

**APPENDIX M-2**  
**Viewshed Analysis for Facilities Associated with the Gulf XPress Project**

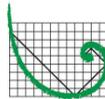


**COLUMBIA GULF TRANSMISSION, LLC**

**Gulf XPress Project  
Docket No. CP16-361-000**

**VISUAL IMPACT ASSESSMENT  
FOR THE  
MOREHEAD, PAINT LICK, AND CANE RIDGE COMPRESSOR STATIONS**

**Prepared by**



**ERM**

**November 2016**

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## 1.0 INTRODUCTION

Columbia Gulf Transmission, LLC (Columbia Gulf), conducted a visual impact assessment to describe conditions and potential visual impacts on sensitive features near the Morehead, Paint Lick, and Cane Ridge Compressor Stations. Residential and recreational land use areas are considered to be sensitive locations because the scenic values of a landscape may be used as part of a leisure experience for varying durations. Transportation corridors<sup>1</sup>, agricultural fields, and commercial areas are not considered sensitive areas as they are not typically associated with leisure use. This assessment uses topographic data in a Geographic Information System (GIS) to determine areas that would be visible from each compressor station. This analysis assumes clear weather and no intervening vegetation or structures (i.e., a “cleared ground surface” analysis) and therefore, represents the maximum potentially visible area of the Project or a “worst-case” scenario. The interaction between the proposed Gulf XPress Project (Project) and visually sensitive locations will help define the basis for assessing impacts and developing mitigation strategies.

### 1.1 METHODOLOGY

The Morehead, Paint Lick, and Cane Ridge Compressor Stations are located on private lands; therefore, they are not subject to federal visual resource management plans and standards. The visual impact assessment methodology applied in this analysis is based on the general concepts found in the United States Forest Service (USFS) Scenery Management System (SMS) (U.S. Department of Agriculture [USDA], 1995) and is described in the *Agriculture Handbook 701, Landscape Aesthetics - A Handbook for Scenery Management* and the National Park Service (NPS) Guide to Evaluating Visual Impact Assessments for Renewable Energy Projects (NPS, 2014).

The SMS establishes a method for measuring the scenic value of lands in National Forests, according to the opinions of various types of viewers and takes into account a wide variety of existing characteristics, such as (but not limited to) slope; vegetative cover type, pattern, height and distribution; soils; geology; and the “edge effect” where different landscape elements meet.

The USFS defines distance zones as the generalized groupings used to describe how viewers see the landscape. The SMS identifies four distance zones:

- immediate foreground (0 to 300 feet);
- foreground (300 feet to 0.5 mile);
- middleground (0.5 mile to 4 miles); and
- background (4 miles to the horizon).

Immediate foreground and foreground views tend to highlight details ranging from individual leaves to individual trees. The middleground “is usually the predominant distance zone at which National Forest landscapes are seen, except for regions lands or tall, dense vegetation.” In the background, “texture has disappeared and color has flattened, but large patterns of vegetation or rock are still distinguishable” (USDA, 1995 4-12). Foreground and the immediate foreground are usually the most visually sensitive areas. This assessment considers views within a 2-mile-wide buffer of each compressor station to capture the area in which visual impacts would be the greatest (Figures 1, 6, and 7).

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<sup>1</sup> The compressor stations are not located along scenic byways.

Visual impacts are defined by the NPS as “changes to the scenic attributes of the landscape brought about by the introduction of visual contrasts from a proposed project, and associated changes in the human visual experience of the landscape” (NPS, 2014:17). They describe the change to the visual qualities of the landscape resulting from the introduction of visual contrasts as well as the human response to that change (NPS, 2014). Specifically for the compressor stations, the visual contrast created by the exhaust stack extending above the tree line could give viewers the perception of a natural landscape being interrupted by manmade elements.

The visual analysis is based on topography from 10-meter Digital Elevation Model (DEM) data available from the United States Geological Survey (USGS). The analysis was performed using the Viewshed Analysis tool in ArcGIS (specifically ArcMap 10.3.1), the industry standard for GIS mapping and analysis. The GIS-based analysis identified areas where the top of the exhaust stack (the tallest component of each compressor station) at the Morehead, Paint Lick, and Cane Ridge Compressor Stations could potentially be visible. The other components of the compressor stations are not necessarily insignificant, but have less significant visual effect due to a lack vertical scale. Tables 1 through 3 provide a list of potentially sensitive features identified as a result of the GIS analysis. These features are depicted on Figures 2, 7, and 9.

The visual impact area was further refined through identification of surrounding vegetation and structures that potentially obscure views and restrict views from sensitive locations. Aerial photography of current conditions (2015) was examined to refine the visual analysis. Additionally, as requested in the Federal Energy Regulatory Commission’s Data Request dated August 24, 2016, the views of the Cane Ridge Compressor Station include photographs taken from public locations within nearby communities of Mill Run; the residences along Hidden Creek Drive; Mill Creek Park and the Mill Creek Greenway; and Stanford Village. The location of each photograph location was recorded by a global position system (GPS) unit. These photographs are included in Attachment 17-1 along with an overview map depicting the locations from which the photographs were taken.

TABLE 1

**Gulf XPress Project  
Morehead Compressor Station  
Potentially Sensitive Features**

ID	Description	Latitude (decimal degrees)	Longitude (decimal degrees)	Distance from Project (miles)	Distance Zone
Business 1	Business			218 feet	Immediate Foreground
Business 2	Business			248 feet	Immediate Foreground
1	Residence	38.27	-83.43	1.0	Middleground
2	Residence	38.26	-83.44	0.7	Middleground
3	Residence	38.26	-83.44	0.6	Middleground
4	Residence	38.26	-83.44	0.6	Middleground
5	Residence	38.26	-83.44	0.6	Foreground
6	Residence	38.26	-83.44	0.5	Foreground
7	Residence	38.26	-83.44	0.4	Foreground
8	Residence	38.26	-83.44	0.4	Foreground
9	Residence	38.26	-83.44	0.4	Middleground
10	Residence	38.26	-83.44	0.5	Foreground
11	Residence	38.26	-83.44	0.5	Foreground
12	Residence	38.25	-83.44	0.4	Foreground
13	Residence	38.25	-83.44	0.3	Foreground
14	Residence	38.25	-83.44	0.3	Foreground
15	Residence	38.25	-83.44	0.2	Foreground
16	Residence	38.25	-83.44	0.2	Foreground
17	Residence	38.26	-83.44	0.5	Foreground
20	Residence	38.25	-83.44	0.2	Foreground
21	Residence	38.25	-83.44	0.1	Foreground
22	Residence	38.25	-83.44	0.1	Foreground
23	Residence	38.25	-83.44	0.2	Foreground
24	Residence	38.24	-83.44	0.3	Foreground
25	Residence	38.24	-83.45	0.6	Middleground
26	Residence	38.24	-83.45	0.8	Middleground
27	Residence	38.24	-83.44	0.5	Middleground
28	Residence	38.24	-83.45	0.7	Middleground
29	Residence	38.24	-83.45	0.7	Middleground
30	Business	38.24	-83.45	0.8	Middleground
31	Residence	38.24	-83.45	0.8	Middleground
32	Residence	38.24	-83.45	0.8	Middleground
33	Residence	38.24	-83.45	0.8	Middleground
34	Residence	38.24	-83.45	0.8	Middleground
35	Residence	38.24	-83.45	0.8	Middleground
36	Residence	38.24	-83.45	0.8	Middleground
37	Residence	38.24	-83.45	0.8	Middleground
38	Residence	38.24	-83.45	0.9	Middleground

TABLE 2					
<b>Gulf XPress Project Paint Lick Compressor Station Potentially Sensitive Features</b>					
ID	Description	Latitude (decimal degrees)	Longitude (decimal degrees)	Distance from Project (miles)	Distance Zone
NSA 1 <sup>a</sup>	Residence	37.58	-84.46	0.1	Foreground
NSA 2 <sup>a</sup>	Residence	37.58	-84.46	0.2	Foreground
NSA 4 <sup>a</sup>	Residence	37.58	-84.45	0.4	Foreground
NSA 5 <sup>a</sup>	Residence	37.58	-84.47	0.4	Foreground
1	Residence	37.58	-84.46	0.1	Foreground
2	Residence	37.58	-84.45	0.6	Middleground
3	Residence	37.59	-84.45	0.8	Middleground
4	Residence	37.58	-84.44	0.9	Middleground
5	Residence	37.59	-84.44	1.0	Middleground
6	Residence	37.59	-84.46	0.7	Middleground
7	Residence	37.59	-84.46	0.8	Middleground
8	Residence	37.57	-84.46	0.9	Middleground
9	Residence	37.59	-84.47	0.7	Middleground

Notes

<sup>a</sup> Resource Report 9, Appendix 9D-Noise Sensitive Areas identified the ambient sound survey for Paint Lick Compressor Station (April 2016).

TABLE 3					
<b>Gulf XPress Project Cane Ridge Compressor Station Potentially Sensitive Features</b>					
ID	Description	Latitude (decimal degrees)	Longitude (decimal degrees)	Distance from Project (miles)	Distance Zone
NSA 1	Residence, Closest house in Delvin Downs	36.03	-86.69	255 feet	Immediate Foreground
NSA 2	Residence, Closest house in Stanford Village	36.02	-86.69	135 feet	Immediate Foreground
NSA 3	Residence	36.03	-86.68	0.3	Foreground
NSA 4	Residence	36.03	-86.69	0.2	Foreground
1	Residence	36.03	-86.68	0.3	Foreground
2	Residence	36.03	-86.70	0.3	Foreground
3	Residence, Closest house on Hidden Creek Drive	36.02	-86.68	0.3	Foreground
4	Residence	36.01	-86.68	0.6	Middleground
5	Residence, Closest house in Mill Run Neighborhood	36.02	-86.69	0.3	Foreground

Notes

<sup>a</sup> Resource Report 9, Appendix 9D-Noise Sensitive Areas identified in the ambient sound survey for Cane Ridge Compressor Station (April 2016).

## 1.2 MOREHEAD COMPRESSOR STATION

A visual assessment was conducted to determine if the Morehead Compressor Station would have a visual effect on the nearby residences, the Daniel Boone National Forest (DBNF), and the Sheltoewe Trace National Recreation Trail within the DBNF. Sheltoewe Trace National Recreation Trail is an approximately 290-mile-long trail that interconnects with many other trails. The trail traverses narrow ridges and deep ravines past historic homesteads, old logging tracts, and oil and gas wells (USDA, 2016).

The Morehead Compressor Station includes a paved access road, control building (approximately 26 feet tall), auxiliary building (approximately 24 feet tall), and compressor building (approximately 48 feet tall) with an exhaust stack (an additional 9 feet). The total combined height of the compressor building and stack would be approximately 57 feet above the ground surface consisting of 10 foot by 10 foot square ducting. Security chain link fencing will be installed around the perimeter of the permanent facility. The security fencing would be 8 feet in height with three strand barb wire extending an additional 1 foot above the top rail of the chain link fence.

Generally, the lighting system can be classified into the following categories:

- Compressor station operations
- Security; and
- Emergency

The Morehead Compressor station is situated within the Appalachian Plateaus (Kanawha) physiographic region which is characterized by relatively flat-lying rock beds with elevation ranging from 500 feet to 1,300 feet above mean sea level (AMSL) (USDA, 2006). Most of the region consists of farms, farm woodlots, and state and national forests. The proposed site is located at an elevation of 756 feet AMSL in relatively flat agricultural farmland. The proposed site is situated in a narrow valley surrounded by dissected uplands reaching approximately 1,260 feet AMSL on either side of the valley. State Route 377 (Cranston Road) is adjacent to the site along the western property boundary and Interstate 64 is to the east. An overhead utility distribution line is aligned along the western property boundary. DeBord Branch flows from west to east through the northern portion of the site into North Fork Triplett Creek, which is located east of the site. The area is surrounded by a combination of agricultural fields, public and private forest lands, and residential areas. The property is bordered to the north and south by private woodlots, which would provide natural visual screening. The DBNF is heavily forested and located east of Interstate 64 and west of Cranston Road. The Sheltoewe Trace National Recreation Trail is located within the DBNF approximately 1.5 miles east of the compressor station at an elevation of approximately 1,000 feet AMSL.

The results of the GIS analysis are depicted in Figure 1 and suggest that the Morehead Compressor Station would primarily be visible in the valley from the northeast and the southwest. Figure 2 identifies the residences and other areas that may have a view of the compressor station. The proposed compressor station may be visible to two businesses (a gas station and an unknown business) within the immediate foreground distance zone, 16 residences within the foreground distance zone, and 19 residences within the middleground distance zone.

There is no visual barrier between the compressor station and the businesses within the immediate foreground; however, these are not considered to be sensitive viewpoints. The

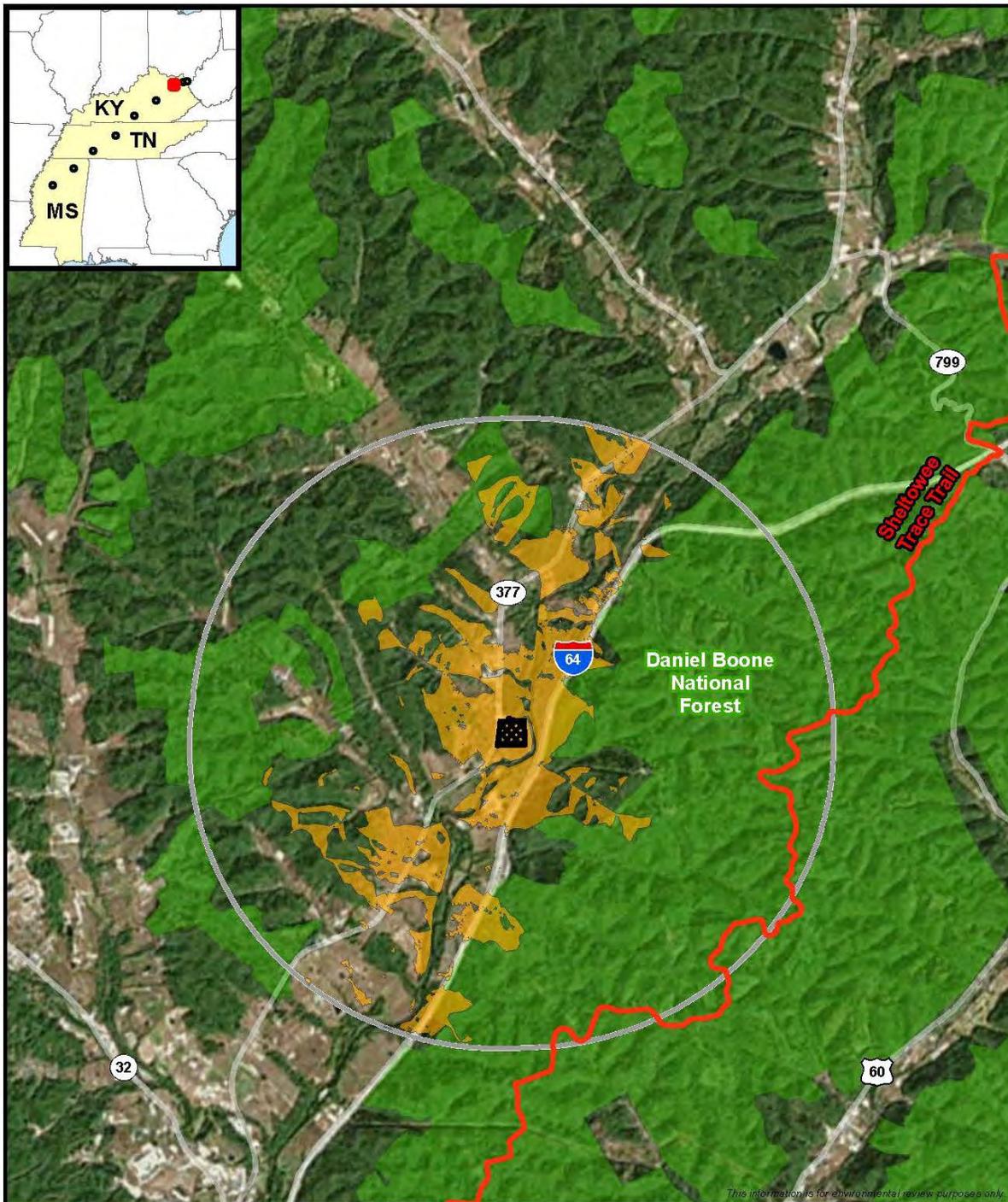
compressor station will not be visible to hikers on the Sheltopee Trace Trail due to the topographic relief and the screening effect of existing forested land in the DBNF.

The visual contrast created by the compressor station would be most evident from the three residences located southwest of the compressor station within the foreground distance zone (Figure 2: points 20, 21, and 22). A representative photograph of this view is depicted in Figure 3.

The compressor station would introduce new elements into the existing landscape that would alter the form, line, and color of the existing landscape. However, the remainder of the residences in the foreground distance zone with the potential to view the compressor station are at the same approximate elevation. They are not within a direct line of site of the compressor station due to intervening trees in windbreaks or forested areas. While portions of the compressor stations buildings may be visible above the trees, through gaps in vegetation, or during winter months when the deciduous trees have shed their leaves, the most visible part of the Morehead Compressor Station would be the exhaust stack.

The residences in the middleground distance zone with the potential to view the compressor station are not within a direct line of site of the compressor station. These residences range in distance between 0.7 and 0.9 mile from the compressor station site. Residences near the North Fork Triplett Creek to the southwest and residences along Democrat Road to the northwest would not see the compressor station due to intervening trees in windbreaks or forested areas, and at a distance of 0.5 mile or greater the compressor station, particularly the stack, would not dominate the landscape.

The existing source of nighttime lighting would be the gas station (Business 2 on Figure 2) on the west side of Cranston Road. There are no street lights along Cranston Road, but other sources of light would be from residences. The Morehead Compressor Station would be lit at night for Project and public safety. Night lighting would increase the visibility of the compressor station from sensitive views.



*This information is for environmental review purposes only.*

- Compressor Station
- Visible
- 2-mile Radius
- U.S. Forest Service Land

0 2,500 5,000 Feet

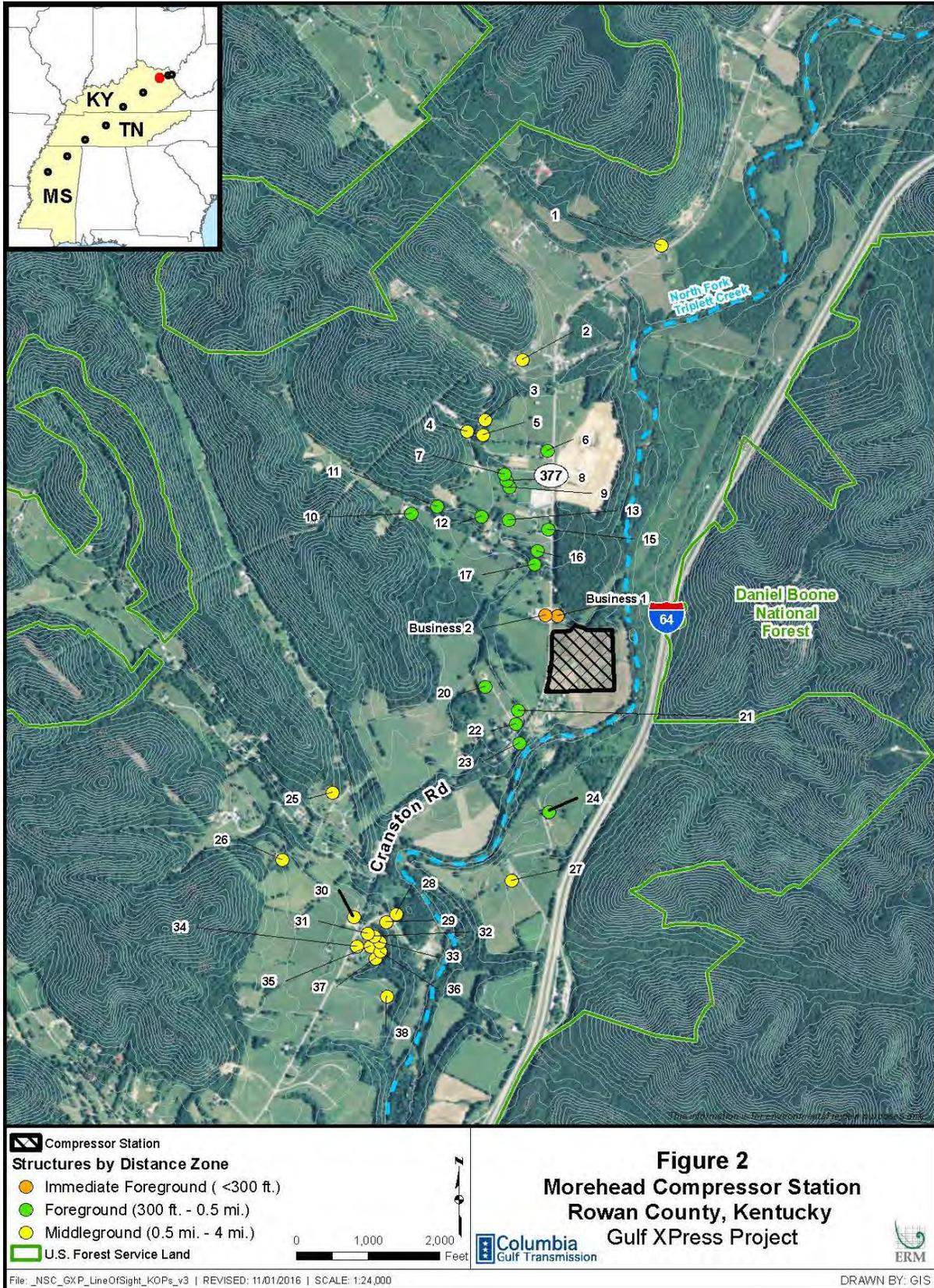


**Figure 1**  
 Visibility Analysis Overview  
 Morehead Compressor Station  
 Rowan County, Kentucky  
 Gulf XPress Project



File: \_NSC\_GXP\_LineOfSight | REVISED: 10/24/2016 | SCALE: 1:64,000

DRAWN BY: EKP





**Figure 3.** Morehead Compressor Station Site from Stegall Cemetery Road, facing northeast.

## **1.2.1 Mitigation**

### **1.2.1.1 Facility Color**

The exterior color of the proposed buildings at Morehead Compressor Station is CS-200, or Columbia Green. The majority of the equipment and piping will be the same Columbia Green color. The exhaust stack of the turbine will be a shade of gray per the manufacturer's Federal Standard Color (<http://www.federalstandardcolor.com/>).

The color of the stack will consist of non-reflective neutral gray. The stack will be viewed against the background sky and gray is conducive to minimizing the visual contrast with the background sky. When viewed against the sky, the color contrasts will vary depending on the weather conditions and distance of the viewer. For instance, the stack located in the middleground could be visible on a sunny day, but on a cloudy day the color contrast will be less. Contrast with vegetation is also an important element. Typical vegetation colors include shades of green, brown, and tan. Similar to the contrast with the background sky, the color contrast will vary depending on distance and weather conditions and will generally be more pronounced the closer the viewer is to the compressor station.

### **1.2.1.2 Landscape Plan**

The most visible portion of the facility is along Cranston Road to the north and south of the Morehead Compressor Station. Landscaping will be established to screen the length of the security fencing along Cranston Road between the north and south property line. A combination of native evergreen shrubs and trees will be planted along the west side property

boundary that will extend to the southwestern property corner to provide visual relief of the Morehead Compressor Station. The shrubs and trees will be planted approximately 15 feet apart in the area described above, with exception of the pipeline right-of-way area, as presented on Drawing FD-GC21-150, titled “Morehead Landscape Plan” in Appendix 17-2 and marked as CEII.

### **1.2.1.3 Lighting Plan**

The objective of this plan is to provide adequate lighting at the compressor station, to comply with applicable regulatory requirements, and to minimize light pollution and trespass affecting the surrounding environment.

Minimum illumination levels were determined in accordance with current industry standards. Outdoor lighting may consist of general illumination (area lighting) and local illumination (task lighting) in order to provide sufficient lighting for the necessary operating and maintenance activities performed at the site.

The outdoor lighting systems are designed to ensure that minimal stray light will leave the site, and that glare is not encountered by personnel performing normal operations activities. At the compressor station facilities, the yard lighting will be directionally aimed inward to the center of the facility. The illumination levels at the property line are significantly less than 0.5 footcandles (fc). The yard lights will be automated so that the station lighting will only illuminate if maintenance work is being performed after hours or in the event of certain unanticipated conditions. In addition, dark-sky compliant lighting will be installed to reduce light pollution and trespass when illuminated. The lighting plan is presented on Drawing FD-GC21-SK01-P3 in Appendix 17-3 and marked as Critical Energy Infrastructure (CEII).

Generally, emergency lighting will provide for fit-for-purpose safety needs resulting from a loss of power to the facility due to weather events or interrupted service from the electricity provider.

## **1.3 PAINT LICK COMPRESSOR STATION**

A visual assessment was conducted to determine if the Paint Lick Compressor Station would have a visual impact on potential sensitive views. The Paint Lick Compressor Station includes a paved access road, the control building (approximately 27 feet tall), an auxiliary building (approximately 25 feet tall), and the compressor building (approximately 48 feet tall) with an exhaust stack (an additional 9 feet). The total combined height of the compressor building and stack would be approximately 57 feet above the ground surface consisting of 10 foot by 10 foot square ducting. Security chain link fencing will be installed around the perimeter of the permanent facility. The security fencing would be 8 feet in height with three strand barb wire extending an additional 1 foot above the top rail of the chain link fence. Generally, the lighting system can be classified into the following categories:

- Compressor station operations
- Security; and
- Emergency

The Paint Lick Compressor station is situated within the Interior Low Plateaus physiographic region which is characterized by gently rolling hills and rich, fertile soils (USDA, 2006). Most of the region consists of farms and pasture interspersed with mixed hardwood forest. Elevation ranges from about 660 feet to 1,100 feet. The proposed site is at an elevation of 995 feet AMSL within an area of low rolling hills. The site is located away from the town center of Lancaster, which lies about 6.8 miles to the west, and population within the area is sparse. Medium to large farming operations with scattered residences surround the site. Kentucky Route 52 borders the property to the north and an overhead utility distribution line is aligned along the north side of the highway. A windbreak along the western edge of the compressor station property creates a visual screen that helps minimize the visibility of the compressor station to the west (Figure 4). The photograph in Figure 5 was taken from the southwestern corner of the proposed facility fence line toward a water tower located about 0.6 mile east. Without access to the property, the water tower height was estimated from the highway to be about 80 feet. Only the top of the water tower is visible due to the undulating topography and natural vegetative screening.



**Figure 4.** Existing Landscape from Proposed Compressor Station site, facing southwest

The results of the GIS analysis are depicted in Figure 6 and suggest that the Paint Lick Station would be visible in patches in all directions around the compressor station site. Figure 7 identifies the residences and other areas that may have a view of the compressor station. No sensitive viewpoints are located in the immediate foreground. Five residences are within the foreground distance zone and eight residences are within the middleground distance zone. The Paint Lick Elementary School and the Fariview Christian Church are west of the Paint Lick Compressor Station along Kentucky Route 52, but would have no views of the facility.

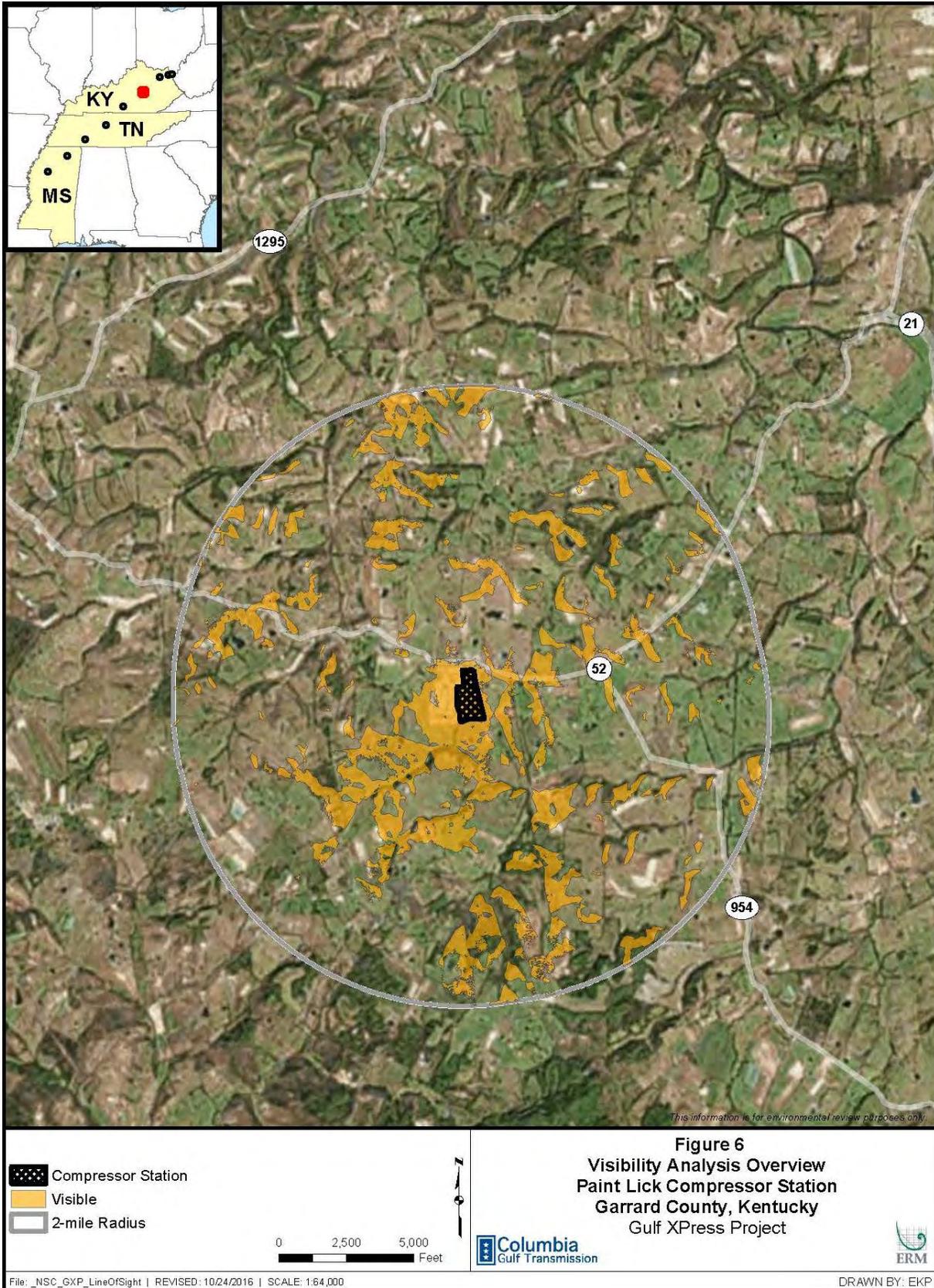


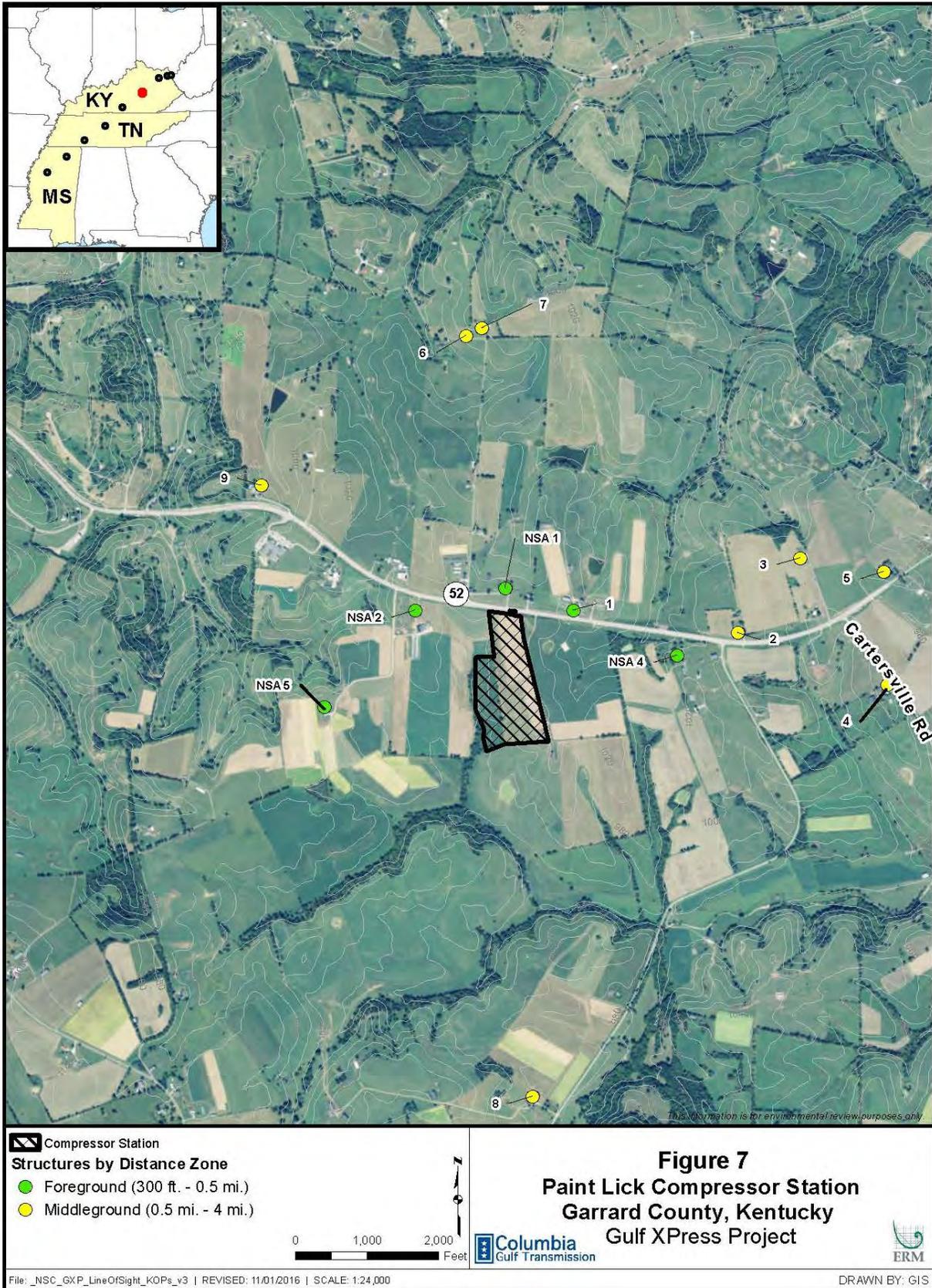
**Figure 5.** Water Tower about 0.6 mile east of Proposed Paint Lick Compressor Station.

Three residences within the foreground distance zone would have a direct view of the compressor station (Figure 7, points NSA1, NSA2, and 1). The compressor station would introduce new elements into the existing landscape that would alter the form, line, and color of the existing landscape for these direct viewers. However, for these viewers the geometric forms of the buildings would be similar to those of the surrounding farming operations. The remaining residences in the foreground may have views blocked by trees that are part of windbreaks located to the east and west of the proposed compressor station. While portions of the compressor stations buildings may be visible above the trees, through gaps in vegetation, or during winter months when the deciduous trees have shed their leaves, the most visible part of the Paint Lick Compressor Station would be the exhaust stack (similar to the existing water tower).

A small number of potential viewers are in the middleground distance zone. However, the residences in the middleground distance zone with the potential to view the compressor station are not within a direct line of site of the compressor station due to intervening trees in windbreaks or forested areas, although at a distance of 0.5 mile or greater the compressor station would not dominate the landscape.

There are no street lights along Kentucky Route 52, but other sources of nighttime lighting would be from residences. The Paint Lick Compressor Station would be lit at night for Project and public safety. Night lighting would increase the visibility of the compressor station from sensitive views.





### **1.3.1 Mitigation**

#### **1.3.1.1 Facility Color**

The exterior color of the proposed buildings at Paint Lick Compressor Station is CS-200, or Columbia Green. The majority of the equipment and piping will be the same Columbia Green color. The exhaust stack of the turbine will be a shade of gray per the manufacturer's Federal Standard Color (<http://www.federalstandardcolor.com/>).

The color of the stack will consist of non-reflective neutral gray. The stack will be viewed against the background sky and gray is conducive to minimizing the visual contrast with the background sky. When viewed against the sky, the color contrasts will vary depending on the weather conditions and distance of the viewer. For instance, the stack located in the middleground could be visible on a sunny day, but on a cloudy day the color contrast will be less. Contrast with vegetation is also an important element. Typical vegetation colors include shades of green, brown, and tan. Similar to the contrast with the background sky, the color contrast will vary depending on distance and weather conditions and will generally be more pronounced the closer the viewer is to the compressor station.

#### **1.3.1.2 Landscape Plan**

The most visible portion of the facility is immediately north and northwest of the Paint Lick Compressor Station across Kentucky Route 52. Landscaping will be established parallel to and north of Columbia Gulf's existing pipelines at a bearing of 35 degrees (reciprocal bearing of 215 degrees) across the width of the property. A combination of native evergreen shrubs and trees will be planted along the existing northern ridge to provide visual relief of the Paint Lick Compressor Station. The shrubs and trees will be planted approximately 15 feet apart in the area described above, with exception of the pipeline right-of-way area, as presented on Drawing FD-GC22-150, titled "Paint Lick Landscape Plan" included in Appendix 17-2 and marked as CEII.

#### **1.3.1.3 Lighting Plan**

The objective of this plan is to provide adequate lighting at the compressor station, to comply with applicable regulatory requirements, while minimizing light pollution and trespass affecting the surrounding environment.

Minimum illumination levels were determined in accordance with current industry standards. Outdoor lighting may consist of general illumination (area lighting) and local illumination (task lighting) in order to provide sufficient lighting for the necessary operating and maintenance activities performed at the site.

The outdoor lighting systems are designed to ensure that minimal stray light will leave the site, and that glare is not encountered by personnel performing normal operations activities. At the compressor station facilities, the yard lighting will be directionally aimed inward to the center of the facility. The illumination levels at the property line are significantly less than 0.5 fc. The yard lights will be automated so that the station lighting will only illuminate if maintenance work is being performed after hours or in the event of certain unanticipated conditions. In addition, dark-sky compliant lighting will be installed to reduce light pollution and trespass when illuminated. The lighting plan is presented on Drawing FD-GC22-SK01-P3 in Appendix 17-3 and marked as CEII.

Generally, emergency lighting will provide for fit-for-purpose safety needs resulting from a loss of power to the facility due to weather events or interrupted service from the electricity provider.

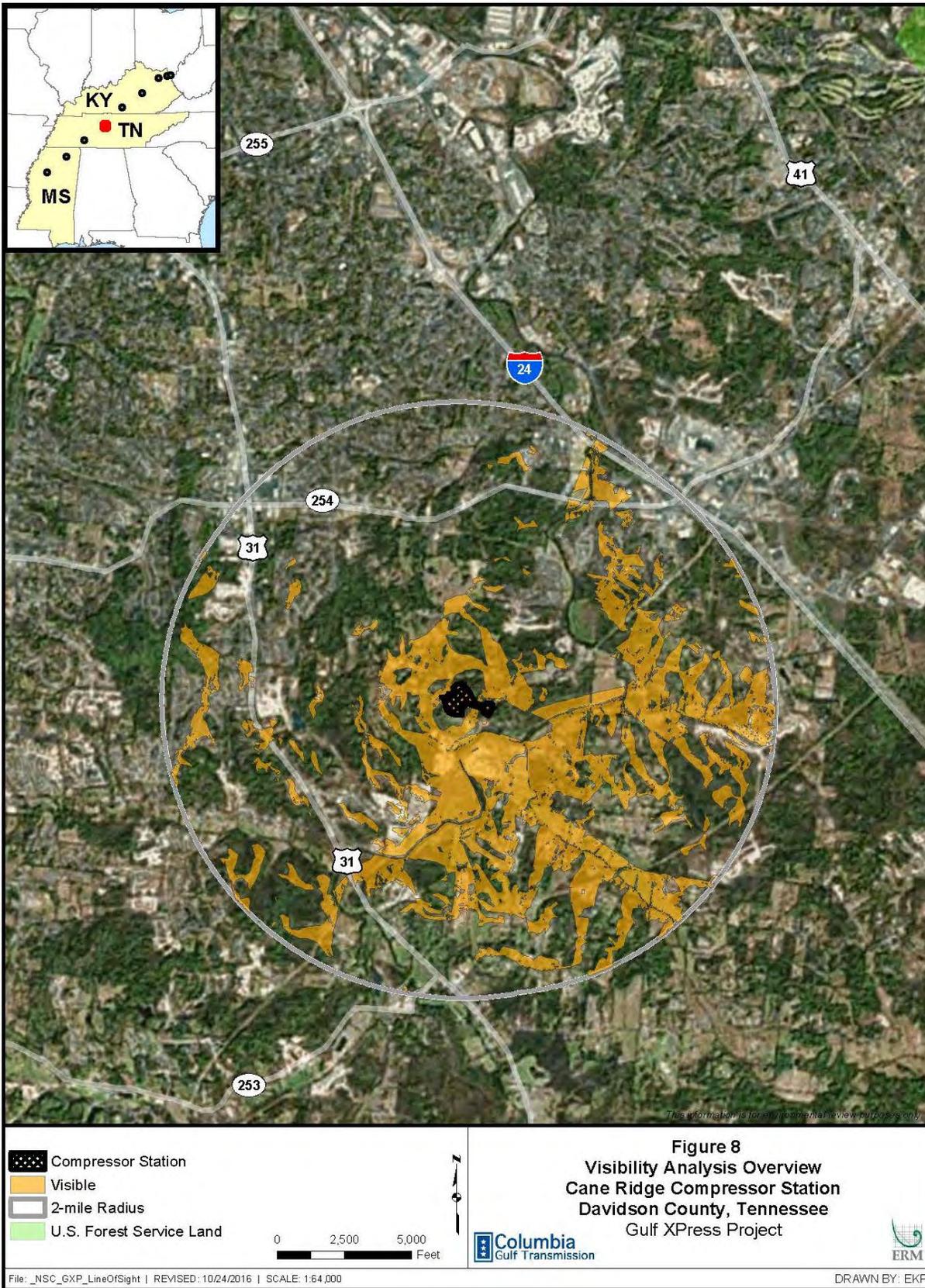
#### **1.4 CANE RIDGE COMPRESSOR STATION**

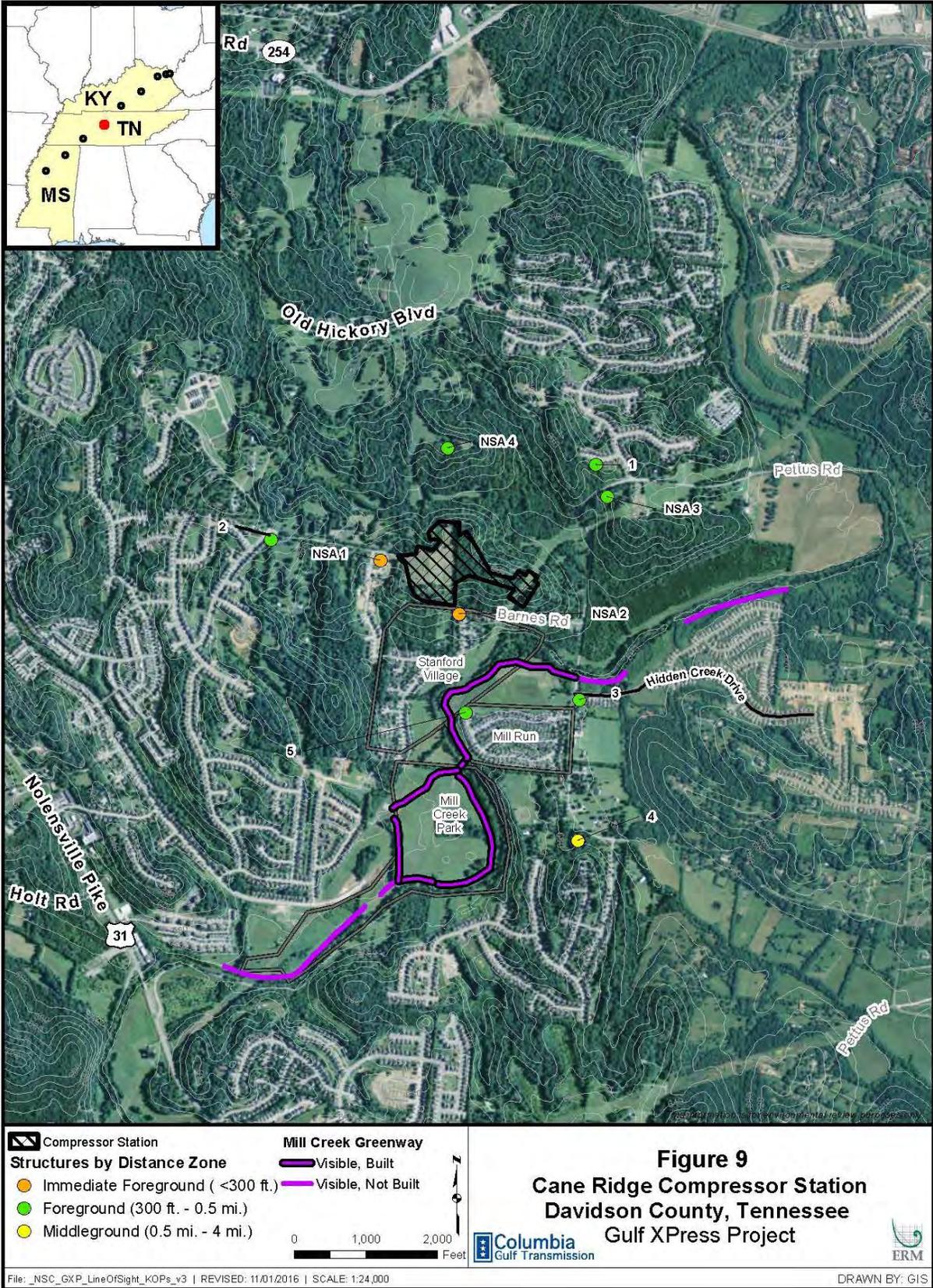
The area proposed for the Cane Ridge Compressor Station site is grass/hay and forest with a general topographic gradient toward the southeast. The property is situated adjacent to the north side of Barnes Road. Columbia Gulf has purchased about 90 acres of land surrounding the site as a visual and noise buffer and to provide a buffer against future encroachment resulting from outside development. Columbia Gulf has no plans to develop the land within the buffer. Much of the farmland in this area south of Nashville has been converted to residential use. The surrounding suburban residential subdivisions and commercial and industrial uses establish the urban form and character of the overall landscape within this greater Nashville metropolitan area. Interstate 24 is located about 2.2 miles to the northeast of the site. Development along the interstate corridor is mixed residential, commercial, and industrial. In addition to the overhead utility distribution lines within the residential subdivisions, overhead distribution lines are aligned with Barnes Road, Old Hickory Boulevard, and Pettus Road. A 500 kilovolt electric transmission corridor traverses the landscape generally parallel to Columbia Gulf's pipeline right-of-way about 1.5 miles to the south. There are no street lights along Barnes Road and the suburban residences would be the main source of nighttime lighting.

The Cane Ridge Compressor Station includes a paved access road, the control building (approximately 27 feet tall), an auxiliary building (approximately 25 feet tall), and the compressor building (approximately 48 feet tall) with an exhaust stack (an additional 9 feet). The total combined height of the compressor building and stack would be approximately 57 feet above the ground surface consisting of 10 foot by 10 foot square ducting. Security chain link fencing will be installed around the perimeter of the permanent facility. The security fencing would be 8 feet in height with three strand barb wire extending an additional 1 foot above the top rail of the chain link fence.

The Cane Ridge Compressor Station is located in the Nashville Basin which is characterized as "deeply dissected and consists of steep slopes between narrow, rolling ridgetops and narrow valleys" underlain by limestone bedrock (USDA, 2006: 395). This area is densely populated and much of the former farmland around Nashville has been converted to residential use.

The results of the GIS analysis are depicted in Figure 8 and suggest that the Cane Ridge Compressor Station would be visible at certain locations along Mill Creek and its tributaries as well as the wooded area around the site. Figure 9 identifies the residences or nearest residences in subdivisions that may have a view of the compressor station. The proposed compressor station may be visible to houses along Barnes Road in the immediate foreground, residences within Mill Run subdivision, along Hidden Creek Drive or three residences to the northeast in the foreground distance zone, and 1 residence within the middleground distance zone.





In Columbia Gulf's response to the Federal Energy Regulatory Commission's August 24, 2016 Data Request, the results of the visual video simulation along Barnes Road and the Stanford Village subdivision was filed to the Project docket on September 7, 2016. This visual simulation includes conceptual buildings and landscaping that would minimize views of the compressor station. Additional photographs were taken subsequent to the September 7 submittal to document the existing conditions from the Mill Run subdivision, along Hidden Creek Drive, Mill Creek Park, the Mill Creek Greenway, and Stanford Village subdivision. Figures 10 through 12 in Appendix 17-1 depict locations from which photographs were taken in each subdivision, park or path toward the proposed Cane Ridge Compressor Station.

### **Views from Hidden Creek Subdivision**

Hidden Creek Subdivision is situated between Old Hickory Boulevard and Pettus Road. The Hidden Creek subdivision is an established neighborhood primarily with 1.5-story and 2-story houses. An overhead utility distribution line is aligned with Hidden Creek Drive. The majority of this subdivision is within the middleground distance zone except near Old Hickory Boulevard where the residences fall within the foreground distance zone. Figures 13 through 21 are photographs taken from the Hidden Creek subdivision toward the Cane Ridge Compressor station (Appendix 17-1). Table 4 lists the bearing of each photograph point depicted on Figure 10 (Appendix 17-1).

### **Views from Mill Run**

The Mill Run subdivision is located southeast of the compressor station site east of Mill Creek. The Mill Creek subdivision is an established neighborhood primarily with 2-story houses. The Mill Creek Greenway is located north and west of the subdivision along Mill Creek. The neighborhood is accessible from Old Hickory Boulevard. This subdivision is within the foreground distance zone. Figures 22 through 26 in Appendix 17-1 are photographs taken in the Mill Run subdivision toward the proposed Cane Ridge Compressor Station. Table 4 lists the bearing of each photograph point depicted on Figure 11 (Appendix 17-1).

