with your community leaders and elected officials about the NEXUS Project while continuing to evaluate and refine the proposed route. In addition, we soon will be meeting with landowners, agencies and other stakeholders to discuss the Project and to seek input on the proposed routing for this expansion.

Please be assured that we are early in the proposed process and everyone will have multiple opportunities to interact and engage with the project team, as well as participate in the appropriate regulatory processes. Different companies take different approaches with engagement and communications with the affected public. DTE Energy and Spectra Energy take a collaborative approach. We communicate early and often about our project activities to build positive relationships and long-lasting partnerships with all stakeholders.

If you have questions or would like additional information concerning our proposed NEXUS Project, please call our toll free number 1-844-589-3655. We would be pleased to address any or all aspects of the project with you. For more information, please visit our website http://nexusgastransmission.com/.

Sincerely,

Peter Cassan

Right-of-Way Project Manager

Peter Carray

Spectra Energy Corp

Enclosure:

NEXUS Project proposed study corridor map NEXUS Project frequently asked questions



NEXUS Gas Transmission: Frequently Asked Questions

What is the proposed NEXUS Gas Transmission project?

The NEXUS Gas Transmission Project (NEXUS) is a natural gas pipeline system proposed to provide additional pipeline transportation infrastructure in the upper U.S. Midwest and eastern Canadian regions to support growing demand for clean-burning natural gas.

The new pipeline will be capable of transporting at least two billion cubic feet per day (Bcf/d) of new, criticallyneeded supplies of natural gas to serve local distribution companies, industrial end users and natural gas-fired power generators in the Ohio, Michigan, Chicago and Dawn Ontario markets.

2. Why is this project necessary?

Natural gas is an integral part of North America's energy mix, and the NEXUS project will serve increasing demand across multiple customer segments – largely being driven by its affordable cost, its ability to complement renewables, its environmental value as a low-carbon fossil fuel and its significant availability into the foreseeable future.

3. What project scope are you proposing?

The transportation path will utilize existing pipeline capacity and infrastructure, as well as a newly-constructed pipeline. The project likely will involve 36-inch to 42-inch diameter pipe, which would extend from an originating point in eastern Ohio to interconnects with the existing pipeline grid in southeastern Michigan. As proposed, the path will utilize both existing and expansion capacity on the DTE Gas transportation system and the Vector Pipeline (Vector) System to access Chicago and the Dawn Hub.

The initial project will include interconnects with Texas Eastern Transmission, LP, and Tennessee Gas Pipeline Company, L.L.C. in the Appalachian Basin, with DTE Gas and Consumers Energy in Michigan, and with the Enbridge Tecumseh storage facility and the Union Gas Limited Dawn Hub in Ontario. Other facilities associated with the project may include compression located along the greenfield portion of the pipeline. The location and size of these other facilities has not yet been determined and could change based on the final project scope.

4. Where will the majority of new pipeline construction occur?

The majority of new pipeline build will occur in the State of Ohio as the system extends from the Utica production region to interconnections in Michigan.

5. What's the estimated cost of the project?

The project is in the early development stage, but preliminary estimates are approximately \$1.5 billion; however, this could change, depending on final market commitments and project scope.

6. What is the expected in-service date of the project?

The project's target in-service date is as early as the fourth quarter of 2017, subject to market demand and receipt of the necessary regulatory approvals.

7. What is the "study corridor" that has been referred to in project-related material?

Generally, study corridors are established along the proposed primary and alternate routes to determine possible locations for the pipeline facilities and potential workspace areas. The study corridors are typically 600 feet wide. However, once our field evaluations are complete, the pipeline corridor will be reduced to a much narrower width that would be necessary to construct the pipeline. Typically, this is approximately 100 feet with the permanent rights-of-way typically being 50 feet wide.

8. Will the route for the new pipeline have any impacts on Lake Erie?

The new pipeline route will not cross or affect Lake Erie.

Will there be long-term benefits to stakeholders once the project is in service?