### **Views from Mill Creek Park and Mill Creek Greenway**

The Mill Creek Greenway is a paved trail from its intersection with Old Hickory Boulevard west to Mill Creek Park; other segments are planned, but not yet built to connect various communities (Nashville Metropolitan Government, 2016). Nashville actively works with the Metro Greenway Division of the Metropolitan Board of Parks and Recreation to build greenway trails for recreation and transportation. Figure 9 depicts the potentially visible built and planned segments near the Project. Figures 37 through 47 are photographs taken along the path toward the compressor station. Table 4 lists each photograph point and the bearing. West of Old Hickory Boulevard for about 0.6 mile, the path borders Mill Creek which is lined with mature hardwood trees. The path intersect Columbia Gulf's pipeline corridor (see Figures 29 through 32, photo points 16, 16a, and 17 depicted on Figure 11). The path crosses Mill Creek and enters Mill Creek Park where it is a trail loop. Mill Creek Park is an open grassy area bordered to the east and south by Mill Creek and residential subdivisions to the west.

### **Views from Stanford Village**

Stanford Village subdivision is situated south of Barnes Road and is within the foreground distance zone. This subdivision is an established neighborhood primarily with 2-story houses. Several overhead utility distribution lines are visible within the subdivision.

Figures 38 through 46 are photographs taken from this subdivision toward the proposed Cane Ridge Compressor Station. Table 4 lists the bearing of each photograph point depicted on Figure 12 (Appendix 17-1).

TABLE 4			
<b>Gulf XPress Project Cane Ridge Compressor Station Photographs of Current Conditions</b>			
Photo Point	Location	Bearing	Figure in Appendix 17-1
1	Stanford Village	343	38
2	Stanford Village	355	39
3	Stanford Village	16	40
4	Stanford Village	18	41
5	Stanford Village	15	42
6	Stanford Village	33	43
6a	Stanford Village	36	44
7	Stanford Village	56	45
8	Stanford Village	93	46
9	Mill Run	353	22
10	Mill Run	327	23
11	Mill Run	341	24
12	Mill Run	334	25
13	Mill Run	346	26
14	Mill Creek Greenway	314	27
15	Mill Creek Greenway	327	28
16	Mill Creek Greenway	349	29
16a	Mill Creek Greenway	234	31
16a	Mill Creek Greenway	46	31
17	Mill Creek Greenway	2	32
18	Mill Creek Greenway	7	33
19	Mill Creek Greenway	291	34
20	Mill Creek Greenway	9	35
21	Mill Creek Greenway	352	36
22	Mill Creek Greenway	355	37
23	Hidden Creek Subdivision	314	13
24	Hidden Creek Subdivision	304	14
25	Hidden Creek Subdivision	293	15
26	Hidden Creek Subdivision	295	16
27	Hidden Creek Subdivision	296	17
28	Hidden Creek Subdivision	295	18
29	Hidden Creek Subdivision	301	19
30	Hidden Creek Subdivision	299	20
31	Hidden Creek Subdivision	303	21

Field observation and the photographs of the residential subdivisions included in Appendix 17-1 confirm a moderate to high level of man-made changes to the landscape which was formerly agricultural. The residences and the greenway path generally do not have direct views of the proposed compressor station due to intervening vegetation, including Columbia Gulf's forested buffer surrounding the Cane Ridge Compressor Station. The large mature trees in these areas along with 1- and 2- storied structures would likely block views in the direction of the Project site. While portions of the compressor stations buildings may be visible above the

trees, through gaps in vegetation, or during winter months when the deciduous trees have shed their leaves, the most visible part of the Cane Ridge Compressor Station would be the exhaust stack.

#### **1.4.1 Mitigation**

##### **1.4.1.1 Facility Color**

The exterior color of the proposed buildings at Cane Ridge Compressor Station is CS-200, or Columbia Green. The majority of the equipment and piping will be the same Columbia Green color. The exhaust stack of the turbine will be a shade of gray per the manufacturer's Federal Standard Color (<http://www.federalstandardcolor.com/>).

The color of the stack will consist of non-reflective neutral gray. The stack will be viewed against the background sky and gray is conducive to minimizing the visual contrast with the background sky. When viewed against the sky, the color contrasts will vary depending on the weather conditions and distance of the viewer. For instance, the stack located in the middleground could be visible on a sunny day, but on a cloudy day the color contrast will be less. Contrast with vegetation is also an important element. Typical vegetation colors include shades of green, brown, and tan. Similar to the contrast with the background sky, the color contrast will vary depending on distance and weather conditions and will generally be more pronounced the closer the viewer is to the compressor station.

##### **1.4.1.2 Landscape Plan**

The most visible portion of the facility is along Barnes Road to the south of the Cane Ridge Compressor Station. Landscaping will be established to screen the length of the security fencing along Barnes Road. A combination of native evergreen shrubs and trees along with native deciduous tree behind the evergreens will be planted along the west side property boundary that will extend to the southwestern property corner to provide visual relief of the Cane Ridge Compressor Station. The shrubs and trees will be planted approximately 15 feet apart in the area described above as presented on Drawing FD-GC24-150, titled "Cane Ridge Landscape Plan" included in Appendix 17-2 and marked as CEII. This has also been represented in the Truescape video simulation shown during open houses and referenced in the September 7, 2016 filing.

##### **1.4.1.3 Lighting Plan**

The objective of this plan is to provide adequate lighting at the compressor station, to comply with applicable regulatory requirements, while minimizing light pollution and trespass affecting the surrounding environment.

Minimum illumination levels were determined in accordance with current industry standards. Outdoor lighting may consist of general illumination (area lighting) and local illumination (task lighting) in order to provide sufficient lighting for the necessary operating and maintenance activities performed at the site.

The outdoor lighting systems are designed to ensure that minimal stray light will leave the site, and that glare is not encountered by personnel performing normal operations activities. At the compressor station facilities, the yard lighting will be directionally aimed inward to the center of the facility. The illumination levels at the property line are significantly less than 0.5 fc.

The yard lights will be automated so that the station lighting will only illuminate if maintenance work is being performed after hours or in the event of certain unanticipated conditions. In addition, dark-sky compliant lighting will be installed to reduce light pollution and trespass when illuminated. The lighting plan is presented on Drawing FD-GC24-SK01-P3 in Attachment 17-3.

Generally, emergency lighting will provide for fit-for-purpose safety needs resulting from a loss of power to the facility due to weather events or interrupted service from the electricity provider.

## 2.0 REFERENCES

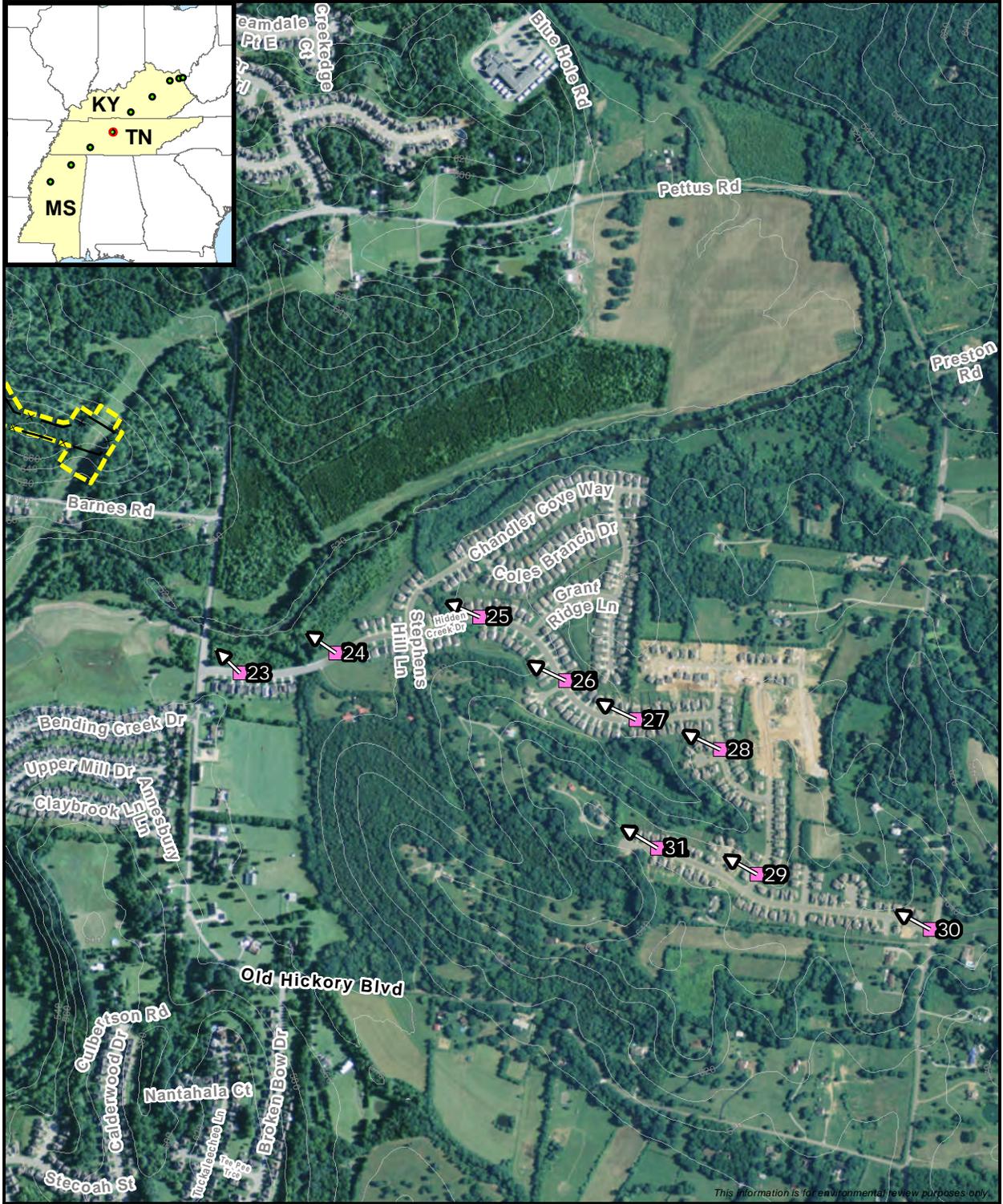
- Nashville Metropolitan Government. 2016. Nashville's Trails & Greenways, Mill Creek Greenway Details. Available online at: <http://www.nashville.gov/Portals/0/SiteContent/Parks/images/greenways/MC%20Park-Lenox.jpg>. Accessed September 2016.
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- U.S. Department of Agriculture. 1995. *Agriculture Handbook 701, Landscape Aesthetics-A Handbook for Scenery Management*.
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Data Request Pursuant to:  
OEP/DG2E/Gas Branch 4  
Data Request Pursuant to:  
OEP/DG2E/Gas Branch 4  
Columbia Gulf Transmission, LLC  
Gulf XPress Project  
Docket No. CP16-361-000  
§ 375.308(x)

**COLUMBIA GULF TRANSMISSION, LLC  
DOCKET NO. CP16-361-000**

**RESPONSE TO AUGUST 24, 2016  
ENVIRONMENTAL DATA REQUEST 17  
NOVEMBER 3, 2016  
3, 2016**

**APPENDIX 17-1**



This information is for environmental review purposes only.

- Photo Point
- Photo Direction
- Fenced Area
- Compressor Station

0    380    760  
Feet

**Figure 10**  
**Photo Points along Hidden Creek Drive**  
**Cane Ridge Compressor Station**  
 Gulf XPress Project



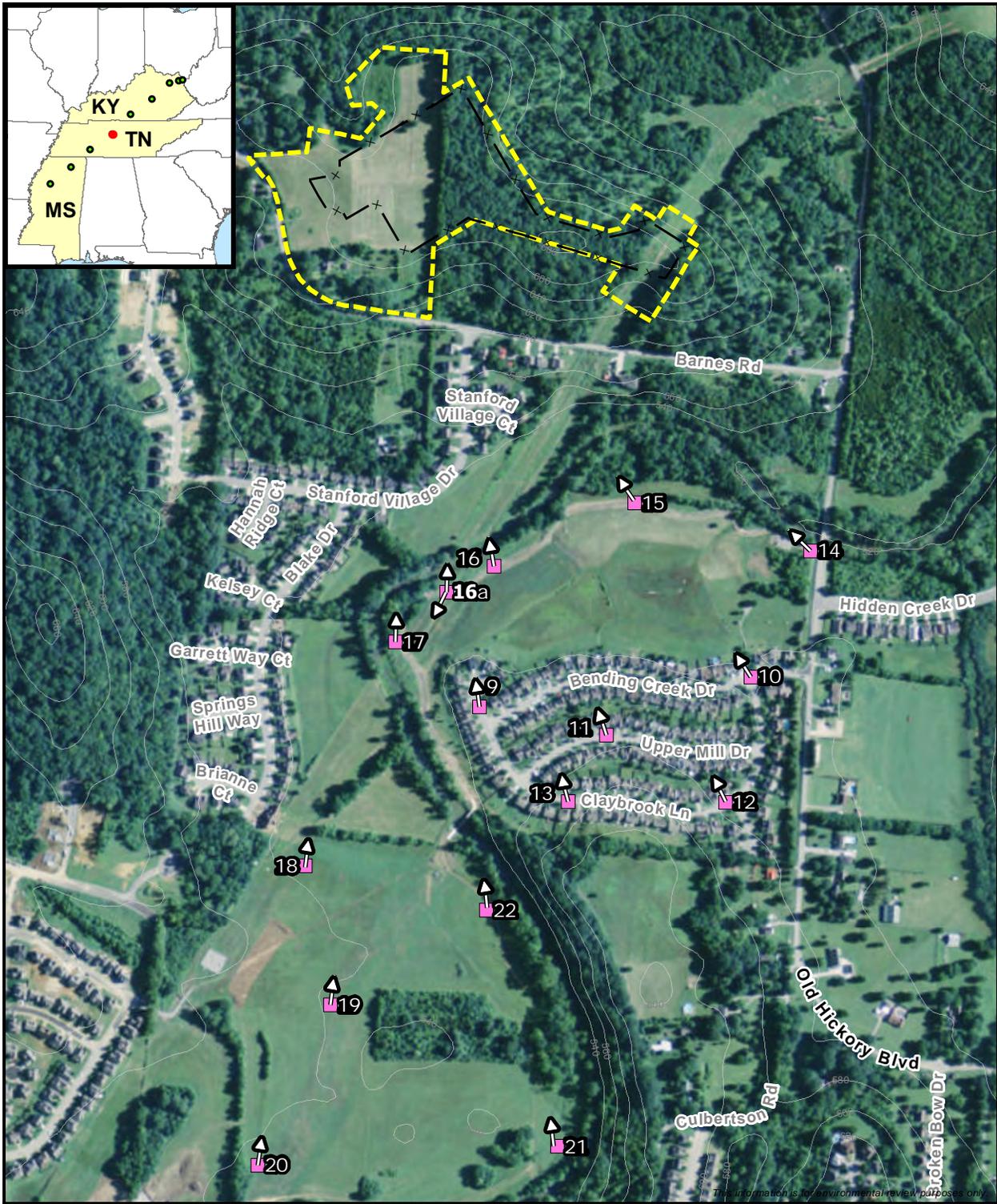
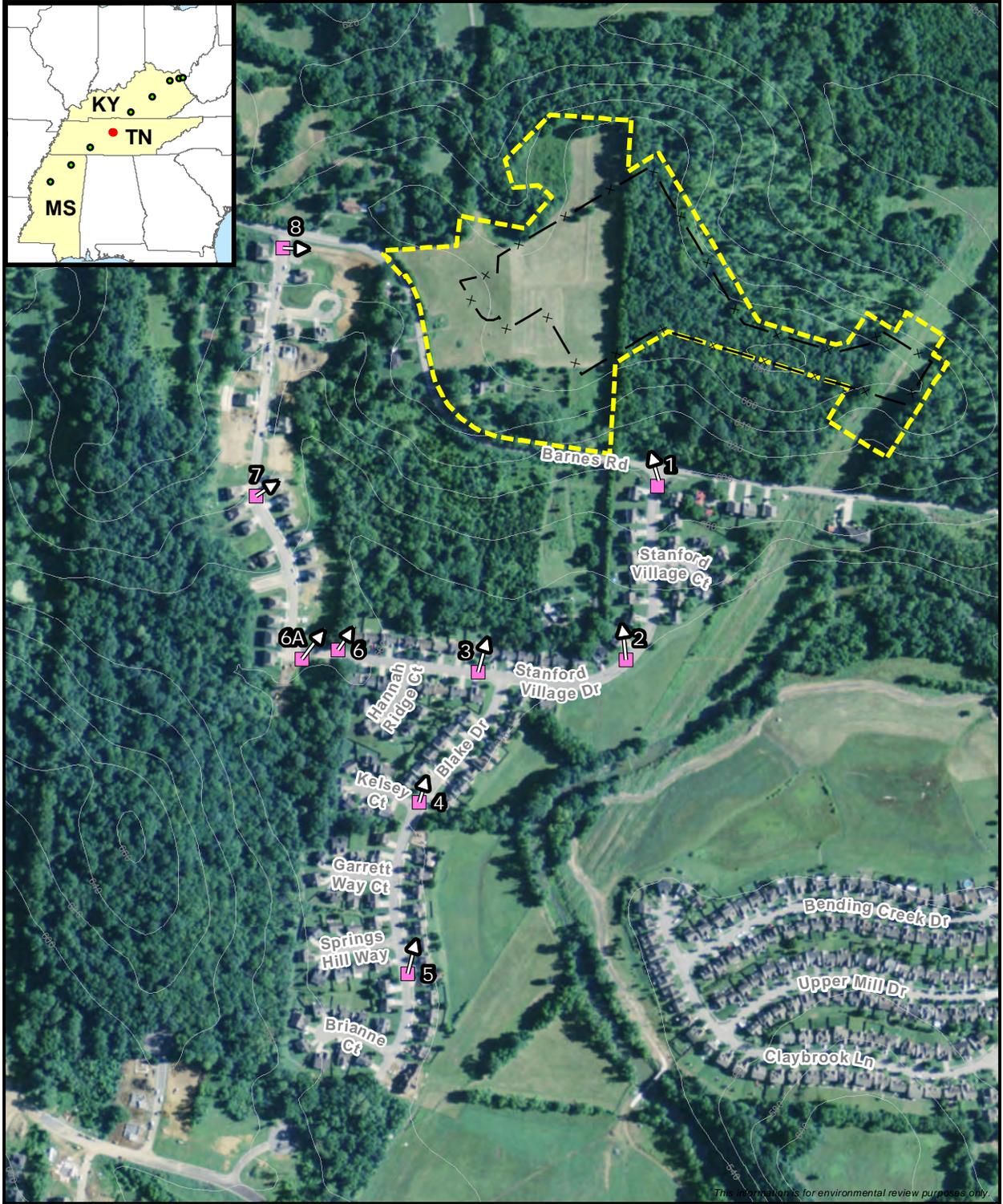


Photo Point  
 Photo Direction  
 Fenced Area  
 Compressor Station

0 250 500 Feet

**Figure 11**  
**Photo Points in Mill Run Neighborhood, Mill Creek Park and Greenway**  
**Cane Ridge Compressor Station**  
**Gulf XPress Project**



■ Photo Point  
⇨ Photo Direction  
x Fenced Area  
  Compressor Station

0 200 400 Feet

N

Columbia  
Gulf Transmission

**Figure 12**  
**Photo Points in Stanford Village**  
**Cane Ridge Compressor Station**  
 Gulf XPress Project





**Figure 13.** Hidden Creek Subdivision, Photo Point 23



**Figure 14.** Hidden Creek Drive, Photo Point 24



**Figure 15.** Hidden Creek Subdivision, Photo Point 25



**Figure 16.** Hidden Creek Subdivision, Photo Point 26



**Figure 17.** Hidden Creek Subdivision, Photo Point 27



**Figure 18.** Hidden Creek Subdivision, Photo Point 28



**Figure 19.** Hidden Creek Subdivision, Photo Point 29



**Figure 20.** Hidden Creek Subdivision, Photo Point 30



**Figure 21.** Hidden Creek Subdivision, Photo Point 31



**Figure 22.** Mill Run, Photo Point 9



**Figure 23.** Mill Run, Photo Point 10



**Figure 24.** Mill Run, Photo Point 11



**Figure 25.** Mill Run, Photo Point 12



**Figure 26.** Mill Run, Photo Point 13



**Figure 27.** Mill Creek Greenway at intersection with Old Hickory Boulevard, Photo Point 14



**Figure 28.** Mill Creek Greenway, Photo Point 15



**Figure 29.** Mill Creek Greenway, Photo Point 16



**Figure 30.** Mill Creek Greenway toward pipeline right-of-way, Photo Point 16a (234 degrees)



**Figure 31.** Mill Creek Greenway toward pipeline right-of-way, Photo Point 16b (46 degrees)



**Figure 32.** Mill Creek Greenway, Photo Point 17



**Figure 33.** Mill Creek Greenway, Photo Point 18



**Figure 34.** Mill Creek Greenway, Photo Point 19



**Figure 35.** Mill Creek Greenway, Photo Point 20



**Figure 36.** Mill Creek Greenway, Photo Point 21



**Figure 37.** Mill Creek Greenway, Photo Point 22



**Figure 38.** Stanford Village, Photo Point 1



**Figure 39.** Stanford Village, Photo Point 2



**Figure 40.** Stanford Village, Photo Point 3



**Figure 41.** Stanford Village, Photo Point 4



**Figure 42.** Stanford Village, Photo Point 5



**Figure 43.** Stanford Village, Photo Point 6



**Figure 44.** Stanford Village, Photo Point 6a



**Figure 45.** Stanford Village, Photo Point 7



**Figure 46.** Stanford Village, Photo Point 8

Data Request Pursuant to:  
OEP/DG2E/Gas Branch 4  
Columbia Gulf Transmission, LLC  
Gulf XPress Project  
Docket No. CP16-361-000  
§ 375.308(x)

**COLUMBIA GULF TRANSMISSION, LLC  
DOCKET NO. CP16-361-000**

**RESPONSE TO AUGUST 24, 2016  
ENVIRONMENTAL DATA REQUEST 17  
NOVEMBER 3, 2016**

**APPENDIX 17-2**

**Landscape Plans**

**Provided Separately**

**Contains Critical Energy Infrastructure**

**(CEII) – Do Not Release**

Data Request Pursuant to:  
OEP/DG2E/Gas Branch 4  
Columbia Gulf Transmission, LLC  
Gulf XPress Project  
Docket No. CP16-361-000  
§ 375.308(x)

**COLUMBIA GULF TRANSMISSION, LLC  
DOCKET NO. CP16-361-000**

**RESPONSE TO AUGUST 24, 2016  
ENVIRONMENTAL DATA REQUEST 17  
NOVEMBER 3, 2016**

**APPENDIX 17-3**

**Lighting Plans**

**Provided Separately**

**Contains Critical Energy Infrastructure**

**(CEII) – Do Not Release**

**APPENDIX N-1**  
**Noise Sensitive Areas Associated with the Mountaineer XPress Project**



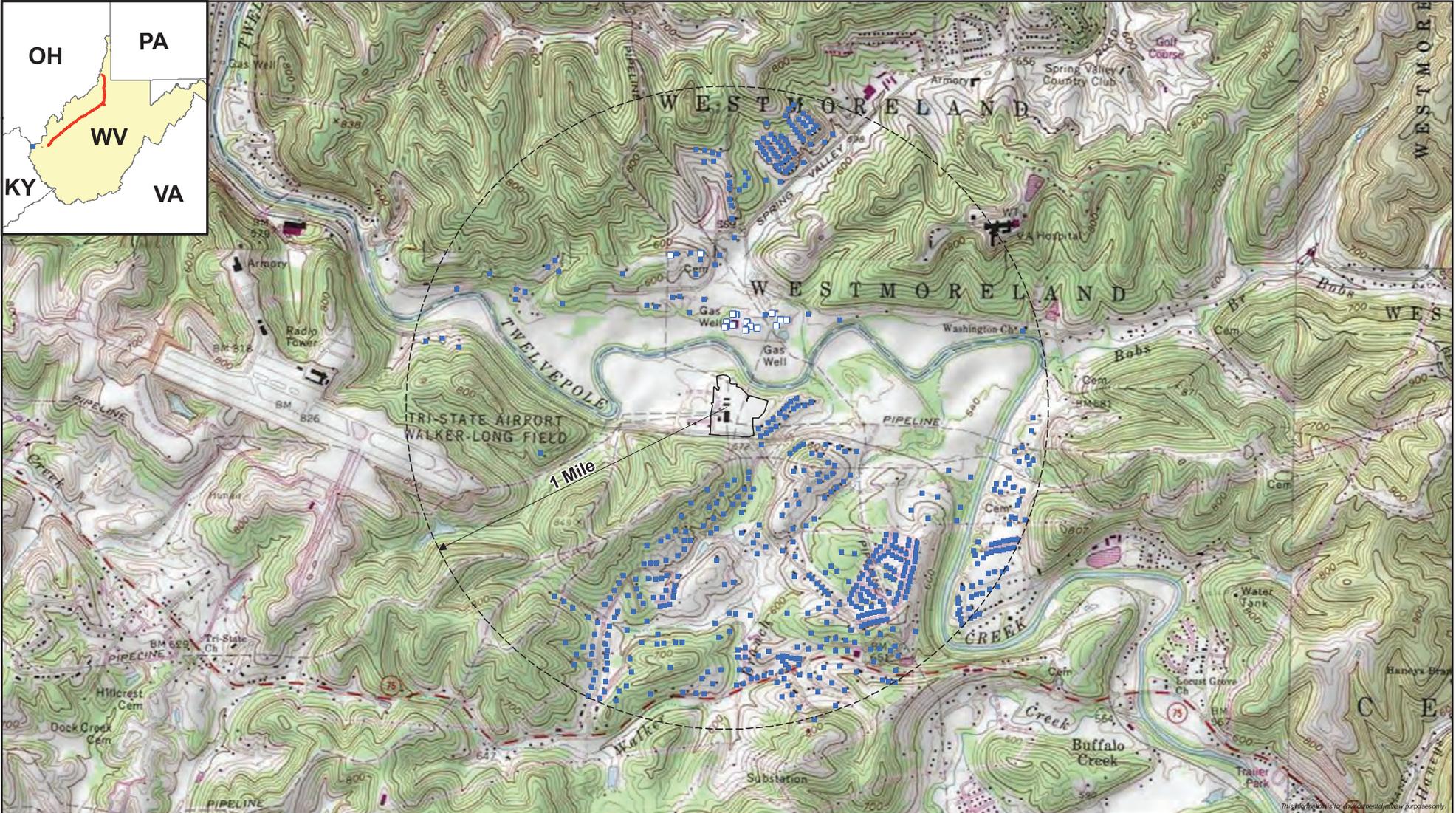
1 Mile Radius  
■ House or Mobile Home  
 Non-Residential Building  
 Site Boundary

1:18,000  
 0 750 1500  
 Feet

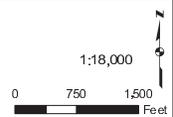
**Noise Sensitive Areas within a 1 Mile Radius of the Existing Lone Oak Compressor Station**  
**Marshall County, West Virginia**  
 Mountaineer XPress Project  
 Columbia Gas Transmission

File: \_NSAs | REVISED: 05/11/2016 | SCALE: 1:18,000 when printed at 11x17

DRAWN BY: TG



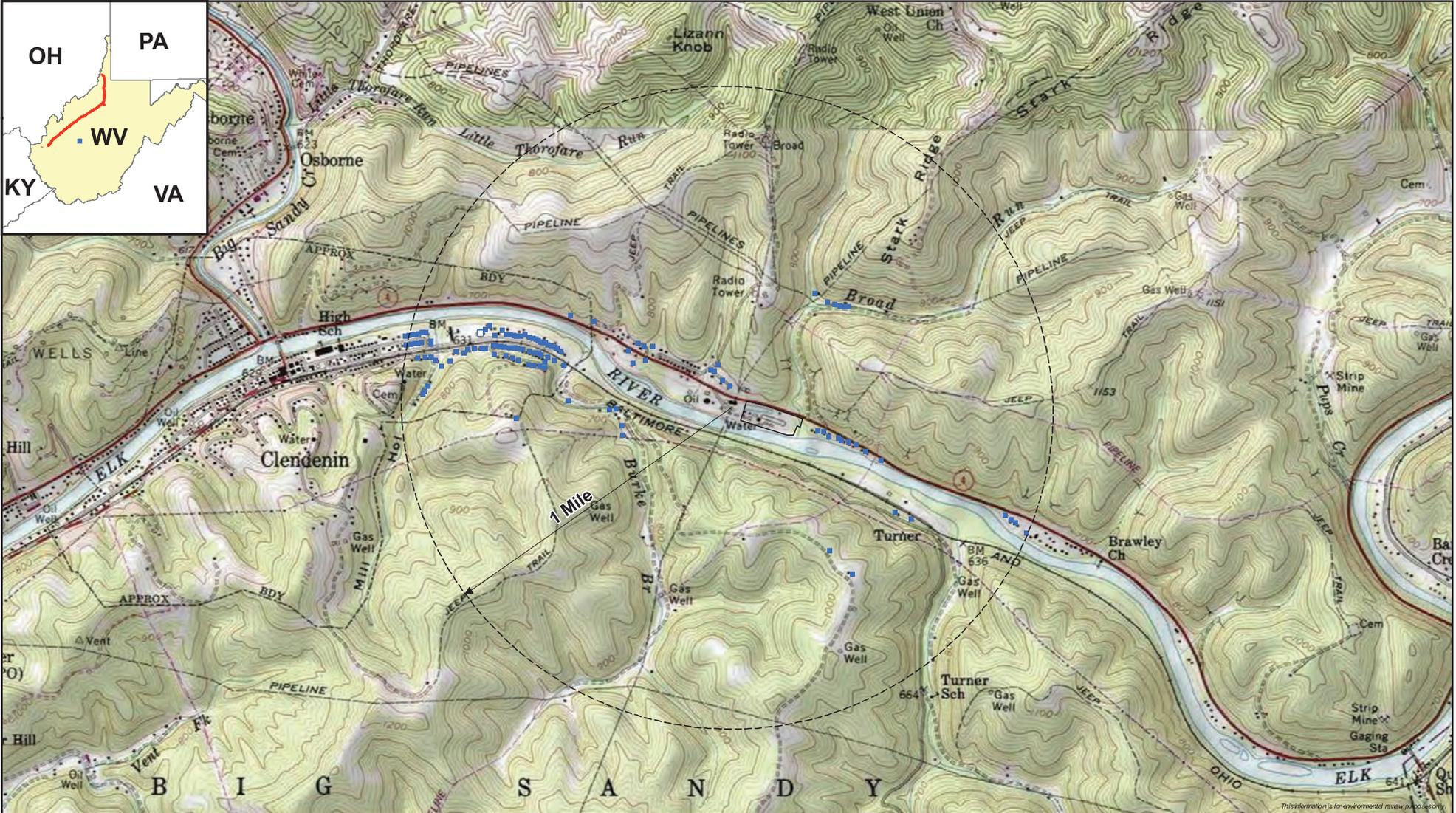
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- House or Mobile Home
- Non-Residential Building
- Site Boundary



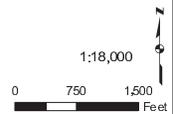
**Noise Sensitive Areas within a 1 Mile Radius of the  
Existing Ceredo Compressor Station  
Wayne County, West Virginia**  
Mountaineer XPress Project  
Columbia Gas Transmission

File: \_NSAs | REVISED: 05/11/2016 | SCALE: 1:18,000 when printed at 11x17

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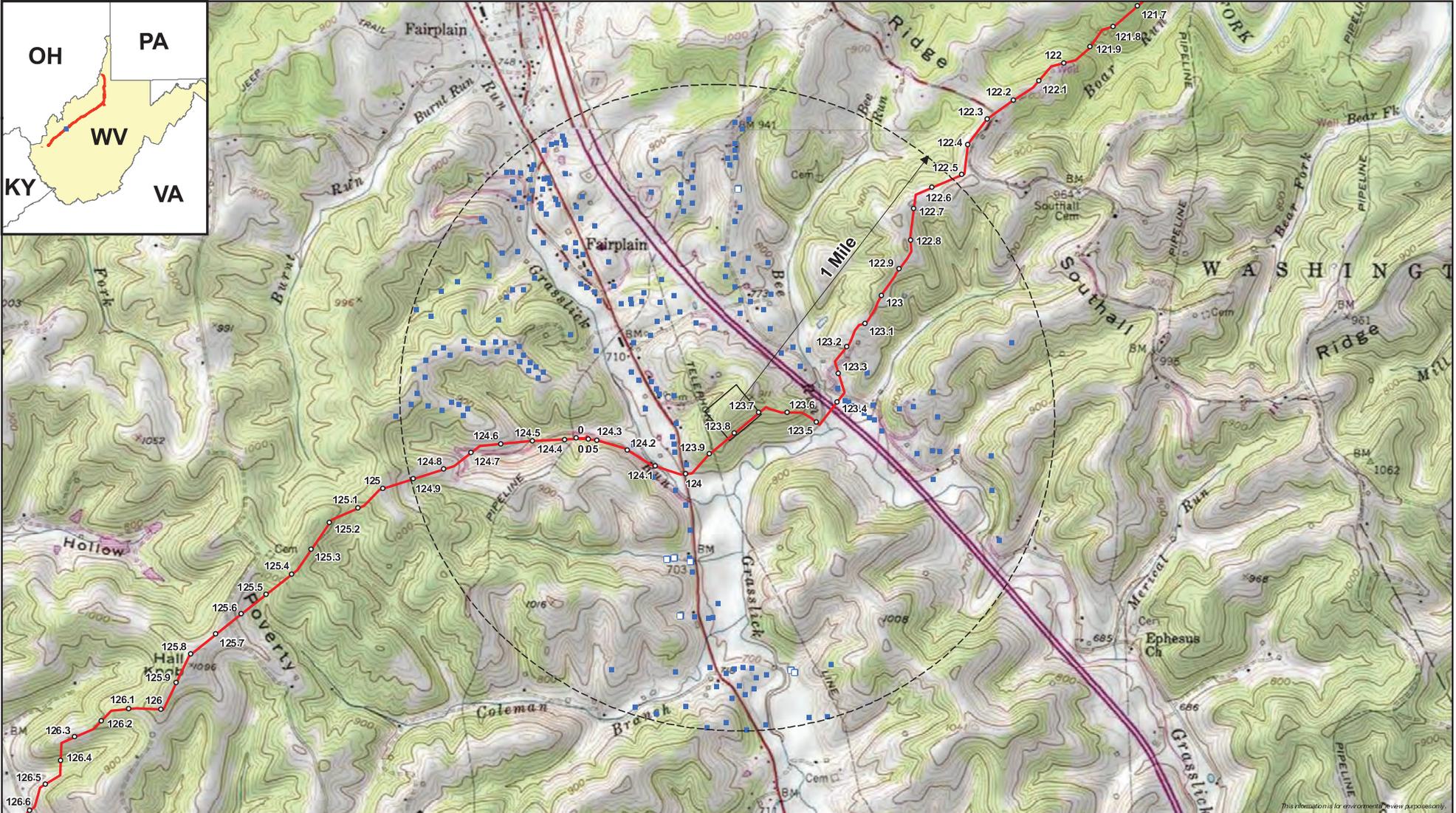
- 1 Mile Radius
- House or Mobile Home
- Non-Residential Building
- Site Boundary



**Noise Sensitive Areas within a 1 Mile Radius of the Existing Elk River Compressor Station**  
**Kanawha County, West Virginia**  
 Mountaineer XPress Project  
 Columbia Gas Transmission

File: \_NSAs | REVISED: 05/11/2016 | SCALE: 1:18,000 when printed at 11x17

DRAWN BY: TG



   1 Mile Radius      — Proposed Centerline  
■ House or Mobile Home       Site Boundary  
□ Non-Residential Building  
○ Milepost

1:18,000  
 0 750 1,500 Feet

**Noise Sensitive Areas within a 1 Mile Radius of the  
 Proposed Mount Olive Compressor Station  
 Jackson County, West Virginia  
 Mountaineer XPress Project  
 Columbia Gas Transmission**

File: \_NSAs | REVISED: 05/11/2016 | SCALE: 1:18,000 when printed at 11x17

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**Noise Sensitive Areas within a 1 Mile Radius of the Proposed Sherwood Compressor Station**  
 Doddridge County, West Virginia  
 Mountaineer XPress Project  
 Columbia Gas Transmission

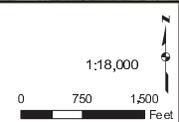
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 [Blue Square] House or Mobile Home      [White Square] Site Boundary  
 [Blue Square with X] Non-Residential Building  
 [Black Circle] Milepost

1:18,000  
 0 750 1500 Feet

File: \_NSAs | REVISED: 05/11/2016 | SCALE: 1:18,000 when printed at 11x17  
 DRAWN BY: TG



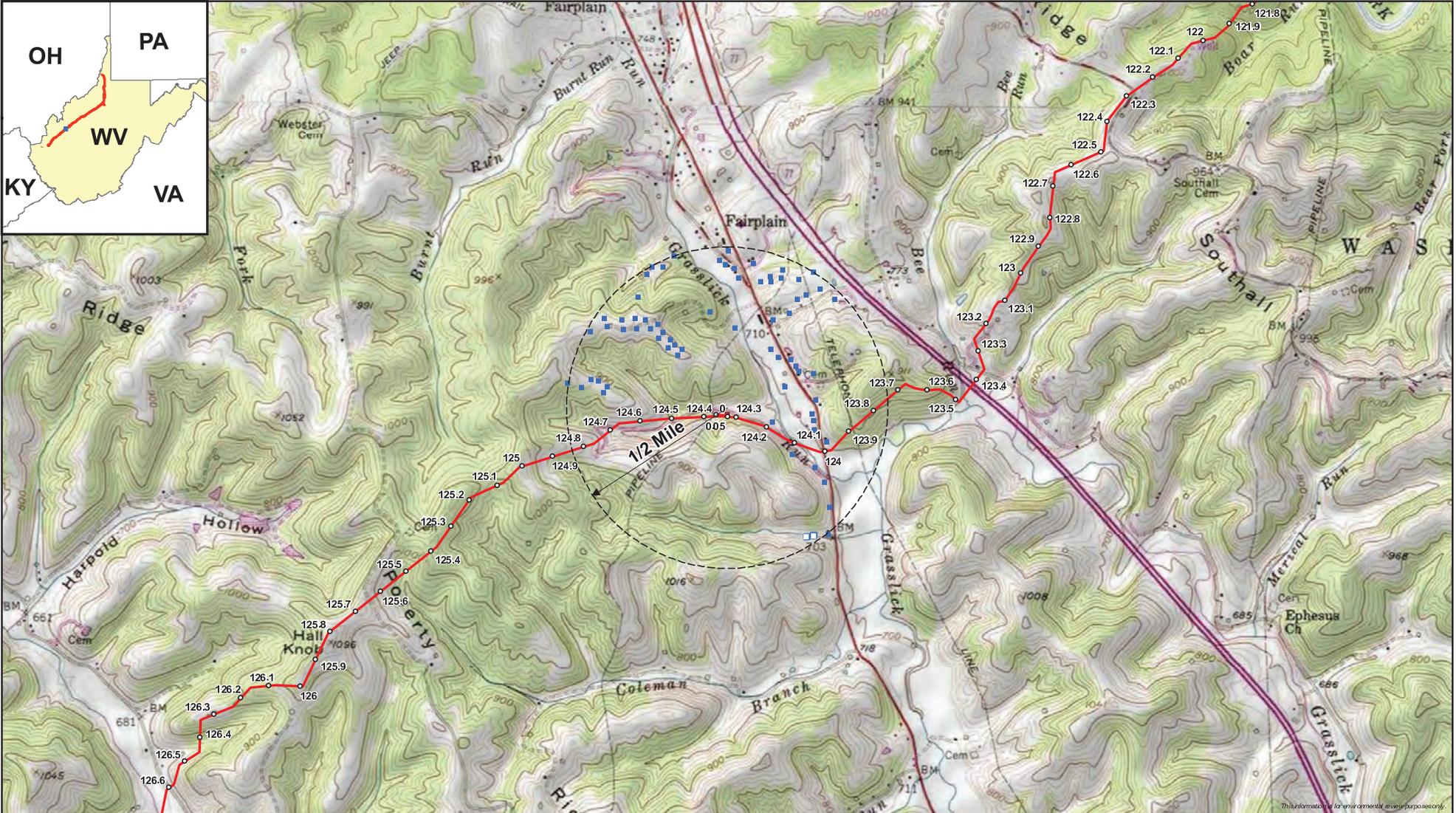
- 1 Mile Radius
- Site Boundary
- House or Mobile Home
- Milepost
- Proposed Centerline



**Noise Sensitive Areas within a 1 Mile Radius of the  
Proposed White Oak Compressor Station  
Calhoun County, West Virginia  
Mountaineer XPress Project  
Columbia Gas Transmission**

File: \_NSAs | REVISED: 05/11/2016 | SCALE: 1:18,000 when printed at 11x17

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   1/2 Mile Radius      — Proposed Centerline  
■ House or Mobile Home         Site Boundary  
□ Non-Residential Building  
○ Milepost

1:18,000  
 0    750    1,500  
 Feet

**Noise Sensitive Areas within a 1/2 Mile Radius of the  
 Proposed Ripley Regulator Station  
 Jackson County, West Virginia  
 Mountaineer XPress Project  
 Columbia Gas Transmission**

File: \_NSAs | REVISED: 05/11/2016 | SCALE: 1:18,000 when printed at 11x17

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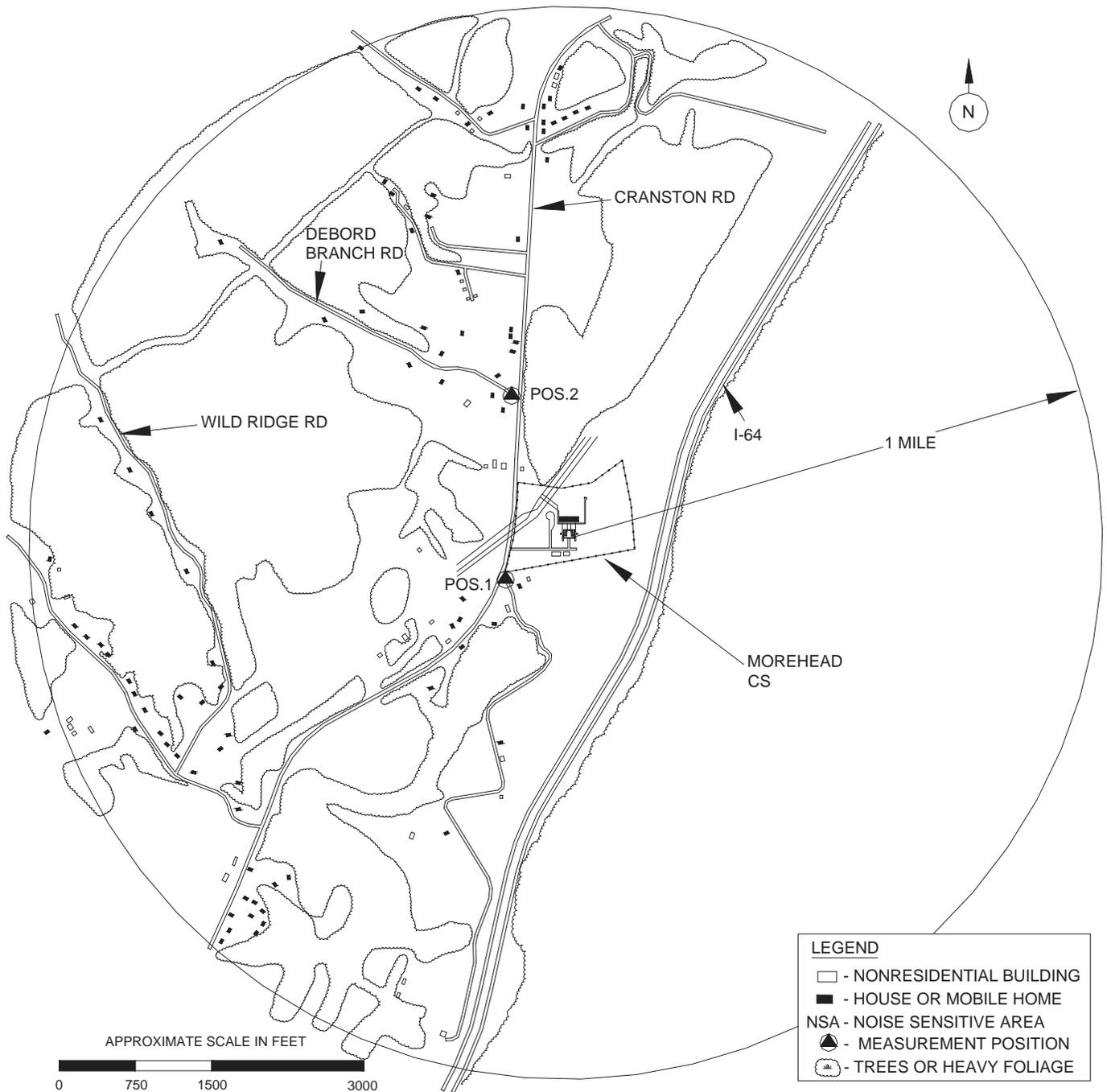
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■ House or Mobile Home         Site Boundary  
□ Non-Residential Building  
○ Milepost

1:18,000

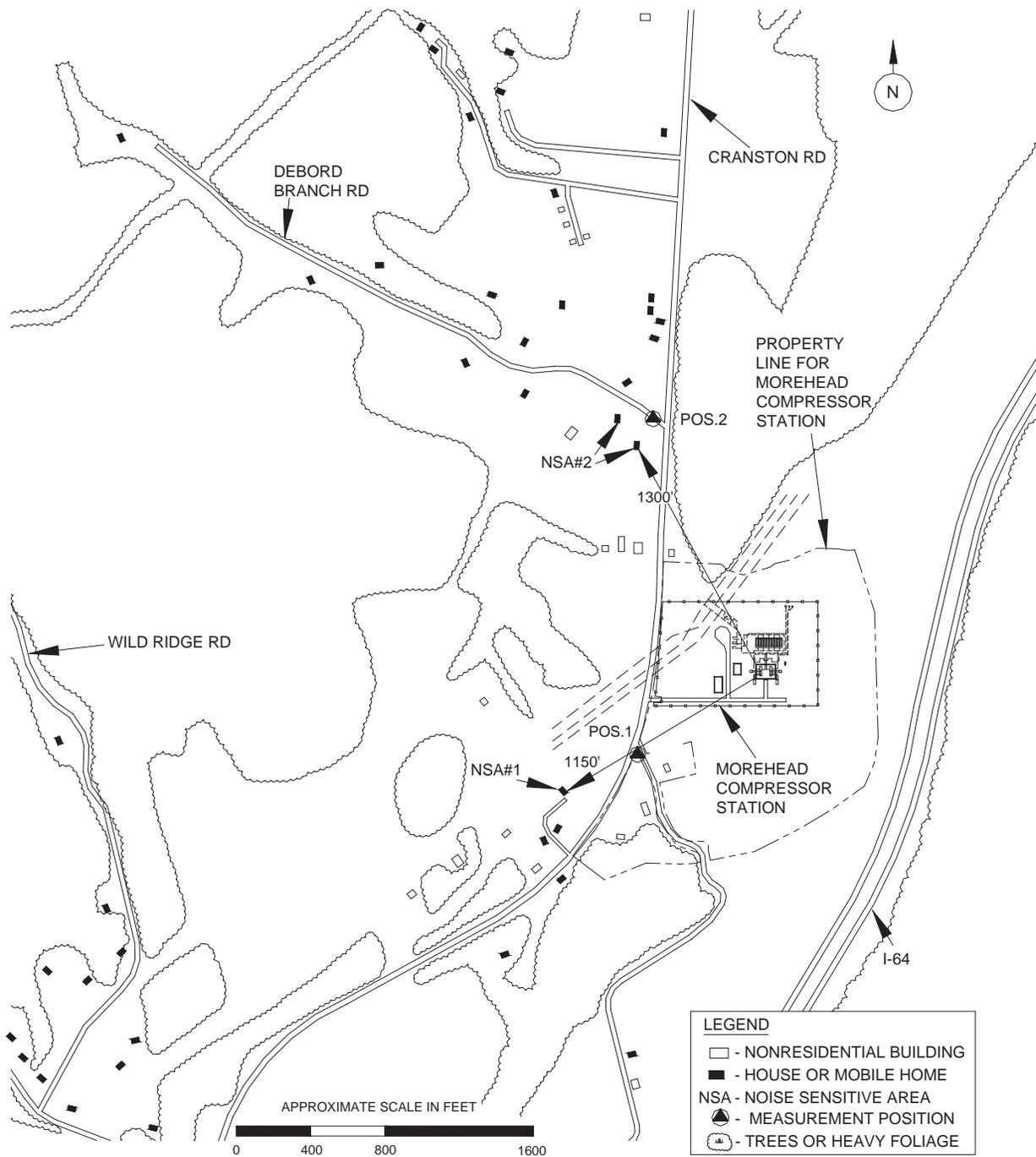
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**Noise Sensitive Areas within a 1/2 Mile Radius of the  
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 Cabell County, West Virginia**  
 Mountaineer XPress Project  
 Columbia Gas Transmission

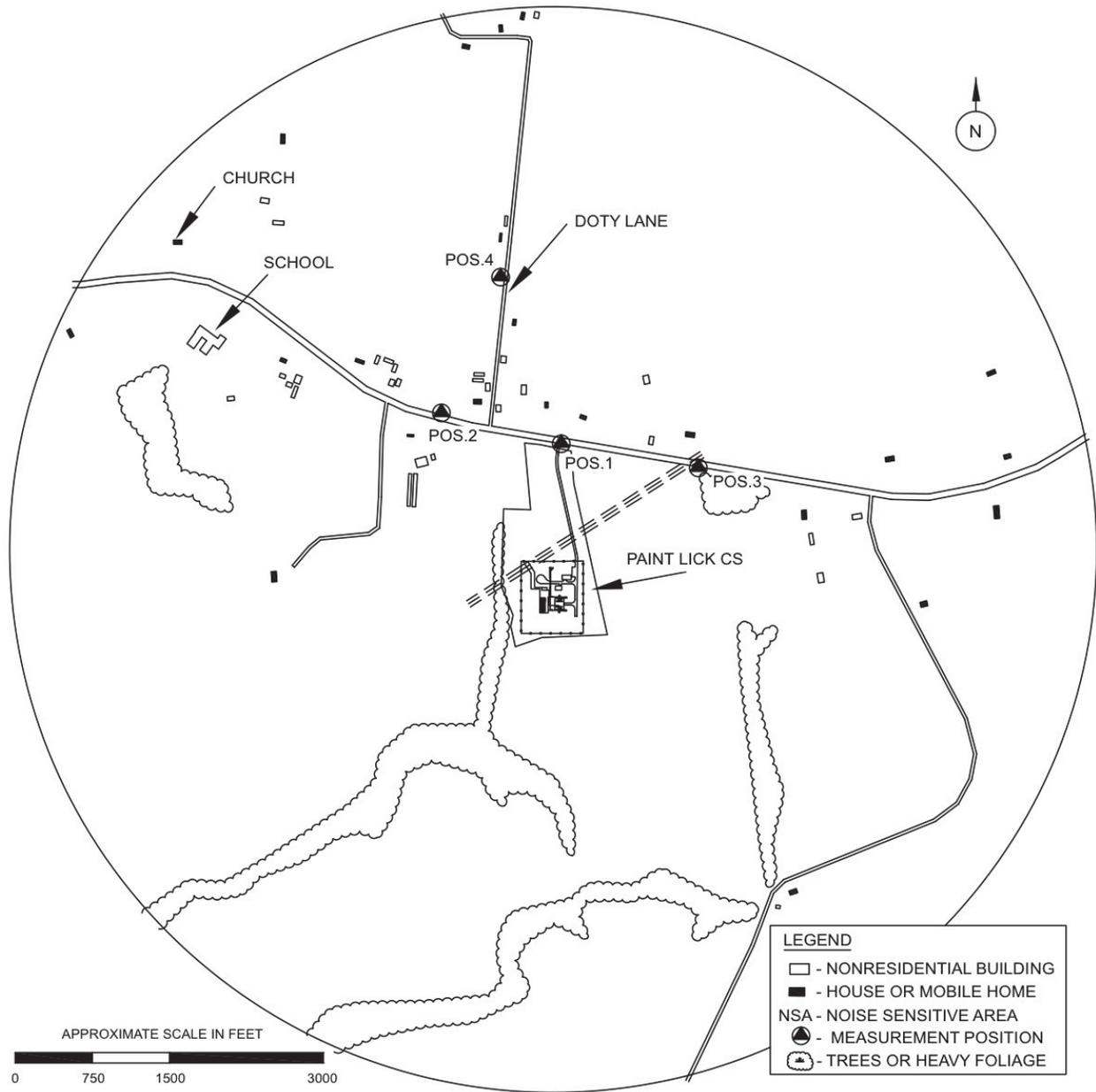
**APPENDIX N-2**  
**Noise Sensitive Areas Associated with the Gulf XPress Project**



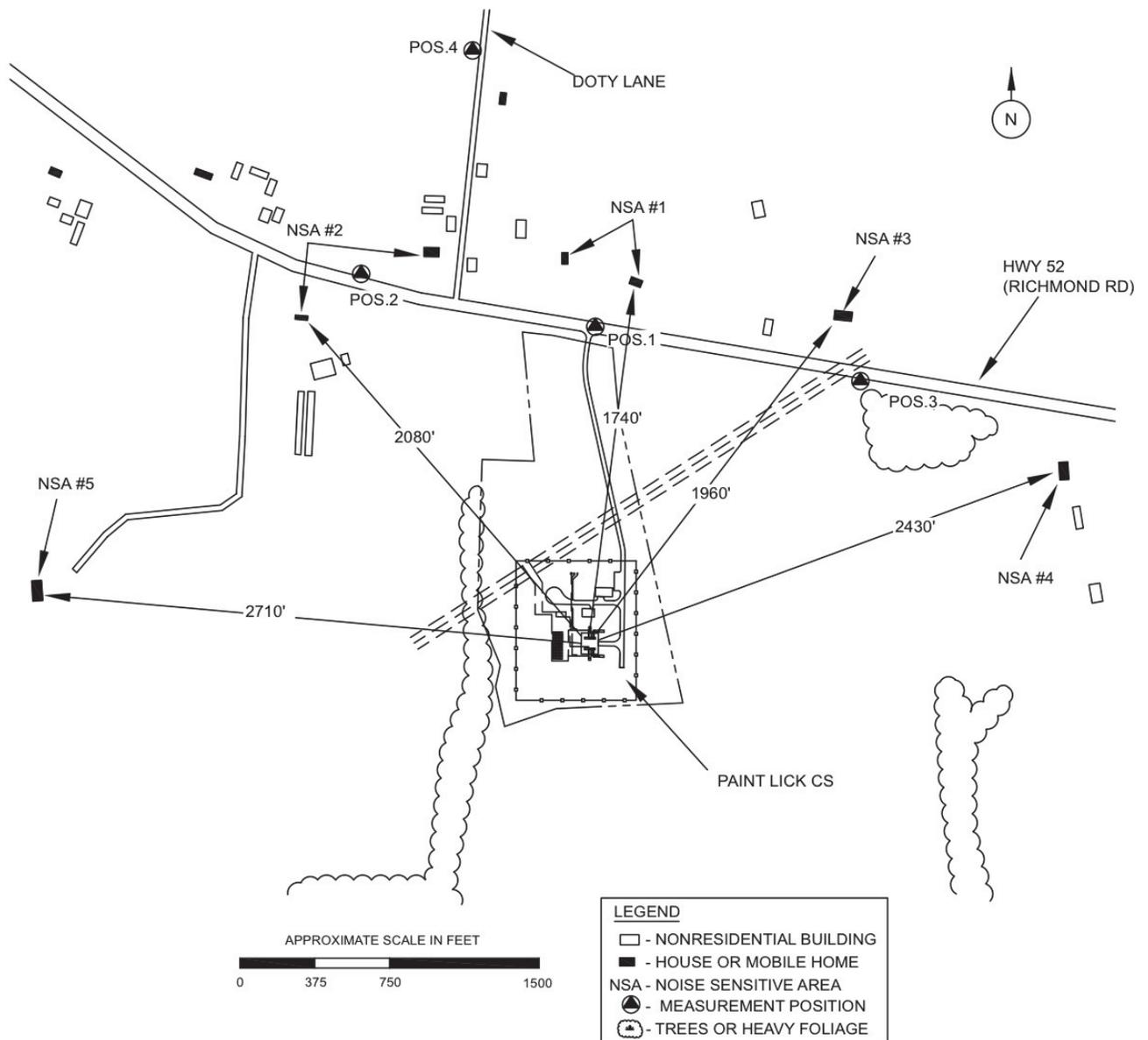
**Figure 1:** Morehead Compressor Station (GXP Project): General Area Layout around the Station showing the NSAs within 1 Mile of the Station Site and Other Areas of Interest.



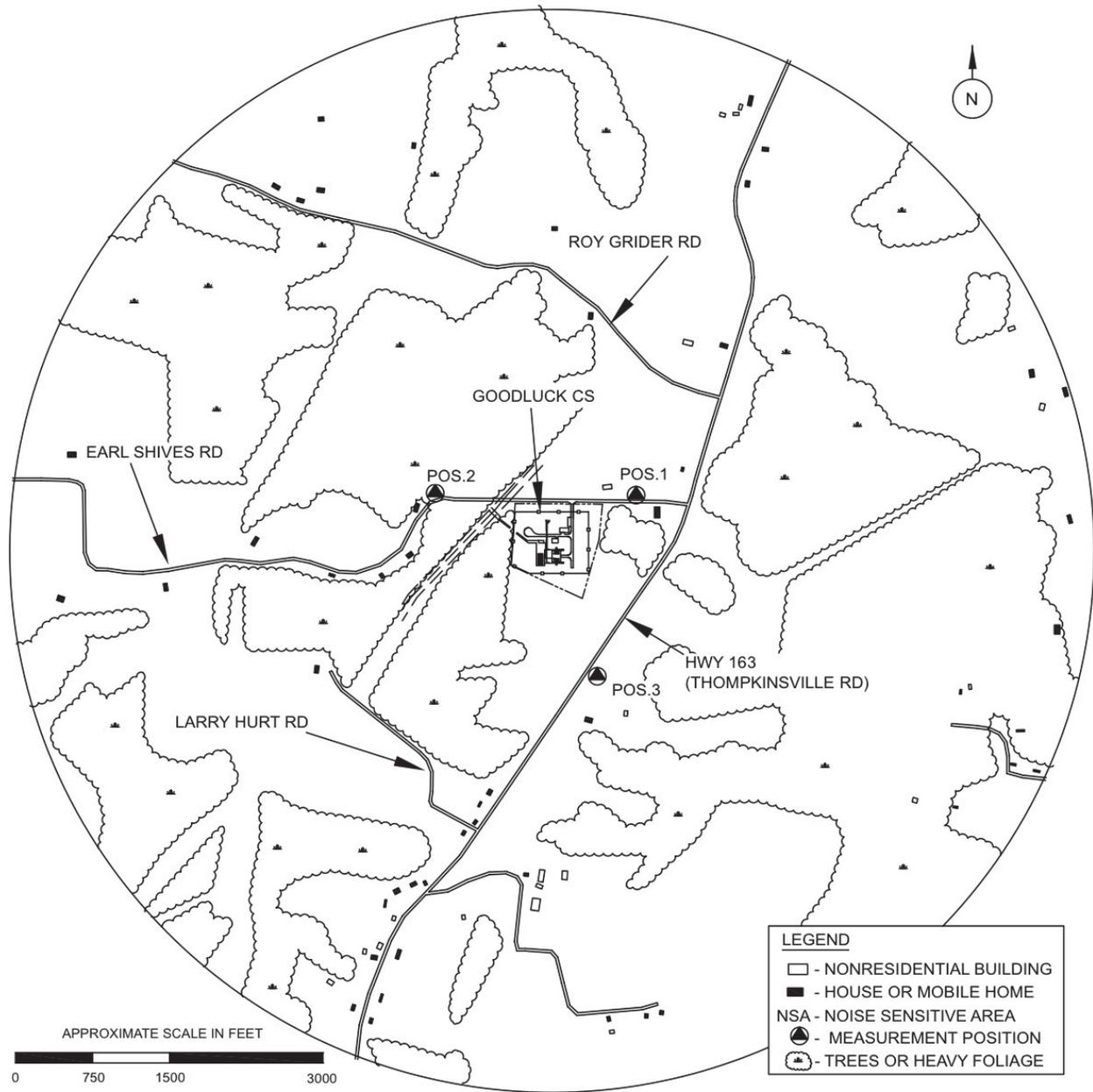
**Figure 2:** Morehead Compressor Station (GXP Project): Layout showing the Identified Closest NSAs, Chosen Sound Measurement Positions near the Closest NSAs and Conceptual Layout of Station Equipment and Buildings.



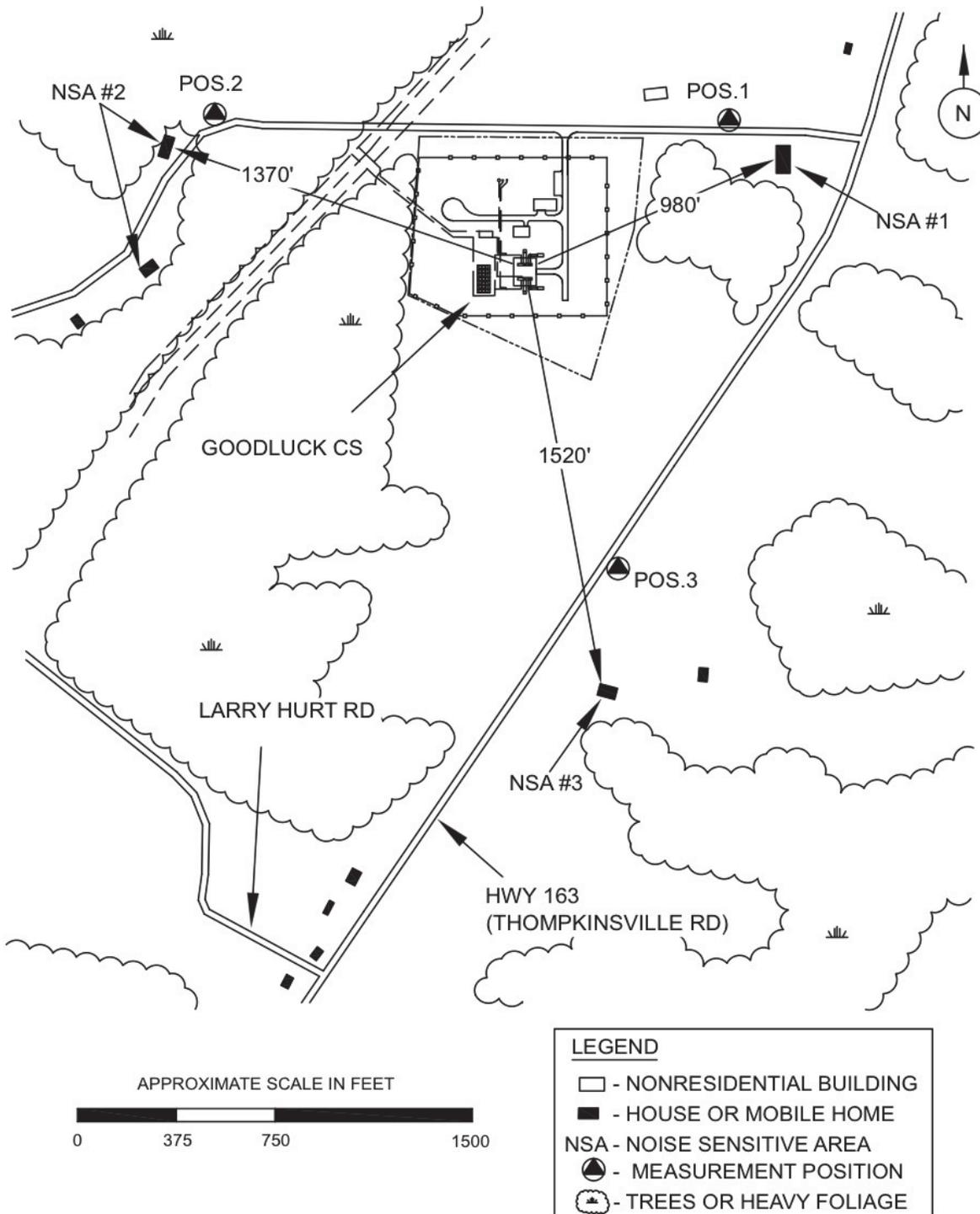
**Figure 1:** Paint Lick Compressor Station (GXP Project): General Area Layout around the Station showing the NSAs within 1 Mile of the Station Site and Other Areas of Interest.



**Figure 2:** Paint Lick Compressor Station (GXP Project): Layout showing the Identified Closest NSAs, Chosen Sound Measurement Positions near the Closest NSAs and Conceptual Layout of Station Equipment and Buildings.



**Figure 1:** Goodluck Compressor Station (GXP Project): General Area Layout around the Station showing the NSAs within 1 Mile of the Station Site and Other Areas of Interest.



**Figure 2:** Goodluck Compressor Station (GXP Project): Layout showing the Identified Closest NSAs, Chosen Sound Measurement Positions near the Closest NSAs and Conceptual Layout of Station Equipment and Buildings.

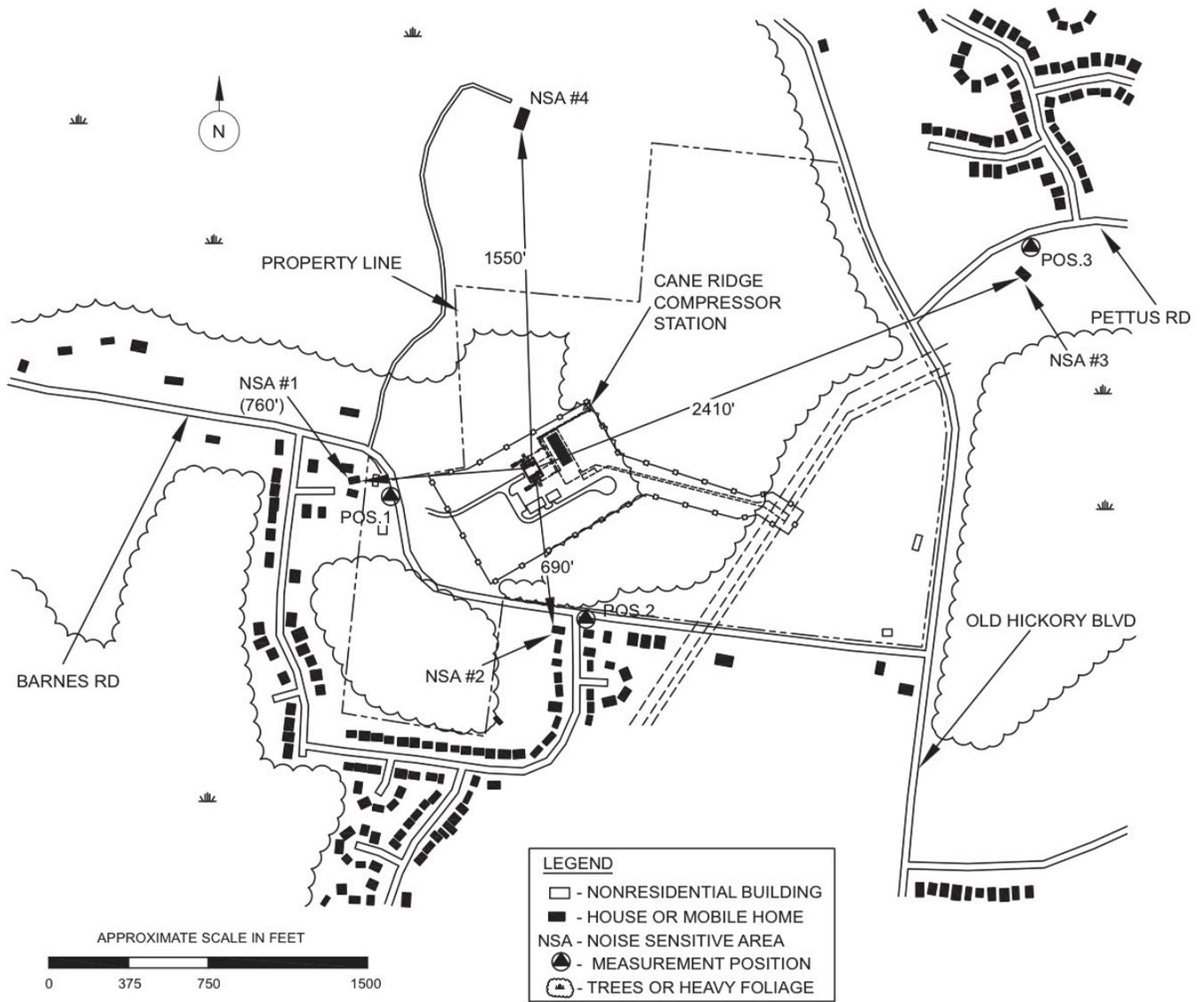
Columbia Pipeline Group – Grayson Compressor Station



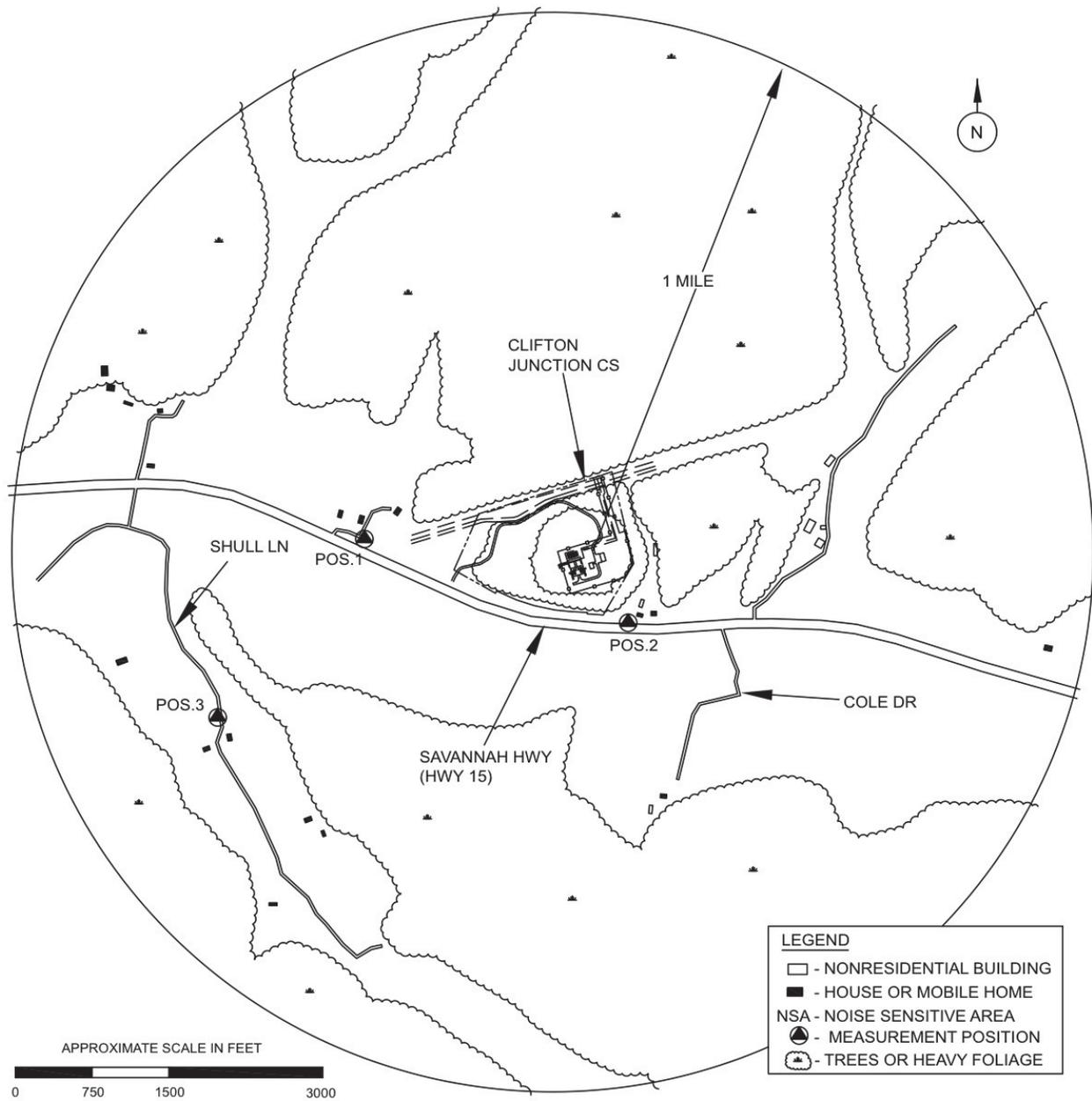
Figure A NSA Distances and Directions, Referenced from Proposed Compressor Building Location.



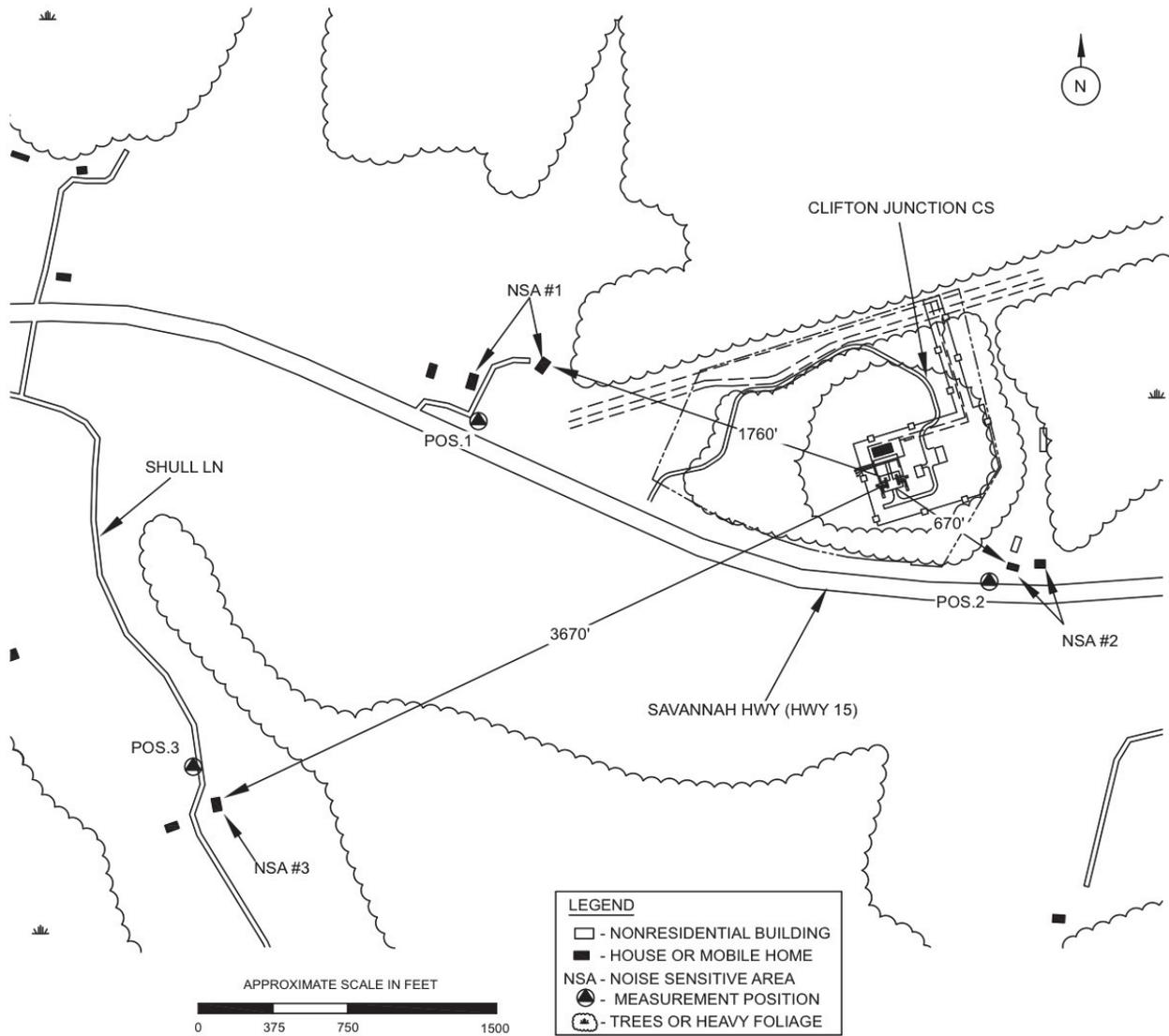
**Figure 1:** Cane Ridge Compressor Station (GXP Project): General Area Layout around the Station showing the NSAs within 1 Mile of the Station Site and Other Areas of Interest.



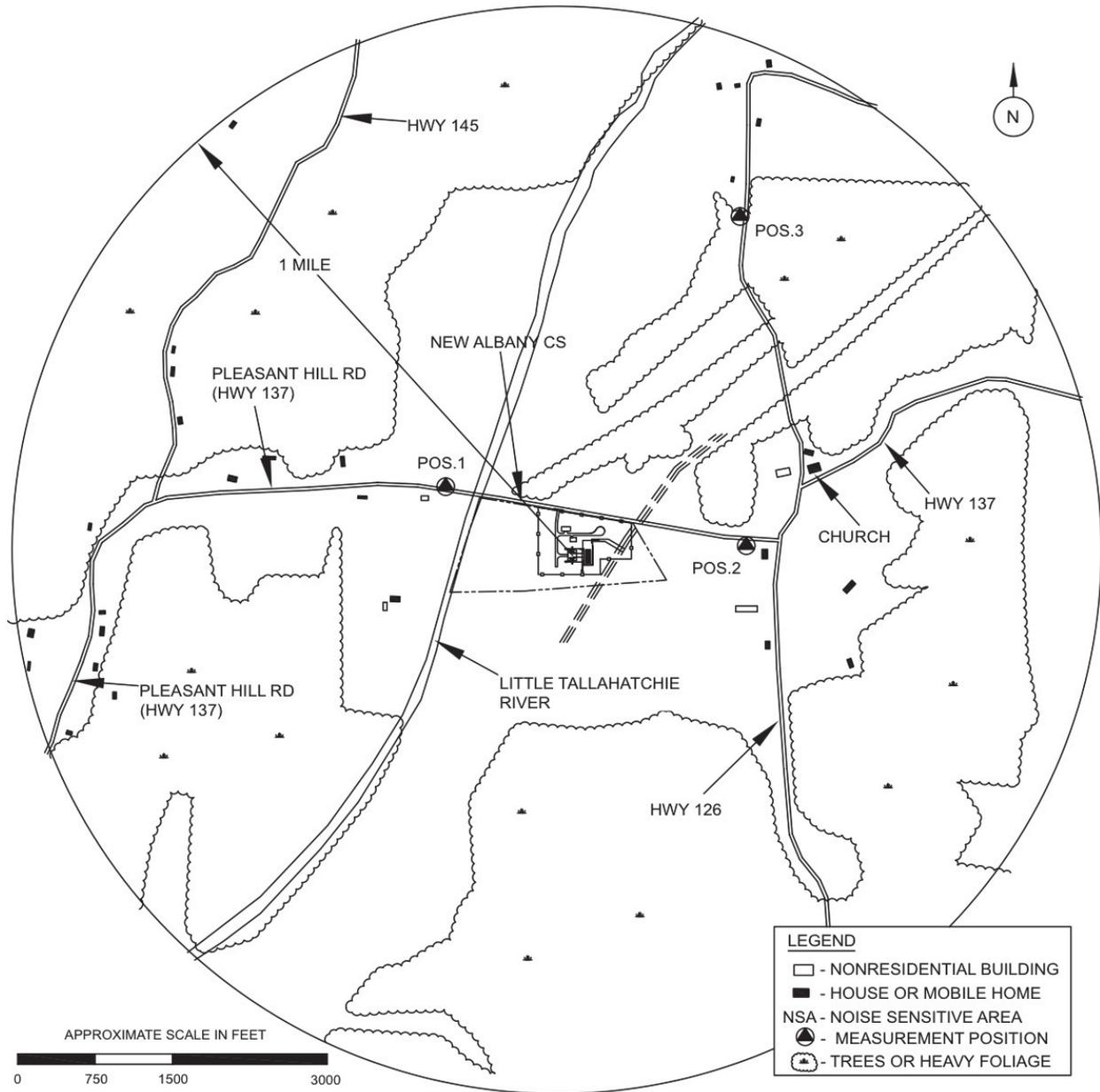
**Figure 2:** Cane Ridge Compressor Station (GXP Project): Layout showing the Identified Closest NSAs, Chosen Sound Measurement Positions near the Closest NSAs and Conceptual Layout of Station Equipment and Buildings.



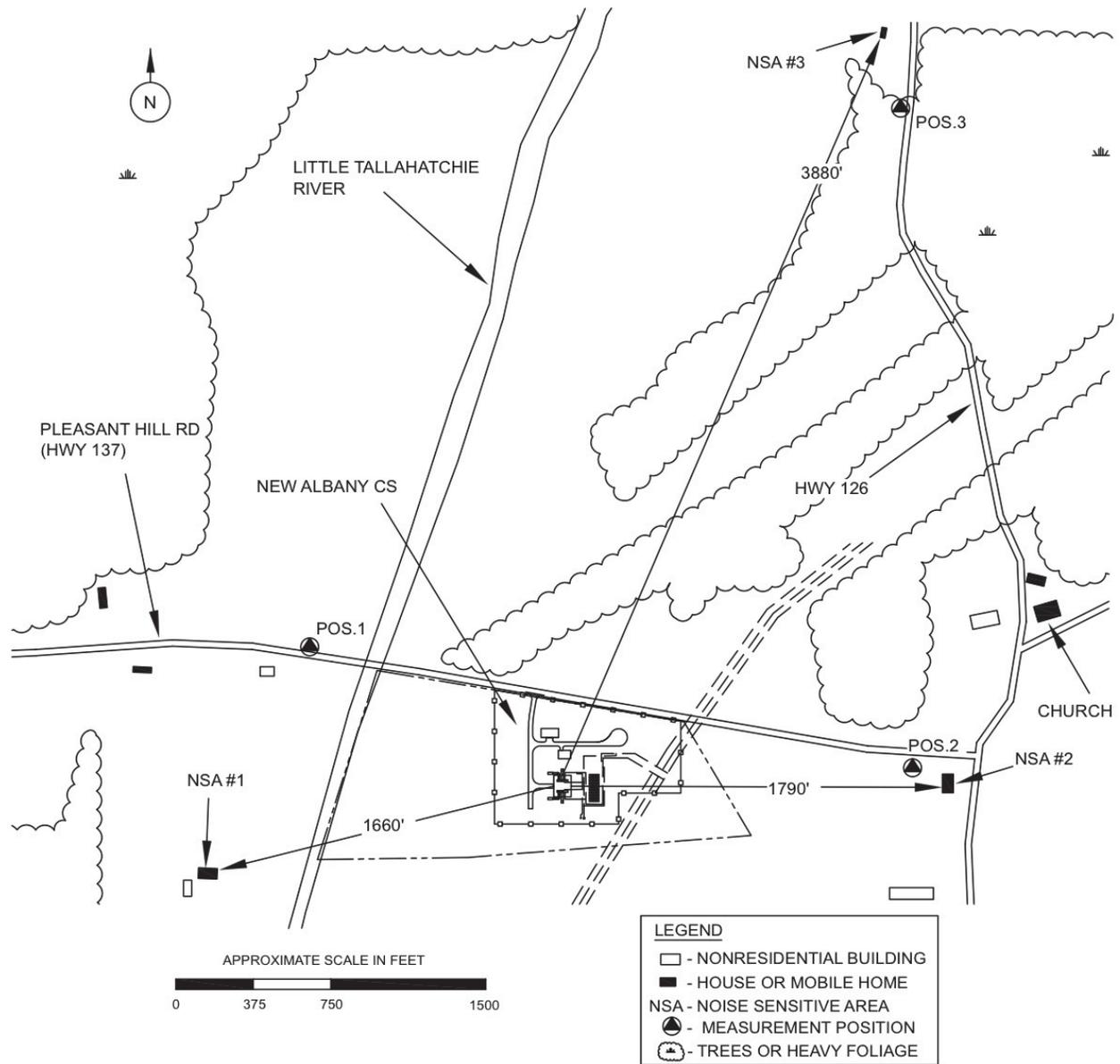
**Figure 1:** Clifton Junction Compressor Station (GXP Project): General Area Layout around the Station showing the NSAs within 1 Mile of the Station Site and Other Areas of Interest.



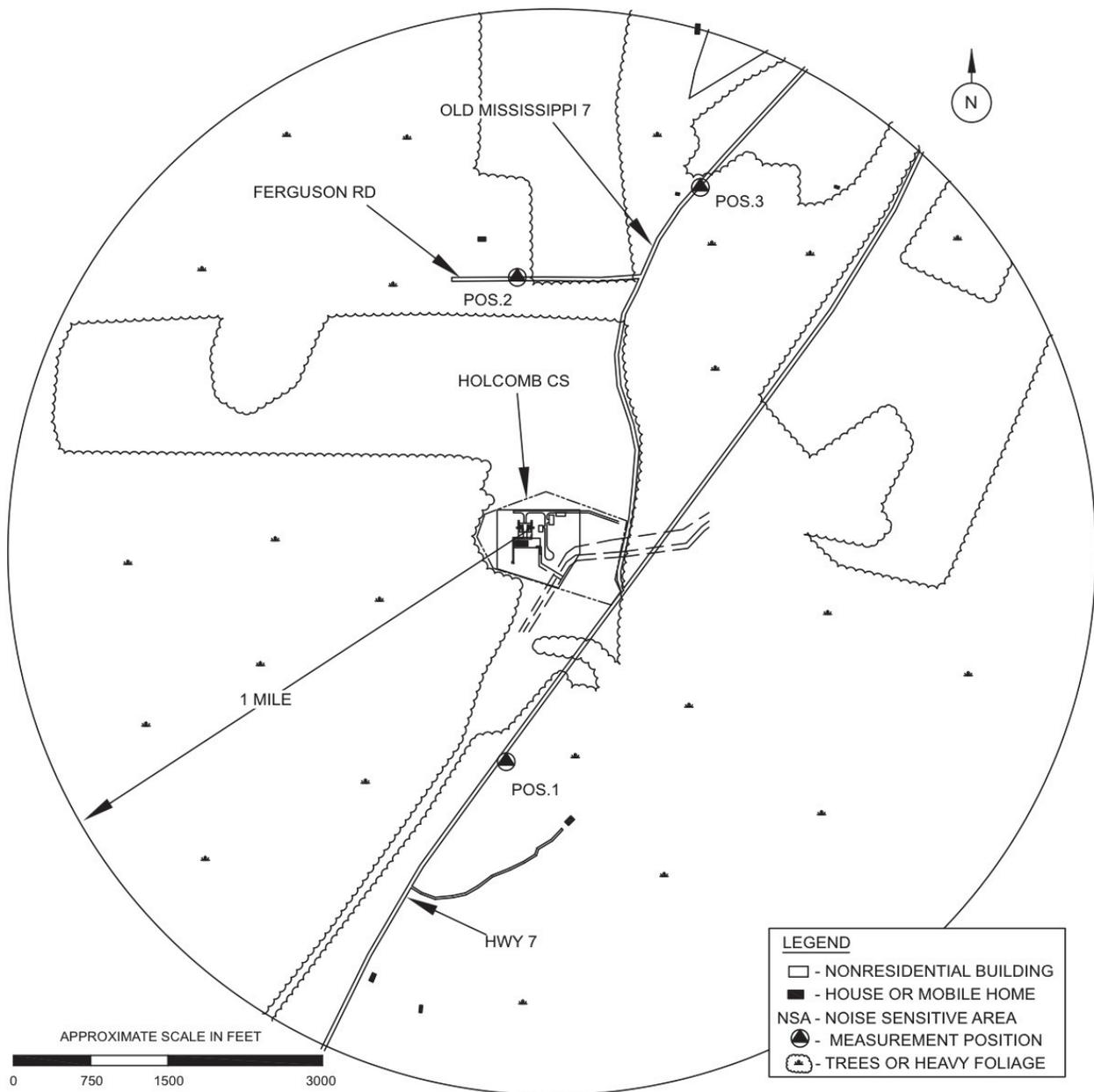
**Figure 2:** Clifton Junction Compressor Station (GXP Project): Layout showing the Identified Closest NSAs, Chosen Sound Measurement Positions near the Closest NSAs and Conceptual Layout of Station Equipment and Buildings.



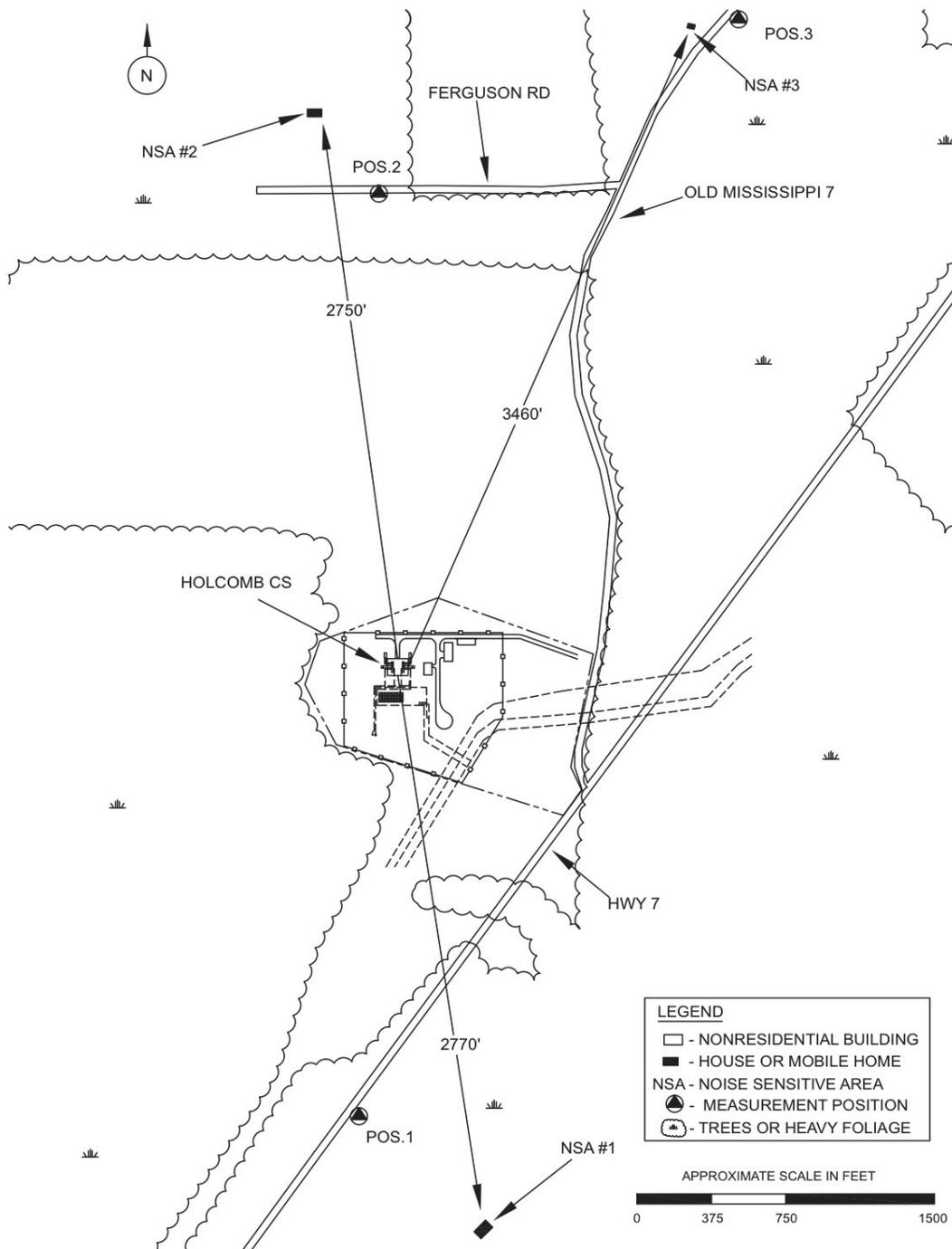
**Figure 1:** New Albany Compressor Station (GXP Project): General Area Layout around the Station showing the NSAs within 1 Mile of the Station Site and Other Areas of Interest.



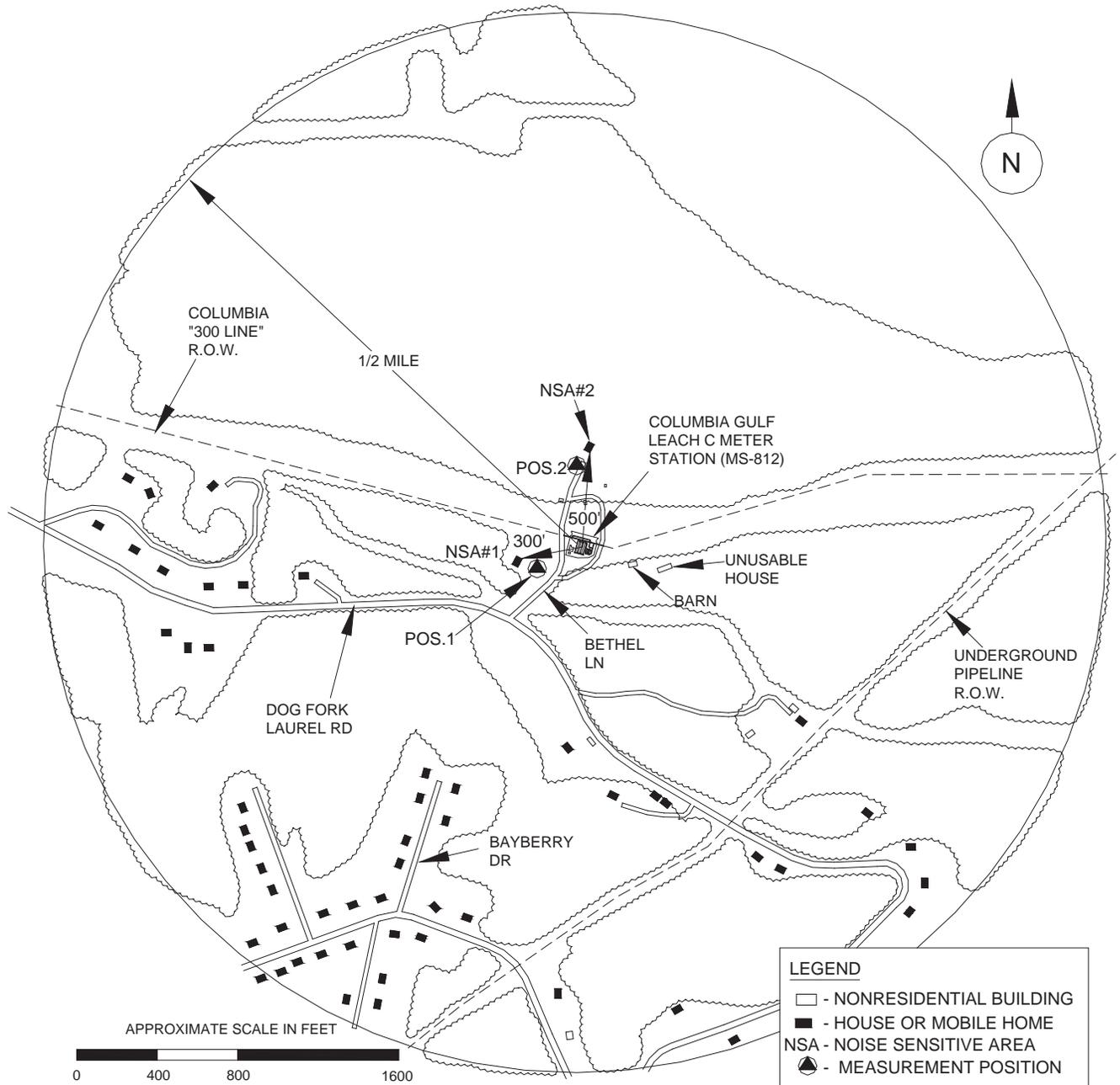
**Figure 2:** New Albany Compressor Station (GXP Project): Layout showing the Identified Closest NSAs, Chosen Sound Measurement Positions near the Closest NSAs and Conceptual Layout of Station Equipment and Buildings.



**Figure 1:** Holcomb Compressor Station (GXP Project): General Area Layout around the Station showing the NSAs within 1 Mile of the Station Site and Other Areas of Interest.



**Figure 2:** Holcomb Compressor Station (GXP Project): Layout showing the Identified Closest NSAs, Chosen Sound Measurement Positions near the Closest NSAs and Conceptual Layout of Station Equipment and Buildings.



**Figure 1:** GXP Project and Leach C M&R Station: Area Layout showing NSAs within 1/2 Mile of the M&R Station Site, Identified Closest NSAs and the Chosen Sound Measurement Positions near the Closest NSAs.

**APPENDIX O**  
**References**

**APPENDIX O - REFERENCES**

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*Burns & McDonnell Engineering, Inc. is a third party contractor assisting the Commission staff in reviewing the environmental aspects of the project application and preparing the environmental documents required by NEPA. Third party contractors are selected by Commission staff and funded by project applicants. Per the procedures in 40 CFR 1506.5(c), third party contractors execute a disclosure statement specifying that they have no financial or other conflicting interest in the outcome of the project. Third party contractors are required to self-report any changes in financial situation and to refresh their disclosure statements annually. The Commission staff solely directs the scope, content, quality, and schedule of the contractor's work. The Commission staff independently evaluates the results of the third-party contractor's work and the Commission, through its staff, bears ultimate responsibility for full compliance with the requirements of NEPA.*

**APPENDIX Q**  
**Comments and Responses on the Draft EIS**

## Appendix Q

### FERC's Responses to Comments on the Draft EIS

ID No.            Commentor

#### **FEDERAL AGENCIES**

FA001            U.S. Department of the Interior (includes USFWS and USGS)  
FA002            U.S. Environmental Protection Agency

#### **STATE AGENCIES**

SA001            Tennessee Department of Environment and Conservation  
SA002            West Virginia Division of Culture and History  
SA003            Tennessee Department of Environment and Conservation  
SA004            West Virginia Division of Natural Resources

#### **LOCAL AGENCIES**

LA001            Fabian Bedne, Nashville Metropolitan Council, District #31

#### **NATIVE AMERICAN TRIBES**

NAT001           Eastern Band of Cherokee Indians  
NAT002           Eastern Band of Cherokee Indians

#### **COMPANIES AND ORGANIZATIONS**

CO001           Teamsters National Pipeline Labor Management Cooperation Trust, Richard Stern  
CO002           Ohio Valley Environmental Coalition, William Hughes  
CO003           Keep Southeast Nashville Healthy, Christopher Tuley  
CO004           Friends of Mill Creek Greenway, Brant N. Miller  
CO005           Keep Southeast Nashville Healthy, Heather Hixson-McGovern  
CO006           Ohio Valley Environmental Coalition  
CO007           Ohio Valley Environmental Coalition, Vivian Stockman  
CO008           Friends of Mill Creek Greenway, Brant N. Miller  
CO009           West Virginia Rivers Coalition  
CO010           Mill Creek Watershed Association  
CO011           Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club  
CO012           Keep Southeast Nashville Healthy  
CO013           American Petroleum Institute  
CO014           Ohio Valley Environmental Coalition, William Hughes

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IND004           Marianne Hughes  
IND005           Alex Cole  
IND006           Barbara Jividen

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IND016	Carolyn Kennedy
IND017	Charles Whiting
IND018	Dan Lekich
IND019	David Beresford
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IND021	Elizabeth Garber
IND022	Lauren Spires
IND023	Lillian Hawkins
IND024	Margaret Cortozzo
IND025	Micah Hararove
IND026	Mike Younger
IND027	Rob Spires
IND028	Sam Cartozzo
IND029	Timmey Orr
IND030	Unknown
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IND033	Jim Pritt
IND034	Richard Given
IND035	Steve McDiffitt
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IND037	William Douglass
IND038	Dan Thomas
IND039	Susan Couch
IND040	Elenor Dyer
IND041	Calvin Burchett
IND042	Anthony Bonitatibus
IND043	Lou Rife
IND044	Aren Sulfridge
IND045	Barry Vincent
IND046	Suzanne Goodman
IND047	Susan Couch
IND048	Chris Strong
IND049	Matthew Guest
IND050	Michael Younger
IND051	Robert Argo
IND052	Lori Burkett

IND053	Andrew Peterson
IND054	Jamie Peterson
IND055	Michelle (last name unknown – oral statement in Cane Ridge, TN)
IND056	Lillian Hawkins
IND057	Holly Greene
IND058	Margaret Cartozzo
IND059	Heather Hixson-McGovern
IND060	Roger Rotoni
IND061	Carl Harris
IND062	Cynthia D. Ellis
IND063	Christy Gibson
IND064	William Robertson
IND065	Elizabeth Forester
IND066	Terry Flesher
IND067	Nathan Bumgarner
IND068	Patrice Nelson
IND069	Betsy Scott
IND070	Janet Keating
IND071	Marilyn Howells
IND072	Mirijana Beram
IND073	Lillian Hawkins
IND074	Geraldine and Richard Markus
IND075	Mary Sansom
IND076	David Howells
IND077	Karen Kurtz
IND078	Aren Sulfridge
IND079	Cynthia Brewer
IND080	Jason Partch
IND081	Ed Jividen
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IND083	Kathryn M. Pyles
IND084	April Keating

**APPLICANT**

CPG001	Columbia Gas Transmission
CPG002	Columbia Gulf Transmission

**FA001 – U.S. Department of the Interior (includes USFWS & USGS comments)**



United States Department of the Interior

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
Custom House, Room 244  
200 Chestnut Street  
Philadelphia, Pennsylvania 19106-2904

IN REPLY REFER TO:

April 24, 2017

9043.1  
ER 17/0091

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
Mail Code: DLC, HL-11.2  
888 First St., NE  
Washington, DC 20426

**RE: Draft Environmental Impact Statement (DEIS) for the Proposed Mountaineer XPress (MXP) and Gulf XPress (GXP) Projects by Columbia Gas Transmission, LLC, FERC Nos. CP16-357-000 and CP16-361-000, West Virginia, Kentucky, Mississippi, and Tennessee.**

Dear Secretary Bose:

The U.S. Department of the Interior (Department) has reviewed the DEIS for the Proposed MXP and GXP projects by the Columbia Gas Transmission, LLC. The proposed MXP, would comprise a total of 170.7 miles of new natural gas transmission pipeline and ancillary facilities, and would modify one existing compressor station and result in the construction of two compressor stations in West Virginia (WV). The MXP would provide the available capacity for transport of Columbia Gas' product to markets across Columbia Pipeline Group's system, including the Columbia Gulf Leach interconnect with Columbia GXP. The proposed Columbia GXP would involve the construction and operation of seven new compressor stations in Kentucky (KY), Mississippi (MS), and Tennessee (TN), and an upgrade of an existing meter station in KY.