Yes. The project will provide critical access to new emerging supplies from the Utica shale gas producing region and provide local communities with affordable, clean-burning and domestically-abundant natural gas to help meet the growing environmental need for cleaner power generation.

The increased investment in energy infrastructure will deliver additional local and regional benefits in Ohio, Michigan and Ontario by creating significant jobs during the construction phase and then increased tax revenues post construction.

10. What sort of local or regional benefits can we expect to see from a project of this size?

In Ohio and Michigan, the project will create significant jobs during construction and add capital investment and tax base to both states. Long term, new natural gas infrastructure will strengthen both Ohio and Michigan as Midwest Hubs and spur additional activity and asset development such as pipelines and storage.

In all areas, the proposed pipeline project will provide consumers and businesses with critical access to an affordable, new natural gas supply source that will invigorate economies, spur growth and ensure regional economic competitiveness.

11. What impact will the project have on landowners?

The project team will begin communicating with stakeholders early on in the development process and will maintain open lines of communication throughout the project's development. Landowners and other stakeholders will have multiple opportunities to provide input during the permitting process.

The new pipeline will follow existing utility corridors for the majority of its route, which will greatly minimize impacts to the environment and surrounding areas

12. How will you communicate with local communities, landowners and other affected parties?

The experienced project development team will engage with stakeholders through informational meetings, open houses, mailings and cooperative outreach efforts with local communities. These activities will be an integral part of the project and will occur through all phases of permitting, construction and in-service operations.

13. How are the final facilities and locations determined?

The Federal Energy Regulatory Commission (FERC) exclusively authorizes the construction and operation of new facilities. FERC is also the lead federal agency responsible for conducting environmental reviews of interstate pipeline projects in compliance with the National Environmental Policy Act.

FERC will review the proposed routes and alternatives to determine which will have the least environmental and stakeholder impact while still meeting the intent of the project and needs of the market. In its review process, FERC will address all concerns raised by stakeholders throughout its proceeding.

14. Can we get a map of the pipeline?

The preliminary study corridor and potential pipeline route will be available during the public outreach phase of the project, well before any final route decisions are made by FERC. During public outreach and open houses NEXUS will seek feedback on the proposed route from

landowners and make adjustments to the route when possible.

15. How will you ensure the environment will not be harmed?

The NEXUS project is committed to protecting the environment. Wherever possible the new pipeline will follow existing rights-of-way to substantially limit environmental impacts and effects to landowners. Another important feature of this pipeline system will also be its ability to utilize both existing and expansion capacity on the DTE Gas transportation system and the Vector Pipeline System to access Michigan, Chicago and the Dawn Hub in Ontario, significantly reducing overall impacts for construction and operation.

These development efforts are closely monitored by federal and state environmental agencies, requiring a number of permits. We closely adhere to all applicable environmental standards to ensure we minimize our footprint.

Environmental aspects of the construction project are regulated by FERC, which will review all plans and conduct its own environmental study of the project. Because the pipeline is an interstate line, its design and operations will be regulated by the U.S. Department of Transportation's (DOT) Office of Pipeline Safety. DOT's technical specifications and requirements that apply to construction, installation and operation of pipelines will be met or exceeded.

16. What about safety issues and measures?

Safety is the number one priority for both DTE Energy and Spectra Energy. The project partners are dedicated to the safe, reliable operation of facilities and to the protection of employees, the public and the environment. Natural gas pipelines monitor and control safety in many ways and use many different tools. Collectively, these tools make natural gas one of the safest forms of energy transportation. Our safety programs are designed to prevent pipeline failures, detect anomalies and perform repairs, often exceeding regulatory requirements. The new pipeline will operate in strict accordance with all federal, state and provincial safety requirements.

For Further Information

Please visit http://nexusgastransmission.com/.