Fish and Wildlife Service Comments

The U.S. Fish and Wildlife Service (Service) offers the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

General Comments

FA001-1 Mountaineer Xpress (MXP) (WV) - The Service West Virginia Field Office has been working with Columbia Gas since 2015 to identify survey and project information needed, including

**FA001-1:** Comment regarding the status of section 7 consultations for the MXP is noted, and is consistent with our assessment in the EIS.

**FA001 – U.S. Department of the Interior (includes USFWS & USGS comments) (continued)**

FA001-1  
(cont.) surveys for federally listed bats and mussels in West Virginia. Once additional information becomes available the Service will work with the applicant to address any species-specific issues, and to develop avoidance and minimization measures for Service trust resources.

Gulf Xpress (GXP) (KY, MS, & TN) - Project activities in the GXP and potential effects to eight federally-listed species that occur or may occur in the proposed project area located in KY, MS, and TN are covered by the Service approved Multi-Species Habitat Conservation Plan<sup>1</sup> (MSHCP) and the resulting programmatic section 7 consultation. Those species are: Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), Virginia big-eared bat (*Corynorhinus townsendii virginianus*), gray bat (*Myotis grisescens*), northern riffleshell (*Epioblasma torulosa rangiana*), pink mucket (*Lampsilis abrupta*), running buffalo clover (*Trifolium stoloniferum*), and Short's bladderpod (*Physaria globosa*).

FA001-2 Columbia Gas has agreed to adhere to the avoidance and minimizations measures included in the MSHCP for those species. The Service believes that the proposed project GXP is consistent with the MSHCP, and, therefore, no additional consultation is required for these species.

**Specific Comments**

GXP activities in KY - Page ES-11 of the DEIS explains that an additional federally-listed species, snuffbox (*Epioblasma triquetra*), was not addressed in that February 16, 2016, letter from the Service or in the November 25, 2016, correspondence from Natural Resource Group to which the Service had responded. Snuffbox is not one of the species covered by the MSHCP but is addressed on page ES-12 in the DEIS, where the FERC makes a “no effect” determination for snuffbox and requests concurrence from the Service. The Service is not required to concur with “no effect” determinations. After reviewing our species occurrence information, while the snuffbox does occur in Carter County, where the Grayson Compressor Station is proposed, there is no habitat for the species in the proposed project area and the nearest record of the species is approximately five miles from the project site in a different watershed. Based on the information available to us, we do not anticipate impacts to snuffbox from the proposed project and therefore we will concur with the “no effect” determination.

If you have any questions regarding these comments, or require additional information, please contact Christine Willis at (404) 679-7310 or via email at [Christine\\_Willis@fws.gov](mailto:Christine_Willis@fws.gov).

USGS Comments

The United States Geological Survey’s (USGS) comments are intended to inform readers of concerns for water quality, public water supply, and construction risks to water resources in karst and steep slope conditions, and ecological stream flows.

<sup>1</sup> “NiSource Habitat Conservation Plan.” Endangered Species Permits, U.S. Fish and Wildlife Service, issued May 4, 2015, (accessed April 10, 2017), link: <https://www.fws.gov/midwest/Endangered/permits/hcp/nisource/pdf/ITPamended1May2015noappendices.pdf>

**FA001-2:** As stated in section 4.7.11.2, we have determined that the GXP would have either *no effect* or would *not likely to adversely affect* any of the federally listed species that could occur in the project vicinity. Consultation with the U.S. Fish and Wildlife Service (USFWS) under section 7 of the Endangered Species Act is complete for these species.

**FA001 – U.S. Department of the Interior (includes USFWS & USGS comments) (continued)**

FA001-3 **COMMENT: Public supply surface-water intakes.**  
 The USGS developed a database containing information about wells, surface-water intakes, and distribution systems of public supply water systems in the United States (Price and Maupin, 2014). Location information for public supply systems is restricted from distribution to the general public, and exact intake locations are not shown in this review. The downstream distance between the MXP proposed route and surface-water intakes identified from the USGS public supply database (PSDB) was estimated along the length of streams in the National Hydrography Dataset. Towns in the following table, have intakes within 5 miles downstream of the ACP known route. As a precaution, these towns should be contacted and alerted to the time of construction activities upstream of their intakes.

Town Name	State	County
West Union	WV	Doddridge
Milton	WV	Cabell
Buffalo	WV	Putnam

FA001-4 **COMMENT: Water-Quality Issues and soil compaction resulting from pipeline and access road construction**  
 The Mountaineer XPress and Gulf XPress Projects will traverse a great many streams in West Virginia. As there is potential for water-quality degradation at and downstream of crossings, pre-and post-construction testing will be conducted, as stated in the DEIS. This DEIS does not list the analytes that would be tested before and after pipeline installation across streams. Typically, analytes to test for in this situation would include pH, total suspended solids, total dissolved solids, conductivity, alkalinity, acidity, sulfates, oil/grease, phenolic, iron, manganese, aluminum, copper, lead, nickel, silver, thallium, zinc, chromium, arsenic, mercury, selenium, cyanide, calcium magnesium, hardness, chlorides, antimony, cadmium, beryllium, and fecal coliform. As streams in some areas along the Eastern Seaboard have a high probability of mobilizing arsenic if sediments are disturbed, it is suggested that total arsenic be included on the analyte list. Sampling methods should comply with approved EPA and state sampling methods, analytical and data quality assurance, and quality control procedures. The samples should be analyzed using EPA-approved methods, and the analysis should be performed by a laboratory certified to conduct the analyses in each state/commonwealth.  
 If water-quality issues such as increased turbidity (the most likely problem), low dissolved oxygen, or elevated levels of contaminants of concern persist, the appropriate state and local health and environmental agencies should be informed, and monitoring should continue until background conditions are restored.

FA001-5 Two additional water-quality topics discussed in the DEIS need additional consideration:  
 4.3.1.4. Wellhead and aquifer protections areas (WHPAs)

**FA001-3:** Columbia’s Environmental Construction Standards (ECS, Section IV.A.1) state that “Columbia will notify authorities responsible for potable water supply intakes located within 3 miles downstream, at least one week before beginning work in the waterbody, or as required by state or local regulation.” Revised section 4.3.2.1.1 includes this information.

**FA001-4:** Columbia Gas does not intend to test water quality of streams crossed by the MXP as there are currently no testing requirements associated with permits for stream crossings issued by the agencies with jurisdiction over the streams or the MXP.

**FA001 – U.S. Department of the Interior (includes USFWS & USGS comments) (continued)**

FA001-5 (cont.)	<p>These areas should be protected from contamination to protect public water supplies, as described by the Safe Drinking Water Act. Four WHPAs would be crossed by the Xpress projects (specifically MXP-100) as currently proposed. Changes in local hydrology from clearing, grading, excavation and compaction may be detrimental to these areas and the underlying groundwater. Therefore, serious consideration should be given to rerouting these access roads away from such important recharge areas. Only two mileposts are indicated (50.7 and 113.8) as being within 3 miles of protection areas for four wells, one owned by Doddridge County Park and the other three by Roane-Jackson Technical Center. As a minimum, these two organizations should be informed that pipeline construction will occur between 144-725 feet from the wells.</p>
FA001-6	<p>4.3.1.3 Springs and private water wells</p> <p>Columbia Gas has not completed the process of identifying wells that are within 150 ft of project workspace, though they have identified many, and some are virtually in the path of the pipeline. Water-quality monitoring is only proposed in the DEIS if requested by the well owner. Water-quality monitoring should be conducted whether requested or not, unless forbidden by the well owner. A related comment was given by FERC:</p> <p><i>“Columbia Gas has neither completed identification of all private water wells and potable springs in proximity to project work areas, nor has it identified any specific protection measures that would be implemented for wells located inside the construction work areas. Therefore, we recommend that prior to construction, Columbia Gas should:</i></p> <ul style="list-style-type: none"> <li>• <i>file with the Secretary the location of all water wells and potable springs within 150 feet of all areas of disturbance associated with the MXP pipelines and related aboveground facilities;</i></li> <li>• <i>offer to test all water wells within 150 feet of construction workspaces;</i></li> <li>• <i>identify measures that would be used to protect the water well at milepost 107.2; and</i></li> <li>• <i>provide the status (active, abandoned, capped, etc.) of the two water wells located at milepost 164.3 and, if active, identify measures to protect these water wells during construction.”</i></li> </ul>
FA001-7	<p><b>COMMENT: Route Variations</b></p> <p>Section 3.4 describes many potential route variations, many of them minor, but collectively the environmental consequences for a revised route may differ from the currently proposed route. Such changes may move the pipe or right of way closer to wells, residences and other terrestrial features that are not near the currently proposed route. Therefore, additional work to identify residents and infrastructure that may be affected and informing the residents or appropriate parties should be completed for all areas where the route is changed before construction begins.</p>
FA001-8	<p><b>COMMENT: Construction in steep-slope areas</b></p> <p>Ground disturbance in steep-slope terrain can cause landslides and other types of land movement. Sudden movement of large amounts of rock, soil and sediment can result in changes to surface-water and groundwater hydrology and water quality. Substantial consideration has</p>

**FA001-5:** We have added a recommendation to section 4.3.1.2.1 suggesting special notifications prior to and immediately following construction within these areas.

**FA001-6:** Section 4.3.1.3.1 indicates that Columbia Gas would offer all landowners the option to test any wells within 150 feet of any area disturbed by construction of the MXP. Rather than waiting for a landowner to request testing, Columbia Gas would now initiate the offer.

**FA001-7:** Section 3.4 discusses the process in which refinements or modifications to the pipeline route would be reviewed for approval should a Certificate be issued. Section 2.6.3, the Post-Approval Variance Process, also discusses the variance approval process in detail, which is consistent with National Environmental Policy Act (NEPA) requirements.

**FA001-8:** As noted in section 4.1.4.4.1, on April 21, 2017, Columbia Gas filed with the Secretary its Phase I Geohazard Assessment Report, which was prepared using publicly available information. The report preliminarily determined that about 68 percent of the proposed MXP pipeline route has a “moderate to high” or “high” landslide hazard index rating. Based on the

**FA001 – U.S. Department of the Interior (includes USFWS & USGS comments) (continued)**

FA001-8 (cont.) been given to this risk category, but additional detail in planning for construction in steep-slope areas should be considered in the DEIS, as stated by FERC.

If there are any comments, please contact J. Michael Norris ([mnorris@usgs.gov](mailto:mnorris@usgs.gov)).

Thank you for the opportunity to provide comments.

Sincerely,



Lindy Nelson  
Regional Environmental Officer

**References:**

Price, C.V., and Maupin, M.A., 2014, Documentation for the U.S. Geological Survey Public-Supply Database (PSDB)—A database of permitted public-supply wells, surface-water intakes, and systems in the United States: U.S. Geological Survey Open-File Report 2014–1212, 22 p.

results of the Phase I Geohazard Assessment, Columbia Gas has initiated a Phase II Landslide Hazard Assessment. Part of the Phase II assessment includes field verification of the areas of interest that were identified in the Phase I assessment. Section 4.1.4.4.1 contains a recommendation that prior to construction, Columbia Gas should file with the Secretary for review and approval from the Director of OEP, the results of its Phase II Landslide Hazard Assessment. Both the Phase II Landslide Hazard Assessment and the Landslide Mitigation Plan would be developed in consultation with the West Virginia Department of Environmental Protection (WVDEP) and West Virginia Division of Natural Resources (WVDNR).

FA002 – U.S. Environmental Protection Agency



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

APR 24 2017

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington, DC 20426

Re: Mountaineer Xpress Project and Gulf Xpress Project Draft Environmental Impact Statement;  
West Virginia, Kentucky, Tennessee, and Mississippi; February 2017 (FERC Docket No. CP16-357-  
000, CP16-357-000; CEQ#20170029)

Dear Secretary Bose:

In accordance with the National Environmental Policy Act (NEPA) of 1969 and Section 309 of the Clean Air Act the U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for Mountaineer Xpress Project (MXP) and the Gulf Xpress Project (GXP) as proposed by Columbia Gas Transmission, LLC (Columbia Gas) and Columbia Gulf Transmission, LLC (Columbia Gulf). Columbia Gas and Columbia Gulf (the applicants or companies) request authorization from the Federal Energy Regulatory Commission (FERC or commission) to construct, operate, and maintain new and upgraded natural gas pipeline and ancillary facilities. Columbia Gas proposes to construct and operate the MXP, which includes approximately 170 miles of mostly 36 inch-diameter natural gas transmission pipeline, three new natural gas-fired compressor stations (CS) and two new regulator stations, and additional gas-fired and electric compression at one existing CSs and two new CSs which are approved or pending under separate FERC proceedings. Columbia Gulf proposes to construct and operate GXP, which includes seven new gas-fired compressor stations, additional and/or improvements at one approved CS under a separate FERC proceeding and additional compression and/or improvements at one existing meter station. The MXP and GXP (the projects) would provide about 2.7 million and 860,000, respectively, dekatherms per day of natural gas.

EPA is a cooperating agency for this DEIS. This comment letter jointly reflects the review and comments of EPA Regions 3 and 4 on the MXP and GXP DEIS. As a cooperating agency, EPA has engaged FERC in order to raise and resolve issues during scoping, FERC's pre-filing process, and EIS preparation. EPA appreciates the coordination done by FERC with federal agencies and efforts made to incorporate suggestions and address concerns raised during scoping and EIS development. This collaborative approach has resulted in a more thorough and clear analysis and presentation of information in the EIS.

EPA's review was primarily concerned with identifying and recommending corrective action for the environmental impacts associated with the proposal. This letter provides recommendations we believe would further strengthen FERC's EIS and consideration of mitigation as it is finalized, in the areas of geology, streams, wetlands and forests, groundwater and drinking water protection, communities, air protection, and cumulative impacts. More detail on these recommendations are provided in the enclosed technical comments.

**FA002-1:** Thank you for your review and cooperation in the process.

FA002-1

**FA002 – U.S. Environmental Protection Agency (continued)**

It is EPA's policy to review and comment in writing on all draft EISs officially filed with the EPA, to provide a rating of the draft EIS which summarizes EPA's level of concern (EPA Policy and Procedures, 1984). The purpose of the rating system is to synthesize the level of EPA's overall concern with the proposal and to define the associated follow-up that will be conducted with the lead agency (EPA Policy and Procedures, 1984). Assignments of the rating are based on the overall environmental impact of the proposed action, including project impacts that are not fully addressed in the DEIS. EPA rates the environmental impacts associated with the preferred alternative as "Environmental Concerns" and the DEIS information as "Insufficient" under its DEIS rating scheme. See [www.epa.gov/nepa/environmental-impact-statement-rating-system-criteria](http://www.epa.gov/nepa/environmental-impact-statement-rating-system-criteria).

We would welcome the opportunity to discuss the comments provided in this letter and the enclosure and answer any questions you may have, at your convenience. EPA recognizes national energy needs and is committed to energy development and distribution, while assuring environmental protection. We will continue to work with FERC to address the topics raised by the agency. Please contact the staff contact for this project Alaina McCurdy at (215) 814-2741 or [mccurdy.alaina@epa.gov](mailto:mccurdy.alaina@epa.gov).

Sincerely,



Jeffrey Lapp  
Associate Director  
Office of Environmental Programs

Enclosure (1) Technical Comments

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**FA002 – U.S. Environmental Protection Agency (continued)**

Enclosure–Technical Comments  
Mountaineer Xpress Project and Gulf Xpress Project

**1) Geology**

FA002-2a

We recommend that the final EIS provide additional risk mitigation information related to the challenging geologic conditions likely to be encountered during construction. Given that blasting, in combination with steep slopes across 58.2 miles of the route, and active or abandoned mines and quarries, has the potential to result in adverse impacts, we support FERC’s recommendation regarding timely filing of the results of a Phase I Landslide Hazard Assessment, as well as timely completion of relevant field activities and assessments so that the results may be included in a Phase II Landslide Hazard Assessment to be filed prior to construction. In addition, EPA recommends that the final EIS evaluate the proximity of streams to locations with high landslide susceptibility in order to ensure that impacts to these resources are avoided or minimized with appropriate construction techniques. Because the MXP is entirely within areas with a high incidence and high susceptibility to future landslides zone, we suggest that a Phase II Landslide Hazard Assessment include a steep slope mitigation plan and site specific methodology for erosion control and construction on steep slopes, included as an appendix, or appropriately referenced. This plan could include specific soil stabilization methods in the EIS such as where slope breakers should be implemented.

FA002-2b

EPA recommends that the EIS evaluate where improvements during construction and operation of pipelines can be made, based on past performance on other recent pipelines, that may reduce erosion and sediment control issues, turbidity in streams, impact to surface or ground water supply, and introduction of invasive species associated with MXP and GXP. This information could provide recommendations for best management practices (BMPs) and other mitigative approaches for impacts, and can be incorporated into direct, indirect and cumulative impact analysis.

FA002-2c

As the DEIS indicates that challenging geologic conditions are likely to be encountered during project construction, the DEIS also discusses construction challenges and constructability issues in the rationale for dismissing the Legacy 2 and LXP Alternatives. We recommend clarification of how the constructability and terrain differs from issues associated with the proposed MXP, such as specifying how much construction workspace is needed, what amount of space would be considered insufficient, and how much of the route was deemed to have insufficient workspace.

**2) Wetlands, Streams and Forests**

FA002-3

The DEIS reports that construction of the MXP and GXP project would temporarily impact about 7.6 and 0.12 acres of wetlands, respectively. Five hundred eight waterbodies would be crossed by the centerline of MXP pipelines (411 open-cut crossings, 96 dry-ditch crossings, and 1 HDD), and an additional 360 waterbodies would be within the pipeline construction right-of-way (ROW) but would not be crossed by the pipeline directly. GXP could potentially affect 15 waterbodies. Temporary and permanent workspace and water withdrawals for hydrostatic testing may impact additional wetland and stream habitat.

FA002-4

Some waterbodies are proposed to be crossed by MXP multiple times, such as the South Fork Hughes River, Spring Creek and Meathouse Fork, which also contain suitable habitat for federal

**FA002-2a:** See response to comment FA001-8.

**FA002-2b:** Our recommendation, included in section 4.1.4.4.1, that prior to construction “Columbia Gas should file with the Secretary for review and approval from the Director of OEP the results of a Phase II Landslide Hazard Assessment, which includes the results of all field activities to investigate and document the status of all potential landslide areas, and provide a Landslide Mitigation Plan that includes site-specific mitigation measures to be conducted during construction and operation of the project on steep slopes and slip-prone soils” is intended to address the concerns raised in this comment. Columbia Gas’ Landslide Mitigation Plan would include:

- a. a description of how construction activities would be conducted on steep slopes and in areas prone to instability;
- b. safety protocols for personnel working on steep slopes or areas prone to instability;
- c. measures Columbia Gas would implement if project-related activities result in instability/landslides during, and after, MXP construction; and
- d. steps to be taken to stabilize and restore such areas affected by project-related activities.

The Phase II Landslide Hazard Assessments and the Landslide Mitigation Plan would be developed in consultation with the WVDEP and WVDNR.

**FA002-2c:** Pipeline construction in areas of rugged topography is described in section 2.4.4.6 of the EIS. As noted in section 3.3, “The topographic setting of the MXP is characterized by steep slopes, narrow ridgetops and valleys, and shallow soils. Construction of the pipeline would require creating a corridor wide enough to allow for equipment and personnel to deliver, assemble, and install the pipeline safely. Other utilities (e.g., powerlines and pipelines) have taken advantage of ridgetops in the MXP area and are already sited to avoid side slopes and narrow valleys, which may be prone to extensive erosion during heavy rainfall events. Co-location opportunities on ridgetops and in the narrow valleys, which are prominent within the project setting and often contain waterbodies, limits the availability of workspace needed to safely construct and operate the proposed facilities. Even with the limited opportunities available, Columbia Gas was able to co-locate with other utility corridors almost 24 miles, or about 13.9 percent, of the

**FA002 – U.S. Environmental Protection Agency (continued)**

FA002-4 (continued)	<p>endangered mussel species. EPA echoes concerns for multiple crossings of the same waterbody and the protection of endangered species habitat expressed by the USFWS, and supports the USFWS recommendation to avoid or drastically minimize the number of crossings to these streams. Water withdrawal may affect recreational and biological uses, stream flow, and result in impacts to stream and wetland habitat, particularly in streams that will be affected by both construction and water withdrawals. Consideration of specific streams and wetlands of concern or high sensitivity, along with coordinating with appropriate resource agencies, may help determine if additional avoidance and minimization efforts may be necessary to reduce impacts to important resources within the project area. Examples include resources on the National Rivers Inventory, communities and riparian habitat.</p> <p>In order to offset the direct and indirect effects from the fragmentation and conversion of regulated waters, EPA recommends that the final EIS present compensatory mitigation addressing both the permanent loss and the permanent conversion of wetlands. EPA can provide expertise on mitigation monitoring, performance measures, success criteria and other CMP components, in an effort to improve mitigation success and more fully address resource loss or conversion.</p>
FA002-5	<p>As reported in Table 4.8-1, of the 3,590 total acres of land affected by MXP construction, 2,327 acres are forested. Based on FERC’s independent analysis, construction of MXP would directly impact of 2,255 acres of core forest areas (CFA). The DEIS recognizes that forest habitat impacts would include fragmentation and edge effects that would impact a number of species that depend on interior forest habitat. EPA recommends that quantification and assessment of effects to interior forest and forest fragmentation also describe the long-term and short-term impacts on migratory bird habitat, including a description of up-front avoidance and minimization efforts and impact mitigation plans for forest resources.</p>
FA002-6	<p>Discussion on the Legacy 2 Alternative asserts that a co-located route with multiple pipelines could inhibit wildlife crossings and further reduce interior forests. While these disadvantages could exist for this alternative, the DEIS does not consider the environmental advantages of preserving existing interior forest blocks elsewhere, or preventing the creation of new forested edges which could inhibit wildlife crossings. We recommend that the FEIS weigh these environmental advantages and disadvantages. Similarly, these environmental advantages should be considered for the LXP Alternative.</p>
	<p><b>3) <u>Groundwater and Drinking Water Protection</u></b></p>
FA002-7	<p>While the project area of the planned pipeline does not directly cross wellhead protection areas (WHPAs) as defined by the West Virginia Bureau of Public Health, the DEIS outlines the proximity of the project area to four wellhead protection areas (Doddridge County Park Well #1 and Roane-Jackson Technical Center Wells #1-3). Columbia intends to minimize the potential for impacts on WHPAs through general construction practices as specified in the Erosion Sediment Control Plan and Spill Prevention, Control and Countermeasures plan. Upgraded construction practices could be warranted near the Doddridge County Park Well #1 and Roane-Jackson Technical Center Wells #1-3 in order to protect these drinking water sources.</p>
FA002-8	<p>Many private wells exist in close proximity to the proposed project workspace. Although some private wells have been identified in Table 4.3-3, Columbia should continue to identify (through landowner consultation, civil survey, and county health departments) private drinking water supply</p>

“MXP route.” Beyond environmental and safety concerns associated with co-location of MXP with the Legacy 2 and LXP corridors, neither of these alternatives fully meet the project objective of delivering the required gas volumes to Columbia Gas’ TCO Pool and other markets on the CPG system. Therefore, it is our determination that further evaluation of these alternatives is unwarranted.

**FA002-3:** On March 2, 2017, Columbia Gas filed a supplement to its application, which included updates to these numbers. See sections 4.3 and 4.4.

**FA002-4:** As noted in section 4.7.2, the USFWS has been working with Columbia Gas since 2015 to identify survey and project information needed, including surveys for federally listed mussels in West Virginia. Once additional information becomes available, the USFWS will work with Columbia Gas to address any species-specific issues and develop avoidance and mitigation measures for federally protected species affected by the project. Columbia Gas anticipates completing necessary project field surveys in late spring or summer 2017.

Columbia Gas and Columbia Gulf would be required to mitigate for temporary and permanent impacts on wetlands as specified in the conditions of each project’s section 404/401 permit.

**FA002-5:** Columbia Gas has provided information indicating that it is working towards a long-term agreement with the WVDNR that would incorporate special construction, restoration, and operational conditions within WVDNR controlled tracts of land. Because specific measures have not been finalized, we have included the following recommendation in section 4.5.4.1:

“As soon as information is available and prior to construction, Columbia Gas should identify any specific construction, restoration, replacement, and/or operation mitigation measures identified through its discussions with the WVDNR that it would implement to promote compatibility with the restoration and management of upland forest areas.”

**FA002-6:** See response to comment FA003-2c.

**FA002-7:** See response to comment FA001-5.

**FA002 – U.S. Environmental Protection Agency (continued)**

FA002-8 (continued)	<p>wells within 150 feet of the project workspace. This table also summarizes these wells and Columbia’s status on identifying private well use. Further, EPA recommends that, prior to construction, Columbia finalize the status of the wells marked as ‘Pending’ due to ongoing consultation with the county health departments. The DEIS mentions that specific protection measures that would be implemented for active wells located inside construction areas have not yet been identified. We recommend that the final EIS identify specific measures that would be used to protect these wells at a level as those identified for human consumption, in addition to the previously mentioned hand-dug water supply well at milepost 107.2.</p>
FA002-9	<p>The DEIS outlines several Surface Water Intake Facilities and Source Water Protection Areas (SWPAs) crossed by the project (Table 4.3-6), and designates whether the project intersects with the Zone of Critical Concern (ZCC), the Zone of Peripheral Concern (ZPC), or both. To prevent impacts on public and private water supplies, we recommend that the final EIS consider route deviations that do not directly pass through state-defined SWPAs, especially those where the project crosses ZCCs multiple times (Convestro, milepost 0.1 – 6.4; Town of West Union, milepost 46.0 – 52.8; Milton Water, milepost 155.8 – 163.9). We recommend that appropriate government entities and/or water utilities that manage each SWPA be identified and coordinated with to identify specific protective measures for any SWPAs crossed by the project be developed prior to construction. Protective measures where the final pipeline route crosses SWPAs may include upgraded construction techniques.</p>
	<p><b>4) <u>Communities</u></b></p>
FA002-10	<p>We appreciate FERC’s use of appropriate benchmarks in the Environmental Justice (EJ) analysis. To improve the clarity of the analysis, tables could include the actual benchmarks used to identify areas of Environmental Justice concern be made available in an easily identifiable and simply understood format. While census tracts and block groups of concern are mentioned and identified in the text following the tables, it would be helpful to have all of the benchmark values clearly listed in the table in such a way as to give readers meaningful information that helps to inform and clarify the process. It would also be helpful to indicate which census tracts or block groups exceed the benchmarking criteria in the tables. It would be helpful to include locations of areas of potential EJ concern on appropriately scaled maps.</p>
	<p>The EJ assessment should consider all of the adverse and beneficial impacts that may occur during construction and operation of the project in the study area or adjacent to it, that may reasonably be anticipated to have an impact upon minority and/or low-income populations. It is recommended that the impacts of short term site activities such as construction, truck traffic, noise and fugitive dusts be clearly considered as to their role in impacting the lives of residents in the study area. It is also suggested that FERC consider the air quality impact on populations of concern in non-attainment areas.</p>
FA002-11	<p>The DEIS mentioned that the proposed Cane Ridge Compressor Station “...would result in a noticeable increase in noise levels, the noise levels would remain below our noise criterion....” Please note that the use of electric driven compressor units may result in reduced noise impacts to the community and environment. We suggest that the practicability of such units be considered as a way to reduce noise impacts to the community surrounding the Cane Ridge Compressor Station.</p>

**FA002-8:** Section 4.3.1.3.1 includes a recommendation that prior to construction, Columbia Gas should:

- file with the Secretary the location of all water wells and potable springs within 150 feet of all areas of disturbance associated with the MXP pipelines and related aboveground facilities;
  - offer to test all water wells within 150 feet of construction workspaces; and
  - provide the status (active, abandoned, capped, etc.) of the two water wells located at milepost 164.3 and, if active, identify measures to protect these water wells during construction.
- Any private drinking water supply well with a “pending” status would be considered active for human consumption and protections would be employed as such.

**FA002-9:** Section 4.3.2.1.1 has been modified to include a recommendation that Columbia Gas consult with the appropriate government entities and/or water utilities that manage each SWPA to identify specific protective measures for any SWPAs crossed by the project. See also response to comment FA001-3.

**FA002-10:** The tables in section 4.9.9 (Environmental Justice) have been revised in response to this comment.

**FA002-11:** Section 3.6 includes an expanded discussion of electric motor driven compressors. Columbia Gulf has determined that gas turbine engines are the most suitable option to achieve hydraulic efficiency at the Cane Ridge Compressor Station. While there may be a noticeable increase over ambient noise levels during operation, as discussed in section 4.11.2.3.2, the predicted noise levels attributable to operation of the Cane Ridge Station at the closest noise-sensitive area (NSA) would be below our noise criterion as well as the Metropolitan Government of Nashville & Davidson County daytime and nighttime limits.

**FA002 – U.S. Environmental Protection Agency (continued)**

**5) Air Protection**

There are (5) major compressor stations located in non-attainment areas or Maintenance areas (see table 4.11. page 4-263). The applicability of these stations to the New Source Review (NSR) regulation is based on the potential-to-emit (PTE) for each compressor station and comparison to applicable permitting thresholds in tons per year. (The PTE are shown in tables 4.11-4 through 4.11-9, presented in sections 4.11.1.2.3 and 4.11.1.2.4.). It is shown that for each station considered individually, the PTE of the station is below the major source threshold requirement of 250 tons per year. However, if they are looked at cumulatively, the total PTE for each criteria pollutant exceeds the 250 ton per year threshold, and in some cases, is greater than ten-times (10x) the threshold. Please see the table below:

	NOX (tpy)	CO (tpy)	VOC (tpy)	PM10/PM2.5 (tpy)	SO2 (tpy)	CO2e (tpy)	Formaldehyde (Single HAP) (tpy)	Total HAPs (tpy)
Total Station Emissions Oak Lane Compressor	127.5	188.36	28.31	15.11	1.65	276,728	1.72	2.5
Emissions from the Sherwood Compressor Station	101.85	239.93	23.7	11.75	1.25	224,976	1.36	2
Emissions from the White Oak Compressor Station	89.35	213.82	18.46	10.32	1.11	193,436	1.22	1.78
Emissions from the Mount Olive Compressor Station	120.39	244	24.93	14	1.51	264,200	1.62	2.37
Emissions from Expansion of the Ceredo Compressor Station	3,582.56	309.93	96.64	41.05	1.21	208,685	40.09	57.78
Emissions from Expansion of the Elk River Compressor Station	98.37	243.38	76.15	11.65	1.27	228,025	1.25	1.86
<b>TOTAL EMISSIONS</b>	<b>4120.02</b>	<b>1439.4</b>	<b>268.2</b>	<b>103.9</b>	<b>8</b>	<b>1396050</b>	<b>47.26</b>	<b>68.29</b>
Major source threshold	250	250	250	250	250	N/A	10	25

The cumulative total emissions would trigger NSR. While such cumulative effects may be considered outside the scope of some permitting programs under the Clean Air Act, air emissions from pipeline compressor station projects such as MXP may have ambient air impacts in such a way as to hamper an area's ability to achieve and maintain national ambient air quality standards (NAAQS). Under 40 CFR 51.160, West Virginia DEQ must consider the cumulative impact from numerous sources on attaining and maintaining air quality standards. We recommend the final EIS consider this situation

**FA002-12:** The U.S. Environmental Protection Agency (EPA) delegates its permitting authority under the Clean Air Act in West Virginia to the WVDEP and we take no position on the WVDEP's decisions under its federally delegated permitting authority. We understand that the MXP compressor stations were permitted as separate sources (and modeling is performed for each area) and we evaluated them as separate sources given their distance from each other. We analyzed cumulative air quality impacts based on the geographic scope, which was extended to a conservative 50-kilometer radius around each compressor station (per EPA's own Prevention of Significant Deterioration [PSD] guidance). Since the compressor stations do not fall within each other's geographic scope, the emissions were not combined.

**FA002 – U.S. Environmental Protection Agency (continued)**

as a component of a cumulative effects analysis and consider additional mitigation efforts to address this issue.

**6) Cumulative Impacts**

EPA recommends that additional analysis of cumulative impacts be provided in the final EIS. The DEIS concludes that the cumulative effect on surface waterbody resources would be temporary and minor, and that groundwater effects would be less than significant. Aquatic resources have the potential to be cumulatively impacted by many factors, including waterbody crossings, change in recharge patterns, clearing, erosion, landslides, and other geohazards, blasting, and water withdraws for hydrostatic testing. We believe the consideration of these factors from other past, present and reasonably foreseeable projects is critical as other FERC jurisdictional projects occur in similar geologic settings and occur within the same watersheds as the proposed action.

Accordingly, we recommend FERC consider performing a cumulative impact assessment at the individual watershed scale, i. e. by individual HUC 10 or 12. We suggest this assessment include stream crossings and surface and groundwater withdrawals, as these will likely have more impact to surface waters than acres disturbed. Other environmental variables that influence the degree of impact, such as miles of high quality and impaired streams; location of rare, threatened, and endangered species; number of National Pollutant Discharge Elimination System permitted outfalls; and any water restoration plans in the HUC are also relevant to cumulative impacts, and can strengthen FERC’s determinations whether cumulative impacts to stream crossings are temporary and minor. We recommend that the cumulative impact analysis also consider impacts to water quality, headwater streams, and high quality and/or sensitive aquatic resources.

We recommend FERC specifically identify subwatersheds where the proposed action would likely have a cumulative impact. Below please review an example of methodology used to assess the cumulative impact of stream crossings, the number of stream crossings per HUC10 and HUC12 for the MXP and other FERC jurisdictional pending or approved projects. This type of data assessment could help highlight areas of special concern and high potential for cumulative impacts, such as the Headwaters Middle Island Creek which is impaired for benthic macroinvertebrates and has high numbers of stream crossings. Headwaters also are critical for the downstream Federally-listed endangered freshwater mussels, where they occur. By identifying these areas, FERC can focus efforts to minimize stream crossings in these areas through minor route modifications.

Table 1: HUC 10’s with highest number of cumulative stream crossings

	HUC 10	HUC Name	# of stream crossings	Additional pipelines in HUC with MXP
1	0503020104	Headwaters Middle Island Creek	58	Rover, ACP, MVP
2	0503020102	Fishing Creek	35	ACP, MXP
3	0503020105	Outlet Middle Island Creek	27	ACP, Rover
4	0503010611	Fish Creek	25	LXP
5	0503020103	McElroy Creek	17	ACP, Rover

**FA002-13:** Cumulative impacts of the MXP and GXP along with other projects occurring or reasonably foreseeable in the same watersheds were considered in our cumulative impacts assessment.

**FA002-14:** We created a new table that lists the HUC-12 subwatersheds along the MXP project and any other projects we evaluated that occur in the same HUC-12. See table 4.13-5.

**FA002 – U.S. Environmental Protection Agency (continued)**

FA002-14 (continued)

Table 2: HUC 12's with the highest number of cumulative stream crossings				
	HUC 12	Name	# of Stream Crossings	Additional pipelines in HUC with MXP
1	050302010402	Buckeye Creek*	19	Rover, ACP, MVP
2	050302031008	Grass Run-South Fork Hughes River	14	n/a
3	050302010403	Meathouse Fork*	13	ACP, MVP
4	050302010204	Upper Fishing Creek	13	n/a
5	050302010404	Nutter Fork-Middle Island Creek*	12	Rover
6	050301061105	Lower Fish Creek	11	LXP

\* = located within the same HUC 10, Headwaters Middle Island Creek, 0503020104.

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SA001 – Tennessee Department of Environment and Conservation



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF WATER RESOURCES  
William R. Snodgrass - Tennessee Tower  
312 Rosa L. Parks Avenue, 11<sup>th</sup> Floor  
Nashville, Tennessee 37243-1102

April 10, 2017

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE, Room 1A  
Washington, DC 20426

re: OEP/DG2E/Gas 4  
Columbia Gulf Transmission, LLC  
Gulf Express Project: FERC Docket No. CP16-361-000

Dear Ms. Bose:

SA001-1

The Division has reviewed the information that was sent as a notice on intent to prepare an environmental assessment for the Columbia Gas Transmission Project. It is my understanding from reading the document that the only portion of the project that will be in Tennessee is are the two new compressor stations located in Cane Ridge/Nashville/Davidson County and Clifton Junction/Wayne County. As proposed this activity does not pose a significant impact on programs regulated by the Division of Water Resources. Review of the site location does not indicate that there are any issues with public water supplies, navigable waters or that the project would impact a river that is part of the Nationwide Rivers Inventory or any wild or scenic river within Tennessee.

SA001-2

The disturbed areas for both properties are well over the one acre threshold and will require a General NPDES Permit for Discharges of Storm Water Associated with Construction Activities (CGP). The exact location of the Clifton Junction compressor station is not given in the draft EIS, but I was able to determine the location via map parcel data for Wayne County. It is not clear from the draft EIS if the Cane Ridge site could impact the unnamed tributary to Mill Creek. If there is the potential for impact, the project will need an Aquatic Resource Alteration Permit (ARAP) application to be filed.

SA001-3

As noted in the draft EIS, the two compressor station sites are located in karst terrain. The particular geologic formations involved are less likely to form sinkholes than some of the other geologic formations in Middle and East Tennessee. Should sinkholes or other karst drainage features be encountered during the two projects, the modification of sinkholes is regulated under the Underground Injection Control (UIC) Program and requires Division approval. The UIC Program is housed in the Drinking Water Unit.

If you have any further questions, I will be glad to try to assist you. You may reach me at (615) 532-0170 or [tom.moss@tn.gov](mailto:tom.moss@tn.gov).

Sincerely,

Thomas A. Moss  
Environmental Review Coordinator  
Compliance and Enforcement Unit

**SA001-1:** The commenter's statements regarding project activities and their impacts on resources within Tennessee regulated by the Division of Water Resources are noted.

**SA001-2:** The status of NPDES and section 404 permitting requirements for GXP facilities in Tennessee are discussed in section 4.3.2.4.2. As indicated in table 1.5-1, Columbia Gulf anticipates filing its NPDES permit application in June 2017. No impacts on surface waterbodies are anticipated from construction and operation of the Cane Ridge Compressor Station.

**SA001-3:** As discussed in section 2.4.4.8, geotechnical investigations of the compressor station sites encountered soil materials with karst terrain, but they did not exhibit typical signs of active features. If sinkholes are discovered during development of the sites, Columbia Gulf would comply with Tennessee Department of Environment and Conservation (TDEC) regulations for sinkhole modifications.



ORIGINAL

The Culture Center  
1900 Kanawha Blvd., E.  
Charleston, WV 25305-0300

Randall Reid-Smith, Commissioner

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EEO/AA Employer

April 7, 2017

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington, DC 20426

RE: Draft Environmental Impact Statement dated February 2017  
Columbia Gas Transmission, Mountaineer Xpress Project  
FERC Docket No(s). CP16-357-000 and CP16-361-000  
FR#: 15-800-MULTI-11

FILED  
SECRETARY OF THE  
COMMISSION  
2017 APR 17 P 2:30  
FEDERAL ENERGY  
REGULATORY COMMISSION

Dear Mr. McKee:

We have reviewed the draft Environmental Impact Statement (DEIS) prepared for the aforementioned project to determine its effects on cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

In general, we are amenable to the information presented in the DEIS; however, a few emendations ought to be made to correct the document. First, our office has not concurred with the argument—either from Columbia Gas, ERM (Columbia's CRM consultant), or FERC—that the pipeline's construction will have no "significant negative impact on the viewshed" of the Morris Memorial Children's Hospital or any other property that is considered eligible for or included in the National Register of Historic Places. As the DEIS noted, consultation continues between our office and Columbia/ERM regarding eligibility and any potential effects the undertaking may have on historic properties. Finally, the DEIS should be corrected to indicate that the Mud River Covered Bridge was listed in the National Register of Historic Places in 1975. It is not, as the DEIS explains, a National Historic Landmark. We will continue to provide additional comments to Columbia and their consultant, ERM, for this undertaking as we receive the information we have previously requested.

SA002-1

We appreciate the opportunity to be of service. If you have questions regarding our comments or the Section 106 process, please contact Lora A. Lamarre-DeMott, Senior Archaeologist, or Mitchell K. Schaefer, Structural Historian, at (304) 558-0240.

Sincerely,

Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP/MKS

CC: Mr. Larry McKee  
Senior Archaeologist  
Environmental Resources Management  
3300 Breckinridge Blvd., Suite 300  
Duluth, Georgia 30096

SA002-1: Thank you for the clarification; section 5.1.10 has been modified to reflect the information provided by the WVSHPO.

## SA003 – Tennessee Department of Environment and Conservation



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
NASHVILLE, TENNESSEE 37243-0435

ROBERT J. MARTINEAU, JR.  
COMMISSIONER

BILL HASLAM  
GOVERNOR

April 24, 2017

Via Electronic Submittal at FERC.gov

Attn: Kimberly D. Bose, Secretary  
Office of Energy Projects  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington, DC 20426

Dear Ms. Bose:

The Tennessee Department of Environment and Conservation (TDEC) appreciates the opportunity to provide comments on the Columbia Gas Transmission, LLC (Columbia Gas) proposed *Mountaineer XPress Project* (MXP), and the Columbia Gulf Transmission, LLC (Columbia Gulf) proposed *Gulf XPress Project* (GXP) included in the Draft Environmental Impact Statement (Draft EIS) prepared by the Federal Energy Regulatory Commission (FERC). Columbia Gas requests authorization to construct and operate a total of 170.7 miles of natural gas transmission pipeline, new compressor stations, and other appurtenant facilities and to modify one existing compressor station and two pending compressor stations located in West Virginia. Columbia Gulf requests authorization to construct and operate compressor stations and to upgrade an approved compressor station and one existing meter station in Kentucky, Tennessee, and Mississippi.

Actions considered in detail within the Draft EIS include:

- **Proposed Action Alternative** – Columbia Gas requests authorization to construct and operate a total of 170.7 miles of natural gas transmission pipeline, new compressor stations, and other appurtenant facilities, and to modify one existing compressor station and two pending compressor stations, all located in West Virginia. The MXP would provide about 2,700,000 dekatherms per day (Dth/d) of available capacity for transport to multiple Midwest, Northeast, and Mid-Atlantic markets across Columbia Pipeline Group's system, including the Columbia Gulf Leach interconnect with Columbia Gulf. Columbia Gulf requests authorization to construct and operate compressor stations and to upgrade an approved compressor station and one existing meter station in Kentucky, Tennessee, and Mississippi. The GXP would provide about 860,000 Dth/d of natural gas delivery to markets in the Gulf Coast region. Under the proposed action the GXP project would lead to the construction of the Cane Ridge Compressor Station on approximately 23 acres in Antioch Township, Davidson County, Tennessee, and the Clifton Junction Compressor Station on approximately 29 acres in Waynesboro, Wayne County, Tennessee.
- **No-Action Alternative** – Under the no-action alternative, the environmental impacts identified in the Draft EIS would not occur. Existing natural gas transportation systems would continue to provide natural

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## SA003 – Tennessee Department of Environment and Conservation (continued)

gas service to these regions; however, the projects<sup>1</sup> customers would likely seek natural gas and transportation services from other sources. To increase capacity or to provide access to new sources of natural gas, the Companies<sup>2</sup> may need to construct additional and/or new gas pipeline facilities and appurtenances in other locations (i.e., system alternatives) to provide the volumes of natural gas contracted through the projects' binding precedent agreements with the respective shippers. Alternatively, customers of the projects' shippers could seek to use other energy alternatives, such as alternative fuel or renewable energy sources, which could also require new facilities. If other new natural gas pipeline facilities or other energy infrastructure were approved and constructed, each project would result in specific environmental impacts that could be less than, similar to, or greater than the current proposals.

- **System Alternatives** – To analyze system alternatives, the Draft EIS evaluated potential impacts associated with using other existing interstate natural gas pipelines to transport an equivalent volume of gas to meet customer requirements set forth in the binding precedent agreements, and to provide firm transportation service to Columbia Gas' TCO Pool<sup>3</sup>, as well as more southerly markets accessible from Columbia Gulf's pipeline. One of the primary purposes of the MXP is to increase deliverability by approximately 1,800,000 Dth/d to the TCO Pool.
- **Major Pipeline Route Alternatives** – FERC received comments during the public scoping period regarding the use of co-location opportunities with other utilities to reduce MXP impacts on landowners, communities, and the environment.<sup>4</sup> Columbia Gas' route review during the MXP pipeline siting process considered co-location opportunities where practicable, with several caveats. Even with the limited opportunities available, Columbia Gas was able to co-locate with other utility corridors almost 24 miles, or about 13.9 percent, of the MXP route. Additionally, FERC analyzed two major route alternatives to the MXP that involved looping/upgrades to the existing Columbia Gas pipeline systems with greater ability to co-locate pipelines (Legacy 1 and Legacy 2 Alternatives), and one major route alternative (LXP Alternative) that included modifications to a Columbia Gas project currently under FERC review (the LXP; Docket No. CP15-514). These alternatives are substantially different from the proposed MXP route and from each other.
- **Pipeline Route Variation Alternatives<sup>5</sup>** – During development of the MXP, Columbia Gas identified and evaluated numerous route variations and alignment modifications as additional information became available.<sup>6</sup>

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<sup>1</sup> Columbia Gas Mountaineer XPress Project (MXP) and the Columbia Gulf XPress Project (GXP) collectively.

<sup>2</sup> Columbia Gas Transmission, LLC (Columbia Gas) and Columbia Gulf Transmission, LLC (Columbia Gul) collectively.

<sup>3</sup> The TCO Pool is the main pooling point on Columbia Gas' system. Specifically, the TCO Pool refers to Columbia Gas' highly liquid trading pool. Shippers may make deliveries into the TCO Pool, i.e., Columbia Gas' Interruptible Paper Pool, from any source delivered into Columbia Gas' system. The TCO Pool is a daily and monthly pricing point listed by S&P Global Platts as "Columbia Gas, Appalachia."

<sup>4</sup> A pipeline is considered co-located with an existing corridor if the new right-of-way is adjacent to or overlaps the existing right-of-way.

A pipeline can parallel an existing linear facility without being co-located (i.e., there is a separation between the rights-of-way), but this can result in multiple clear-cuts along similar paths with limited benefit in reducing impacts on environmental and other resources. Parallel configurations are typical for a gas pipeline where the corridor being followed is a foreign pipeline or utility, or where the company does not have multiple line rights within its existing right-of-way. In either scenario, whether truly co-located or simply paralleling another utility, construction within or adjacent to existing rights-of-way can minimize impacts on visual sightlines and intrinsic value, depending on how the new pipeline is configured in relation to the existing corridors. Because co-location usually minimizes vegetation clearing, it subsequently reduces fragmentation of forested habitats. Conversely, multiple corridors can have negative impacts on landowners, and studies have shown there can be detrimental effects on certain species of wildlife in areas with multiple co-located pipelines, as corridors can expand to the point that they create barriers to wildlife passage, and in some cases, effectively isolate populations. The extent of this effect depends on the species, life cycles, the geography of an area, and the cleared corridor width.

<sup>5</sup> Route variations differ from system or major route alternatives in that they are designed to reduce impacts on specific localized features, are typically shorter than major route alternatives, and do not result in a significant departure from the original alignment.

<sup>6</sup> In its application filing, Columbia Gas identified and provided its rationale for adopting 21 minor variations and 3 more significant route modifications (the Maxwell Ridge, Sherwood Lateral, and Hurricane Creek Alternatives) that were considered. Two of the modifications

## SA003 – Tennessee Department of Environment and Conservation (continued)

- **MXP Aboveground Facility Site Alternatives** – Columbia Gas selected the proposed compressor station locations to optimize gas flow hydraulics, integrate with other pipelines on the Columbia Gas system, and to minimize construction challenges given that much of the terrain where compression is required is mountainous and rugged. The three new compressor station sites proposed by Columbia Gas are privately owned parcels for which Columbia Gas has obtained purchase rights. No significant issues were identified with any of the three proposed sites, and FERC received no comments to evaluate any specific alternate sites during the public scoping period. As such, FERC did not evaluate alternative sites for the Sherwood, White Oak, or Mount Olive Compressor Stations. Additionally, FERC did not receive comments or evaluate alternatives for modifications at existing compressor facilities during the public scoping period.
- **GXP Compressor Station Alternatives** – The number and locations of the compressor stations proposed for GXP considered the basic flow dynamics of natural gas on Columbia Gulf's system and the effects of the GXP. To determine the amount of compression needed by the GXP and the location of compressor stations, Columbia Gulf used a combination of factors, including compression ratios, fuel consumption, and compressor suction and discharge pressures.<sup>7</sup>

As the environmental and natural resources regulatory authority in Tennessee, TDEC's comments will focus on proposed actions and associated impacts that will occur in Tennessee. Proposed actions occurring in Tennessee are included as part of the GXP project. Under the proposed action, Tennessee would see two new natural gas compressor stations constructed:

- The Cane Ridge Compressor Station is proposed for construction on approximately 23 acres in Antioch Township, Davidson County, Tennessee.
- The Clifton Junction Compressor Station is proposed for construction on approximately 29 acres in Waynesboro, Wayne County, Tennessee.

TDEC's **Office of Energy Programs** has reviewed the Draft EIS and provides the following comments regarding the proposed actions occurring within Tennessee.

SA003-1

- Section 4.5.1.1.1 "Pipeline Facilities" – In the final EIS, TDEC recommends that consideration be given to using electric-powered lawn equipment, which is as much as fifty percent (50%) quieter than traditional gas-operated models. Electric-powered lawn equipment has zero air emissions onsite, reduces petroleum-fuel purchases, and eliminates used oil waste.

SA003-2

- Section 4.1.4.8 "Flash Flooding" – TDEC encourages Columbia Gas to elevate essential electric components, utility boxes, and any backup power generation as a resiliency measure to ensure safe operation in the event of a flash flood or an extreme flood event. Columbia Gas should evaluate beyond

were specifically developed in response to comments received during project scoping. In its October 13, 2016 supplemental filing, Columbia Gas identified an additional 48 route changes, which resulted from further project refinements in consideration of its 2016 field surveys, stakeholder comments, input from FERC staff, and other considerations. These route adjustments were adopted to address landowner concerns, design changes, and constructability constraints, as well as to avoid certain parcels and landmarks.

<sup>7</sup> Columbia Gulf proposed the new compressor stations to meet the volumetric and pressure requirements for its existing lines, as well as to meet the requirements of the project shippers, while minimizing environmental impacts and maintaining service to existing customers. Applying site-specific conditions to the results of hydraulic modeling led Columbia Gulf to determine that each compressor station must be located within approximately 1 mile upstream and downstream of the optimal compression location. This would achieve the hydraulic efficiency necessary to meet the required project shipper volume.

**SA003-1:** Lawn maintenance on a 10-acre site with electric powered equipment would be impractical from an efficiency perspective. In its response to our May 9, 2017 data request, Columbia Gulf indicated it would not be using electric-powered lawn equipment. Since maintenance activities would be conducted infrequently on a seasonal basis, we do not anticipate these activities should warrant special mitigation.

**SA003-2:** TDEC's recommendation is noted.

**SA003 – Tennessee Department of Environment and Conservation (continued)**

SA003-2 (cont.)	the FEMA 100-year floodplain map for the Cane Ridge and Clifton Junction Compressor Stations in Tennessee as recent flooding events in Middle Tennessee have exceeded 100-year floodplain levels. <sup>8</sup>
TDEC’s Division of Water Resources (DWR) has reviewed the Draft EIS and provides the following comments regarding the proposed action occurring within Tennessee.	
SA003-3	<ul style="list-style-type: none"> <li>The project as proposed will include the disturbance of more than one acre, and will therefore require a NPDES – General Stormwater Construction Permit, as well as a Storm Water Pollution Prevention Plan and Best Management Practices Plan.<sup>9</sup> TDEC acknowledges that this consideration is included in the Draft EIS and recommends that it be included in the Final EIS.</li> </ul>
SA003-4	<ul style="list-style-type: none"> <li>It is not clear from the Draft EIS if the Cane Ridge Compressor Station could impact the unnamed tributary to Mill Creek on the east-southeast portion of the property. If there is the potential for impact, the project will need to file an Aquatic Resource Alteration Permit (ARAP) application.<sup>10</sup> TDEC recommends that additional clarification on potential impacts to the unnamed tributary to Mill Creek be included in the Final EIS.</li> </ul>
SA003-5	<ul style="list-style-type: none"> <li>As noted in the Draft EIS, the two compressor station sites are located in karst terrain. The particular geologic formations involved are less likely to form sinkholes than some of the other geologic formations in Middle and East Tennessee. Should sinkholes or other karst drainage features be encountered during the two projects, the modification of sinkholes is regulated under the Underground Injection Control (UIC) Program and requires DWR approval.<sup>11</sup> TDEC recommends that these considerations be addressed in the Final EIS.</li> </ul>
SA003-6	TDEC’s Division of Archaeology (DoA) has reviewed the Draft EIS and provided the following comments regarding the proposed action occurring within Tennessee. Environmental Resources Management Archaeologists conducted cultural resource surveys at the two proposed compressor stations in Tennessee. Two prehistoric archaeological sites were located within the footprint of this proposed project. However, they were determined to be ineligible for the National Register of Historic Places. The Tennessee State Historic Preservation Officers concurred with these findings (May 16, 2016); DoA also agrees with Columbia Gas’ recommendation that no further archaeological surveys are required for this project to move forward.
SA003-7	TDEC’s Division of Natural Areas (DNA) has reviewed the Draft EIS and has no specific comments regarding the proposed actions or its alternatives potential impacts to endangered species. <sup>12</sup> In regards to clearing activities, if any wood is transported from site, special consideration should be given to protect against the spread of the Emerald Ash Borer ( <i>Agrilus planipennis</i> ), a federally regulated invasive species found in Tennessee. TDEC
<p><sup>8</sup> For example, the Opry Mills Mall site in Metro Nashville was built two feet above the 100-year floodplain levels, yet the 2010 historic flood exceeded those levels. Similar rainfall levels have been seen in the Metro Nashville area since 2010 and pose significant risk to these same watersheds. For more information visit <a href="http://www.tennessean.com/story/news/local/2015/05/02/promise-floodwall-nashville/26759801/">http://www.tennessean.com/story/news/local/2015/05/02/promise-floodwall-nashville/26759801/</a>.</p> <p><sup>9</sup> For more information on NPDES Stormwater Construction Permitting please visit <a href="http://www.tn.gov/environment/article/permit-water-npdes-stormwater-construction-permit">http://www.tn.gov/environment/article/permit-water-npdes-stormwater-construction-permit</a>. Additionally, Projects in Metro Nashville where ground cover, natural or man-made, is removed require a grading permit in addition to a CGP. <a href="http://www.nashville.gov/Water-Services/Developers/Stormwater-Review/Who-Needs-A-Grading-Permit.aspx">http://www.nashville.gov/Water-Services/Developers/Stormwater-Review/Who-Needs-A-Grading-Permit.aspx</a>.</p> <p><sup>10</sup> For more information on the ARAP program please visit <a href="https://www.tn.gov/environment/article/permit-water-aquatic-resource-alteration-permit">https://www.tn.gov/environment/article/permit-water-aquatic-resource-alteration-permit</a>.</p> <p><sup>11</sup> TDEC’s UIC Program is housed in the Drinking Water Unit, more information can be found at <a href="https://www.tn.gov/environment/article/permit-water-underground-injection-control-permit">https://www.tn.gov/environment/article/permit-water-underground-injection-control-permit</a>.</p> <p><sup>12</sup> The Tennessee Wildlife Resources Agency (TWRA) manages information related to state listed rare animal species, and should be consulted in addition to the Division of Natural Areas.</p>	

**SA003-3**

See response to comment SA001-2.

**SA003-4:** No impacts on surface waterbodies are anticipated from construction and operation of the Cane Ridge Compressor Station. See section 4.3.2.4.2 of the final EIS.

**SA003-5:** See response to comment SA001-3.

**SA003-6:** The DoA’s concurrence with project findings and recommendations is noted.

**SA003-7:** The DNA recommendation for Columbia Gulf to inspect wood materials to be transported offsite has been added to section 2.4.1.2.

**SA003 – Tennessee Department of Environment and Conservation (continued)**

- SA003-7 (cont.) recommends Columbia Gas include language in the Final EIS to identify any ash trees onsite and check for infestation or otherwise that may be deemed to present a hazard of the spread of the Emerald Ash Borer.<sup>13</sup>
- SA003-8 TDEC's Division of Solid Waste Management (SWM) has reviewed the Draft EIS and recommends the Final EIS reflect that any wastes associated with construction at the two compressor station sites in Tennessee must be handled in accordance with the Solid and Hazardous Waste Rules and Regulations of the state.<sup>14</sup>
- TDEC's Division of Air Pollution Control (APC) has reviewed the Draft EIS and provides the following comments regarding the proposed action occurring within Tennessee.
- SA003-9
    - The estimated natural gas compressor emissions are likely to be at levels that will require Title V permits to be issued by each of the separate state and county (local air program) jurisdictions they are proposed to be constructed within. TDEC does not issue permits for facilities inside of Davidson County. Facilities inside of Davidson County would fall under the jurisdiction of the Metro Nashville Local Air Program and must comply with their permitting regulations.<sup>15</sup> TDEC recommends that the likely need for Title V permits be referenced in the final EIS.
  - SA003-10
    - TDEC Title V construction permits for facility ID# 91-0098 were issued August 31, 2016 and September 9, 2016 for the proposed facility located off US 64 Savannah Highway, (Clifton Junction) in Wayne County. Both permits expire on August 30, 2017, and the facility is required to apply for a Title V Operating Permit when the source begins operation. TDEC recommends that the likely need for Title V permits be referenced in the final EIS.
  - SA003-11
    - Davidson and Wayne counties are both classified as attainment for all National Ambient Air Quality Standards (NAAQS) pollutants. The applicant has conducted air quality modeling using the Environmental Protection Agency's (EPA) approved AERMOD modeling software for the two compressor stations proposed to be constructed in Tennessee and has provided summary reports detailing that emissions will minimally impact the NAAQS for the pollutants evaluated. Because both counties are currently classified as attaining the NAAQS, General Conformity applicability determinations will not be required.
  - SA003-12
    - No demolition of existing structures is described as planned for this project (in Tennessee), however, if any existing structures were to be subject to demolition, both the state and local asbestos NESHAPs R&D programs will need to be notified 10 working days in advance of the planned demolition(s). Any existing pipeline segments in Tennessee that may be subject to replacement should also be evaluated for both asbestos and PCBs prior to any activities that would otherwise disturb any wrappings or coatings on the pipe found to contain these regulated materials. If these materials are found to be present, appropriate measures must be taken to implement special handling and disposal of the affected pipeline segments in accordance with federal, state and or local asbestos or PCB regulations.
  - SA003-13
    - The Draft EIS includes a listing on page 4-282 of the State of Tennessee Air Regulations that the Wayne County facility would be subject to with regard to air permitting requirements. TDEC recommends that

<sup>13</sup> For more information regarding the Emerald Ash Borer please visit <https://www.tn.gov/agriculture/topic/ag-businesses-eab>.  
<sup>14</sup> Reference TDEC SWM Rule 0400 Chapter 11 for Solid Waste and Chapter 12 for Hazardous Waste <http://sos.tn.gov/effective-rules>.  
<sup>15</sup> For more information on the Metro Nashville, Air Pollution Control program visit <http://www.nashville.gov/Health-Department/Environmental-Health/Air-Pollution-Control.aspx> or contact John Finke, Director Division of Pollution Control Metro Public Health Department 2500 Charlotte Avenue Nashville, TN 37209-4129 Phone: (615) 340-5653 Email: [john.finke@nashville.gov](mailto:john.finke@nashville.gov).

**SA003-8:** As stated in section 1.5, Columbia Gulf would be responsible for all permits and approvals required to implement the proposed project prior to construction, consistent with the conditions of any authorization issued by FERC.

**SA003-9:** Table 1.5-2 has been modified to identify Metropolitan Government of Nashville & Davidson County as the regulatory agency for air permitting in Davidson County. We also have identified the Metropolitan Government of Nashville & Davidson County as the permitting agency for the Cane Ridge Compressor Station in section 4.11.1.3.2.

**SA003-10:** The Title V applicability for all new compressor stations is noted in section 4.11.1.3.2, Federal Regulations, and more specifically under the Kentucky, Tennessee, and Mississippi Regulations heading in that same section.

**SA003-11:** Further description of General Conformity is described in section 4.11.1.1.1

**SA003-12:** See response to comment SA003-8.

**SA003-13:** We have updated section 4.11.1.3.2 to include this corrected information under Kentucky, Tennessee, and Mississippi Regulations.

**SA003 – Tennessee Department of Environment and Conservation (continued)**

SA003-13 (cont.) the applicable Metro (Davidson County) regulations also be listed for the project that is proposed for Davidson County.<sup>16</sup>

SA003-14

- Footnote 41 on page 4-290 references a procedure to obtain the modeling information discussed in the Draft EIS. On attempting to obtain this information for review purposes, the following message statement was displayed: "The General and Advanced Searches are not available at this time." It would be desirable to have additional time to review this information and any MOVES modeling results obtained after modeling using the MOVES transportation model.

TDEC appreciates the opportunity to comment on this Draft EIS. Please note that these comments are not indicative of approval or disapproval of the proposed action or its alternatives, nor should they be interpreted as an indication regarding future permitting decisions by TDEC. Please contact me should you have any questions regarding these comments.

Sincerely,



Kendra Abkowitz, PhD  
Director of Policy and Planning  
Tennessee Department of Environment and Conservation  
[Kendra.Abkowitz@tn.gov](mailto:Kendra.Abkowitz@tn.gov)  
(615) 532-8689

cc: Molly Cripps, TDEC, OEP  
Lacey Hardin, TDEC, APC  
Lisa Hughey, TDEC, SWM  
Tom Moss, TDEC, DWR  
Mark Norton, TDEC, DoA  
Stephanie A. Williams, TDEC, DNA

**SA003-14:** In its May 16, 2017 response to FERC’s data request, Columbia Gulf indicated it has coordinated with TDEC representatives to provide the requested information. Copies of correspondence between Columbia Gulf and TDEC were attached to the response as confirmation.

<sup>16</sup> The Metro Nashville regulations can be found at <http://www.nashville.gov/Health-Department/Environmental-Health/Air-Pollution-Control/Pollution-Downloads.aspx>.

**SA004 – West Virginia Division of Natural Resources**

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**DIVISION OF NATURAL RESOURCES**  
Wildlife Resources Section  
Operations Center  
P.O. Box 67  
Elkins, West Virginia 26241-3235  
Telephone (304) 637-0245  
Fax (304) 637-0250

**Jim Justice**  
Governor

**Stephen S. McDaniel**  
Director

April 24, 2017

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First St. N.E., Room 1A  
Washington, DC 20426

Subject: Mountaineer Xpress Project Draft Environmental Impact Statement  
Columbia Gas Transmission, LLC  
Docket CP16-357

Dear Ms. Bose:

The West Virginia Division of Natural Resources, Wildlife Resources Section has received the Mountaineer Xpress Project Draft Environmental Impact Statement and appreciates the opportunity to review and provide comments on this project. We have provided comments relating to wildlife, wetlands, aquatic resources and public lands in West Virginia.

For questions, please contact Clifford Brown, Environmental Resources Specialist, by phone (304) 637-0245 or email [Clifford.L.Brown@wv.gov](mailto:Clifford.L.Brown@wv.gov).

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**SA004 – West Virginia Division of Natural Resources (continued)**

Comment #	Comment Author	Page # /Section	Paragraph	Comment
SA004-1	WVDNR	ES-9	5	Proposed locations for vegetative clearing during the May nesting period should be described and justified.
SA004-2	WVDNR	ES-10	1	Because there will be significant fragmentation of cerulean warbler habitat and WV supports the majority of the current cerulean warbler breeding population, replacement of interior forest habitat for unavoidable impacts and adverse effects should be provided.
SA004-3	WVDNR	4-11	First bullet	The Landslide Mitigation Plan should contain notification procedures, including notification of WVDNR for any landslides or slips on WMAS; and notification of both WVDNR and WVDEP for landslides that may impact streams or wetlands.
SA004-4	WVDNR	4-80	Table 4.4-1	Conversion impacts should be determined for both PSS and PFO wetlands.
SA004-5	WVDNR	4-108	First bullet	Replacement of core forest habitat for unavoidable impacts and adverse effects to interior forest wildlife species should be provided.
SA004-6	WVDNR	4-110	First bullet	Columbia should include Integrated Vegetation Management (IVM) in development of BMPs for ROW maintenance and noxious and invasive weed management.
SA004-7	WVDNR	4-121	1	This MOU also obligates FERC to "Require, as appropriate, applicants to mitigate negative impacts on migratory birds and their habitats by proposed actions, in compliance with and/or supporting the intent of the MBTA, Executive Order 13186, BGEPA, ESA and other applicable statutes". Including, "compensating for the impact by replacing or providing substitute resources or environments".
SA004-8	WVDNR	4-154	First bullet	The mussel survey period in WV as outlined in the current West Virginia Mussel Survey Protocols is May 1 to October 1.
SA004-9	WVDNR	4-192	3	Can eminent domain be exercised on State property acquired or managed with Federal funds, e.g. Pittman-Robertson Wildlife Restoration Program?
SA004-10	WVDNR	4-200	Table 4.8-6	Sportsman Park is operated by the Wirt County Commission. WVDNR has a Public Access Site at the park for boating and fishing on the Little Kanawha River.
SA004-11	WVDNR	4-204	4	A portion of Lewis Wetzel WMA was acquired with USFWS Wildlife and Sport Fish Restoration funds, not the Lantz Farm. To date, WVDNR has not made a determination of interference in the purpose of Federal Aid Grant W-35-L from the USFWS, Division of Wildlife and Sport Fish Restoration for this project. WVDNR will provide a statement of determination and supporting documentation to the USFWS for consideration. USFWS will review the documentation provided and subsequently respond to WVDNR with a conclusion of support, or denial, with respect to a determination of interference for the purpose of the grant.
SA004-12	WVDNR	5-17	1	A portion of Lewis Wetzel WMA was acquired with USFWS Wildlife and Sport Fish Restoration funds, not the Lantz Farm. To date, WVDNR has not made a determination of interference in the purpose of Federal Aid Grant W-35-L from the USFWS, Division of Wildlife and Sport Fish Restoration for this project. WVDNR will provide a statement of determination and supporting documentation to the USFWS for consideration. USFWS will review the documentation provided and subsequently respond to WVDNR with a conclusion of support, or denial, with respect to a determination of interference for the purpose of the grant.

**SA004-1:** In section 4.6.3.1, we have included a recommendation that Columbia Gas file an update with the Secretary regarding the status of Migratory Bird Treaty Act (MBTA) consultations with the USFWS and WVDNR regarding the development of its MBTA Tree Clearing Strategy (and provide a copy of the final plan, if available); and identify special measures, if any, that Columbia Gas would implement to reduce impacts on cerulean warbler habitat.

**SA004-2:** We are recommending that Columbia Gas continue to consult with the WVDNR and USFWS to further reduce impacts, particularly on the large Core Forest Areas preferred by the cerulean warbler. As stated in section 4.6.5.1, Columbia Gas would continue to consult with authorizing agencies to address location-specific impact minimization and mitigation measures regarding wildlife, wetlands, and other regulated sensitive environmental features.

**SA004-3:** See response to comment FA002-2b.

**SA004-4:** Footnote a/ in table 4.4-1 describes how conversion impacts for PSS/PFO wetlands were determined.

**SA004-5:** The recommendation in section 4.5.4.1 has been modified to include replacement in Columbia Gas' discussions with the WVDNR regarding upland forests.

**SA004-6:** The recommendation in section 4.5.5.1 has been modified to specify that the BMPs should include IMV.

**SA004-7:** The Memorandum of Understanding between FERC and the USFWS states in section F.2, the Commission shall "require, as appropriate, applicants to mitigate negative impacts on migratory birds and their habitats by proposed actions, in compliance with and/or supporting the intent of the MBTA, Executive Order

**SA004 – West Virginia Division of Natural Resources (continued)**

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13186, BGEPA, ESA, and other applicable statutes.” The memorandum further clarifies that mitigation includes avoiding, minimizing, rectifying, reducing, or compensating for the impact. Although we agree that compensatory mitigation is one way to off-set the impacts resulting from forest loss, there are other avoidance, minimization, and mitigation measures described in section 4.5.4.1 and 4.6.3.1 that would reduce forest fragmentation and impacts on core forests. While FERC does not require compensation, have asked the applicant to develop a MBTA plan, with appropriate mitigation measures, in consultation with USFWS and WVDNR. Columbia Gas is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Columbia Gas would consult with the appropriate state agency. State agencies would have the opportunity to review Columbia Gas’ proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond that proposed.

**SA004-8:** No changes required to the recommendation. Mussel surveys will be conducted during the permitted survey period as conditions allow. The survey period has been added to section 4.7.2.

**SA004-9:** As a general matter, a holder of a certificate of public convenience and necessity may exercise eminent domain under section 7(h) of the Natural Gas Act to obtain the necessary rights-of-way through State property, regardless of whether the State property was acquired or is managed with federal funding.

**SA004-10:** We have incorporated this information into table 4.8-6.

**SA004-11:** Section 4.8.2.2.1 has been revised to include the text provided.

**SA004 – West Virginia Division of Natural Resources (continued)**

**SA004-12:** Section 5.1.8 has been revised such that the information provided relating to the Lewis Wetzel WMA has been removed from the description of Lantz Farm.

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LA001 – Fabian Bedne, Nashville Metropolitan Council, District #31

20170503-0013 FERC PDF (Unofficial) 05/02/2017



**METROPOLITAN COUNCIL**

Member of Council

**FABIAN BEDNE**

Metro Council 31<sup>st</sup> District

Historic Metro Courthouse • One Public Square, Suite 204 • Nashville, TN 37219

Telephone 615-829-6226

April 24, 2017

The Honorable Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington, D.C., 20426

ORIGINAL

FILED  
SECRETARY OF THE  
COMMISSION  
2017 MAY -2 P 3 54  
FEDERAL ENERGY  
REGULATION COMMISSION

Dear Secretary Bose,

LA001-1

I would like to advocate the interests of my constituents and strongly encourage you to deny certificate approval for FERC Docket Number CP16-361-000, Columbia Gulf Transmission, LLC's Gulf Xpress Project (GXP). The extensive proposed project includes construction of a new gas compressor station in the Cane Ridge community of my district in Davidson County, Tennessee. This gas compressor station will have a direct and negative impact on the surrounding community and have deleterious effects on resident's wellbeing.

LA001-2

The proposed gas compressor station would be located on Barnes Road approximately 0.5 mile west of Old Hickory Boulevard, an area that is zoned residential, not industrial. This station would be in very close proximity to many subdivisions, two schools, and less than a mile away from the Mill Creek Park and from the Greenway system that is currently undergoing an expansion as part of the Master Plan conceived ten (10) years ago. Construction has also just begun on a nearby \$3 million dollar sports field. There is no doubt the location of this gas compressor station will pose health, safety and environmental risks to the surrounding community. It is also clear that the Columbia Gulf company can better locate this station in an alternate site already zoned for industrial uses.

LA001-3

While an FERC fact sheet notes that "accidents are rare and usually the result from outside forces or unauthorized action by someone other than the pipeline company", they cannot guarantee an accident will not occur. What will happen to the residents, schools, and park system in the immediate vicinity?

LA001-4

In a notice for the draft environmental impact statement (EIS) for the GXP, the FERC staff "concludes that approval of the proposed projects would result in some adverse and significant environmental impacts." An FERC fact sheet also notes that "natural gas-fired engines and turbines burn a portion of the natural gas in the pipeline and would emit pollutants." The proposed station would in fact be a natural gas-fired turbine-driven compressor. Even more concerning is the fact that the FERC's EIS acknowledges that generally, station sites are in rural areas with population densities less than the

LA001-1: Comment noted.

LA001-2: Comment noted.

LA001-3: Reliability and Safety are discussed in section 4.12. See response to comments IND009-5 and IND006-4.

LA001-4: Comment noted. The complete quote is as follows: "The draft EIS assesses the potential environmental effects of the construction and operation of the MXP and GXP in accordance with the requirements of NEPA. The FERC staff concludes that approval of the proposed projects would result in some adverse and significant environmental impacts. However, if the projects are constructed and operated in accordance with applicable laws and regulations, the mitigation measures discussed in this EIS, and our recommendations, these impacts would be reduced to acceptable levels." Note that this summary paragraph references both the GXP and the MXP. The only potentially significant environmental impact identified during our review of both projects is associated with the MXP (specifically to Core Forest Areas). See response to comments IND010-4 and IND021-2 regarding air emissions. It is not unprecedented for metropolitan areas to incorporate natural gas infrastructure as part of their energy supply plans. In densely populated areas, additional safety measures are incorporated into the design, testing, and operation of the facilities

LA001 – Fabian Bedne, Nashville Metropolitan Council, District #31 (continued)

20170503-0013 FERC PDF (Unofficial) 05/02/2017

LA001-4 (cont.) statewide averages, *except for the Cane Ridge site in Davidson County, Tennessee, which is the second largest population center in the state. This clearly reveals that Cane Ridge is not an appropriate location for a gas compressor station.*

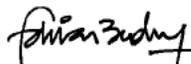
LA001-5 In addition to detrimental health impacts, residents are also worried that property values will dramatically decrease, and the possibility that they could be forced to sell or lease their land for easements or right of ways. This station will not only be a burden to current residents, but will also make the area less desirable for prospective home buyers, further decreasing property values.

LA001-6 Advocates for the compressor station purport that the station will be good for business and create opportunities in the community, but this does little to placate resident's concerns. The previously referenced EIS reports that Columbia Gulf estimates 90% of the construction workforce at the compressor station site will be non-local, leaving just 10% as local hires. Additionally, since the compressor site will be situated in an urban area, unlike the other proposed stations in this project, there will be a substantial increase in traffic along Barnes Road which will result in delays to local commuters.

LA001-7 Constituents have increasingly and overwhelmingly voiced their concerns to me, fellow Council members, and state officials. In light of these concerns, I sponsored an ordinance in 2016 that adds gas compressor stations to the list of facilities that are regulated locally as a major source of air pollutants in Nashville. This ordinance also requires that gas compressor stations obtain construction permits to open. As part of this ordinance, Nashville's health department director could also deny a construction permit if a facility violates air quality standards. The numerous adverse effects of this compressor station necessitate action to protect the surrounding ecosystem and thousands of residents who live in close proximity to this proposed station. It is overwhelmingly apparent that Columbia Gulf Transmission is pursuing this station for their own gain while providing no benefit to the surrounding community.

LA001-8 Again, I implore you to deny certificate approval for Columbia Gulf Transmission for the Gulf Xpress Project, specifically for the Cane Ridge, Tennessee gas compressor station. This community has strongly conveyed their concern and disapproval. I respectfully ask you to consider the health, environmental, and residential implications of this planned station. Thank you for your time and attention.

Sincerely,



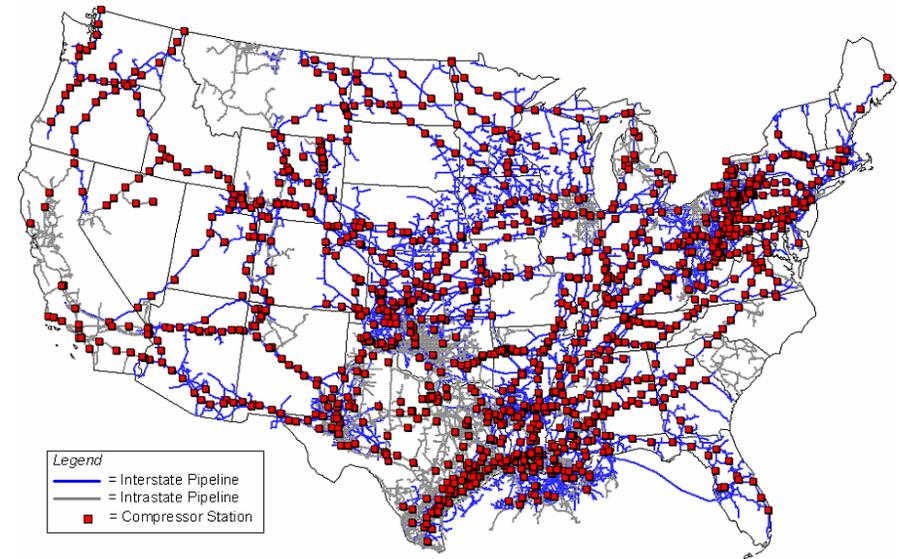
Fabian Bedne  
Councilmember, District 31

FB/dg

as required by DOT regulations at 49 CFR 192 (see section 4.12.1).

The U.S. Energy Information Administration map below illustrates the location of natural gas compressor stations in the United States, many of which are located in metropolitan areas.

[https://www.eia.gov/pub/oil\\_gas/natural\\_gas/analysis\\_publications/ngpipeline/compressormap.html](https://www.eia.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/compressormap.html)



LA001-5: See response to comment IND017-9.

LA001-6: Potential impacts on the local economy are discussed in section 4.9.8.2. While the majority of the construction workforce would be non-local, there would still be a beneficial impact on the community through increases in the local tax revenue as well as through other construction expenses. Potential traffic impacts related to construction and operation of the Cane Ridge Compressor Station are discussed in section 4.9.5.2. Columbia Gulf recognizes the possibility of delays during peak traffic hours and would work with local transportation officials to mitigate transportation and traffic impacts on Barnes Road during the 10-month construction period.

LA001-7: See response to comment CO005-3. Benefits associated with the GXP are discussed in section 4.9.8.2.

LA001-8: Comment noted.





CO001 – Teamsters National Pipeline Labor Management Cooperation Trust

ORIGINAL

March 20, 2017

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington, DC 20426

Dear Secretary Bose:

Please find written comments submitted by the "Teamsters National Pipeline Labor Management Cooperation Trust" for the Mountaineer Xpress and Gulf Xpress Pipeline Projects (FERC Docket Numbers CP16-357-000 and CP16-361-000).

I would like this cover letter along with the enclosed "Agreement and Declaration of Trust Establishing the Teamsters National Pipe Line Training Fund" to be part of our comments for the record.

This document gives an overview of our organization's mission.

If you have any questions I can be reached at (703) 508-8690.

Sincerely,



Richard Stern, Administrator  
Teamsters National Pipeline Labor  
Management Cooperation Trust

Enclosure

FILED  
SECRETARY OF THE  
COMMISSION  
2017 MAR 23 P 4:15  
FEDERAL ENERGY  
REGULATORY COMMISSION

CO001-1: Thank you for your comment.

**Note to reader:** This comment letter included over 40 pages of supplemental information related to the pipeline construction industry, including the Declaration of Trust and Purposes for the Teamsters National Pipeline Labor-Management Cooperation, pipeline worker training brochure and employment requirements, information regarding the construction process known as horizontal directional drilling, driver training requirements, drug and alcohol testing policies, and the Teamsters Military Assistance Program. The visibility of the attachments were low quality; therefore were not copied into this appendix. The comment and all attachments can be viewed at <http://www.ferc.gov>. Using the "eLibrary" link, select "Advanced Search" from the eLibrary menu and enter 20170324-0017 in the "Numbers: Accession Number" field.

**CO002 – Ohio Valley Environmental Coalition, William Hughes**

Comments submitted on behalf of OVEC by:  
William J Hughes  
862 Scheidler Run Rd  
New Martinsville, WV 26155

DEIS for Columbia Gas Transmission  
FERC Docket Number CP16-357; and  
CP16-361

**Comments to FERC on MVP DEIS** for Columbia Gas Transmission, filed by William J Hughes, on behalf of Ohio Valley Environmental Coalition

1. These comments here also include: **Exhibit A**, the red, three binder with 105 photographs; **Exhibit B**, six pages of Descriptions of Photographs which is insider the front cover of the three binder; **Exhibit C**, an eight page list of WVDEP-DWG air quality permits, inserted into the back pocket of the three ring binder. <sup>DAQ</sup>
2. Some of my comments here are based on my very detailed, close up observations and documentation of a recently FERC approved, constructed, completed and now in use 30-inch natural gas pipeline. This would be your Docket numbers CP-41-000 and CP15-41-001. It is an EQT pipeline. That project was called the Ohio Valley Connector. My almost daily observations spanned over a 10-month period from January 2016 to late November, 2016.
3. Our home is located near the midway point in the overall length of the OVC pipeline and the right of way for it passes about 150 feet from my mailbox.
4. Our home is about **1.5 miles** from the proposed Right of Way for the Mountaineer Xpress pipeline (MXP) near Mile Post 17. Many of the same roads will be used for construction work. The proposed MXP cuts Wetzel County in half, from north to south slightly east of our home.
5. I am aware that it is not be possible to extrapolate the cumulative environmental impacts from one pipeline construction project to predict the exact outcome of another much larger project. The MXP will have a larger diameter and will be over four times longer. It is not unreasonable to expect the community and environmental impacts to be greater or at least the same as we experienced.
6. Section **4.0** in the MXP DEIS starts the Environmental Analysis; within it is section **4.11** (page 4-260) on Air Quality and Noise and section **4.13** (pg 4-319) on Cumulative Impacts;

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Pg 1/7

CO002 – Ohio Valley Environmental Coalition, William Hughes (continued)

7. And within that is section 4.13.1 **Projects and Activities Considered** (page 4-319) This paragraph includes:

In accordance with NEPA, we considered the cumulative impacts of the MXP and GXP and other projects or actions in the area of each. As defined by the CEQ, a cumulative effect is the impact on the environment that results from the incremental impact of the proposed action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (CEQ, 1997). Although the individual impact of each separate project may be minor, the additive or synergistic effects of multiple projects could be significant. This cumulative impacts analysis includes other actions meeting the following three criteria:

- the action impacts a **resource** that is also potentially affected by the MXP or GXP;
- the action causes the impacts **within all** or part of the same geographic scope as the MXP or GXP; and
- the action causes this impact within all or part of the **temporal** scope for the potential impacts from the MXP or GXP.

8. A few paragraphs further (page 4-320) it says:

"We recognize that oil and natural gas exploration and production activities are ubiquitous in many of the counties crossed by the MXP. Oil and natural gas exploration activities include improvement or construction of roads, preparation of a well pad, drilling and completion of wells, and construction of gathering systems and consequent rights-of-way. We have not examined the impacts associated with these activities to the same extent as the other projects identified in table 4.13-2 because the status, scale, and timing of these facilities are unknown."

9. If one reads and digests the complete statement here this DEIS is actually saying, that FERC and Columbia are required to consider all the cumulative impacts which might affect the same resource, OUR AIR, at about the same time, and in the same general location of our neighborhood. However, then there is the extremely inadequate, borderline high-school-level excuse of why they did not do so, which is that the status, scale and timing are unknown. Someone at Columbia Gas needs to do their homework here. To help Columbia and FERC out, I would like to also submit my **Exhibit C** which took me maybe 30 minutes to find and print. This Exhibit ~~is~~ list eight pages of many dozens of locations just within Wetzel County which have known gas related operations and an WVDEP Air Quality permit. These are not UNKNOWN. A similar list could be quickly generated for every county in West Virginia thru which the MXP passes. These locations and the detailed Air Quality permit

2/7

CO002-1: Thank you for this information. See updates to section 4.13.1, which includes a new discussion of gas production facilities in the vicinity of the MXP. Subsection 4.13.2.9.1 addresses concerns related to oil and gas exploration activities on air quality.

CO002-1

**CO002 – Ohio Valley Environmental Coalition, William Hughes (continued)**

CO002-1  
(con't)

which accompanies them, of compressor stations; de-hy stations and gas processing plants, are not UNKNOWN. Almost every natural gas compressor station within the state has an DAQ permit now. It is common knowledge; readily available.

10. In general, within this DEIS there are multiple, major omissions, and an apparent, broad based, intentional, concerted effort on the part of Columbia to avoid any real acknowledgement or evaluation of the cumulative impacts on overall air quality by glossing over many nearby contributors to air quality.

CO002-2

11. One of the most significant omissions in the MXP DEIS, is all the thousands of operating gas wells and many hundreds of horizontal gas well pads. Table 4.13-1 on page, 4-322 lists Cumulative Impact Geographic Scope distance of **31 miles** for air quality emissions sources during operations. Every well pad within the counties of Marshall, Wetzel, Tyler and Doddridge are within **31 miles** of one of the MXP compressor stations. Many of these well pads are only small fractions of a mile away from the actual RoW for the MXP.

CO002-3

12. The failure to address air pollution caused by natural gas well pads as a contributor to overall air quality represents a major flaw in this Columbia Gas DEIS for its MXP. There is no reasonable or accurate way to consider the cumulative impacts to long term, total, regional, cumulative air quality natural gas infrastructure when Columbia totally ignores one of the major sources of the air pollution. That is what is being done when FERC allows them to ignore all the existing large well pads with thousands of shale gas wells whose operation is totally interconnected and interdependent. These well pads truly share a symbiotic relationship with the pipelines. They absolutely need each other. The existence and location of these gas producing or processing plants and gas well pads are readily available and easy to locate and identify and quantify. All the work has been done by WVDEP-OOG. Each of these well pads have many (NGL) condensate storage tanks on the well pads, which vent VOC's to the atmosphere; and combustion units within the three phase separators; some have their own small de-hy units on the pad. WVDEP DAQ has on file air quality permits for all these well pad locations. This information is common knowledge. Its omission must have been intended. And the omission of this represent a fatal flaw to any attempt at a comprehensive evaluation of this or any large FERC pipeline. Nowhere within the FERC MXP documents does it make any attempt to take all these sources into consideration.

3/7

**CO002-2:** See response to comment CO002-1

**CO002-3:** The EIS was prepared by FERC staff in accordance with NEPA, CEQ guidelines, and other applicable requirements. The EIS is consistent with FERC style, formatting, and policy regarding NEPA evaluation of cumulative impacts. However, we have updated section 4.13.1 to address gas production facilities in the vicinity of the MXP.

CO002 – Ohio Valley Environmental Coalition, William Hughes (continued)

CO002-4 13. There are many relevant “minor” point sources of air emissions not included here in the DEIS. The designation of “minor” is only technically correct in that they do not mathematically exceed the 100 TPY of a regulated pollutant to be labeled a “major” source. Calling them “minor” does not mean insignificant of that the air is actually good for long term public health.

CO002-5 14. Another major, and presumably intentional limitation to the DEIS is the use of a very poor quality base map to show the pipeline route. It is very difficult to see much detail.

CO002-6 15. Throughout the FERC documents are what I would have to categorize as “non-sequitur” statements or arguments. Meaning, of course, that the simplistic conclusion statement(s) is (are) not at all supported by whatever facts, generalizations or vague allusions which might have preceded them. Table 4.11-1 (page 4-263) shows air quality within this MXP area. It indicates that areas designated as unclassified are treated as : **“attainment”**. Many areas of WV thru which the proposed MVP would travel, are in counties in the category of unclassified with regard to air quality. That means we do not know. It does not mean that they are in attainment. There are very few air monitors across the state of WV and none in Wetzel, Tyler, Doddridge, or Ritchie Counties. The simple truth is that **we do not know** what the current, cumulative air quality is in any of the counties of WV which are being impacted by the ten years of continuing shale gas operations or their associated pipelines like the MXP or the recently completed OVC. There has never been any effort to aggregate the air emissions of all the gas processing and TEG De-hy units and well pads and compressor stations et cet. All of them are usually given a generic DAQ permit as a single, isolated, point source of air pollution as though they exist and operate in an isolated sealed vacuum. Or within a sealed Plexiglas bubble. The FERC documents do in fact give some casual mention that the diesel fumes and compressor stations might contribute to air pollution, and would result in permanent air quality impacts (see pg 4-354 and 4-356) but that acknowledgment is always followed by over-simplified phrases that emissions would be generally localized and minimal, and that therefore we conclude that the cumulative impact of the projects in table 4.13-2 (page 4-324) in combination with the MXP project would not significantly affect local or regional air quality. Unfortunately for all our residents, Table 4.13-2 ff, with the

4/7

CO002-4: “Minor” and “major” point sources are regulatory terms under the Clean Air Act. They are included for disclosure of permitting authorities and not intended to reflect a FERC conclusion or opinion regarding the source’s relative importance. Air regulations and permitting requirements are discussed generally in 4.11.1.1.1, and those applicable to MXP are discussed in section 4.11.1.2.2.

CO002-5: Detailed mapping for the MXP was included in appendix B-1 of the draft EIS and is reproduced in the final EIS.

CO002-6: With respect to air permitting under the Clean Air Act, there is no difference between “unclassified” and “attainment” areas. Designations are based on the most recent set of air monitoring or modeling data characterizing an area. See also response to comment CO012-8 and additional cumulative air discussion under section 4.13.2.9.1.

Regional air monitoring data are available to the public online at <https://www.epa.gov/outdoor-air-quality-data>. Background concentrations used in the modeling analysis were derived from these data. The most representative air quality monitor was used for each compressor station site. See the modeling analysis in section 4.11.1.2.4.

CO002 – Ohio Valley Environmental Coalition, William Hughes (continued)

exception of many more FERC pipelines, the table does not include any natural gas facilities anywhere.

CO002-7 16. For example of see pages: 4-267; 4-282; 4-319-320; 4-332; Of course, there is no justification to this gross over simplification of air pollution characteristics and related problems. Air pollution does not freeze and sit still forever stuck at the top of the exhaust stack. It does, in fact, get blown away, downwind to where my neighbors live. We do in fact know that no industrial category, toxic or hazardous air pollutant is ever local or contained or confined. Public health professionals have known for decades and they have well documented the "long legs" of small particles from diesel fumes and the downwind spread of the resultant ozone formed by the combined NOx and VOC so prevalent in any active natural gas field operations and production.

CO002-8 17. Once the honest acknowledgment is made that we do not know (unclassified) the actual air quality status of all these WV counties since they are unclassified, absolutely no conclusion can be made as to how much any other project, pipeline or compressor station will make matters much worse or will be insignificant as the FERC DEIS dreamingly states over and over. However, we just cannot keep pretending that air pollution of all forms do not add up and maybe, disperse and travel downwind and accumulate in valleys. The frequent unsubstantiated statement in the DEIS that all emissions for the MXP are "localized" is patently absurd since no air emission can be guaranteed to stay where we put them. Exhaust stack fumes will always travel and spread. Their effect is ongoing and cumulative and has public health consequences even if we pretend otherwise. And the assumption among the gas industry and apparently among some FERC evaluators seems to be that if the WV air is now "sort of OK", then we can continue to dump whatever pollutant we want into our common atmosphere until there is a widespread, recognized and acknowledged public health problem years later. Did not Allegheny County (Pittsburgh) in Penn. come to this obvious conclusion over 50 years ago ? It had filthy, unhealthy, air and it was not good for public health. It behooves us to now avoid public health air problems rather than create them now and force future generations to undo the effects of our ignorant industrial behavior in our rural neighborhood.

5/7

CO002-7: Using an EPA recommended model, air dispersion modeling was performed to predict maximum ground level concentrations of the criteria pollutants that would be emitted from MXP facilities and determine the potential off-site impacts of air pollutants from the compressor stations. No exceedances of the National Ambient Air Quality Standards were predicted. See section 4.11.1.2.4 for a discussion of this analysis. Further background on air dispersion modeling can be found on the EPA's Support Center for Regulatory Atmospheric Modeling website at [https://www3.epa.gov/ttn/scram/dispersion\\_prefrec.htm](https://www3.epa.gov/ttn/scram/dispersion_prefrec.htm).

CO002-8: See response to comments CO002-6 and CO002-7.

**CO002 – Ohio Valley Environmental Coalition, William Hughes (continued)**

18. The Conclusions and Recommendations section begins on page 5-1. From page 5-22, it states that, *"The air quality impacts associated with construction of the MXP and GXP would include temporary, localized increases in tailpipe emissions from fossil-fueled construction equipment.....and "Operation of the MXP and GXP aboveground facilities would result in long-term air emissions from stationary equipment (e.g., turbines, emergency generators, and heaters at compressor stations and M&R stations), including emissions of NOx, CO, particulate matter, SO2, VOCs, GHGs (including fugitive CH4), and HAPs....."*

CO002-9

However, since this Columbia Gas DEIS at no time includes ANY emissions from horizontal well operations and related gas processing, this then seems to give FERC the perplexing but unsubstantiated ability to simplistically conclude: *"Based on our analysis and compliance with federal and state air quality regulations, we conclude that operational emissions would not have a significant impact on local and regional air quality"*. This is just another example, one of many, of the oversimplified, non-sequitur arguments contained throughout the FERC documents. There is absolutely no rational, logical way that the conclusion given can be drawn from the sketchy, partial, wishful thinking style of sentences cobbled together here in this DEIS. We can and must be smarter than this.

**CO002-9:** See response to comment CO002-1

19. In Section 4.9.5.1 (pg. 4-230-235) there is a discussion of traffic and transportation issues. Based on my detailed observations and documentation here on the construction of the OVC pipeline, there were literally hundreds of truck trips to and from the four nearby laydown and work yards. Construction equipment was regularly loaded and unloaded from big flatbed trucks on the public highway. The routine travel of all local residents was delayed and restricted daily. On our very narrow local roads, residential traffic was always forced to yield to pipeline workers even when we had the right of way.

CO002-9b

Any time, any pipeline associated truck, of any size needed to pull into or out of any laydown yard next to the highway, the pipeline contractor would stop all local, routine traffic. This was done every day for the convenience of the pipeline construction company. Mud was dropped onto the public roadway and sometimes cleaned up. Old, visibly obsolete trucks would be burning black diesel fumes every day all along the public roads used by the pipeline contractor. All of this continual

**CO002-9b:** Traffic related to construction and operation of the MXP is discussed in section 4.9.5. Cumulative impacts from MXP construction traffic are discussed in section 4.13.2.6.1. Columbia Gas' ECS for MXP addresses Temporary Road Access (and mud tracking) in section II.D.4 (page 7).

6/7

**CO002 – Ohio Valley Environmental Coalition, William Hughes (continued)**

community impacts for just a 30-inch pipeline which was only 31 miles long here in WV.

- CO002-10 20. There is no way to avoid the obvious connection between all these FERC pipeline projects and the many hundreds of existing and thousands proposed, shale gas wells in WV and Penn and eastern Ohio. The only reason many additional pipelines are allegedly needed is to allow for more shale gas to be produced and transported out of the state and in some cases out of the country. There are currently thousands of conventional wells here in WV. For many decades those wells have not needed these oversized pipelines and their massive compressor stations. Therefore, any reasonable Environmental Impact evaluation must look at the whole picture and attempt to make a reasoned, scientific, factual evaluation of our current and long term air quality and its impact on future public health.
- CO002-11 21. This proposed MXP 36-inch pipeline should not be allowed to be located whereby a residential dwelling would be within the PIR for the rated pressure of the gas.
- CO002-12 22. Given the excessive sedimentation (see photo 90) which I saw here downstream during a routine pump around, all larger streams and rivers crossed by the MXP should be required to use HDD to get the pipe under them.
- CO002-13 23. Since many of us only just recently received the printed hard copy of the MXP DEIS, we would like to request an extension of the final date to submit comments beyond the April 24<sup>th</sup>.
- CO002-14 24. On page 4-274, emissions data for the Ceredo compressor station are listed. Since three, **11,000 HP** electric powered motors are used for the compressors, their proportionate share of air pollution at the coal fired generating plant which provides the electric power should be included here.

7/7

**CO002-10:** See response to comment CO006-3. As stated in section 1.1.1, the Commission’s role in reviewing the details of any project is to make a determination of public convenience and necessity. A FERC EIS serves to inform the Commission as to the environmental impacts associated with a proposed action, but does not establish or justify the overall “need” for a project. If a Commission determination of public convenience and necessity is made in the affirmative, after a thorough review of a host of environmental and non-environmental factors, then the “need” for the project is affirmed.

**CO002-11:** Pipeline Reliability and Safety are discussed in section 4.12. Interstate natural gas pipelines are regularly sited in residential communities, and residential communities are frequently constructed around existing pipelines. Pipelines constructed and operated by U.S. Department of Transportation (USDOT) standards are, by definition, considered safe.

**CO002-12:** Waterbody construction is discussed in section 2.4.4.2. Permits, Approvals, Consultations, and Regulatory Requirements for waterbody crossings can be found in section 1.5.4. While a horizontal directional drill (HDD) can be a good option for certain waterbody crossings, our experience is that a direct crossing of a waterbody in 24-48 hours can often be preferable from an environmental standpoint than setting up an HDD operation with accompanying extra workspace which could take weeks to complete. As discussed in section 4.3.2.4.1, downstream turbidity from a dry-ditch crossing should dissipate quickly, and sedimentation should be minor.

**CO002-13:** The commenter’s request to extend the comment period is noted. We have continued to accept and respond to comments received after the close of the public comment period in development of the final EIS.

**CO002-14:** Because electric-powered sources have no air emissions themselves, they are not regulated by the EPA. The point source generating the electricity is the regulated entity (e.g., a coal-fired electricity generating unit). Section 3.6 has been updated to provide further details regarding electric motor-driven compressors.

**CO002 – Ohio Valley Environmental Coalition, William Hughes (continued)**

**Note to Reader:** As part of this comment submittal package, OVEC included over 100 photographs of pipeline-related construction activities from a different project(s) as exhibit B. Additionally, exhibit C contained a list of air permits issued by the WVDEQ (unrelated to the MXP). We do not have any further responses regarding these photographs or air permits unrelated to the MXP. Due to the volume of pages we have not included those exhibits in this appendix. Persons interested in reviewing the photographs and/or air permits, please follow these steps:

The comment and all attachments can be viewed at <http://www.ferc.gov>. Using the “eLibrary” link, select “Advanced Search” from the eLibrary menu and enter - 20170330-4002 in the “Numbers: Accession Number” field.

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## CO003 – Keep Southeast Nashville Healthy, Christopher Tuley



### Motion to Intervene Out of Time

#### Basis for Intervening:

As the Vice President of Keep Southeast Nashville Healthy, a 501(c)(3) community based group, I represent thousands of private citizens living within three miles of the proposed Cane Ridge Gulf Xpress Compressor Station. The station would adversely impact the health, property values, and lifestyles of these citizens.