200 Corporate Center Drive, Suite 350 Coraopolis, PA 15108



August 16, 2014

«Salutation» «First_Name» «Last_Name» «CorporationTrust» «Address_Line_1» «Mailing City», «Mailing State» «Mailing Zip»

Re: Proposed NEXUS Gas Transmission (NEXUS) Project

Tax Parcel #(s): «Tax ID»

Property located in: «Property County», County «Property State»

Dear Landowner:

Recently you were mailed a letter announcing that DTE Energy Co. ("DTE Energy") and Spectra Energy Corp ("Spectra Energy"), the lead developers of the NEXUS Gas Transmission Project ("NEXUS"), are evaluating a proposed natural gas pipeline expansion project in your area. DTE Energy and Spectra Energy are two of the leading energy service and infrastructure companies in North America with more than a century of combined experience in developing infrastructure projects to meet the energy needs of North America in a safe, reliable and responsible manner.

To help us analyze the proposed NEXUS study corridor, our representatives are in the early stages of collecting and evaluating information necessary to determine the pipeline path with the least overall landowner, community and environmental impact, while balancing constructability concerns. You are receiving this follow-up letter because your property is within the initial study corridor being considered. We are requesting your authorization to access your property for the purpose of performing the necessary survey activities in connection with the NEXUS Project.

Our earlier letter shared news of our initial Project outreach efforts with landowners, community leaders and elected officials. This is all part of our coordinated plan to inform stakeholders about various aspects of the proposed Project, such as surveys. These civil, environmental and cultural resource survey activities are required to thoroughly evaluate a pipeline route. The surveys will be performed in a minimal amount of time with the goal of little to no inconvenience to you and other landowners.

The survey activities planned along a portion of your property within the study area, and any minimal impacts that may result, are more fully described in the enclosure entitled "Description of Survey Activities." While NEXUS certainly does not anticipate any damages to result from these surveys, please be assured that you will be compensated if any damages to your property or crops occur as a direct result of these activities. Please also note that granting us authorization to access your property for the purpose of conducting these surveys does not grant any other rights to NEXUS. Your consent to survey and your cooperation with NEXUS's Project representatives would be sincerely appreciated.

Survey work is scheduled to begin in September 2014. In those areas where NEXUS is proposing to construct the new pipeline system, it will be necessary to determine a location for the proposed line, availability of temporary construction work areas and potential construction access roads.

Page 2

Your NEXUS representative will soon reach out to you to begin the dialogue that leads to a better understanding of your property and minimizing any impacts to your land. Our goal is for you to be as informed as possible throughout the process.

A survey permission form is enclosed for your consideration, along with a self-addressed stamped envelope. We ask that you sign this survey permit and return it to us in the enclosed envelope.

NEXUS's efforts to develop a new natural gas transportation system will benefit the U.S. Midwest Region and the Dawn natural gas trading hub in Southwestern Ontario, Canada. Ultimately, this Project will help to meet the growing environmental need for cleaner and more affordable fuels for regional power generation and for industrial and commercial customers, as well as home heating and domestic use as early as the fourth quarter of 2017.

Due to the nature of siting interstate pipelines, other pipeline companies may be evaluating proposed projects and their representatives may contact you or other landowners in your area. This is because other pipeline companies may be evaluating routing using similar criteria to NEXUS's. We understand it may be confusing if other pipeline companies contact you regarding potentially competing projects. We will certainly keep you informed of the progress of the NEXUS Project. Please don't hesitate to contact us at the number below if you have any questions.

Again, we are early in the proposed Project process and everyone will have multiple opportunities to interact and engage with the Project team, as well as participate in the appropriate regulatory processes. Different companies take different approaches to engagement and communications with the public. DTE Energy and Spectra Energy take a collaborative approach. We communicate early and often about our project activities to build positive relationships and long-lasting partnerships with all stakeholders.

If you have questions or would like additional information concerning our proposed NEXUS Project, please call our toll free number 1-844-589-3655. We would be happy to address any or all aspects of the Project with you. For more information, please visit our website http://nexusgastransmission.com/.