- CO003-1a If the station were constructed, there would be continual noise pollution disturbing the peace and quiet of residential areas, as a result of over 40,000 horsepower turbines running non-stop, and periodic loud blasts from blowdowns conducted as part of routine maintenance, which also would release raw natural gas/methane and other chemicals into the atmosphere.
- CO003-1b The compressor station will have only a small buffer of trees to be planted by CGT along its south side next to Barnes Road, which will offer negligible noise buffering to users of the Mill Creek Greenway, and negligible noise and visual buffering to residences of numerous subdivisions including Stanford Village, Mill Run, Barnes Cove, Hidden Creek and many more. The compressor station's location above the road will allow its noise to resonate down to the Mill Creek Greenway and the subdivisions that lie in the valley of Mill Creek below.
- CO003-2 The Station would have a strong negative impact on the air quality of not only Greenway users and nearby neighborhoods, but of Southeast Nashville as well. Hazardous byproducts of this station, which will be continually released into the atmosphere, will include chemicals known to cause cancer, including benzene, formaldehyde, chromium, and others.
- CO003-3 Radon gas, which is densely present in this natural gas obtained from Marcellus and Utica shales, would be released into the atmosphere of the surrounding neighborhoods, schools, and parks at all times, creating the risk of lung cancer to users and residents who breathe this air.
- CO003-4 In the event of a catastrophic failure of the compressor station, with resulting explosions and fires, nearby residents would surely face serious injury and death.
- CO003-4 Mill Creek, which is very close to the proposed gas compressor station (less than half of a mile), is the only habitat of the federally-listed, endangered Nashville Crayfish. Pollutants originating from the Station could pose a hazard to this endangered species.

The proposed compressor would create no local jobs and no revenue for Davidson County. It would add to the pollution (clean air attainment) burden, which could decrease availability for potential job-producing operations to locate to the Nashville area.

**CO003-1a:** As stated in section 4.11.3.2, noise levels during operation of the Cane Ridge Compressor Station would not exceed our criterion of 55 dBA L<sub>dn</sub>. Noise from planned or unplanned blowdown events could exceed the noise criteria but would be infrequent and of relatively short duration. Using CadnaA modeling, which takes into account additional parameters such as area terrain, we performed additional noise modeling for the Cane Ridge Compressor Station and found the anticipated noise levels to be lower than Columbia Gulf had initially projected. Based on the analyses conducted, mitigation measures proposed, and our recommendations, we conclude that operation of the GXP would not result in significant noise impacts on residents or the surrounding communities.

Table 4.11-24 provides the gas composition for GXP compressor stations. Gas releases during blowdown events and fugitive gas emissions would be pipeline quality gas that is primarily comprised of CH<sub>4</sub>, ethane, and propane (hydrocarbons) and not highly toxic compounds. Hexane is the only gas component that is a listed HAP and is present in only trace amounts.

**CO003-1b:** The Cane Ridge Compressor Station is proposed for construction on an approximately 31-acre site, of which approximately 10.6 acres would be permanently affected for operation of the facility. The remainder of the site would remain undeveloped to provide a visual and noise buffer to the surrounding community. Noise from the facility would be limited to an L<sub>dn</sub> of 55 dBA at the nearest receptor, which is less than allowed by local standards. We have updated the EIS with our own noise modeling for the Cane Ridge station, presented in section 4.11.2.3.2.

Columbia Gulf purchased the residential land located within the temporary work space for the Cane Ridge site and would convert it to open land following construction. The visual screening plan developed by Columbia Gulf for the Cane Ridge station is presented in section 4.8.3.2 and appendix M-2.

**CO003-2:** As discussed in section 4.11.1, models of air quality impact for the Cane Ridge station indicate potential air emissions at concentrations below the National Ambient Air Quality Standards. Our analysis of the risk of exposure to "other chemicals" and radon in natural gas is described in section 4.11.1.3.5.

**CO003 – Keep Southeast Nashville Healthy, Christopher Tuley (continued)**

CO003-5 Columbia Gulf Transmission LLC (CGT) did not exercise due diligence in performing its requirement to select potential alternative gas compressor station sites in Davidson County or in surrounding counties. Of four alternative sites selected for evaluation, two were excluded from further analysis (CGT Resource Report 10, 10.6.2.2), one which “was already under contract to be sold,” and the other “because the landowner was not interested in selling their property.” It seems apparent that CGT conducted merely a perfunctory search for alternative sites in order to satisfy a requirement to do so. If CGT were serious about finding alternative sites, they would have done a more thorough search, including in industrially-zoned land and less-populated areas in Davidson and the two adjoining counties, Williamson and Rutherford.

CO003-6 Davidson County Substitute Ordinance No. BL2015-1210 requires land to be zoned as Industrial in order for a gas compressor station to be built there. However, no alternatives were presented on industrially-zoned land in Davidson County. CGT still needs to do everything possible to find an industrially-zoned location, even if it means doing so at extra cost. I, along with numerous other citizens of Davidson County, think that CGT needs to find a suitable location for the gas compressor station, and if in Davidson County, it needs to be situated in an industrially-zoned area to comply with our county ordinance.

Therefore, I am respectfully requesting to be included as an Intervener in Docket CP16-361.

Sincerely,

Christopher Tuley  
Vice President  
Keep Southeast Nashville Healthy

**Keep Southeast Nashville Healthy Mission Statement:**

Keep Southeast Nashville Healthy is an organization comprised of diverse community members from the southeast Nashville area who are aligned to focus on keeping our environment healthy, our living areas healthy, and our property investments healthy in our communities.

**CO003-3:** Safety data for natural gas facilities indicate that operation of the GXP would represent only a very slight increase in risk to the general public. Section 4.12, Reliability and Safety, discusses the safety record of natural gas facilities in the United States, the project impact on public safety, and measures that Columbia Gulf would take to operate its facilities safely.

**CO003-4:** Potential surface water impact associated with construction and operation of the Cane Ridge station are discussed in section 4.3.2.4.2. Section 4.7.8.2.1 discusses potential impacts on the Nashville crayfish.

**CO003-5:** Columbia Gulf considered alternative sites during its siting process, prior to the selection of the Cane Ridge site, as discussed in section 3.6.2. As noted in our discussion, certain hydraulic parameters must be met for siting a compressor station; it is not as simple as merely finding a vacant industrial lot to construct on. Further, site availability is an important consideration. Although section 7 of the Natural Gas Act does confer eminent domain authority for aboveground facilities, the Commission greatly prefers that land acquisition for compressor stations be obtained from a willing landowner, rather than through condemnation. The EIS recommending a compressor station site that is not available for sale or lease would run counter to this goal. We requested that Columbia Gulf file information for additional alternatives identified during the draft EIS public comment period. Section 3.6.2 has been revised to include our evaluation of the additional sites.

**CO003-6:** See response to comment CO003-5. During the draft EIS comment period, we identified one alternative site, and several others were identified in public comments. Our evaluation of these alternatives is presented in the revised section 3.6.2. As noted there, many of the suggested alternative sites would require extra pipeline to connect the compressor station to the existing mainline system, as well as additional looping. The extra impacts associated with such rights-of-way, as well as other factors, led us to conclude that the alternate sites did not confer an environmental advantage or, in some cases, would result in a greater environmental impact compared to the proposed site.

**CO004 – Friends of Mill Creek Greenway, Brant N. Miller**

Submission Description: (doc-less) Out-of-Time Motion to Intervene of Friends of Mill Creek Greenway, Mill Creek Park Section under CP16-361-000.

Submission Date: 3/27/2017 8:31:15 PM

Filed Date: 3/28/2017 8:30:00 AM

Dockets  
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CP16-361-000 Application for Public Convenience and Necessity for the Gulf Xpress Project of Columbia Gulf Transmission, LLC

Filing Party/Contacts:

Filing Party Signer (Representative)  
Other Contact (Principal) -----  
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Friends of Mill Creek Greenway, Mill Creek Park Section  
finalvinyl@comcast.net

Basis for Intervening:

CO004-1 As the chairman of Friends of Mill Creek Greenway, I represent hundreds of users of the Mill Creek Greenway, Mill Creek Park Section, which is located within 0.25 mile of the proposed Cane Ridge Gas Compressor Station. The Park and Greenway are operated by Nashville Metro Parks, and used by hundreds of local residents as a place to walk, run, and bike in a tranquil, clean natural setting, which is also a protected natural corridor for native Tennessee wildlife. The Station would adversely impact the experience, and even the health, of Park and Greenway users through noise and air pollution.

**CO004-1:** Comment noted.

CO004-2 There would be continual noise pollution disturbing the peace and quiet of adjacent residential areas, as a result of 40,000 horsepower turbines running non-stop, and periodic loud blasts from blowdowns conducted as part of routine maintenance, which also would release raw natural gas/methane and other chemicals into the atmosphere.

**CO004-2:** See response to comment CO003-1.

The compressor station will have only a small buffer of trees to be planted by CGT along its south side next to Barnes Road, which will offer negligible noise buffering to users of the Greenway, and negligible noise and visual buffering to residences of Stanford Village, Mill Run, Barnes Cove, and Hidden Creek. The compressor station's location above the road will allow its noise to resonate down to the Greenway and the subdivisions that lie in the valley of Mill Creek below.

CO004-3 The Station would have a strong negative impact on the air quality of not only Greenway users and nearby neighborhoods, but of Southeast Nashville as well. Hazardous byproducts of this station, which will be continually released into the atmosphere, will include chemicals known to cause cancer, including benzene, formaldehyde, chromium, and others.

**CO004-3:** See response to comment CO003-2.

**CO004 – Friends of Mill Creek Greenway, Brant N. Miller (continued)**

CO004-3 (cont.) Radon gas, which is densely present in this natural gas obtained from Marcellus and Utica shales, would be released into the atmosphere of the Greenway and surrounding neighborhoods at all times, creating the risk of lung cancer to users and residents who breathe this air.

CO004-4 In the event of a catastrophic failure of the compressor station, with resulting explosions and fires, nearby Greenway users and resident would be face injury and death.

CO004-5 Mill Creek, which borders our Greenway and is very close to the proposed gas compressor station, is the only habitat of the federally-listed, endangered Nashville Crayfish. Pollutants originating from the Station could pose a hazard to this endangered species.

CO004-6 The proposed compressor would create no local jobs and no revenue for Davidson County. It would add to the pollution (clean air attainment) burden, which could decrease availability for potential job-producing operations to locate to the Nashville area.

CO004-7 Columbia Gulf Transmission LLC (CGT) did not exercise due diligence in performing its requirement to select potential alternative gas compressor station sites in Davidson County or in surrounding counties. Of four alternative sites selected for evaluation, two were excluded from further analysis (CGT Resource Report 10, 10.6.2.2), one which "was already under contract to be sold," and the other "because the landowner was not interested in selling their property." It seems apparent that CGT conducted merely a perfunctory search for alternatives sites in order to satisfy a requirement to do so. If CGT were serious about finding alternative sites, they would have done a more thorough search, including in industrially-zoned land and less-populated areas in Davidson and the two adjoining counties, Williamson and Rutherford.

Davidson County Substitute Ordinance No. BL2015-1210 requires land to be zoned as Industrial in order for a gas compressor station to be built there. However, no alternatives were presented on industrially-zoned land in Davidson County. CGT still needs to do everything possible to find an industrially-zoned location, even if it means doing so at extra cost. I, along with numerous other citizens of Davidson County, think that CGT needs to find a suitable location for the gas compressor station, and if in Davidson County, it needs to be situated in an industrially-zoned area to comply with our county ordinance.

Therefore, I am respectfully requesting to be included as an Intervener in Docket CP16-361.

Sincerely,  
Brant N. Miller, Chairman  
Friends of Mill Creek Greenway  
Mill Creek Park Section

CO004-4: See response to comment CO003-3.

CO004-5: See response to comment CO003-4.

CO004-6: See response to comment CO005-3.

CO004-7: See response to comment CO003-6.

**CO005 – Keep Southeast Nashville Healthy, Heather Hixson-McGovern**

**Motion to Intervene Out of Time**

**Docket # CP16-361**

**Basis for Intervening:** As not only a private citizen and land owner living in the Stanford Village subdivision located directly across from the proposed site with over 100 homes in our community alone, but also as the Secretary and Marketing Chair of Keep Southeast Nashville Healthy, a 501(c)(3) community based group, I feel I represent thousands of citizens in several subdivisions living within three miles of the proposed Cane Ridge Gulf Xpress Compressor Station. As both a group and a community at large we have several concerns regarding the impact this 44,000HP station would have on our area including:

- CO005-1 • The adverse impacts to our health including both air and noise pollution: If the station were constructed, there would be continual noise pollution disturbing the residential areas as a result of the over 40,000 HP turbines running non-stop coupled with the periodic loud blasts from blow downs conducted as part of routine maintenance. These blow downs also pose a concern as they release raw natural gas/methane and other chemicals into the atmosphere. Plans by CGT for the proposed station show only a small buffer of trees to be planted along its south side next to Barnes Road, which will offer minimal noise buffering to not only the many users of the Mill Creek Greenway, but also very minimal noise and visual buffering to the residences of numerous subdivisions including Stanford Village, Mill Run, Delvin Downs, and more. The station would have a strong negative impact on the air quality of not only Greenway users and nearby neighborhoods, but on Southeast Nashville as a whole. Hazardous byproducts of this station, which will be continually released into the atmosphere, will include chemicals known to cause cancer including benzene, formaldehyde, chromium, and others. Radon gas, which is densely present in this natural gas obtained from Marcellus and Utica shales, would be released into the atmosphere of the surrounding neighborhoods, schools (of which there are 2 within a 5 mile radius of the proposed site) and parks at all times, creating the risk of lung cancer to users and residents who breathe this air.
- CO005-2 • Lack of jobs, and therefore a distinct lack of economic assistance gained by this proposed station along with inappropriate zoning: This proposed compressor station would create no local jobs and no revenue for Davidson County and would in fact add to the pollution (clean air attainment) burden, which could, as a result, DECREASE availability for potential job-producing operations to locate to the Nashville area. Columbia Gulf Transmission LLC (CGT) did not exercise due diligence in performing its requirement to select potential alternative gas compressor station sites in Davidson County or in surrounding counties. Of four alternative sites selected for evaluation, two were excluded from further analysis (CGT Resource Report 10, 10.6.2.2), one which “was already under contract to be sold,” and the other “because the landowner was not interested in selling their property.” It seems apparent that CGT conducted merely a perfunctory search for alternatives sites in order to satisfy a requirement to do so. If CGT were serious about finding alternative sites, they would have done a more thorough search, including in industrially-zoned land and less-populated areas in Davidson and the
- CO005-3
- CO005-4

**CO005-1:** Noise attributable to operation of the Cane Ridge Compressor Station is discussed in detail in section 4.11.2.3.2, including our revised noise analysis and recommended conditions.

**CO005-2:** See responses to comments CO003-1 and CO003-2.

**CO005-3:** As detailed further in section 4.9.8, construction of the Cane Ridge Compressor Station would result in minor beneficial socioeconomic impacts due to increases in construction jobs, payroll taxes, local purchases made by the workforce, and expenses associated with the local acquisition of material, goods, and equipment. The GXP has the support of the Teamsters National Pipeline Labor Management Cooperation Trust, who would provide Teamsters members who belong to local unions to perform work with high wages, health insurance, and pension benefits. Operation of the project would have a minor-to-moderate positive effect to the local government’s tax revenues due to the increase in real property taxes that would be collected from Columbia Gulf for the life of the project.

**CO005-4:** See responses to comments CO003-5 and CO003-6.

**CO005 – Keep Southeast Nashville Healthy, Heather Hixson-McGovern (continued)**

CO005-4  
(cont.)

two adjoining counties, Williamson and Rutherford. Davidson County Substitute Ordinance No. BL2015-1210 requires land to be zoned as Industrial in order for a gas compressor station to be built there. However, no alternatives were presented on industrially-zoned land in Davidson County. CGT still needs to do everything possible to find an industrially-zoned location, even if it means doing so at extra cost. I, along with numerous other citizens of Davidson County, think that CGT needs to find a suitable location for the gas compressor station, and if in Davidson County, it needs to be situated in an industrially-zoned area to comply with our county ordinance.

Due to the above stated concerns I am respectfully requesting to be included as an Intervener in Docket CP16-361.

Sincerely,  
Heather Hixson-McGovern  
Secretary/Marketing Chair, Keep Southeast Nashville Healthy

***Mission Statement: Keep Southeast Nashville Healthy is an organization comprised of diverse community members from the southeast Nashville area who are aligned to focus on keeping our environment healthy, our living areas healthy, and our property investments healthy in our communities.***

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## CO006 – Ohio Valley Environmental Coalition



### Ohio Valley Environmental Coalition

Supporting Organized Voices and Empowered Communities Since 1987

P.O. Box 6753 Huntington, WV 25773-6753

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info@ohvec.org

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#### Talking Points for Mountaineer Xpress/ Gulf Xpress DEIS comments

We request an extension of the comment period on the Mountaineer Xpress DEIS of a minimum of one month.

Some concerned citizens in at least Cabell, Putnam and Roane did not receive copies of the DEIS (hardcopy or CD versions) until 10 days prior to the first public comment meeting (In Hurricane). Public libraries and other interested citizens may have received their copies of the DEIS slightly earlier. This is insufficient time to review a 500+ page document, especially for anyone with a full-time job, health issues, and/or family obligations.

The addition of the Gulf Xpress information into the Mountaineer Xpress DEIS is confusing and necessitates additional time to analyze the DEIS.

Since Gulf Xpress information is included in this DEIS, we request that additional public meetings be scheduled for those communities in Kentucky that would be impacted by that pipeline and its associated compressor stations for the Gulf Xpress. There currently are no meetings scheduled in Kentucky.

The DEIS fails to adequately consider the regional cumulative impact of all the proposed pipeline projects in our region, in terms of potential leakages and explosions, habitat fragmentation, impact on human health, impacts of water resources, and more. FERC should address the fact that this and other pipelines will mean more fracking related activities for already besieged communities. Former FERC Chair Norman Bay is quoted as recently saying, “Even if not required by NEPA, in light of the heightened public interest and in the interests of good government, I believe the Commission should analyze the environmental effects of increased regional gas production from the Marcellus and Utica.” The DEIS should heed Bay’s comments.

The DEIS fails to examine the real possibility of over-capacity, that is too many pipeline built and too little available gas to move through the pipelines.

Climate change impacts from these proposed pipelines, coupled with all other proposed pipelines in our region, should be a major focus of the DEIS, but the DEIS fails to address what this pipeline buildout will have in terms of increasing climate change. Methane and other emissions resulting from increased drilling of the state’s shale fields in this state, which would be brought on by having these exporting pipelines built, would contribute significantly to global climate change.

Former FERC Chair Norman Bay is quoted as recently saying, “The use of natural gas, and the resulting methane releases from venting and leakage, is now the primary driver of the increasing climate crisis. Rather than increase the development of natural gas infrastructure, the Commission should take the lead in reducing it significantly.” The DEIS should heed these words and should include a thorough analysis of climate change impacts.

The DEIS fails to adequately consider the impacts to the Ohio River – the tap water source for three to five million people. This project jeopardizes the Ohio.

**CO006-1:** See response to comment CO002-13.

**CO006-2:** Cumulative impacts are addressed in section 4.13.

**CO006-3:** As stated in section 1.1.1, the MXP is designed to transport existing natural gas supplies from receipt points in West Virginia, Ohio, and Pennsylvania to markets on the CPG system. The MXP is supported by binding Precedent Agreements with eight shippers, collectively representing more than 96 percent of the project’s capacity.

**CO006-4:** While former Chairman Bay (in reference to a study conducted by the Department of Energy) encouraged FERC to analyze the environmental effects of increased regional gas production from Marcellus and Utica shale formations, such a study is not required by NEPA, and is considered outside the scope of this EIS. The Commission has consistently found that “the environmental effects from natural gas production are generally neither caused by a proposed pipeline (or other natural gas infrastructure) project nor are they reasonably foreseeable consequences of our approval of an infrastructure project.”

**CO006-5:** Impacts on water resources throughout the project areas are discussed in section 4.3.2. Although the MXP is located within the Ohio River watershed, the pipeline corridor does not traverse the Ohio River, nor are any of the proposed compressor or metering facilities located on the Ohio River. Based on our analysis, no long-term impacts on surface water quality or quantity are anticipated to result from construction of the proposed project. Columbia Gas would not significantly or permanently affect any designated water uses; it would bury the pipeline beneath the bed of all waterbodies, implement erosion controls, and restore the streambanks and streambed contours as close as practical to pre-construction conditions.

**CO006 – Ohio Valley Environmental Coalition (continued)**

CO006-6	<p>The DEIS should examine whether there really is a “need” for this pipeline, and define what is meant by the word “need” and note whose “needs” are being served.</p> <p>The DEIS should examine the legal and constitutional ramifications of allowing a for-profit corporation to use eminent domain to seize land, especially when that seizure is conducted under the false banner of “national energy security.”</p>
CO006-7	<p>The DEIS fails to honestly examine alternatives. One alternative is to build renewable energy projects in lieu of these pipelines. The DEIS should consider whether there are alternatives for energy production, not specifically delivering natural gas to a certain location.</p>
CO006-8	<p>We note that these critical aspects of project planning are still lacking:</p> <ul style="list-style-type: none"> <li>• landslide risk assessment and mitigation plans</li> <li>• full mapping and analysis of groundwater/well sources</li> <li>• stream crossing restoration plans</li> <li>• HDD Inadvertent Return Contingency Plan for the Kanawha River crossing</li> <li>• other hydrological reports and plans</li> <li>• invasive and noxious weed infestation plans</li> <li>• endangered species reports, including USFWS’ determination for the MXP impacts on the diamond darter, multiple species of endangered mussels, the Indiana bat and Myotis bats</li> <li>• Traffic management plans</li> <li>• noise level evaluations and mitigation plans</li> <li>• archaeological and cultural resource surveys</li> </ul>
CO006-9	<p>We disagree strongly with this statement on cumulative impacts, found on p. 42:</p> <p><i>The majority of cumulative impacts would be temporary and minor when considered in combination with past, present, and reasonably foreseeable activities. Minor or negligible cumulative impacts could occur on geological resources, soils, water resources, land use, visual resources, air quality, and noise. However, some long-term cumulative impacts would occur on upland forested vegetation and associated wildlife habitats. Some short- and long-term cumulative benefits to the communities in and around the MXP and GXP project areas would be realized through jobs, wages, purchases of goods and materials, and annual property taxes paid by the Companies.</i></p> <p>We know that construction jobs on the pipeline route will be of a temporary nature and often out-of-state contractors will be supplying these jobs. As for property taxes, we are doubtful that any easement property taxes paid by an interstate pipeline company would adequately compensate communities that could be adversely affected by the installation or operation of these pipelines. We are also well aware that the contents of this pipeline seem primarily destined for international export, not for domestic usage.</p>
CO006-10	<p>We question whether adequate evacuation and/or crisis plans have been developed to protect citizens and property in all communities to be impacted by these pipelines. Without plans in place for a two mile evacuation zone around the entire route of the pipeline, communities could be at risk of serious financial and physical harm.</p> <p>We agree with this statement, found on p 44:</p> <p><i>The MXP’s impacts on upland interior forest habitat and large Core Forest Areas (including habitat for the cerulean warbler) would be significant.</i></p> <p>and this:</p>

**CO006-6:** The EIS does not consider or reach a conclusion on whether there is a need for the projects. Council on Environmental Quality regulations implementing NEPA (40 CFR 1502.13) requires that an EIS “briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” In other words, the EIS states the purpose of and need for a proposed project in order to define the range of alternative actions that the agency can legitimately consider. The determination of whether there is a “need” for the proposed facilities for the purpose of issuing an authorization under section 7 of the Natural Gas Act will be made in the subsequent Commission Order granting or denying the applicants’ request for Certificate authorization and is based on a balancing of the benefits of the projects against any adverse impacts. After the issuance of the final EIS, the Commission makes the determination of whether a project is in the public convenience and necessity. This evaluation and subsequent decision is based on many factors, including the final EIS and associated recommendations, market analysis, ensuring just and reasonable rates, and engineering analyses. The Commission considers the local, regional, and national benefits of each project against any adverse impacts. This determination has not been made for the proposed projects at this time.

**CO006-7:** Alternatives are discussed in section 3. The purpose of the projects is to transport natural gas in interstate commerce. Energy production from renewable resources or the gains realized from increased energy efficiency and conservation are not transportation alternatives and are beyond the scope of this EIS.

**CO006-8:** Studies necessary to prepare project plans are ongoing. The final EIS has been revised to include new information provided by Columbia Gas and/or findings from the regulatory review process. See sections:

- 4.1.4.4.1 - Landslides
- 4.3.1.2.1 and 4.3.1.3.1 - Groundwater
- 4.3.2.4.1 - Stream Crossing Restoration Plans
- Appendix G - HDD Inadvertent Return Contingency Plan for the Kanawha River
- 4.3.2.4.1, 4.7.5.1, and 4.7.10.1 - other hydrological reports and plans
- 2.4.1.2 and 4.5.5.2 - Invasive and Noxious Weed Infestation Plan
- 4.7.3 - Federally Listed Species
- 4.11.2 – Noise, and Appendices N-1 and N-2 (section II.J)
- 4.10 - Cultural Resources

**CO006 – Ohio Valley Environmental Coalition (continued)**

CO006-11	<p><i>[There are] 40 project-specific mitigation measures that the Companies should implement to further reduce the environmental impacts that would otherwise result from construction and operation of the projects. We conclude that these measures are necessary to either augment the environmental record for the projects or to reduce adverse impacts associated with the projects; and, in part, we are basing our conclusion on the successful implementation of these measures. Therefore, we recommend that these mitigation measures be attached as conditions to any authorization issued by the Commission. These recommended mitigation measures are presented in section 5.2 of the draft EIS.</i></p> <p>We want to raise questions as to the effectiveness of these mitigation plans, and also to the issue of who will enforce that these plans get carried out prior to, during, and after the start of any construction?</p>
CO006-12	<p>We request that additional filings from Columbia Pipeline group be made public and that there be further public input opportunities on the companies' additional submissions and on any route changes.</p> <p>We would like to emphasize our request for an extension on this comment period until these important documents and mitigation plans are entered into the public record and available for public comment.</p>
CO006-13	<p>We request that Columbia be required to provide pre- or baseline testing of all wells and ground-water sources located in the path of the proposed pipeline route, and we feel that 150 feet is not a sufficient distance to extend this testing; we would request that all wells and springs utilized for human consumption be tested within a mile radius of the pipeline.</p>
CO006-14	<p>We need to stress again that the location of the Kanawha River crossing (or tunnel) is problematic. The river is very shallow in that area, (averaging a depth of between 12 and 16 feet), meaning that any increase in sedimentation could be devastating to the channel of this major waterway-- which is used for both commercial and recreational transportation of citizens, and barge-loads of commercial products. Increased sedimentation and pollution in this area could also be devastating to aquatic and amphibious wildlife populations in the area. Birds and bats may also be impacted.</p> <p>The location of the proposed pipeline's traverse to and from the Kanawha river banks is also problematic. On the Midway, WV, side of the river, the proposed pipeline markers are located very close to a populated area that includes many single family homes, (some with well water), churches, and a greenhouse operation, (Gritt's Midway Greenhouse), that is one of our larger in-state fresh food and plant providers. On the Frazier's Bottom, WV, side of the river the proposed pipeline's markers are very close to an industrial facility – FL Smidth – that manufactures mining equipment and sources cement operations. Local residents report that this plant frequently “lets off blasts” which sometimes shake the walls and windows of their homes. One resident who lives on the other side (Midway) of the river from the plant reports hearing and feeling these blasts frequently (more than once a week). Also on the Frazier's Bottom side of the river, there is an industrial park that contains other businesses, including two food warehouses. There appears to be a small wetlands area near this Industrial Park that is adjacent to markers for the proposed pipeline route. There are also active CSX Railroad tracks, and at least one gas station within this area we have described that is within 500 feet of the pipeline's proposed crossing of the Kanawha River.</p>
CO006-15	<p>The existing pipeline (SM-80 and SM-80 Loop) that the MXP project is proposed to connect to in Cabell and Wayne Counties, WV, is of indeterminate age and, while some segments are being renovated, there is no public information on the condition of the existing line traversing our more densely populated counties. Until the entire length, condition and dimensions of this existing pipeline infrastructure are disclosed to the public, we recommend a denial of the FERC application.</p>
CO006-16	<p>The MXP is proposed to cross under a major highway – Interstate 64 – in between Hurricane, WV and Milton, WV. This is a very heavily traveled stretch of interstate. Truck traffic on this highway – often bumper to bumper – includes daily transport of industrial chemicals and petroleum products. Any rupture of a pipeline in this area could have catastrophic consequences.</p>

**CO006-9:** Comment noted. Socioeconomic impacts and benefits of the MXP are addressed in section 4.9. See response to comment CO005-3.

**CO006-10:** Pipeline reliability and safety are addressed in section 4.12. Safety standards and emergency response are discussed in detail in section 4.12.1.

**CO006-11:** FERC is the federal agency responsible for authorizing applications to construct and operate interstate natural gas pipeline facilities. As part of its responsibilities, FERC enforces regulatory requirements through imposition of civil penalties and other means.

**CO006-12:** See response to comment CO002-13. Supplemental information filed for the project is publicly available on the FERC website ([www.ferc.gov](http://www.ferc.gov)) using the eLibrary link.

**CO006-13:** See revised section 4.3.1.2. Columbia Gas consulted with the WVDHHR to obtain location data for WHPAs within 3 miles of the MXP pipeline centerlines. Columbia Gas would perform pre- and post-construction monitoring for well yield and water quality for private wells within 150 feet of construction workspaces. If testing results indicate the integrity of any water supply well has been impacted during construction, Columbia Gas would provide a temporary water supply source and compensate the landowner for repairs, installation of a new well, or other options as agreed upon with the landowner. As discussed in section 4.8.1.3, Columbia Gas would implement a landowner complaint resolution process to document and track landowner problems and their resolution.

**CO006-14:** The Kanawha River is a navigable waterway that would be crossed using HDD to avoid direct impacts (see sections 2.4.4.2.3 and 4.3.2.4.1). Columbia Gas has prepared a site-specific HDD crossing plan for the Kanawha River crossing. The U.S. Army Corps of Engineers (USACE) and WVDEP would issue a permit for this crossing. Details regarding HDD crossings of waterbodies are included in section 2.4.4.2. Appendix G contains the Inadvertent Return Contingency Plan for the Kanawha River.

**CO006-15:** Pipeline safety is addressed in section 4.12. The USDOT is mandated to provide pipeline safety under 49 U.S.C. 601. The USDOT's Pipeline and Hazardous Materials Safety Administration administers the national regulatory program to ensure the safe transportation of natural gas and other hazardous materials by pipeline. The USDOT regulations require operators to develop and follow a

**CO006 – Ohio Valley Environmental Coalition (continued)**

CO006-17 The terminal compressor station for the proposed MXP route is very close to the Tri-State (Huntington, WV) airport, near some suburban residential communities and near the Huntington, WV Veterans Administration Hospital; the air emissions from this station pose a potential public health hazard of catastrophic proportions.

CO006-18 There is no apparent plan for the petroleum resources shipped by this pipeline to be utilized in our state or region. The Columbia MXP appears to be an interstate transport line – in that the Gulf Xpress and the Leach Xpress lines connect into the same system. We believe these pipelines will primarily take our natural resources to export terminals along coastal areas of the country. In conclusion, we believe the potential cost in terms of environmental destruction and endangerment of human health and life is greater than any potential economic benefit to this state or region.

CO006-19 The DEIS fails to evaluate all the ecosystem services and their dollar value that will be eliminated or impacted by the construction, maintenance and operation of this pipeline. Ecosystem services include such services offered by, for instance, intact forests, such as flood control, erosion control, water purification and atmospheric purification. These are real services with extreme economic value.

CO006-20 The DEIS fails to examine the capacity and ability for first responders (often volunteers) and nearby hospitals to respond if/when there is an explosion on the pipeline.

written Integrity Management Program (IMP) that contains all the elements described in 49 CFR 192.911 and addresses the risks on each transmission pipeline segment. Specifically, the rule establishes an IMP that applies to all high-consequence areas.

**CO006-16:** The commentor’s observation on traffic in the project area is noted. See response to comment CO006-10 regarding pipeline safety.

**CO006-17:** We have determined, as stated in section 4.11.3.1.1, “... any emissions resulting from operation of MXP’s compressor stations would not have significant impacts on local or regional air quality.” This conclusion is based on factual data, industry- and permitting agency-accepted modeling, and federal regulations.

**CO006-18:** See response to comment CO006-6. The purpose and need for the MXP is discussed in section 1.1.1.

**CO006-19:** Socioeconomic impacts from the projects are addressed in section 4.9. We have concluded that construction of the MXP and GXP would result in minor beneficial socioeconomic impacts due to increases in construction jobs, payroll taxes, local purchases made by the workforce, and expenses associated with the local acquisition of material, goods, and equipment. Operation of the projects would have a minor-to-moderate positive effect to the local governments’ tax revenues due to the increase in real property taxes that would be collected from the Companies. Our environmental analysis addresses resources affected by the projects. Where specific resources are identified that may be negatively impacted by construction of the MXP, we provide recommendations for avoidance, restoration, or mitigation for these resources. We do not find that the value of these resources can be quantified as proposed by the commentor within the scope of this EIS.

**CO006-20:** Safety data indicate that operation of the projects would represent only a very slight increase in risk to the general public. Columbia Gas employs qualified and licensed personnel who could be immediately dispatched to the scene of an emergency should the need arise. Section 4.12 discusses the safety record of natural gas facilities in the United States, the project impact on public safety, and measures that the Companies would take to operate their facilities safely.

**CO007 – Ohio Valley Environmental Coalition, Vivian Stockman**

1 P R O C E E D I N G S

2 VIVIAN STOCKMAN: My name is Vivian Stockman. V  
3 I V I A N, S T O C K M A N. Do you need a title or anything  
4 like that? I'm a, well, these are my personal comments. I  
5 work for the Ohio Valley Environmental Coalition and we will  
6 be submitting longer technical comments.

CO007-1

7 My first request is that we please have an  
8 extension of the comment period. It was just several days  
9 ago that several people got either the hard copy or the CD  
10 version, and there's definitely not enough time to go  
11 through the 500-plus pages, even with the April 24th  
12 deadline. I would request please, an extension of the  
13 comment period so we can really dive deep.

CO007-2

14 I would like to say that I think the DEIS on the  
15 MXP fails to address the cumulative impacts on air, water,  
16 land, and communities in regards to other oil and gas  
17 activities that would be added into this proposed activity  
18 in cumulative effects. For instance, the Markwest Plant in  
19 Doddridge county, I believe, is ignored; the compressor  
20 stations along, that already exist, are ignored. There's  
21 lots more that just seems to be ignored.

22 The DEIS says: in accordance with NEPA we  
23 considered the cumulative impacts of the MXP and the GXP and  
24 other projects or actions in the area of each, but then it  
25 goes on to say, we recognize that the oil and gas

**CO007-1:** See response to comment CO002-13.

**CO007-2:** See response to comment CO002-1.

**CO007 – Ohio Valley Environmental Coalition, Vivian Stockman (continued)**

CO007-2  
(cont.)

1 exploration and production activities are ubiquitous in many  
2 of the counties crossed by the MXP. Oil and gas natural  
3 exploration activities can include, yada yada, it goes on,  
4 but it says: We have not examined the impacts associated  
5 with these activities to the same extent as the other  
6 projects -- identified in a table in there -- because the  
7 status, scale, and timing of these facilities are unknown.

8 Frankly, that was a jaw dropper. That's truly a  
9 lame excuse. If FERC is going to bother to look, it will  
10 find these quote, unquote, "unknowns." For instance, the  
11 DEP Office of Oil and Gas has air quality information on  
12 boatloads of oil pads and compressor stations in the, you  
13 know, within the required radius for the cumulative impacts  
14 of this proposed pipeline. And the DEIS should not ignore  
15 this data and it should be considered; and really to say  
16 they are unknown is just ludicrous.

17 Throughout the DEIS there are statements that  
18 this or this impact will be, quote, "minimal," unquote. For  
19 instance, there's a statement, emissions generated during  
20 operation of the pipeline portion of the MXP would be  
21 minimal, limited to those from maintenance vehicles and  
22 equipment and fugitive emissions. I just don't see how one  
23 can conclude that the assorted activities declared to have  
24 minimal impact would, in fact, have minimal impact, without  
25 any considerations of the cumulative impacts.

This area left blank intentionally.

**CO007 – Ohio Valley Environmental Coalition, Vivian Stockman (continued)**

CO007-2 (cont.)	<p>1                    So, I think that's a major path and major fail. 2 I also note that the Ceredo compressor station would have 3 three huge electrical engines. The DEIS should factor in 4 the air pollution and greenhouse gas load that these engines 5 will create at the supplying power plant.</p>
CO007-3	<p>6                    Let's see, there's others; I'm not going to go 7 into much more, but one thing I would like to point out and 8 then I'll shut up is the DEIS fails to examine the real 9 possibility of overcapacity, too many pipelines built with 10 too little available gas to move the pipelines. That would 11 certainly be something in the bigger picture that the DEIS 12 should examine. And then the climate change impacts from 13 these proposed pipelines, coupled with all the proposed 14 pipelines in our region should be a major factor of the 15 DEIS, but the DEIS fails to examine what these proposed 16 pipeline build outs will have, what effect they'll have in 17 terms of increasing climate change.</p>
CO007-4	<p>18                    Methane and other emissions resulting from the 19 increased drilling of the state shale field in this, which 20 would be brought on by having these exporting pipelines 21 built would contribute significantly to global climate 22 change and these should be considered in the DEIS. 23                    And I'll leave it at that. There's a lot more 24 but we'll get to those in our written comments.</p>

**CO007-3:** See response to comment CO006-3.

**CO007-4:** Our discussion of climate change is presented in section 4.11 and in revised section 4.13.

**CO008 – Friends of Mill Creek Greenway, Brant N. Miller**

COMMENTS REGARDING FERC DRAFT EIS (FERC/DEIS-0275) BY BRANT N. MILLER, CHAIR OF FRIENDS OF MILL CREEK GREENWAY – DOCKET NO. CP16-361-000

As the chairman of Friends of Mill Creek Greenway, I represent hundreds of users of the Mill Creek Greenway, Mill Creek Park Section, which is located within 0.25 mile of the proposed Cane Ridge Gas Compressor Station. The Park and Greenway are operated by Nashville Metro Parks, and used by hundreds of local residents as a place to walk, run, and bike in a tranquil, clean natural setting, which is also a protected natural corridor for native Tennessee wildlife. The Station would adversely impact the experience, and even the health, of Park and Greenway users through noise and air pollution.

CO008-1

There would be continual noise pollution disturbing the peace and quiet of adjacent residential areas, as a result of 40,000 horsepower turbines running non-stop, and periodic loud blasts from blowdowns conducted as part of routine maintenance, which also would release raw natural gas/methane and other chemicals into the atmosphere.

**CO008-1:** See response to comment CO004-2.

CO008-2

The compressor station would have only a small buffer of trees to be planted by CGT along its south side next to Barnes Road, which would offer negligible noise buffering to users of the Greenway, and negligible noise and visual buffering to residences of Stanford Village, Mill Run, Barnes Cove, and Hidden Creek. The compressor station's location above the road would allow its noise to resonate down to the Greenway and the subdivisions that lie in the valley of Mill Creek below.

**CO008-2:** See response to comment CO003-1.

CO008-3

The Station would have a strong negative impact on the air quality of not only Greenway users and nearby neighborhoods, but of Southeast Nashville as well. Hazardous byproducts of this station, which will be continually released into the atmosphere, will include chemicals known to cause cancer, including benzene, formaldehyde, chromium, and others.

**CO008-3:** See response to comment CO003-2.

Radon gas, which is densely present in this natural gas obtained from Marcellus and Utica shales, would be released into the atmosphere of the Greenway and surrounding neighborhoods at all times, creating the risk of lung cancer to users and residents who breathe this air.

CO008-4

In the event of a catastrophic failure of the compressor station, with resulting explosions and fires, nearby Greenway users and resident would be face injury and death.

**CO008-4:** See response to comment CO003-3.

CO008-5

Mill Creek, which borders our Greenway and is very close to the proposed gas compressor station, is the only habitat of the federally-listed, endangered Nashville Crayfish. Pollutants originating from the Station could pose a hazard to this endangered species.

**CO008-5:** See response to comment CO003-4.

**CO008 – Friends of Mill Creek Greenway, Brant N. Miller (continued)**

COMMENTS REGARDING FERC DRAFT EIS (FERC/DEIS-0275) BY BRANT N. MILLER, CHAIR OF FRIENDS OF MILL CREEK GREENWAY – DOCKET NO. CP16-361-000 (CONTINUED)

CO008-6 The proposed compressor would create no local jobs and no revenue for Davidson County. It would add to the pollution (clean air attainment) burden, which could decrease availability for potential job-producing operations to locate to the Nashville area.

CO008-7 Columbia Gulf Transmission LLC (CGT) did not exercise due diligence in performing its requirement to select potential alternative gas compressor station sites in Davidson County or in surrounding counties. Of four alternative sites selected for evaluation, two were excluded from further analysis (CGT Resource Report 10, 10.6.2.2), one which “was already under contract to be sold,” and the other “because the landowner was not interested in selling their property.” It seems apparent that CGT conducted merely a perfunctory search for alternatives sites in order to satisfy a requirement to do so. If CGT were serious about finding alternative sites, they would have done a more thorough search, including in industrially-zoned land and less-populated areas in Davidson and the two adjoining counties, Williamson and Rutherford.

CO008-8 Davidson County Substitute Ordinance No. BL2015-1210 requires land to be zoned as Industrial in order for a gas compressor station to be built there. However, no alternatives were presented on industrially-zoned land in Davidson County. CGT still needs to do everything possible to find an industrially-zoned location, even if it means doing so at extra cost. I, along with numerous other citizens of Davidson County, think that CGT needs to find a suitable location for the gas compressor station, and if in Davidson County, it would need to be situated in an industrially-zoned area to comply with our county ordinance.

CO008-9 In order to facilitate CGT’s further investigation of alternative sites, I have attached a number of maps and one table which show and describe the location of industrially-zoned parcels, all of which lie within 2 miles of the gas pipeline and within a 3.5 mile radius of the current proposed compressor site, within Davidson County. There are two maps showing the location of the industrially-zoned parcels in relation to the currently proposed compressor station and the gas pipeline. Their file names are CR\_Industrial\_Mar23\_17.pdf and CR\_Industrial\_Mar28\_17 aerial.pdf. There are maps of each of the twelve (12) parcels included, which are screenshots from Nashville Planning Department’s interactive Parcel Viewer (<http://maps.nashville.gov/ParcelViewer/>), with each map’s file name being the same as its parcel number. Table 1 lists each parcel, with its address, owner, acreage, zoning, land use description, planned development (none, according to Nashville Planning Department’s Development Tracker (<http://maps.nashville.gov/developmenttracker/>), and comments.

**CO008-6:** See response to comment CO005-3.

**CO008-7:** See response to comment CO003-5.

**CO008-8:** See response to comment CO003-6.

**CO008-9:** We have reviewed the information provided and determined that none of the proposed alternatives have significant environmental advantages to the proposed location for the Cane Ridge Compressor Station (see section 3.6.2). All of the sites would require additional suction/discharge piping (which would necessitate additional right-of-way and impact a number of landowners) to interconnect with the Columbia Gulf system, as well as additional looping ranging from 9-17 miles on Columbia Gulf’s mainline system (see tables 3.6-3 and 3.6-4). See also response to comments CO003-5 and CO003-6.

**CO008 – Friends of Mill Creek Greenway, Brant N. Miller (continued)**

COMMENTS REGARDING FERC DRAFT EIS (FERC/DEIS-0275) BY BRANT N. MILLER, CHAIR OF FRIENDS OF MILL CREEK GREENWAY – DOCKET NO. CP16-361-000 (CONTINUED)

CO008-9  
(cont.)

I, as the representative of hundreds of users of the Mill Creek Greenway, Mill Creek Park Section, and as a resident of the affected Cane Ridge Community, urge FERC to require CGT to carefully review and consider these industrially-zoned parcels as alternative sites for their proposed gas compressor station. In terms of impacts on adjoining neighborhoods and outdoor recreational areas, it would appear that any of these alternative sites would be a much more acceptable than the proposed location, which is next to our Park and Greenway, and adjacent to many residential subdivisions.

Thank you!

Sincerely,

Brant N. Miller, Chair  
Friends of Mill Creek Greenway, Mill Creek Park Section

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CO008 – Friends of Mill Creek Greenway, Brant N. Miller (continued)

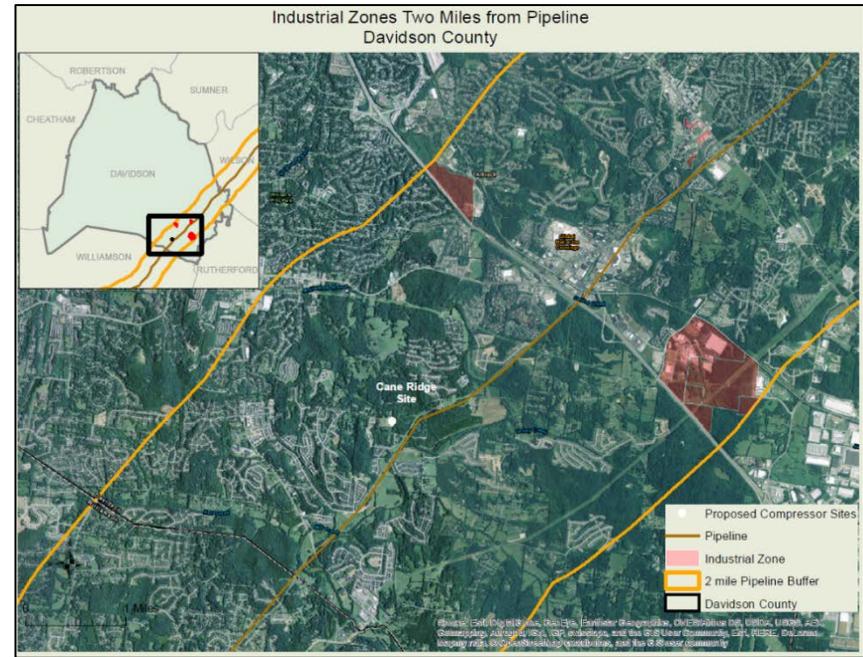
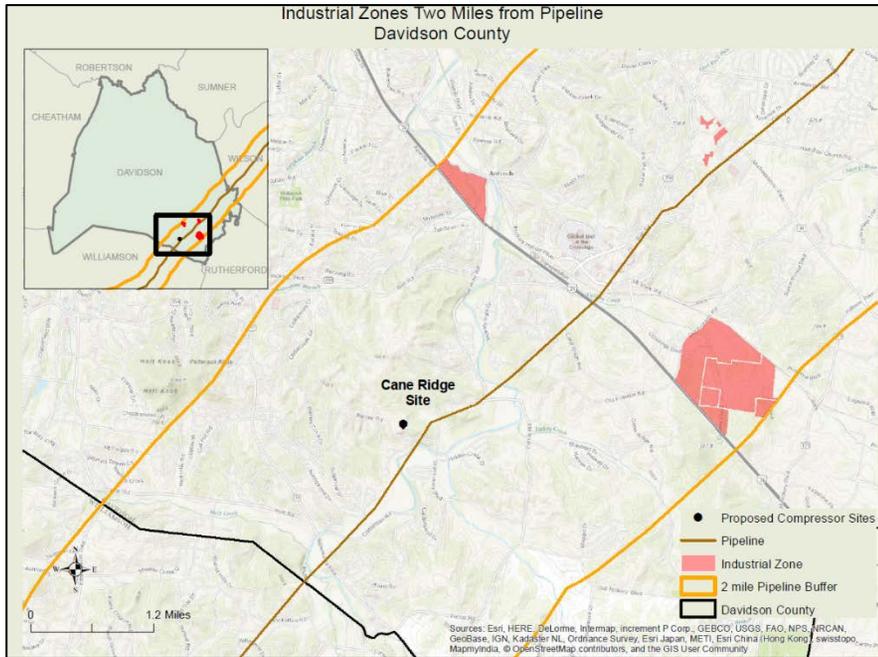
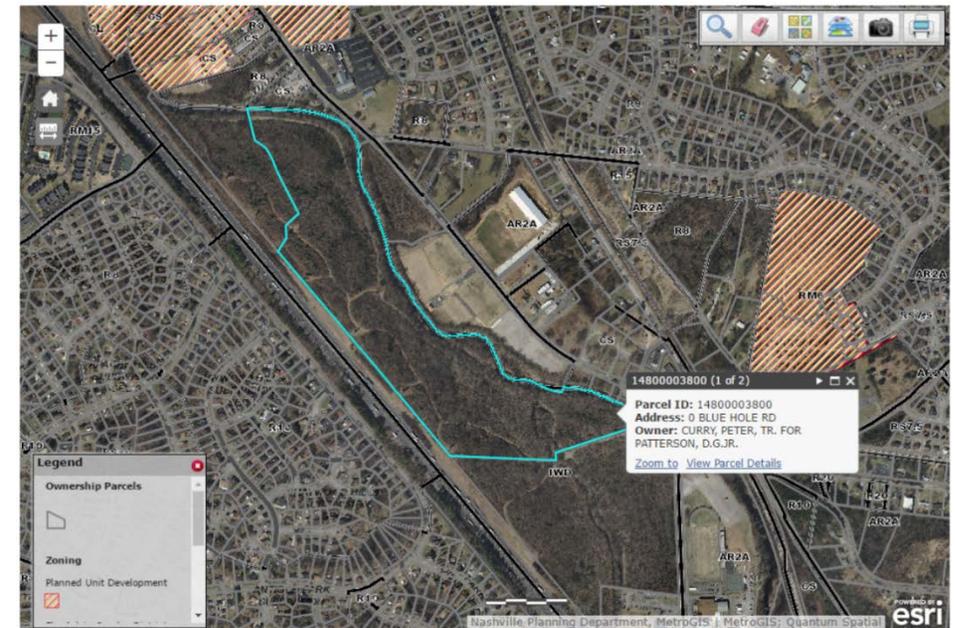
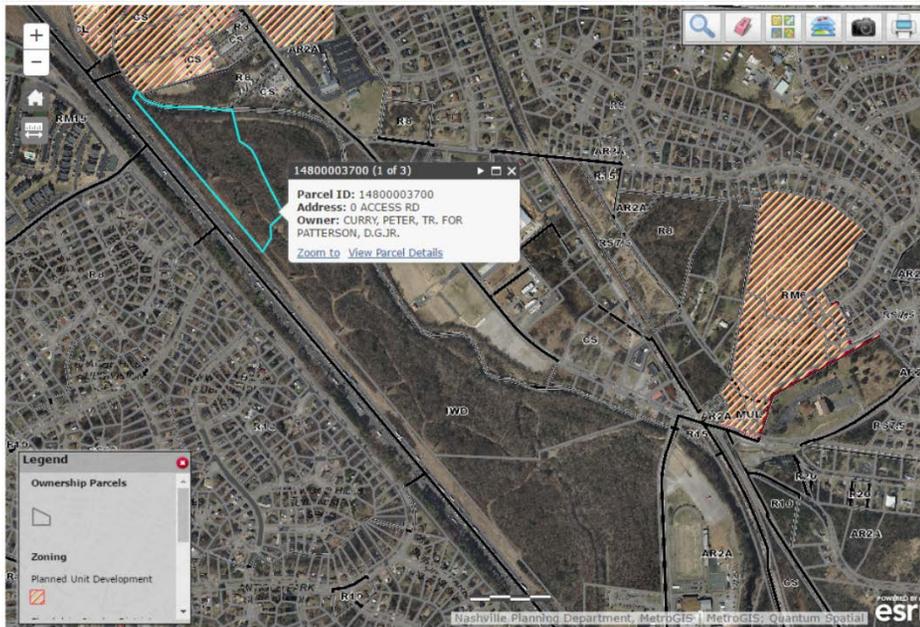
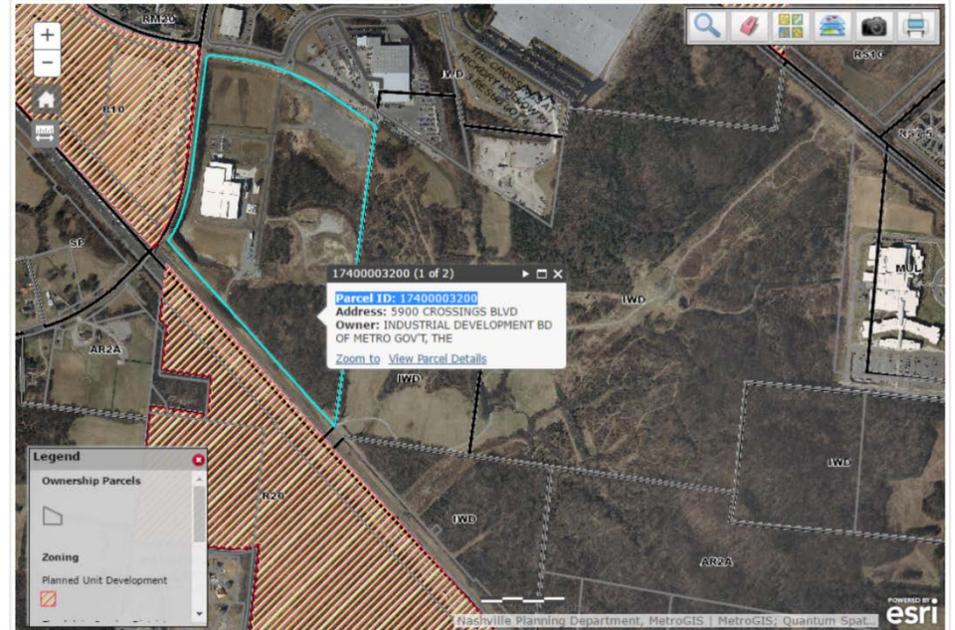
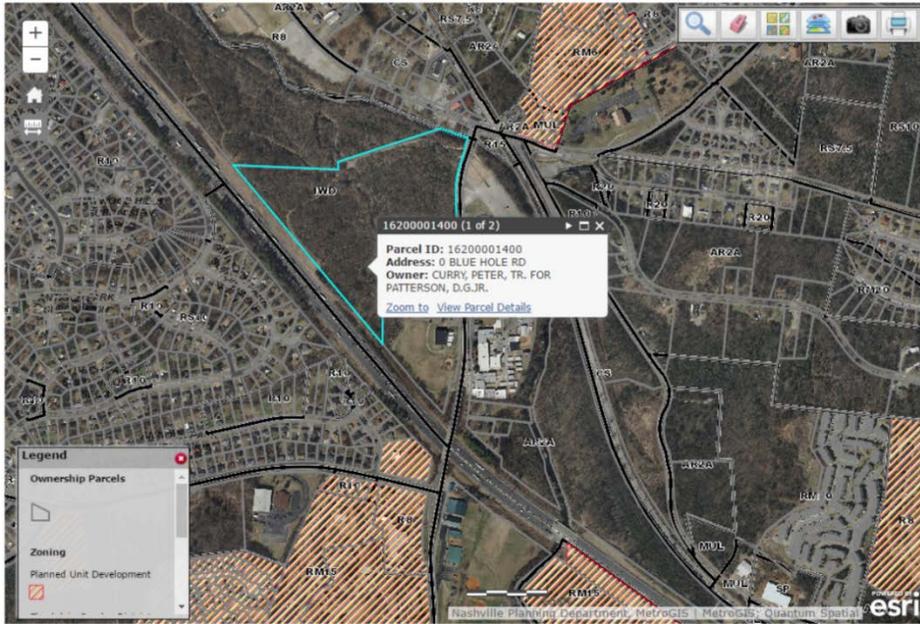


TABLE 1: ALTERNATIVE GAS COMPRESSOR SITES ON INDUSTRIALLY-ZONED PARCELS

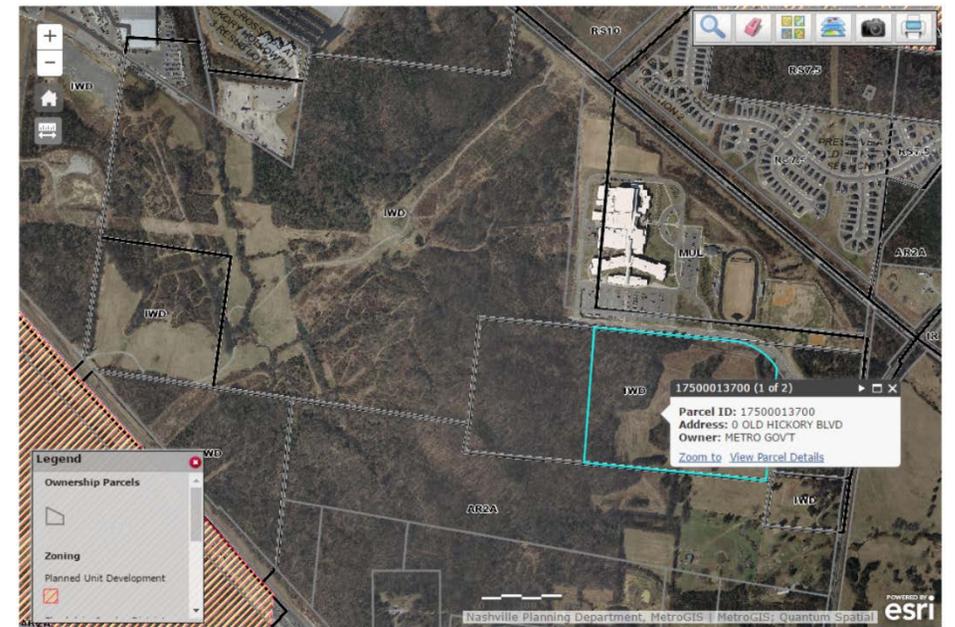
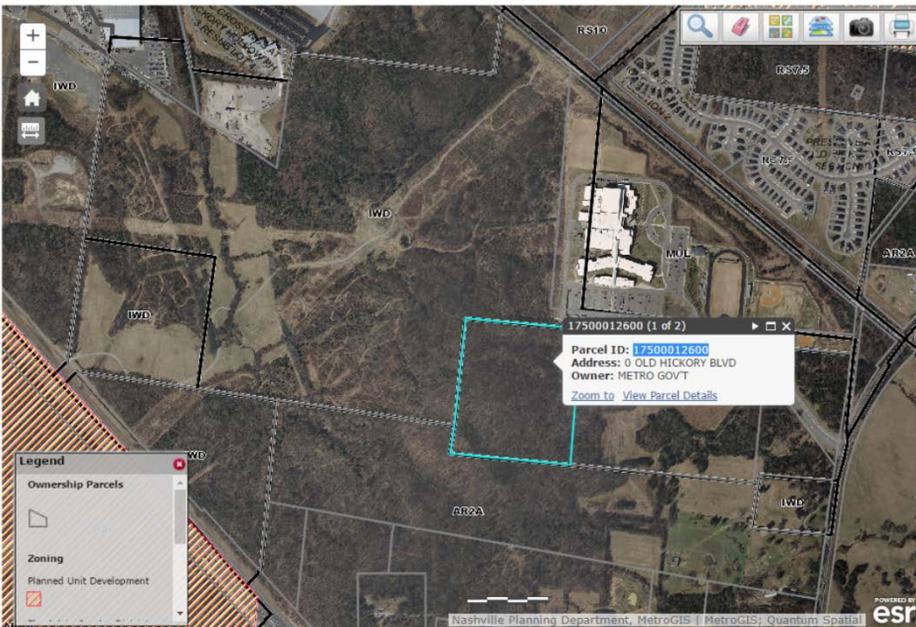
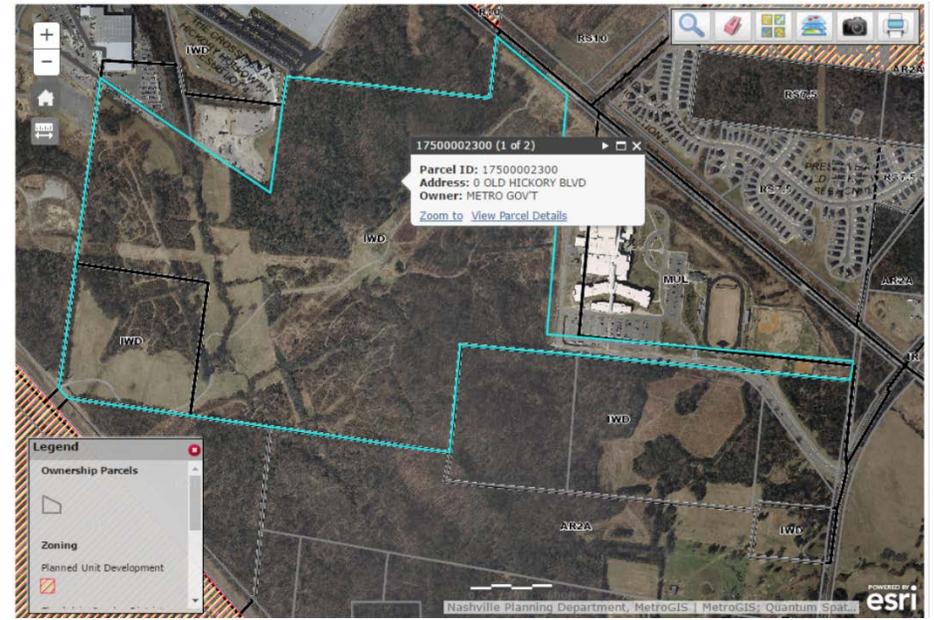
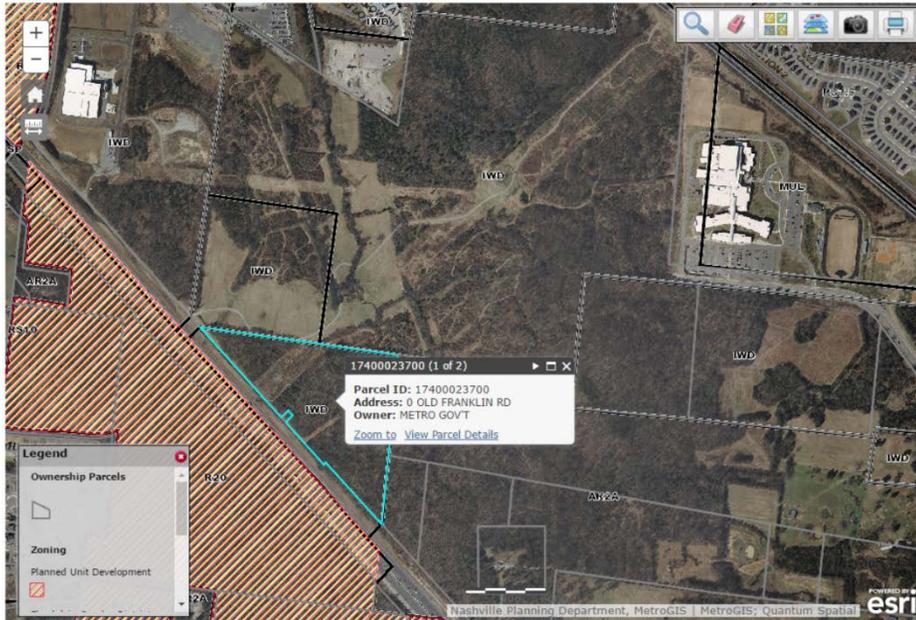
PARCEL ID	ADDRESS	OWNER	ACREAGE	ZONING	LAND USE DESCRIPTION	PLANNED DEVELOPMENT *	COMMENTS
<b>PARCELS SOUTH OF PIPELINE</b>							
17400003200	5900 CROSSINGS BLVD, ANTIOCH TN 37013	INDUSTRIAL DEVELOPMENT BD OF METRO GOV'T	54.74	IWD**	SMALL WAREHOUSE	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE
17500002300	0 OLD HICKORY BLVD, ANTIOCH TN 37013	METRO GOVERNMENT	187.82	IWD**	VACANT COMMERCIAL LAND	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE
17500012600	0 OLD HICKORY BLVD, ANTIOCH TN 37013	METRO GOVERNMENT	20.00	IWD**	VACANT RURAL LAND	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE
17500013700	0 OLD HICKORY BLVD, ANTIOCH TN 37013	METRO GOVERNMENT	30.57	IWD**	VACANT COMMERCIAL LAND	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE
17500018100	0 OLD HICKORY BLVD, ANTIOCH TN 37013	METRO GOVERNMENT	5.25	IWD**	VACANT COMMERCIAL LAND	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE
17400023700	0 OLD FRANKLIN RD, ANTIOCH TN 37013	METRO GOVERNMENT	21.38	IWD**	MORTUARY/CEMETARY	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE
17500021400	0 OLD HICKORY BLVD, ANTIOCH TN 37013	METRO GOVERNMENT	6.29	IWD**	VACANT COMMERCIAL LAND	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE
17500014000	12872 OLD HICKORY BLVD	TEGRAH RESOURCES, LLC	4.99	IWD**	SINGLE FAMILY	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE
17500019400	12575 OLD HICKORY BLVD	COLONIAL PIPELINE COMPANY	118.19	IR***	VACANT INDUSTRIAL LAND	NONE	JUST OUTSIDE 2 MILES FROM COLUMBIA PIPELINE
<b>PARCELS NORTH OF PIPELINE</b>							
16200001400	0 BLUE HOLE RD, ANTIOCH TN 37013	CURRY, PETER, TR. FOR PATTERSON, D.G.JR	32.02	IWD**	VACANT COMMERCIAL LAND	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE
14800003800	0 BLUE HOLE RD, ANTIOCH, TN 37013	CURRY, PETER, TR. FOR PATTERSON, D.G.JR	51.33	IWD**	VACANT COMMERCIAL LAND	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE
14800003700	0 ACCESS RD, ANTIOCH, TN 37013	CURRY, PETER, TR. FOR PATTERSON, D.G.JR	9.91	IWD**	VACANT COMMERCIAL LAND	NONE	WITHIN 2 MILES OF COLUMBIA PIPELINE

\* INFORMATION FROM NASHVILLE PLANNING DEPARTMENT DEVELOPMENT TRACKER MAP  
 \*\*INDUSTRIAL ZONING: INDUSTRIAL WAREHOUSING/DISTRIBUTION, INTENDED FOR A WIDE RANGE OF WAREHOUSING, WHOLESALING, AND BULK DISTRIBUTION USES  
 \*\*\*INDUSTRIAL ZONING: INDUSTRIAL RESTRICTIVE, INTENDED FOR A WIDE RANGE OF LIGHT MANUFACTURING USES AT MODERATE INTENSITIES WITHIN ENCLOSED STRUCTURES

CO008 – Friends of Mill Creek Greenway, Brant N. Miller (continued)



CO008 – Friends of Mill Creek Greenway, Brant N. Miller (continued)



## CO009 – West Virginia Rivers Coalition



# WEST VIRGINIA RIVERS

April 24, 2017

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington, DC 20426

Submitted electronically at [www.ferc.gov](http://www.ferc.gov)

Re: Draft Environmental Impact Statement, Docket No. CP16-357-000

Dear Secretary Bose,

West Virginia Rivers Coalition, along with the organizations signed below, respectfully submit the following comments on the Draft Environmental Impact Statement (DEIS) for the Mountaineer XPress Pipeline (MXP), Docket No. CP16-357-000.

CO009-1 We found the DEIS lacking of the critical information needed to fully analyze the significant impacts of the project. Due to the lack of adequate information, we are unable to provide a comprehensive analysis of the DEIS. Because of this deficiency, we request a revised DEIS to be issued for the proposed project with all the necessary information to meet the requirements of the National Environmental Policy Act (NEPA). Specifically, the regulation explains that "NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA." The MXP DEIS released fails to meet NEPA requirements and a revised DEIS must be issued. A complete DEIS is necessary to provide the planning and analysis required so that agency decision-makers can mitigate or avoid impacts, and can correctly identify the least-impacting alternative.

CO009-2 Furthermore, we request that the revised DEIS address only the MXP. Combining the two projects into a single DEIS is problematic. The two projects, while proposed by the same parent company during the same time frame, are managed by two separate subsidiaries. The two projects are dissimilar in their nature and will require different mitigation measures. Therefore, combining the two projects into one DEIS does not adequately address the impacts. The fact that the Certificate issuance would be separate warrants a separate DEIS. If these two projects are combined into a single DEIS, then FERC should undertake a programmatic DEIS for all pipeline projects in the greater east coast region.

*Conserving and Restoring West Virginia's Exceptional Rivers and Streams*

3501 MACCORKLE AVENUE SE #129 CHARLESTON, WEST VIRGINIA 25304 • 304-637-7201 • WWW.WVRIVERS.ORG

**CO009-1:** The draft EIS represents a comprehensive review and environmental analysis of existing conditions and the potential impacts of construction and operation of the projects on numerous physical, cultural, and socioeconomic resources. Additionally, the document addresses alternatives to the two projects. Our analysis is based on information provided by the applicants, field investigations, public scoping, literature research, contacts with or comments received from federal, state, and local agencies, and comments from the public. The EPA, USACE, WVDEP, and West Virginia Division of Natural Resources participated as cooperating agencies in preparation of the draft EIS. The draft EIS considered all direct, indirect, and cumulative impacts associated with the projects, consistent with NEPA, and concludes that although the projects would result in some adverse environmental impacts, if the projects are constructed and operated in accordance with applicable laws, the successful implementation of mitigation measures identified in the EIS, and the Commission's regulations, the impacts would be reduced to acceptable levels.

**CO009-2:** The decision to review the two projects in a single EIS is explained in the Executive Summary and in section 1.0.

## CO009 – West Virginia Rivers Coalition (continued)

Additionally, we request the following to be addressed in the revised DEIS:

### 1.1 Project Purpose and Need

CO009-3

Page 1-2: The DEIS does not adequately address the need of the project. The only evidence of need for the pipeline is that Columbia has contracts with shippers who are not identified. There does not appear to be any detailed analysis of existing pipeline capacity. This leads to expensive overbuilding and needless environmental impacts. Former Commission Chairman Norman Bay said the commission should also consider whether capacity is needed to ensure deliverability to power generators, reliability benefits and concerns “that anticipated markets may fail to materialize.” The DEIS states, “However, determining project need is beyond the scope of the EIS.” The FERC must determine whether there is a need for the project. This issue must be fully analyzed in a revised DEIS.

### 3.4 Pipeline Route Variations

CO009-4

Page 3-19: The DEIS does not address the full scope of environmental and cultural resource impacts. The DEIS states “All four of these requested route adjustments would require further environmental and cultural resource surveys”. The final route has not been determined; and therefore, the DEIS does not contain the full scope of environmental impacts because they are still being determined. A revised DEIS must be issued to address these deficiencies.

### 4.1.4.4 Landslides

CO009-5

Mountaineer XPress Project, page 4-10: The DEIS fails to adequately address landslides. The DEIS states “Columbia Gas should file with the Secretary the results of a Phase I Landslide Hazard Assessment”. FERC needs this information to “further refine our assessment of proposed mitigation measures in areas characterized by steep slopes or slip-prone soils”. Additionally, FERC is requesting the Phase II Landslide Hazard Assessment prior to construction meaning the results of the Assessment will not be incorporated into the DEIS or available for public comment. Mitigation designs for steep slopes is critical in evaluating the hazards posed by construction on slip prone areas. The public must be provided access to this information in a revised DEIS. The failure to include complete information on this issue in the DEIS implies that information on steep slopes is not particularly important to decision-making, a conclusion contradicted by both science and common sense, as slope hazards can lead to catastrophic failure of the pipeline. Such a failure could lead to substantial damage to the natural environment, private and public property, and loss of human life, which, according to 40-CFR-1508.27, clearly would be defined as a significant impact, and which therefore, must be addressed in a revised DEIS.

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**CO009-3:** See response to comments CO006-3 and CO006-3. Purpose and need for the projects is discussed in section 1.1. The use of existing pipeline capacity is addressed as System Alternatives in section 3.2.

**CO009-4:** On May 16, 2017, Columbia Gas filed additional information addressing environmental and cultural resource impacts. This information has been incorporated into the appropriate sections of the EIS (see response to comment CO006-8). If the MXP is approved by the Commission, we anticipate that a number of minor changes would occur in response to environmental, engineering, and landowner considerations. See section 2.6.3 for information on the post-approval variance process.

**CO009-5:** On April 21, 2017, Columbia Gas filed its Phase I Geohazard Assessment Report. Based on the results of the Phase I Geohazard Assessment, Columbia Gas has initiated a Phase II Landslide Hazard Assessment. See our recommendation in section 4.1.4.4.1.

Supplemental information filed for the projects is publicly available on the FERC website ([www.ferc.gov](http://www.ferc.gov)) using the eLibrary link.

**CO009 – West Virginia Rivers Coalition (continued)**

4.2 Soils

CO009-6 **Mountaineer XPress Project, pages 4-29 & 4-32: The DEIS does not contain an updated Erosion Control Plan.** The Erosion Control Plan (ECP) filed by Columbia is inconsistent with FERC's plan in regards to removal of rock greater than 4 inches and topsoil segregation. FERC requests that the ECP be modified and provided to the Secretary prior to construction; however, this would prohibit the public from having the opportunity to review the plan. Additionally, FERC must have this information prior to issuing a certificate for the project to ensure that the project will comply with FERC procedures. This issue must be rectified in a revised DEIS.

4.3.1.5 Water Supply Wells and Springs

CO009-7 **Page 4-45: The DEIS does not supply sufficient information on water supply wells and springs.** The DEIS states "Columbia Gas has neither completed identification of all private water wells and potable springs in proximity to project work areas, nor has it identified any specific protection measures that would be implemented for wells located inside the construction work areas." This information is critical in determining the impacts of construction on private drinking water sources. The results of the completed field surveys must be included in a revised DEIS.

4.3.2.1 Public Water Supplies

CO009-8 **Mountaineer XPress Project, page 4-54: The DEIS does not adequately address impacts to public drinking water supplies.** The DEIS states "The ZCCs and ZPCs warrant a more detailed inventory and management due to their proximity to the source water and susceptibility to potential contaminants" Table 4.3-6 of the DEIS identifies 7 water treatment facilities whose ZCC or ZPC are crossed by the MXP. However, the DEIS does not identify measures that will be used to reduce or avoid impact to the source water. A turbidity analysis is needed where the pipeline would impact source water protection areas. Excess sediment in source water accelerates the formation of haloacetic acids when chlorine is added for treatment purposes. Haloacetic acids are regulated by EPA under the Safe Drinking Water Act. Excess sediment in source water can cause water utilities to exceed the standards resulting in undue hardships on the water utility and endangering human health. This issue must be addressed in a revised DEIS.

4.3.2.4 Impacts and Mitigation

CO009-9 **Mountaineer XPress Project, Dry Ditch Stream Crossing, page 4-63: The DEIS does not adequately address stream restoration.** The DEIS recommends that a waterbody crossing

**CO009-6:** On May 16, 2017, Columbia Gas filed a revised ECS document, which we find to be consistent with our Plan and Procedures. The revised ECS is presented in appendix D-1 of the EIS.

**CO009-7:** See revised section 4.3.1.3.

**CO009-8:** See response to comment FA002-9.

**CO009 – West Virginia Rivers Coalition (continued)**

CO009-9 (cont.)	restoration plan should be submitted prior to construction. Restoration plans are vital to assessing the impacts of construction on waterbodies. The public and agencies must be able to review the restoration plans and thus they must be included in a revised DEIS.
CO009-10	<b>Mountaineer XPress Project, HDD Crossing, page 4-65: The DEIS contains incomplete information regarding the HDD crossing of the Kanawha River.</b> The DEIS states, “the plan presents no insight into how a release from underneath the river (directly into the water) would be discovered or what Columbia Gas would do following such a discovery to limit impact on the river.” This information is critical to understanding the impacts of the HDD crossing on the Kanawha River and must be included in a revised DEIS.
CO009-11	<b>Mountaineer XPress Project, Hydrostatic Testing and Dust Control, page 4-69: The information contained in the DEIS on water withdrawals for hydrostatic testing and dust control is incomplete.</b> Columbia has identified the sources and anticipated quantities for hydrostatic testing, but the DEIS fails to mention the sources and anticipated quantities for dust control. Sources and quantities of water used for dust control must be included in a revised DEIS. Additionally, the DEIS fails to mention the locations for discharging the hydrostatic testing waters. The discharge locations are crucial to assessing the impacts of hydrostatic testing. For the WVDEP NPDES permit needed to discharge hydrostatic test water, requirements of the permit include discharging the hydrostatic test water back to the original water source. These issues must be addressed in a revised DEIS.
CO009-12	<b>First-order Streams: The DEIS fails to address cumulative impacts on headwater streams.</b> First-order or headwater streams are vitally important to the health of the watershed. The overall health of a watershed is dependent on its network of tributaries. Further analysis is needed to understand the impacts to headwater streams. A project of this magnitude that impacts multiple watersheds must be assessed at a regional scale. The DEIS must contain an analysis on the projects total impacts within each watershed to determine the overall impacts of the project. MXP must provide an analysis for each watershed including information on the number of headwater stream crossings by watershed and the number of stream crossings on each stream if waterbodies are crossed multiple times. At the landscape level, impacts from the ROW are exacerbated by the cumulative impacts of the proposed access roads. There is a negative correlation between road miles within a watershed and water quality. An analysis of the pre-construction vs. post-construction ratio of roads within a basin must be included in the DEIS to adequately assess the impacts from the proposed project.
CO009-13	<b>Stream Bank Cover: The DEIS fails to address loss of stream bank cover due to stream crossings.</b> The DEIS should include an analysis of the loss of stream bank cover on a watershed

**CO009-9:** Columbia Gas’ proposed stream crossing restoration techniques, which are provided in its ECS, have been reviewed and approved by the WVDEP. Confirmation of the WVDEP’s approval was filed on April 21, 2017.

**CO009-10:** Columbia Gas’ revised HDD Inadvertent Return Contingency Plan for the Kanawha River is provided in appendix G.

**CO009-11:** See revised section 4.3.2.4.1 for additional information on hydrostatic test water.

**CO009-12:** Section 4.13.2.1 has been revised to include HUC-12 subwatersheds crossed by the proposed MXP pipelines and aboveground facilities.

**CO009 – West Virginia Rivers Coalition (continued)**

CO009-13 (cont.)	scale to determine the % loss of stream bank cover by watershed to provide a better understanding of the potential impacts of the project.
	<p><u>4.3.2.5 Conclusion</u></p> <p>Page 4-76: The DEIS prematurely concludes that the project would not significantly impact surface water quality or quantity. The ECP, Restoration Plan, HDD Contingency Plan and hydrostatic testing discharge plan have not been completed; therefor, FERC is premature in concluding that the project will not significantly impact water resources. FERC must have all the pertinent information before drawing that conclusion.</p>
CO009-14	<p><u>4.3.3.1 Wetland Mitigation</u></p> <p>Page 4-84: The Wetlands Mitigation plan is not included within the DEIS. The DEIS states Columbia Gas states that it would prepare a compensatory wetland mitigation plan for project impacts." The wetlands mitigation plan is not included in the DEIS and FERC makes no recommendation to submit it. This plan is critical in assessing whether the impacts to wetlands have been mitigated properly. Not requiring the plan to be submitted to be included in the DEIS prevents the public from reviewing and commenting on the wetland mitigation plan, undermining the public 's participation and failing to meet the requirements of NEPA. The Wetland Mitigation Plan must be included in a revised DEIS.</p>
CO009-15	<p>Wetland Impacts: The DEIS fails to address the project's impact on wetland functions regarding water storage for flood prevention. The DEIS must provide an analysis of the disruption of water storage for flood control. The analysis must include watershed-based wetland impacts with details on the acres of impacted wetlands by watershed to determine whether flooding within the watershed has the potential to significantly increase as a result of the loss of wetland functions during construction and operation of the pipeline.</p>
CO009-16	<p><u>4.4.4 Conclusion</u></p> <p>Mountaineer XPress Project, Page 4-84: The DEIS prematurely concludes that the project would not significantly impact wetlands. The DEIS states "By implementing construction and mitigation measures outlined in Columbia Gas' ECS, completing compensatory mitigation as determined by the USACE and other appropriate agencies, and complying with federal and state permit conditions, we conclude that the MXP would not result in any significant impacts on wetlands." The mitigation plan has not been completed, the wetland permits have not been issued and the ECS has not been finalized; therefore, FERC is premature in concluding that the project will not significantly impact wetlands. FERC must have all the pertinent information before drawing that conclusion.</p>
CO009-17	

**CO009-13:** See response to comment CO009-9. Columbia Gas would implement the measures contained in its ECS during construction to minimize instream impacts, including erosion controls and revegetation of disturbed areas.

**CO009-14:** See response to comment CO006-8.

**CO009-15:** Project wetland mitigation plans are prepared in support of permit applications to state and federal regulatory agencies (i.e., the USACE and WVDEP). Compensatory mitigation for unavoidable project impacts would be determined during the permit approval process. Columbia Gas would be required to demonstrate that it had complied with all section 10/404/401 permit conditions as a pre-requisite to our issuance of a notice to proceed with construction should the project be approved by the Commission.

Supplemental information filed for the projects is publicly available on the FERC website ([www.ferc.gov](http://www.ferc.gov)) using the eLibrary link.

**CO009-16:** Section 4.4.2 discusses wetland impacts and mitigation. Wetland impacts are anticipated to be minor and temporary. There would be no net loss of wetlands as a result of project construction. See table 4.4-1 for details on MXP construction and operation impacts on wetlands.

**CO009-17:** See responses to comments CO009-15 and CO009-16.

**CO009 – West Virginia Rivers Coalition (continued)**

4.5.6 Habitat Fragmentation and Edge Effects

CO009-18

Page 4-165: The DEIS analysis on forest fragmentation is incomplete. The DEIS states “Several agencies, including the FS and WVDNR, have expressed concerns regarding forest fragmentation and the impacts on interior forest and their associated wildlife species.” FERC recommends several additional items be submitted prior to the close of the DEIS comment period to address the deficiency. The additional information should have been included in the DEIS. A revised DEIS must be issued containing this critical information.

**CO009-18:** See revised section 4.5.4.1.

4.7 Endangered Species

CO009-19

Mountaineer XPress Project, pages 4-153, 4-154 & 4-159: The DEIS does not adequately address impacts on endangered species. Construction of MXP will negatively affect endangered bat and mussel species and the diamond darter. Mussel and bat surveys have not been completed. Consultations with the US Fish and Wildlife Service and WVDNR have not been completed. Consultations could result in additional mitigation, conservation measures, or reroutes. This lack of sufficient information must be corrected in a revised DEIS.

**CO009-19:** The USFWS is working with Columbia Gas to address any species-specific issues and develop avoidance and mitigation measures for federally protected species affected by the MXP. See revisions to section 4.7 for the current status of surveys and consultations for federally protected species.

4.8.2.4 Natural, Recreational, or Scenic Rivers and Trails

CO009-20

Mountaineer XPress Project, Page 4-207: The DEIS fails to adequately address impacts on recreation. MXP proposed to cross 18 recreational trails. The DEIS states “Columbia Gas would work with the respective trail management agencies to develop site-specific crossing methods and restoration plans for each trail crossing.” The DEIS does not specify whether these consultations with trail management agencies are in progress and site-specific plans have not been included in the DEIS. Without this information, one cannot adequately address how construction will impact recreation and tourism in these areas. This information must be included in a revised DEIS.

**CO009-20:** See revised section 4.8.2.4.1.

4.9 Socioeconomics

CO009-21

The DEIS fails to analyze economic impacts to West Virginia gas users. Almost certainly, the MXP would result in significant increases in price of gas in WV, which will adversely affect current users. The DEIS needs to analyze these impacts on the economy, and completely fails to do so. Former Commission Chairman Norman Bay has previously stated “Overbuilding may subject ratepayers to increased costs of shipping gas on legacy systems. If a new pipeline takes customers from a legacy system, the remaining captive customers on the system may pay higher rates.” This issue must be addressed in a revised DEIS.

**CO009-21:** Comment noted. See response to comment CO009-3. The purpose and need for the projects is discussed in section 1.1. More than 96 percent of the new capacity created by MXP is subscribed and supported by binding, long-term precedent agreements with project shippers, thereby demonstrating the need for the project, and that “overbuilding” is not an issue. The Commission considers all evidence submitted reflecting on the need for a project, including, but not limited to precedent agreements, demand projections, potential cost savings to consumers, or a comparison of projected demand with the amount of capacity currently serving the market. The requested economic analysis is beyond the scope of this EIS.

**CO009 – West Virginia Rivers Coalition (continued)**

4.11.1.2.4 Operational Air Emission Impacts and Mitigation

The DEIS fails to adequately address greenhouse gas emissions. While this DEIS does provide some information on greenhouse gases, it does not include a detailed analysis of methane emissions. Additionally, it does not address the basic question of whether cumulative emissions will increase or decrease, whether the CO2 emissions of end users of the gas from the MXP pipeline displace, or add to, emissions from existing coal-fired power plants, or the impacts of "upstream" emissions from additional gas drilling, pipelines and compressor stations. Former Commission Chairman Norman Bay called on the commission to "analyze the environmental effects of increased regional gas production from the Marcellus and Utica" and consider "the downstream impacts of the use of natural gas and ... a life-cycle greenhouse gas emissions study." The revised DEIS must address these issues.

CO009-22

In conclusion, for the reasons outlined above, we request a revised DEIS to be issued with complete and accurate information in order to comply with the NEPA requirements. A complete DEIS is necessary to provide the planning and analysis needed so that the agency decision-makers can mitigate or avoid impacts, and can correctly identify the least-impacting alternative. We appreciate the opportunity to submit these comments and look forward to further participation in this proceeding.

Respectfully Submitted,

Angie Rosser & Autumn Crowe  
West Virginia Rivers Coalition

Cindy Ellis & Cindy Rank  
West Virginia Highlands Conservancy

Chris Hale  
Friends of Water

April Keating  
Sierra Club, West Virginia Chapter

Kevin Campbell  
Mountain Lakes Preservation Alliance

Becky Park  
Citizens' Climate Lobby of Southern West Virginia

**CO009-22:** Comment noted. Operational GHG emission estimates for the MXP are presented, as CO<sub>2e</sub>, in tables 4.11-4 through 4.11-9. A detailed discussion on impacts from project GHG emissions and climate change is included in section 4.13.2.11. See response to comment CO006-4.

**CO010 – Mill Creek Watershed Association**

Micah Hargrove, Mill Creek Watershed Association, Nashville, TN.  
The Mill Creek Watershed Association opposes the proposed gas compressor pump station.

**CO010-1** [ The selected site is not zoned for industrial use. The gas compressor station needs to be placed on a site zoned for industrial use.

**CO010-2** [ The gas compressor station will use the existing pipeline infrastructure to convey oil. The new compressor station will increase the pressure and volume loads on the pipe. The existing pipeline infrastructure is estimated to have installed 40-50 years prior. Before construction can begin to be considered, the existing pipeline infrastructure will require a thorough inspection to determine if the pipeline can handle the projected pressure and volume loads. There are at least three existing pipeline crossings along Mill Creek. If just one of these crossings ruptured, the damage to Mill Creek would be devastating and irreparable to the local wildlife and vegetation.

**CO010-3** [ We request that the gas compressor station be relocated to an area zoned for industrial land use and for the existing pipeline to be repaired to prevent future ruptures in the pipeline. The MCWA seeks to protect the community and water quality within the Mill Creek watershed; we ask that the Federal Energy Regulatory Commission do the same in return.

**CO010-1:** See revisions to section 3.6.2 and our response to comments CO003-5 and CO003-6.

**CO010-2:** The Columbia Gulf system transports natural gas; it does not transport oil or oil products. The proposed compressor station would compress the natural gas to allow for an increase in capacity to the existing system. Columbia Gulf has not requested an increase in the maximum allowable operating pressure (MAOP). By law (49 CFR 192, subparts L and M), Columbia Gulf must maintain its pipeline and perform routine inspections as required by the USDOT’s Pipeline and Hazardous Materials Safety Administration.

**CO010-3:** See response to comments CO010-1 and CO010-2.

**CO011 - Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club**

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

Columbia Gas Transmission, LLC  
Columbia Gulf Transmission, LLC

Docket No. CP16-357-000  
Docket No. CP16-361-000

**MOTION TO INTERVENE AND COMMENTS OF ALLEGHENY DEFENSE  
PROJECT, OHIO VALLEY ENVIRONMENTAL COALITION, AND SIERRA CLUB**

**I. MOTION TO INTERVENE**

Pursuant to 18 C.F.R. §§ 157.10 and 385.214, the following parties move to intervene in the above-captioned proceedings:

Allegheny Defense Project is a grassroots conservation organization headquartered at 117 West Wood Lane, Kane, PA 16735 and is dedicated to the protection and restoration of the Allegheny Bioregion. Formed in 1994, our organization works to protect the Allegheny National Forest and other public lands and resources from the impacts of industrial extraction such as oil and gas drilling. In addition to the environmental impacts caused by pipeline construction are the impacts of related Marcellus and Utica shale gas development. This drilling is fundamentally altering the Allegheny Bioregion with new roads, well sites, wastewater disposal pits, gathering lines, and other infrastructure. By approving the Projects, FERC will authorize Columbia to build a pipeline that will only encourage further shale gas drilling in the Allegheny Bioregion and, as a result, further degradation of our land, air, and water.

Ohio Valley Environmental Coalition ("OVEC") is a grassroots conservation organization headquartered at P.O. Box 6753, Huntington, WV 25773-6753. OVEC's mission is to organize and maintain a diverse grassroots organization dedicated to the improvement and preservation of the environment and our communities through education, grassroots organizing

**Note:** comments on the DEIS begin on page 4.

**CO011 - Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club (continued)**

and coalition building, leadership development and media outreach. OVEC's works encompasses much of West Virginia as we seek to defend our water from pollution arising from mountaintop removal coal mining, "disposal" of coal prep plant waste, and deep-shale gas extraction and waste "disposal" activities.

The Sierra Club is a national nonprofit organization with 67 chapters and over 740,000 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club is a national leader in the movement to end reliance on fossil fuels that cause climate disruption and to transition to a clean energy economy.

The Sierra Club seeks to intervene in this proceeding because the Mountain XPress Project severely impacts our water resources and headwaters in the mountains of West Virginia, fragments core forest areas, threatens endangered species, disrupts cultural attachments and communities adjacent to the corridor, impacts our historic resources, inflicts economic damage on communities and continues to block the development of renewable energy sources. Further, the cumulative impacts of the Mountain XPress and Gulf XPress Projects combined with the impacts from the Mountain Valley Pipeline, Atlantic Coast Pipeline, and the WB XPress Project are unknown and require further analysis of cumulative impacts on a regional scale.

Although these groups share common goals, each group has its own independent mission and supporter base and each group joins this motion as individual movants, requesting independent intervenor status on behalf of their organizations in the above-captioned proceedings. The movants do not support the Projects, their interests are not adequately

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**CO011 - Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club (continued)**

represented by any existing party to the proceedings, and their participation would further the public interest. This motion is timely filed in accordance with FERC's February 27, 2017 Notice.

**II. COMMENTS**

The following comments are provided on behalf of the Allegheny Defense Project, OVEC, and Sierra Club regarding the Federal Energy Regulatory Commission's ("FERC") draft environmental impact statement ("DEIS") for Columbia Gas Transmission's ("Columbia Gas") proposed Mountaineer XPress Project ("MXP") and Columbia Gulf Transmission's ("Columbia Gulf") proposed Gulf XPress Project ("GXP") (collectively, "Projects"). Columbia Gas proposes to construct and operate the following facilities in West Virginia: (i) 164.3 miles of new 36-inch-diameter pipeline known from Marshall County to Cabell County; (ii) 5.9 miles of new 24-inch-diameter pipeline in Doddridge County; (iii) three new compressor stations in Doddridge, Calhoun, and Jackson Counties; (iv) two new regulating stations in Ripley and Cabell Counties; (v) 296 feet of new, 10-inch-diameter natural gas pipeline at the Ripley Regulator Station to tie Columbia Gas' existing X59M1 pipeline into the MXP-100 pipeline in Jackson County; (vi) 0.4-mile-long replacement section of 30-inch-diameter natural gas pipeline in Cabell County; (vii) upgrades to one existing compressor station (Wayne County) and two compressor stations (Marshall and Kanawha Counties) either approved or pending under separate FERC proceedings; and (viii) related facilities in various West Virginia Counties. Columbia Gulf proposes to construct and operate the following facilities in Kentucky, Tennessee, and Mississippi: (i) seven new compressor stations in Kentucky (Rowan, Garrard, and Metcalfe Counties), Tennessee (Davidson and Wayne Counties), and Mississippi (Union and Granada Counties); (ii) upgrades

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to one approved compressor station in Carter County, Kentucky; and (iii) upgrades at one existing meter station in Boyd County, Kentucky.

FERC's decision to grant a certificate to construct the Projects is a "major Federal action" within the meaning of the National Environmental Policy Act (NEPA), and it must be preceded by the preparation of an Environmental Impact Statement (EIS). 42 U.S.C. § 4332. FERC's EIS must address:

(i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between the local short-term uses of the project as compared to the long term use of the land, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

42 U.S.C. § 4332. Under NEPA, "agencies [must] take a 'hard look' at the environmental effects of their planned action." *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989). Pursuant to the Administrative Procedure Act (APA), reviewing courts are to set aside as arbitrary and capricious any major Federal action that is taken without the requisite "hard look" at the relevant factors in an EIS. 5 U.S.C. § 706(2)(A). FERC's analysis in the DEIS for the Projects fails to meet NEPA's standards in several ways and must be significantly improved or FERC's decision will be subject to vacatur under the APA.

CO011-1

**A. FERC's purpose and need statement and range of alternatives are inadequate.**

FERC failed to provide the legally required purpose and need statement in the DEIS. The Council on Environmental Quality's ("CEQ") regulations implementing NEPA (adopted by FERC under 18 C.F.R. § 380.1) require FERC to "specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. FERC must "exercise a degree of skepticism in dealing with self-serving

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**CO011-1:** Comment noted. As described in section 1.1, the applicants developed the projects in response to customers' demands and then filed applications with the FERC for authorization to construct and operate the proposed facilities. The EIS is limited to assessing the potential environmental impacts of the proposed projects and an appropriate range of alternatives. While the EIS does consider whether alternative actions might meet the customers' demands, the document does not consider or reach a conclusion on whether there is a "public need" (i.e., in terms of a "public convenience and necessity") for the proposed projects. Council on Environmental Quality regulations implementing NEPA (40 CFR 1502.13) require that an EIS "briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." In other words, the EIS states the purpose of and need for a proposed project in order to define the range of alternative actions that the agency can legitimately consider.

CO011-1  
(cont.)

statements from a prime beneficiary of the project.” *Simmons v. U.S. Army Corps of Eng’s*, 120 F.3d 664, 669 (7th Cir. 1997) (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 209 (D.C. Cir. 1991) (Buckley, J., dissenting)). FERC “cannot restrict its analysis to those ‘alternative means by which a particular applicant can reach his goals.’” *Id.* (quoting *Van Abbema v. Fornell*, 807 F.2d 633, 638 (7th Cir. 1986); see also *Nat’l Parks & Cons. Ass’n v. Bureau of Land Mgmt.*, 606 F.3d 1058, 1072 (9th Cir. 2009) (finding a purpose and need statement that included the agency’s goal to address long-term landfill demand, and the applicant’s three private goals was too narrowly drawn and constrained the possible range of alternatives in violation of NEPA).

According to FERC, “determining project need is beyond the scope of the EIS.” DEIS at 1-3. This is in direct violation of the plain language of the CEQ regulation, which requires FERC to “specify the underlying purpose *and need*” for the project in the EIS. 40 C.F.R. § 1502.13 (emphasis added). Without performing an independent assessment of the need for the project, FERC cannot determine the reasonable range of alternatives that must be analyzed in the DEIS. In particular, without determining the need for the project, FERC cannot reasonably assess the desirability of the required “no action” alternative. Furthermore, by waiting until some unspecified future date to determine the need for the project, FERC denies the public its right to comment on all aspects of the DEIS, including the statement of need and the alternatives analysis that depends on that statement.

Not only did FERC completely fail to provide a statement of need for the Project, but it also framed its statement of purpose far too narrowly. FERC primarily relies on the applicants’ “stated objectives” for the Projects which are to:

- Increase firm transportation service from receipt points in the Appalachian Basin to markets in the Midwest, Northeast, Mid-Atlantic, South, and Gulf Coast; specifically

The determination of whether there is a “public need” for the proposed facilities (for the purpose of considering an authorization under section 7 of the Natural Gas Act) will be made in the subsequent Commission Order granting or denying the applicants’ requests for Certificate authorization and is based on a balancing of the benefits of the projects against any adverse impacts. See also response to comment CO002-10.

The purpose of the proposed projects is to transport natural gas in interstate commerce. The FERC is an independent regulatory agency responsible for, among other things, responding to applications for the interstate transportation of natural gas. It has no mandate for determining overall U.S. energy policy or what components of a national policy should or should not be promoted. Energy production from renewable resources or alternative energy sources, or the gains realized from increased energy efficiency and conservation, are not transportation alternatives and are considered beyond the scope of this EIS.

CO011-1  
(cont.)

to increase natural gas deliverability by 1,800,000 Dth/d to Columbia Gas' TCO Pool, as well as up to an additional 900,000 Dth/d to Columbia Gas' Leach Interconnect with Columbia Gulf's existing system; and

- Provide an additional 860,000 Dth/d of natural gas supplies to markets in Mississippi and Louisiana.

DEIS at 3-1. By relying almost exclusively on the applicants' ambitions for the Projects to frame its statement of purpose, FERC impermissibly "restrict[ed] its analysis to just those 'alternative means by which a particular applicant can reach his goals.'" *Simmons*, 120 F.3d at 669 (quoting *Citizens Against Burlington*, 938 F.2d at 209 (Buckley, J., dissenting)); see also *Nat'l Parks & Cons. Ass'n*, 606 F.3d at 1072.

For example, FERC acknowledges that if it selects the no-action alternative, "customers of the projects' shippers could seek to use other energy alternatives, such as alternative fuel or renewable energy sources, which could also require new facilities." DEIS at 3-3. Rather than exploring such alternatives, FERC flatly states that if such facilities were approved and constructed, "each project would result in specific environmental impacts that could be less than, similar to, or greater than the current proposals." *Id.* This is a meaningless statement that fails to compare other reasonable alternatives to the proposed actions. FERC's categorical refusal to consider alternative energy and increased energy efficiency alternatives is at odds with other recent statements.

For example, in the Constitution Pipeline DEIS, FERC considered energy conservation/efficiency and renewable energy alternatives. See Constitution Pipeline DEIS at 3-3 – 3-12 (Docket CP13-499-000). While FERC ultimately decided against considering these alternatives in greater detail, it at least considered them in some detail. That is in stark contrast to this DEIS. Therefore, FERC must prepare a revised or supplemental DEIS that includes an independent assessment of both "purpose and need", taking into account not only the applicant's

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CO011-1 (cont.)	stated purpose but also the broader public purpose and need, and put the complete DEIS out for public comment.
CO011-2	<p><b>B. The lack of complete information in the DEIS renders it legally deficient.</b></p> <p>Throughout the DEIS, FERC indicates that information provided by the applicants is incomplete. This incomplete information forms the basis for many of the proposed conditions that FERC staff recommends be attached to any certificate authorizing the Atlantic Sunrise Project. <i>See</i> DEIS at 5-26 – 5-36. Much of this information should have been included in the DEIS so that the public had an opportunity to review it and provide comments.</p> <p>The NEPA EIS requirement “guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.” <i>Department of Transportation v. Public Citizen</i>, 541 U.S. 752, 768 (2004) (citation omitted). This “informational role” assures the public that the agency has considered environmental concerns in its decisionmaking process and provided a “springboard for public comment” in that decisionmaking process. <i>Id.</i> (citation omitted). “The purpose here is to ensure that the ‘larger audience[ ]’ . . . can provide input as necessary to the agency making the relevant decisions.” <i>Id.</i> (citation omitted); <i>see also League of Wilderness Defenders v. Connaughton</i>, 752 F.3d 755, 761 (9th Cir. 2014) (“Informed public participation in reviewing environmental impacts is essential to the proper functioning of NEPA.”).</p> <p>In reviewing an EIS, courts look at “whether the EIS’s form, content and preparation foster both informed decisionmaking and informed public participation.” <i>California v. Block</i>, 690 F.2d 753, 761 (9th Cir. 1982). Here, FERC decided to publish a DEIS knowing that it lacked information that is critical for its own review, and for meaningful public review and</p>

**CO011-2:** Comment noted. As with any project of this magnitude, studies necessary to prepare project plans are ongoing and continue. None of the “information gaps” noted will provide information upon which a determination of significant impact hinges.