Sincerely,

Peter Cassan

Right-of-Way Project Manager NEXUS Gas Transmission

Peter Carry

Enclosure:

Survey Permission form Description of Survey Activities Self-addressed stamped envelope

Tract No(s): «Tract_Number»

NEXUS Project Public and Agency Participation Plan January 2015

200 Corporate Center Drive, Suite 350 Coraopolis, PA 15108

«First_Name» «Last_Name» «CorporationTrust»

Tax Parcel ID #(s): «Tax_ID»



SURVEY AUTHORIZATION

I/we, hereby provide to NEXUS Gas Transmission, its affiliates, agents, employees and contractors, the limited permission to enter upon my/our property only for the purposes of conducting civil, environmental and cultural resource surveys, expressly subject to the condition that I am/we are paid for any and all damages to property or crops that may be directly caused by such activities. Your answers to the following questions will be most helpful in accurately completing our survey activities.

s there water well located s there a septic system loc		Yes	YesNo	No	
Comments:					
	Signature:				
Re: Tract No(s): «Tract_	Number»				
Dated:					
Telephone:	(home)				
	(work)				
	(cell)				

Page 4

Description of Survey Activities

Depending on the size of an individual parcel, all survey activities described below should only take a minimal amount of time and should not result in any inconvenience to the property owner. All survey work will be performed during reasonable daylight hours only. All work will be performed by authorized professional surveyors and their crews. The surveys that NEXUS Gas Transmission ("NEXUS") will request for each property are:

- (a) <u>Civil Survey</u>. This activity involves approximately four to five representatives, intermittently placing wooden stakes along a portion of each property to delineate the area described as the "study corridor." Depending upon the length of the proposed study corridor on the property to be surveyed, this activity should take no longer than two days for each property that will be surveyed.
- (b) Environmental Survey. This activity involves approximately two to three representatives walking within the study corridor, which will be clearly staked, to identify and delineate any vegetative and geological indicators of wetland areas that may be present on the property. The wetlands boundaries will be marked with small colored flags. NEXUS representatives will also look for the presence of any threatened or endangered species, if a suspected habitat is within the staked area. Depending on the length of the proposed route of the pipeline on the property being surveyed, this activity should take no longer than three days for each property that will be surveyed.
- (c) <u>Cultural Resources Survey</u>. This activity involves two to four representatives walking within the staked study corridor to identify any indicators of potential archaeological resources. If such a site is suspected, then the Archeologists would return to that location with spade shovels and perform a limited excavation of the test hole that would measure approximately 2x2 feet square and approximately 2-3 feet deep. Any area that is excavated for this type of survey will be restored by NEXUS to a condition consistent with its condition prior to the excavation. Depending on the length of the proposed route of the pipeline on the property being surveyed, the archaeological walkover will take less than one day. If a limited archaeological excavation is necessary, it should take no longer than two days, weather permitting.

During any survey work, no trees over 2 inches in diameter or timber will be cut down or removed from any property. Small brush, however, may be cut in order for the civil surveyors to obtain a line-of-sight. If any such brush is cut in residential areas, it will be removed from the property by NEXUS representatives.



September 18, 2014

Angela Boyer U.S. Fish and Wildlife Service Ohio Ecological Services Field Office 4625 Morse Rd, Suite 104 Columbus, OH 43230

Subject: NEXUS Gas Transmission, LLC NEXUS Gas Transmission Project

NEXUS Gas Transmission, LLC, a joint venture between Spectra Energy and DTE Energy Co., is proposing to construct approximately 245-miles of 42-inch diameter natural gas pipeline from Kensington, Ohio to Willow Run, Michigan. The NEXUS Gas Transmission Project ("NEXUS Project" or the "Project") traverses approximately 199-miles through eleven (11) counties in Ohio, including Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, and Fulton. NEXUS is investigating a study corridor as generally depicted on attached Figure 1.

Initial review of the potential pipeline corridor indicated that rare, threatened and/or endangered species may be present based on published county lists. Table 1 is attached and lists the rare, threatened and endangered species that have been previously identified in the counties traversed by the pipeline corridor. On behalf of NEXUS, TRC is requesting the assistance of the U.S. Fish and Wildlife Service ("USFWS") to determine if any of these species are known to occur within the one-mile wide area under investigation. This information will assist us in determining a route to potentially avoid and minimize disruption to sensitive habitat and determine potential seasonal or species specific surveys that maybe required during permitting of the Project. Any further comments or survey guidance regarding rare, threatened, endangered or other important species is also welcomed.

To help facilitate the consultation process, TRC requests a meeting to discuss the general scope of the proposed Project and the consultation process with the USFWS moving forward. This meeting will be the first of many opportunities to participate in the development and review of these projects. We will be contacting you soon and hope to schedule this meeting within the next month. Additional information such as a GIS SHP files of the Project study corridor to aid in the review of the Project can also be provided at that time.

U.S. Fish and Wildlife Service September 18, 2014 Page 2 of 3

If you have any questions regarding the Project or the request herein, please contact me at TRC by calling (207) 232-1979 or via email at mlychwala@trcsolutions.com

Sincerely,

Michael Lychwala, TRC

cc: Matt Barczyk, Spectra Energy Partners, LP Angela Gardner, TRC U.S. Fish and Wildlife Service September 18, 2014 Page 3 of 3

Table	1- Federally Listed Species Pote	entially Occurring Within/	Near Nexus Project in Ohio
Common Name	Scientific Name	Status	County Traversed By Project With Species Occurrence
Indiana bat	Myotis sodalis	Endangered	All Counties
Northern Long-eared Bat	Myotis septentrionalis	Proposed Endangered	All Counties
Kirtland's warbler	Dendroica kirtlandii	Endangered	Erie, Lake, Lorain, Lucas, Sandusky
Piping Plover	Charadrius melodus	Endangered	Erie, Lake
Red Knot	Calidris canutus rufa	Proposed Threatened	Erie, Lake, Lorain, Lucas, Sandusky
Eastern massasauga	Sistrurus catenatus	Candidate	Columbiana, Erie, Lucas, Sandusky, Wayne
Rayed bean	Villosa fabalis	Endangered	Lucas
Karner blue butterfly	Lycaeides melissa samuelis	Endangered	Lucas
Eastern prairie fringe orchid	Platanthera leucophae	Threatened	Lucas, Sandusky, Wayne
Lakeside daisy	Hymenoxys herbacea	Threatened	Erie



Appendix H: List of Voluntary Landowner Informational Meetings

DATE	MEETING LOCATION	COUNTY
Tuesday, October 7, 2014	Firelands Elementary School 10779 Vermilion Rd. Oberlin, OH 44074	Lorain
Wednesday, October 8, 2014	Stark State College 6200 Frank Ave. NW North Canton, OH 44720	Columbiana Stark Summit Carroll
Thursday, October 9, 2014	Medina Community Recreation Center 855 Weymouth Rd. Medina, OH 44256	Medina Wayne
Monday, October 13, 2014	Swanton High School 601 N Main St Swanton, OH 43558	Fulton Lucas
Tuesday, October 14, 2014	Margaretta Elementary School 5906 Bogart Rd. W Castalia, OH 44824	Erie
Wednesday, October 15, 2014	Terra Community College 2830 Napoleon Rd. Fremont, OH 43420	Sandusky
Thursday, October 16, 2014	Owens Community College 30335 Oregon Rd Perrysburg, OH 43551	Wood
Wednesday, November 12, 2014	Lincoln High School 7425 Willis Rd Ypsilanti, MI 48197	Washtenaw Monroe
Thursday, November 13, 2014	Adrian High School 785 Riverside Ave Adrian, MI 49221	Lenawee



PRIVILEGED AND CONFIDENTIAL BOUND SEPARATELY IN VOLUME III

- **♦ Landowner List**
- **♦** List of Abutters Within ½ Mile of Proposed Compressor Stations