The final EIS has been revised to include new information provided by Columbia Gas and/or findings from the regulatory review process. See sections:

- 4.1.4.4.1 - Landslides
- 4.3.1.2.1 and 4.3.1.3.1 - Groundwater
- 4.3.2.4.1 - Stream Crossing Restoration Plans
- Appendix G HDD - Inadvertent Return Contingency Plan for the Kanawha River
- 4.3.2.4.1, 4.7.5.1, and 4.7.10.1 - other hydrological reports and plans
- 2.4.1.2 and 4.5.5.2 - Invasive and Noxious Weed Infestation Plan
- 4.7.3 - Federally Listed Species

Supplemental information filed for the projects is publicly available on the FERC website ([www.ferc.gov](http://www.ferc.gov)) using the eLibrary link.

CO011-2  
(cont.)

comment. As such, the DEIS is legally deficient and must be redone in accordance with CEQ's regulations. *See* 40 C.F.R. § 1502.9(a).

We are particularly concerned about the Project's untold water impacts, and the DEIS' myriad information gaps with respect to these impacts exemplifies why FERC cannot proceed with supplementing its inadequate draft. For example, FERC states that Columbia Gas and/or Columbia Gulf must provide the following information either before the end of the DEIS comment period or before construction:

- A modified version of its ECS (section II.I.1) that is consistent with the 2013 version of FERC's Upland Erosion Control, Revegetation, and Maintenance Plan ("Plan") at section V.A.4.
- A modified version of its ECS (section II.D.2) that is consistent with the 2013 version of FERC's Plan at section IV.B.1.a.
- The location of all water wells and potable springs within 150 feet of all areas of disturbance associated with the MXP pipelines and related aboveground facilities.
- A waterbody crossing restoration plan.
- A revised HDD Inadvertent Return Contingency Plan for the Kanawha River.
- An alternative stream/source of hydrostatic test water for Grasslick Run.
- A flow regime for each waterbody where Columbia Gas will withdraw hydrostatic test water at the time of the year when testing is anticipated and specific measures to protect instream habitat and downstream uses.

DEIS at 5-31- 5-32. Such information gaps pervade the DEIS. FERC similarly requests that the applicants provide the following information either before the end of the DEIS comment period or before construction:

- Descriptions, maps, and environmental impacts comparisons regarding route variations of the proposed MXP-100 route on the Umstead, Hall, Elliot, and Cobb properties.
- The results of a Phase I Landslide Hazard Assessment, Phase II Landslide Hazard Assessment, and a Landslide Mitigation Plan.
- Specific construction, restoration, and/or operation mitigation measures to promote compatibility and management of forested areas.
- A noxious and invasive weed management plan.
- An update regarding the status of Migratory Bird Treaty Act ("MBTA") consultations with U.S. Fish and Wildlife Service ("USFWS") and West Virginia Department of Natural Resources ("WVDNR") regarding the development of a Migratory Bird Plan

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<p>CO011-2 (cont.)</p>	<p>(and provide a draft copy of the plan, if available); and identify special measures to reduce impacts on cerulean warbler habitat.</p> <ul style="list-style-type: none"> <li>• Required mussel surveys and an update on discussions with USFWS regarding recommendations on stream crossing locations and construction methodologies where federally protected mussel species may be present.</li> <li>• Required bat surveys, an update on discussions with USFWS regarding the Indiana bat and the northern long-eared bat, and a Myotis Bat Conservation Plan.</li> <li>• Documentation of consultation with WVDNR for state-listed mussels, including updated stream crossing plans and/or additional mitigation measures.</li> <li>• Updated consultations with Kentucky Department of Fish and Wildlife Resources (KDFWR) regarding state-listed species identified in Appendix K.</li> </ul> <p><i>Id.</i> at 5-30 – 5-34. This information is relevant to FERC’s evaluation of “reasonably foreseeable significant adverse effects” and it should have been included in the DEIS. 40 C.F.R. § 1502.22.</p> <p>The sheer volume of incomplete information indicates that FERC issued a legally deficient DEIS. The fact that the requested information concerns impacts to waterbodies and wetlands, drinking water supplies, threatened and endangered species, and other public resources only underscores the inadequacy of the DEIS. By publishing the DEIS without the required information, FERC denied the public an opportunity to meaningfully participate in the decisionmaking process. <i>Public Citizen</i>, 541 U.S. at 768; <i>League of Wilderness Defenders</i>, 752 F.3d at 761.</p>
<p>CO011-3</p>	<p>C. <b>The EIS fails to take a “hard look” at the direct and indirect effects of the Projects.</b></p> <p>FERC must take a “hard look” at the direct and indirect effects of the Atlantic Sunrise Project. <i>Robertson v. Methow Valley Citizens Council</i>, 490 U.S. 332 (1989). Direct effects are “caused by the action and occur at the same time and place.” 40 C.F.R. § 1508.8(a). Indirect effects are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). To satisfy the “hard look” requirement, FERC must ensure that it has “adequately considered and disclosed the environmental impact of its actions and that its decision is not arbitrary and capricious.” <i>Nevada v. Dep’t of Energy</i>, 457</p>

**CO011-3:** Issues associated with the Atlantic Sunrise Project (FERC Docket No. CO15-138-000; final EIS issued on December 30, 2016) are beyond the scope of this EIS. The MXP and GXP EIS was prepared in accordance with NEPA, CEQ guidelines, and other applicable requirements. The EIS is consistent with FERC style, formatting, and policy regarding NEPA evaluation, “hard look,” of the different types of impacts (direct, indirect, and cumulative). The EIS includes sufficient detail to enable the reader to understand and consider the issues raised by the proposed projects and addresses a reasonable range of alternatives.

CO011-3 (cont.) F.3d 78, 93 (D.C. Cir. 2006) (*quoting Balt. Gas & Elec. Co.*, 462 U.S. 87, 98 (1983)). The DEIS for the Projects fails to provide the requisite “hard look” at both the direct and indirect effects of the proposal.

**1. The DEIS fails to adequately analyze the direct effects of the Projects on waterbodies and wetlands.**

CO011-4 **a. Waterbodies**

The proposed MXP pipelines would directly cross 417 minor waterbodies, 86 intermediate waterbodies, and 5 major waterbodies in West Virginia. *See* DEIS at 4-53. Another 360 waterbodies could be indirectly impacted by construction since they are located in the pipeline construction rights-of-way. *Id.* The GXP could impact an additional 12 ephemeral streams. *Id.*

West Virginia’s anti-degradation policy establishes three tiers for protecting waters of the state. *See* <http://www.dep.wv.gov/WWE/Programs/wqs/Pages/default.aspx>. “The higher the tier, the more stringent the requirements are for protection.” *Id.* Tier 1 “[m]aintains and protects existing uses of a water body and the water quality conditions necessary to support such uses.” *Id.* “A waterbody that is listed as impaired on the state’s 303(d) list is considered a Tier 1 water as it pertains to the specific pollutant listed.” *Id.* Tier 2 “[m]aintains and protects ‘high quality’ waters – water bodies where the level of water quality exceeds levels necessary to support recreation and wildlife and the propagation and maintenance of fish and other aquatic life.” *Id.* Tier 3 “[m]aintains and protects water quality in outstanding national resource waters.” *Id.* Tier 3 waters include, but are not limited to: (i) all streams and rivers within Wilderness Areas, (ii) all federally designated Wild and Scenic Rivers, (iii) all streams and other waterbodies in state parks which are HQWs or naturally producing trout streams, (iv) waters in National Parks and National Forests which are HQWs or naturally reproducing trout streams, (v) waters designated under the

**CO011-4:** Comment noted.

Beginning with our pre-filing process (initiated September 16, 2015), there have been a number of opportunities for public comment into our review of the MXP, including open houses held by Columbia Gas (October 2015), public scoping (November 2015), and public comment on the draft EIS.

The MXP would not cross any waterbodies designated as Tier 3 by the State of West Virginia. This issue does not support the necessity for issuing a revised or supplemental document.

Our *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) provide a baseline set of practices and mitigations sufficient to support a determination of no significant impact on waterbodies when the Procedures are employed. The potential for significant impact to occur when our Procedures are employed is remote, and simply doesn’t support the requirement to use HDD techniques for every waterbody crossing (or even all high quality waters [HQWs]). *See* also response to comment CO002-12.

CO011-4  
(cont.)

National Parks and Recreation Act of 1978, and (vi) those waters whose unique character, ecological, or recreational value, or pristine nature constitute a valuable national or state resource. DEIS at 4-60. Tier 3 waters “shall be maintained and protected and improved where necessary.” *Id.*

The MXP pipelines and aboveground facilities would cross or disturb 43 sensitive waterbodies. *See* DEIS at 4-61. Most of these waterbodies are classified as high-quality waters (“HQW”), *i.e.*, Tier 2 waters. *Id.* at 4-60. According to FERC, existing HQWs “must be maintained at their existing high quality unless it is determined necessary to accommodate important economic or social development.” *Id.*

This explanation is incomplete and leads the reader to believe that agencies may simply ignore Tier 2 protections if they determine economic or social development interests are allegedly more important. However, according to West Virginia’s anti-degradation policy for Tier 2 waters:

[E]xisting high quality waters of the state must be maintained at their existing high quality unless it is determined *after satisfaction of the intergovernmental coordination of the state’s continuing planning process and opportunity for public comment and hearing* that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

47 CSR2 § 47-2-4.1.b (emphasis added). Thus, in order to override Tier 2 protections, there must be an intergovernmental process that includes opportunities for public comments and hearings. Only then can Tier 2 protections be overruled.

According to FERC, construction of the MXP “would not significantly or permanently affect any designated water uses[.]” DEIS at 4-76. This conclusion is insufficient. Whether existing designated water uses will be “significantly or permanently affect[ed]” does not answer the question of whether the existing designated water uses will be maintained. By adding the

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<p>CO011-4 (cont.)</p>	<p>qualifying language, FERC fails to state whether the MXP may affect designated water uses. FERC must remedy this in a revised or supplemental DEIS.</p> <p>Moreover, it is apparent that FERC needs more information about existing designated water uses. For example, FERC states that “[t]he MXP <i>does not appear</i> to cross any Tier 3 streams (WVDEP, 2015d).” DEIS at 4-60 (emphasis added). The proposed MXP either does or does not cross Tier 3 waters. FERC cannot leave it up to the public to figure out whether the MXP actually crosses Tier 3 waters. FERC must remedy this in a revised or supplemental DEIS.</p> <p>FERC’s decision whether to permit Columbia Gas to cross dozens of HQWs is a significant matter. According to FERC, however, Columbia Gas is proposing to use trenchless crossing methods at just one crossing for the Kanawha River. <i>See</i> DEIS at 4-53. FERC must require Transco to reconsider use of trenchless methods for the other proposed crossings of HQW waterbodies. This reconsideration should be disclosed, independently scrutinized by FERC and the public, and appropriately incorporated into any potential certification by FERC of the Projects.</p> <p>Absent the requirement to use trenchless crossing techniques for every water crossing, the Project will have significant water impacts that must be disclosed and weigh towards denial of FERC certification. In its recent water quality certification denial for the proposed Constitution Pipeline, the New York Department of Environmental Conservation (“NYDEC”) explained that “[o]pen trenching is a highly impactful construction technique involving significant disturbance of the existing stream bed and potential long-term stream flow disruption, destruction of riparian vegetation and establishment of a permanently cleared corridor.” NYDEC, Notice of WQC Denial for Constitution Pipeline, p. 8 (Apr. 22, 2016) (“Constitution WQC Denial”), <i>available at</i></p>
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CO011-4  
(cont.) [http://www.dec.ny.gov/docs/administration\\_pdf/constitutionwc42016.pdf](http://www.dec.ny.gov/docs/administration_pdf/constitutionwc42016.pdf). In addition, NYDEC

explained the importance of looking at the cumulative impacts of pipeline construction:

Cumulatively, impacts to both small and large streams from the construction and operation of the [Constitution Pipeline] Project *can be profound* and include loss of available habitat, changes in thermal conditions, increased erosion, creation of stream instability and turbidity, impairment of best usages, as well as *watershed-wide impacts* resulting from placement of the pipeline across water bodies in remote and rural areas.

*Id.* at 12.

The NYDEC also recently denied WQC for National Fuel Gas Company's ("National Fuel") proposed Northern Access 2016 Project. *See* NYDEC, Notice of WQC Denial for Northern Access 2016 Project (Apr. 7, 2017), *available at*

[http://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/northaccesspipe42017.pdf](http://www.dec.ny.gov/docs/permits_ej_operations_pdf/northaccesspipe42017.pdf). NYDEC required National Fuel to evaluate "all [192] stream crossings . . . for environmental impacts and [explained] that trenchless technology was the preferred construction method for stream crossing." *Id.* at 5. After acknowledging that "additional expense [ ] may be associated with such methods[.]" NYDEC "focused on more environmentally sensitive or significant waterbodies for purposes of additional analysis." *Id.* at 5-6. This resulted in the selection of 55 stream crossings for further trenchless feasibility analysis. *Id.* FERC must require a similar analysis for the MXP.

NYDEC's WQC denials for the Constitution and Northern Access pipelines are a cautionary tale for FERC as it reviews the proposed Projects. According to NYDEC, Constitution Pipeline's "Trenchless Feasibility Study" did not include information requested by multiple agencies and "did not provide a reasoned analysis to enable [NYDEC] to determine if the [Constitution Pipeline] Project demonstrates compliance with water quality standards."

Constitution WQC Denial at 10-11. NYDEC further explained that:

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CO011-4  
(cont.)

Of the 251 streams to be impacted by the [Constitution Pipeline] Project, [the Trenchless Feasibility] Study evaluated only 87 streams, in addition to the Schoharie Creek, as part of the Phase I desktop analysis which Constitution used to determine if surface installation methods warranted consideration for a trenchless design. Of the 87 streams reviewed, Constitution *automatically eliminated* 41 streams from consideration for trenchless crossing because those streams were 30 feet wide or less . . . Using its review criteria, Constitution’s [Trenchless Feasibility] Study finally concluded that *only 11 stream crossings of the 251* displayed preliminary evidence in support of a potentially successful trenchless design and were chosen for the Phase III geotechnical field analysis. [NYDEC] staff *consistently told Constitution that its November 2013 Trenchless Feasibility Study was incomplete and inadequate.*

*Id.* at 11 (emphasis added) (citation omitted).

Did Columbia Gas prepare a similar trenchless feasibility study for the *entire* MXP? If not, why not? If so, does it suffer from the same inadequacies that plagued the one prepared for the Constitution Pipeline? For example, did Columbia Gas “automatically eliminate” streams from consideration for trenchless crossing because they were 30 feet wide or less? These are important questions that must be answered in light of the fact that there are more stream crossings involved in the MXP than in the Constitution Pipeline Project and even fewer proposed uses of trenchless crossings.

According to FERC, the only “site-specific crossing plan” that Columbia Gas has provided is “for the Kanawha River, which would be crossed using the HDD method[.]” DEIS at 4-53. This is woefully insufficient. FERC must require Columbia Gas to submit site-specific crossing plans for *all* waterbody crossings (or, at a minimum, all Tier 2 and Tier 3 waters) and provide a detailed trenchless feasibility study such as the one that NYDEC sought (but never received) in the Constitution Pipeline proceeding. FERC cannot issue a certificate until Columbia Gas submits this information and makes it available for additional public review and comment.

**b. Wetlands**

CO011-5

**CO011-5:** Response begins on next page.

CO011-5  
(cont.)

Pipeline construction can have significant adverse impacts on wetlands. For example, construction of Tennessee Gas Pipeline Company's "300 Line" in northern Pennsylvania "highly impacted" the hydrological connectivity between a wetlands complex and a stream to the point that the stream, which had previously flowed from the wetlands complex, is now "barely discernable." *See* FERC Docket No. CP15-148-000, Accession No. 20150402-5213.<sup>1</sup> In addition, according to the Western Pennsylvania Conservancy, construction of a pipeline through Tamarack Swamp in Clinton County "appears to have been particularly disruptive, physically separating contiguous sections of wetland, altering hydrological patterns and introducing strips of highly altered substrate that will not easily recover." Western Pennsylvania Conservancy, Clinton County Natural Heritage Review at 79 (2002), *available at* [http://www.clintoncountypa.com/departments/county\\_departments/planning/pdfs/Natural%20Heritage%20Inventory.pdf](http://www.clintoncountypa.com/departments/county_departments/planning/pdfs/Natural%20Heritage%20Inventory.pdf).

The MXP will almost certainly have significant adverse impacts on numerous wetlands in West Virginia. FERC acknowledges that "[c]onstruction of MXP facilities would have temporary and permanent impacts on wetlands within project workspaces." DEIS at 4-79. The examples above from Pennsylvania demonstrate that pipeline construction impacts on wetlands can extend beyond "project workspaces."

Instead of substantively analyzing the impacts on wetlands, however, FERC relies on Columbia Gas' yet-to-be-developed "project-specific wetland restoration plan" and the U.S. Army Corps of Engineers ("USACE") future determination in regard to compensatory mitigation. *See* DEIS at 4-84. First, if Columbia Gas is going to develop a "project-specific

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<sup>1</sup> This disclosed in Tennessee Gas Pipeline Company's "Aquatic Resources Report" in for its proposed Susquehanna West Project and was included as Appendix 2-A in Resource Report 2, which can be found by the referenced docket and accession numbers.

**CO011-5:** The draft EIS presents our "worst-case" analysis of project-related impact on wetlands. See response to CO009-15.

Additionally, we recognize the legitimate role and significant expertise of the USACE in the development of appropriate wetland compensatory mitigation. This is acknowledged by the USACE in consenting to be a cooperating agency (within the meaning of NEPA) in the preparation of this EIS.

CO011-5 (cont.)	<p>wetland restoration plan,” that plan should have been included in the DEIS so that the public had an opportunity to review and comment on it. Second, with regard to relying on USACE’s determination on compensatory mitigation, FERC cannot delegate its NEPA responsibilities by deferring “to the scrutiny of other [agencies].” <i>Idaho v. Interstate Commerce Comm’n</i>, 35 F.3d 585, 595 (D.C. Cir. 1994) (citing <i>Calvert Cliffs’ Coordinating Comm., v. U.S. Atomic Energy Comm’n</i>, 449 F.2d 1109 (D.C. Cir. 1971). FERC should prepare a revised or supplemental DEIS that includes Columbia Gas’ project-specific wetland restoration plan and the hard-look analysis on wetlands impacts that NEPA requires.</p>
CO011-6	<p style="text-align: center;"><b>2. The DEIS Fails to Consider the Indirect Impacts of the Reasonably Foreseeable Shale Gas Drilling That Would Be Induced by the Projects.</b></p> <p>In analyzing the potential impacts of its approval of the Projects, FERC must consider the indirect effects of shale gas development. Indirect effects are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”<sup>2</sup> “Indirect effects are defined broadly, to ‘include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.’”<sup>3</sup></p> <p>For several years, however, FERC has categorically refused to consider induced gas development as an indirect effect of pipeline projects such as the MXP and GXP. FERC’s argument is usually two-fold. First, FERC claims that gas drilling and pipeline projects are not “sufficiently causally related” to warrant a detailed analysis.<sup>4</sup> Second, FERC claims that even if</p> <hr/> <p><sup>2</sup> 40 C.F.R. § 1508.8(b).</p> <p><sup>3</sup> <i>Natural Res. Def. Council v. U.S. Army Corps of Eng’rs</i>, 339 F. Supp. 2d 386, 404 (S.D.N.Y. 2005) (quoting 40 C.F.R. § 1508.8(b)).</p> <p><sup>4</sup> See e.g., <i>Nat’l Fuel Gas Supply Corp.</i>, 150 FERC ¶ 61,162, at P 44 (2015).</p>

**CO011-6:** Comment noted. See response to comment CO006-4.

The commentator argues that the Commission has specific information in this proceeding sufficient to show a causal link between the projects and natural gas production. Generally, the commentator cites statements by a trade association, business executives, and the Energy Information Administration suggesting both that insufficient transportation infrastructure can limit production growth and that additional transportation infrastructure spurs production growth.

In order to identify the appropriate scope of the Commission’s environmental review, Commission staff sent the *Notice of Intent to Prepare an Environmental Impact Statement for the Planned Mountaineer XPress Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings* to more than 1,300 interest parties, including federal, state, and local government representatives and agencies, elected officials, environmental and public interest groups, Native American tribes, affected property owners, and other interested parties. Additionally, Commission staff held four scoping meetings and an interagency meeting in West Virginia in December 2015.

A causal relationship sufficient to warrant Commission analysis of the non-pipeline activity as an indirect impact would only exist if a proposed pipeline would transport new production from a specified production area and that production would not occur in the absence of the proposed pipeline (i.e., there will be no other way to move the gas). Though the commentator disagree with our position, we continue to believe that the opposite causal relationship is in fact more likely, i.e., once production begins in an area,

CO011-6  
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gas drilling and pipeline projects are “sufficiently causally related,” the potential environmental impacts of the gas development are not “reasonably foreseeable” as contemplated by CEQ’s NEPA regulations.<sup>5</sup>

The DEIS continues this head-in-the-sand approach, failing to consider at all the indirect effects of shale gas development, completely ignoring shale gas development as an indirect effect. FERC’s certificate approvals could plausibly induce new natural gas production since new pipelines will be made available to transport fracked gas. In fact, the applicant makes just such a claim in its press release announcing the project filing with FERC, claiming that the project “will create approximately 2.7 billion cubic feet per day of firm transportation capacity from existing and new points of receipt along or near Columbia Transmission’s system, providing producers in the Marcellus and Utica shale areas new transportation options to move gas out of the capacity-constrained supply basin and into the interstate market.”<sup>6</sup> Therefore, it seems reasonable for FERC to conduct NEPA analyses of the upstream development that would likely occur due to its certificate approvals. Arguments have been made that current levels of natural gas production are adequate to supply any new natural gas infrastructure,<sup>7</sup> and so the construction of new pipelines does not induce new natural gas production.<sup>8</sup> However, it is

<sup>5</sup> *Id.*

<sup>6</sup> Available at: <https://www.cpg.com/about-us/news-room/2015/09/23/columbia-pipeline-group-and-columbia-pipeline-partners-mountaineer-xpress-pipeline-advances-enters-pre-filing-with-federal-energy-regulatory-commission>.

<sup>7</sup> Opening Brief of Petitioners Catskill Mountainkeeper, Inc., et al. at 22-23, *Catskill Mountainkeeper, Inc., et al. v. FERC*, No. 16-345-L (2d Cir. July 12, 2016).

<sup>8</sup> In fact, if that is the case, it undercuts the need for a new pipeline. A revised or supplemental DEIS must clarify if the pipeline is in fact needed and, if so, how much new gas development it would induce.

shippers or end users will support the development of a pipeline to move the produced gas.

The evidence cited by the commentator does not demonstrate the requisite reasonably close causal relationship between the projects and the impacts of future natural gas production to necessitate further analysis. The fact that natural gas production and transportation facilities are all components of the general supply chain required to bring domestic natural gas to market is not in dispute. This does not mean, however, that the Commission’s approval of these particular projects will cause or induce the effect of additional or further shale gas production. A number of factors, such as domestic natural gas prices and production costs, drive new drilling. If the projects were not constructed, it is reasonable to assume that any new production spurred by such factors would reach intended markets through alternate pipelines or other modes of transportation. Any such production would take place pursuant to the regulatory authority of state and local governments. The projects are responding to the need for transportation, not creating it.

The Commission has found that the potential environmental impacts resulting from natural gas production are generally not reasonably foreseeable. Because production-related impacts are highly localized, even if the Commission knows the general source area of gas likely to be transported on a given pipeline, a meaningful analysis of production impacts would require more detailed information regarding the number, location, and timing of wells, roads, gathering lines, and other appurtenant facilities, as well as details about production methods, which can vary by producer and which depend on the applicable regulations in the various states.

CO011-6  
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unlikely that current production would be sufficient to supply natural gas for the life of a pipeline, which could be up to fifty years,<sup>9</sup> meaning that new production could be induced to continually supply a pipeline throughout its lifespan.<sup>10</sup> Therefore, the indirect effects of FERC's certificate approvals, including induced production, must be included in its NEPA analysis of the Projects.

Commissioner Bay recently stated that, "in light of the heightened public interest and in the interests of good government . . . the Commission should analyze the environmental effects of increased regional gas production from the Marcellus and Utica" shale formations.<sup>11</sup>

Commissioner Bay noted that "[t]he Department of Energy has conducted a similar study in connection with the exercise of their obligations under Section 3(a) of the Natural Gas Act."<sup>12</sup>

Commissioner Bay further stated that FERC should also consider "analyzing the downstream impacts of the use of natural gas and [ ] performing a life-cycle greenhouse gas emissions study, both of which DOE has conducted in issuing permits for LNG exports."<sup>13</sup> Thus, there is no reason why FERC cannot perform such an analysis for the Projects.

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<sup>9</sup> Interstate Natural Gas Association of America, *The Interstate Natural Gas Transmission System: Scale, Physical Complexity and Business Model, Executive Summary* (2010), <http://www.ingaa.org/file.aspx?id=10751>.

<sup>10</sup> Roger Howard, *Is the Fracking Boom a Bubble?* Newsweek, July 11, 2014, <http://www.newsweek.com/2014/07/18/how-long-will-americas-shale-gas-boom-last-260823.html>; see also IEEFA Study, *supra* note 50 at 11 (finding that the pipeline capacity being proposed in the Atlantic Coast and Mountain Valley pipelines exceeds the amount of natural gas likely to be produced from the Marcellus and Utica formations over the lifetime of the pipelines).

<sup>11</sup> *Nat'l Fuel Gas Supply Corp.*, 158 FERC 61,145, Commissioner Bay Separate Statement at 5 (Feb. 3, 2017).

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

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a. **There is a Clear Causal Connection Between the Proposed Projects and Shale Gas Development**

Courts have said that an agency must consider something as an indirect effect if the agency action and the effect are “two links of a single chain.”<sup>14</sup> It cannot be disputed that gas development and infrastructure that transports that gas are “two links of a single chain.” The gas industry certainly considers them to be so; for example, in a 2014 report, the Interstate Natural Gas Association of America (“INGAA”) stated that

midstream infrastructure development is crucial for efficient delivery of growing supplies to markets. Sufficient infrastructure goes hand in hand with well-functioning markets. *Insufficient infrastructure can constrain market growth and strand supplies. . . . New infrastructure will be required to move hydrocarbons from regions where production is expected to grow to locations where the hydrocarbons are used. Not all areas will require significant new pipeline infrastructure, but many areas (even those that have a large amount of existing pipeline capacity) may require investment in new capacity to connect new supplies to markets. In analogous cases to date, oil and gas producers and marketers have been the principal shippers on new pipelines. These “anchor shippers” have been willing to commit to long-term contracts for transportation services that provide the financial basis for pipeline companies to pursue projects. Going forward, producers will likely continue to be motivated to ensure that the capacity exists to move supplies via pipelines. Producers have learned from past experience that the consequences of insufficient infrastructure for gas transport are severe, and that the cost of pipeline transport is a relatively small cost compared with the revenues lost as a result of price reductions or well shut-ins that occur when transport from producing areas to liquid pricing points is constrained.*<sup>15</sup>

In other words, according to INGAA, gas producers rely on there being sufficient infrastructure capacity to continue, if not expand, production activities. If new infrastructure is not built, prices

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<sup>14</sup> *Sylvester v. U.S. Army Corps of Eng'rs*, 884 F.2d 394, 400 (9th Cir. 1989).

<sup>15</sup> INGAA, *North American Midstream Infrastructure through 2035: Capitalizing on Our Energy Abundance, Executive Summary*, p. 1, 8-9 (Mar. 18, 2014) (emphasis added), available at <http://www.ingaa.org/file.aspx?id=21498>.

CO011-6  
(cont.)

drop, new production slows, well shut-ins occur, and the attendant environmental and social impacts of drilling are reduced or eliminated.

According to the Energy Information Administration (“EIA”), pipeline projects facilitate an increase in gas production. In a recent report on natural gas liquids (NGL) market trends, EIA stated that “[e]thane production is increasing as midstream infrastructure projects become operational and ethane recovery and transport capacities grow.”<sup>16</sup> In other words, an increase in infrastructure to transport a product results in an increase in production of that product.

Indeed, Columbia claims that the MXP will “provid[e] [gas] producers in the Marcellus and Utica shale areas new transportation options to move gas out of the capacity-constrained supply basin and into the interstate market.” Columbia Pipeline Group, Community News (Sept. 23, 2015), available at <https://www.cpg.com/about-us/news-room/2015/09/23/columbia-pipeline-group-and-columbia-pipeline-partners-mountaineer-xpress-pipeline-advances-enters-pre-filing-with-federal-energy-regulatory-commission>. Without the pipeline to move the gas from the production areas, the drilling would simply not be economical and would not occur.

Recent statements from other oil and gas industry officials corroborate this. For example, in May 2015, Dennis Xander, president of Denex Petroleum spoke about the recent downturn in gas drilling, stating that “[d]rilling is hard to justify” due, in part, “to lack of infrastructure[.]”<sup>17</sup> According to Mr. Xander, “there are several infrastructure projects in progress that will change

<sup>16</sup> EIA, *Hydrocarbon Gas Liquids (HGL): Recent Market Trends and Issues*, p. 6 (Nov. 2014), available at <http://www.eia.gov/analysis/hgl/pdf/hgl.pdf>.

<sup>17</sup> Casey Junkins, *Number of Drilling Rigs on the Decline*, The Intelligencer/Wheeling News-Register (May 19, 2015), available at <http://wvpress.org/news/ohio-hit-harder-than-w-va-by-drilling-decline/>.

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all that.”<sup>18</sup> Mr. Xander continued that “[b]y 2017 and 2018, things will be very busy – count on it.”<sup>19</sup>

According to Corky DeMarco, executive director of the West Virginia Oil and Natural Gas Association, “when drilling slows down, that is when you build pipelines” because “[i]t’s just the way the industry works.”<sup>20</sup> According to Tim Greene, owner of Mineral Management of Appalachia, “more pipelines will lead to more drilling all across [West Virginia].”<sup>21</sup> Indeed, according to Mr. DeMarco, “[o]nly 5 percent of the potential Marcellus wells have even been permitted[.]”<sup>22</sup>

In July 2016, Brian Sheppard, Dominion Transmission’s vice president of pipeline operations, said the ACP “will increase pipeline capacity and stimulate drilling activity[.]”<sup>23</sup> In April 2017, Mr. Xander said that “[u]ntil new pipelines are built from West Virginia to new markets, natural gas prices will remain flat and producers will struggle[.]”<sup>24</sup> In the same article,

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<sup>18</sup> *Id.*

<sup>19</sup> *Id.* The ACP facilities were scheduled to be placed in service no later than November 1, 2018. See ACP Application at 3.

<sup>20</sup> *Id.*

<sup>21</sup> Casey Junkins, *Billion-Dollar Projects to ‘Become the Norm’*, *The Intelligencer/Wheeling News-Register* (Oct. 26, 2014), available at <http://www.theintelligencer.net/news/top-headlines/2014/10/billion-dollar-projects-to-become-the-norm/>.

<sup>22</sup> *Id.*

<sup>23</sup> Lisa Troshinsky, *Oil and gas companies in north central West Virginia are optimistic despite industry decline*, *The Exponent Telegram* (July 17, 2016), available at [https://www.theet.com/news/local/oil-and-gas-companies-in-north-central-west-virginia-are/article\\_56e0f30c-b9ee-5bf1-b144-6facb8268f26.html](https://www.theet.com/news/local/oil-and-gas-companies-in-north-central-west-virginia-are/article_56e0f30c-b9ee-5bf1-b144-6facb8268f26.html).

<sup>24</sup> Austin Weiford, *W.Va. Oil, Gas Industry Poised for Boom, Part 2*, *The State Journal* (Apr. 2, 2017), available at [https://www.theet.com/statejournal/w-va-oil-gas-industry-poised-for-boom-part/article\\_e1933cb7-cf51-52e9-83c7-0444221cc2f9.html](https://www.theet.com/statejournal/w-va-oil-gas-industry-poised-for-boom-part/article_e1933cb7-cf51-52e9-83c7-0444221cc2f9.html).

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**CO011 - Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club (continued)**

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(cont.)

Al Schopp, regional senior vice president of gas producer Antero Resources, said that natural gas prices would improve once there are more “pipelines out of the basin to get the gas to other places[.]”<sup>25</sup> According to Mr. Schopp, “for the energy industry to see another boom like 2008 and 2009, the pricing of natural resources will have to improve, which he hopes will come with the upcoming pipeline projects [in West Virginia].”<sup>26</sup> These industry statements make clear that major pipeline projects such as MXP and GXP are planned not only to transport current production but in anticipation of and to facilitate long-term increases in production.

FERC, however, has previously claimed that it need not consider the indirect effects of shale gas development because “such development will likely continue regardless of whether the proposed projects are approved because multiple existing and proposed transportation alternatives for production from the region are available.”<sup>27</sup> As the statements above indicate, that does not appear to be the case. The corollary to “more pipelines will lead to more drilling” is that fewer pipelines may lead to less drilling. Moreover, when FERC says shale gas development will continue because there are other “proposed transportation alternatives,” those other “proposed transportation alternatives” are almost certainly interstate natural gas pipelines subject to FERC’s jurisdiction. To say in one proceeding that shale gas development will continue regardless of whether that particular project is approved because there are other similar projects that will likely be authorized by FERC itself only proves the causal connection between FERC’s decision to approve pipeline projects and shale gas development.

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<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> *Nat’l Fuel Gas Supply Corp.*, 150 FERC ¶ 61,162, at P 45 (2015).

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(cont.)

A recent EIS prepared by the Surface Transportation Board (“Board”) demonstrates why FERC’s logic is incompatible with NEPA. In April 2015, the Board published a DEIS for the Tongue River Railroad Company’s (“TRRC”) proposal to build a railroad to transport coal to market.<sup>28</sup> According to the Board, the proposed railroad would “transport low-sulfur, subbituminous coal from proposed mine sites yet to be developed in Rosebud and Powder River Counties, Montana.”<sup>29</sup> The Board continued that, “[b]ecause the Tongue River region contains additional quantities of coal, future rail traffic could also include shipments of coal from other mines whose development could be induced by the availability of a nearby rail line.”<sup>30</sup> As a result, the Board prepared an analysis of various coal production scenarios in southeastern Montana should the Board approve the railroad. The Board’s analysis included consideration of domestic and export markets, coal production costs, transportation routes, and emissions forecasts. The results of the analysis revealed that approval of the railroad was likely to induce the development of at least two additional coal mines in southeastern Montana.<sup>31</sup>

The Board’s decision to consider induced coal production in its review of TRRC’s proposed railroad is important because, just as FERC has no jurisdiction over gas production, the Board has no jurisdiction over coal production. Nevertheless, the Board did not completely ignore its obligation under NEPA to consider indirect effects. Rather, it prepared a review of

<sup>28</sup> See Board, Tongue River Railroad DEIS, available at <https://www.stb.gov/decisions/readingroom.nsf/fc695db5bc7ebe2c852572b80040c45f/e7de39d1f6fd4a9a85257e2a0049104d?OpenDocument>.

<sup>29</sup> *Id.* App. C at C.1-2, available at [https://www.stb.gov/decisions/readingroom.nsf/UNID/E7DE39D1F6FD4A9A85257E2A0049104D/\\$file/AppC\\_CoalProduction.pdf](https://www.stb.gov/decisions/readingroom.nsf/UNID/E7DE39D1F6FD4A9A85257E2A0049104D/$file/AppC_CoalProduction.pdf).

<sup>30</sup> *Id.*

<sup>31</sup> *Id.* at C.3-1.

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(cont.)

likely coal production scenarios that could occur should it approve TRRC's project. Likewise, FERC must review likely gas production scenarios that could occur should it approve the Projects.

**b. The Impacts of Shale Gas Development Are Reasonably Foreseeable**

Shale gas development is not only causally related to construction of the Projects, but is also reasonably foreseeable. An indirect effect is "reasonably foreseeable" if it is "sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision."<sup>32</sup> "[W]hen the *nature* of the effect is reasonably foreseeable but its *extent* is not, [an] agency may not simply ignore the effect."<sup>33</sup> "Agencies need not have perfect foresight when considering indirect effects, effects which by definition are later in time or farther removed in distance than direct ones."<sup>34</sup> Here, additional shale gas drilling is sufficiently likely to occur that a person of ordinary prudence would take it into account when assessing the impact of the Projects on the environment. Moreover, FERC is well aware of the nature of the effects of shale gas development and, therefore, may not ignore those effects.

FERC, however, has consistently and stubbornly claimed that even if there is a sufficient causal relationship between projects such as the one under review here and induced gas production, "such production is not reasonably foreseeable as contemplated by CEQ's

<sup>32</sup> *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992).

<sup>33</sup> *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549 (8th Cir. 2003) (emphasis in original); see also *Habitat Educ. Ctr. v. U.S. Forest Serv.*, 609 F.3d 897, 902 (7th Cir. 2010).

<sup>34</sup> *WildEarth Guardians v. U.S. Office of Surface Mining*, 104 F. Supp. 3d 1208, 1230 (D. Colo. 2015).

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(cont.)

regulations and case law.<sup>35</sup> There, FERC said that it “need not address remote and highly speculative consequences.”<sup>36</sup> FERC also said that it is not required “to engage in speculative analysis” or “to do the impractical, if not enough information is available to permit meaningful consideration.”<sup>37</sup> Finally, FERC said that even if it knew the “identity of a supplier of gas . . . and even the general area where the producer’s existing wells are located,” it does not mean that FERC can engage in forecasting future development.<sup>38</sup> The DEIS for the Projects adopts this flawed interpretation of “reasonably foreseeable.”<sup>39</sup>

FERC’s claim that if it does not know the *exact* timing and location of future shale gas development, it may “simply ignore the effect” cannot be squared with the requirements of NEPA.<sup>40</sup> FERC’s practice “would require the public, rather than the agency, to ascertain the cumulative effects of a proposed action.”<sup>41</sup> “Such a requirement would thwart one of the ‘twin aims’ of NEPA – to ‘ensure[ ] that the *agency* will inform the *public* that it has indeed considered environmental concerns in its decision making process.”<sup>42</sup> Compliance with NEPA “is a

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<sup>35</sup> See, e.g., *Nat’l Fuel Gas Supply Corp.*, 150 FERC ¶ 61,162, at P 46 (2015).

<sup>36</sup> *Id.* (citing *Hammond v. Norton*, 370 F. Supp. 2d 226, 245-46 (D.D.C. 2005)).

<sup>37</sup> *Id.* (citing *N. Plains Res. Council v. Surface Transp. Bd.*, 668 F.3d 1067, 1078 (9th Cir. 2011)).

<sup>38</sup> *Id.*

<sup>39</sup> See DEIS at 1-20.

<sup>40</sup> See *Mid States Coal.*, 345 F.3d at 549.

<sup>41</sup> *Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Dep’t of the Interior*, 608 F.3d 592, 605 (9th Cir. 2010). While this case was about cumulative impacts, the same rationale holds true for indirect effects in terms of effects being “reasonably foreseeable.”

<sup>42</sup> *Id.* (quoting *Balt. Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97, 103 S.Ct. 2246, 76 L.Ed.2d 437 (1983)) (emphasis added by Ninth Circuit).

**CO011 - Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club (continued)**

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(cont.)

primary duty of every federal agency; fulfillment of this vital responsibility should not depend on the vigilance and limited resources of environmental plaintiffs.”<sup>43</sup> Thus, FERC’s insistence that it is incumbent upon others to produce the kind of information it claims to need is wholly inconsistent with its obligations under NEPA.

As the D.C. Circuit has explained, “[r]easonable forecasting and speculation is ... implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as ‘crystal ball inquiry.’”<sup>44</sup> Here, FERC has attempted to “shirk [its] responsibilities” by characterizing the future environmental effects of induced shale gas drilling as “crystal ball inquiry” despite abundant available information regarding the impacts of the gas drilling that would be facilitated by construction of the Projects, thus violating NEPA.<sup>45</sup>

Reasonable forecasting of the impacts of the type of future drilling that would be necessary to supply the Projects is being performed in other federal regulatory contexts. For example, on November 25, 2016, the U.S. Fish & Wildlife Service (“FWS”) announced its intent to prepare an EIS for the proposed issuance of a 50-year incidental take permit under the Endangered Species Act (“ESA”) for the draft “Oil & Gas Coalition Multi-State Oil and Gas

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<sup>43</sup> *City of Carmel-by-the-Sea v. U.S. Dep’t of Transp.*, 123 F.3d 1142, 1161 (9th Cir. 1997) (quoting *City of Davis v. Coleman*, 521 F.2d 661, 671 (9th Cir. 1975); see also *Ctr. for Biological Diversity v. U.S. Forest Serv.*, 349 F.3d 1157, 1166 (9th Cir. 2003) (“The procedures prescribed both in NEPA and the implementing regulations are to be strictly interpreted ‘to the fullest extent possible’ in accord with the policies embodied in the Act....” [g]rudging, pro forma compliance will not do.”) (citations omitted)).

<sup>44</sup> *Delaware Riverkeeper Network v. F.E.R.C.*, 753 F.3d 1304, 1310 (quoting *Scientists’ Inst. For Pub. Info., Inc. v. Atomic Energy Comm’n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973)); see also *N. Plains Res. Council v. Surface Transp. Bd.*, 668 F.3d 1067, 1078-79 (9th Cir. 2011).

<sup>45</sup> See *Delaware Riverkeeper*, 753 F.3d at 1310.

CO011 - Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club (continued)

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(cont.)

Habitat Conservation Plan (“O&G HCP”).<sup>46</sup> The O&G HCP would “streamline environmental permitting and compliance with the ESA for nine companies in conjunction with their respective midstream and upstream” operations in Ohio, Pennsylvania, and West Virginia.<sup>47</sup> The companies are seeking incidental take coverage for five species of bat: Indiana bat, northern long-eared bat, little brown bat, eastern small-footed bat, and tri-colored bat.<sup>48</sup>

According to FWS, the covered activities would include upstream well development, production, decommissioning, and reclamation as well as construction of midstream gathering, transmission, and distribution pipelines.<sup>49</sup> Importantly, FWS explains that “[a] model of the proposed covered activities will be used to estimate potential impacts to the covered species by overlaying the predicted covered activity implementation (including the type and location of infrastructure build-out) on the covered species’ habitats.”<sup>50</sup> If FWS can use a model to predict how oil and gas development activities will impact five threatened and endangered bat species over the next half-century, then FERC cannot claim such modeling is infeasible for the Projects.<sup>51</sup>

Nor may FERC claim that the environmental impacts of those activities cannot be reasonably predicted. FERC is well aware of the nature of the impacts of shale gas drilling. In

<sup>46</sup> See 81 Fed. Reg. 85,250 (Nov. 25, 2016).

<sup>47</sup> *Id.* at 85,251.

<sup>48</sup> *Id.* at 85,252.

<sup>49</sup> *Id.* at 85,252.

<sup>50</sup> *Id.* (emphasis added).

<sup>51</sup> Commenters discuss the EIS for the 50-year incidental take permit for the O&G HCP only to demonstrate the feasibility of future forecasting of shale gas development, not to express any support for the issuance of such a permit.

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**CO011 - Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club (continued)**

CO011-6 (cont.) the FEIS for the Constitution Pipeline, for example, FERC relied on multiple agency reports and statistics to describe the nature of the impacts caused by Marcellus shale development activities.<sup>52</sup> FERC stated that “an average well requires approximately 4.8 acres during construction and 0.5 acre during operation[.]”<sup>53</sup> FERC determined 13,402 acres of earth disturbance could result to supply the Constitution Pipeline.<sup>54</sup> Thus, FERC is clearly aware of the nature of shale gas drilling.

Despite FERC’s awareness of these impacts, it likely underestimated them in the Constitution Pipeline FEIS.<sup>55</sup> For example, according to a 2012 U.S. Geological Survey (“USGS”) report,

[a] recent analysis of Marcellus well permit locations in Pennsylvania found that well pads and associated infrastructure (roads, water impoundments, and pipelines) required nearly 3.6 hectares (9 acres) per well pad with an additional 8.5 hectare (21 acres) of indirect edge effects (Johnson, 2010). This type of extensive and long-term habitat conversion has a greater impact on natural ecosystems than activities such as logging or agriculture, given the great dissimilarity between gas-well pad infrastructure and adjacent natural areas and the low probability that the disturbed land will revert back to a natural state in the near future (high persistence) (Marzluff and Ewing, 2001).<sup>56</sup>

The USGS figures on surface disturbance are substantially higher than the figures FERC relied on in the Constitution Pipeline FEIS. According to the West Virginia Department of Commerce

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<sup>52</sup> See Constitution Pipeline FEIS at 4-232 – 4-235 (Docket No. CP13-499-000, Accession No. 20141024-4001).

<sup>53</sup> *Id.* at 4-233.

<sup>54</sup> *Id.*

<sup>55</sup> Commenters cannot determine if FERC underestimated these impacts in the MVP DEIS because it made no such estimations.

<sup>56</sup> Slonecker, E.T., et al., *Landscape Consequences of Natural Gas Extraction in Bradford and Washington Counties, Pennsylvania, 2004-2010: USGS Open-File Report 2012-1154*, p. 8 (2012), available at <https://pubs.usgs.gov/of/2012/1154/of2012-1154.pdf> (“USGS Report”).

**CO011 - Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club (continued)**

<p>CO011-6 (cont.)</p>	<p>(“WVDOC”), approximately 2,700 Marcellus shale wells have been drilled in West Virginia.<sup>57</sup></p> <p>Using the USGS figures, it is reasonable to assume that approximately 24,300 acres of West Virginia’s landscape have been converted to shale gas infrastructure with 56,700 acres of additional indirect edge effects.</p> <p>These are enormous impacts to our landscapes, watersheds, wildlife habitat, and recreation opportunities that FERC routinely fails to fully evaluate under NEPA. FERC has the information required to assess the impacts of the shale gas drilling that would be induced by its approval of the Projects. FERC may not shirk its responsibilities under NEPA by dismissing the environmental impacts of that future shale gas extraction in the Marcellus and Utica shale formations as too speculative.<sup>58</sup> FERC has failed to analyze the reasonably foreseeable impacts of the Projects in the DEIS in violation of NEPA.</p>
<p>CO011-7</p>	<p><b>D. FERC Fails to Take a Hard Look at the Direct and Indirect Effects of the Project on Climate Change.</b></p> <p>There is a “pressing need” for agencies to account for climate change in performing their duties under NEPA. <i>Conservation Nw. v. Rey</i>, 674 F. Supp. 2d 1232, 1253 (W.D. Wash. 2009). As a result, it has become relatively routine practice to account for indirect greenhouse gas (GHG) emissions from proposed federal actions.<sup>59</sup> FERC, however, concludes that “[b]ecause</p> <hr/> <p><sup>57</sup> See WVDOC, Fossil Energy – Marcellus Shale, available at <a href="http://www.wvcommerce.org/energy/fossil_energy/marcellusshale.aspx">http://www.wvcommerce.org/energy/fossil_energy/marcellusshale.aspx</a>.</p> <p><sup>58</sup> <i>Delaware Riverkeeper</i>, 753 F.3d 1304, 1310.</p> <p><sup>59</sup> See, e.g., BLM, Final EIS for South Gillette Area Coal Lease Applications (Aug. 2009) available at <a href="http://www.blm.gov/pgdata/etc/medialib/blm/wy/information/NEPA/hpdo/south_gillette/feis.Par_57426.File.tmp/voll.pdf">http://www.blm.gov/pgdata/etc/medialib/blm/wy/information/NEPA/hpdo/south_gillette/feis.Par_57426.File.tmp/voll.pdf</a> (BLM accounted for the emissions from coal mining and the combustion of coal in its NEPA review of mine leases. BLM did not evaluate GHG emissions from the transportation of the coal because it claimed that data was unavailable); see also <i>WildEarth Guardians v. U.S. Forest Serv.</i>, 828 F. Supp. 2d 1223, 1231 (D. Colo. 2011)</p>

**CO011-7:** Climate change is discussed in sections 4.11 and 4.13. We have updated section 4.13.2.11 to further address this comment.

CO011-7  
(cont.)

we cannot determine the projects' incremental physical impacts on the environment caused by climate change, we cannot determine whether the projects' contribution to cumulative impacts on climate change would be significant." DEIS at 4-361. The analysis falls short in at least three ways. First, FERC's quantification of the direct GHG emissions are underestimated. Second, FERC underestimated the indirect emissions from the project while also impermissibly narrowing the scope of the indirect emissions it quantified. Third, the conclusory statement that FERC "cannot determine whether the projects' contribution to cumulative impacts on climate change would be significant" fails to meet the hard-look standard required under NEPA.

CO011-8

**I. FERC Underestimates the Project's Direct Emissions**

First, FERC's quantification of the direct GHG emissions from the Project, DEIS at 4-260, have been underestimated. The DEIS understates the Project's direct GHG emissions, by understating the impact of methane emissions. The primary component of natural gas is methane, and methane is also a potent GHG. The DEIS does not identify the Project's methane emissions. Instead, it reports GHG emissions in terms of carbon dioxide equivalents ("CO<sub>2e</sub>"). To calculate CO<sub>2e</sub>, emissions of non-CO<sub>2</sub> GHGs are multiplied by a pollutant-specific "global warming potential" ("GWP"), which reflects the ratio between the amount of warming a ton of that pollutant causes and the amount of warming that would be caused by a ton of CO<sub>2</sub>.<sup>60</sup> While methane is a much more potent GHG than carbon dioxide, methane is much shorter-lived in the

(discussing final EIS by Forest Service that included an evaluation of GHG emissions from mining a coal seam and from combustion of the recovered coal).

<sup>60</sup> See EPA, *Glossary of Climate Change Terms - Carbon Dioxide Equivalent*, <http://www.epa.gov/climatechange/glossary.html#C> (last visited June 16, 2014).

**CO011-8:** As described in a footnote in section 4.11.1.1, our use of carbon dioxide equivalents (CO<sub>2e</sub>) is consistent with the EPA's methods for characterizing methane in greenhouse gas estimates, allowing a common standard for comparison across projects.

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atmosphere.<sup>61</sup> Thus, in converting methane to CO<sub>2</sub>e, different values must be used for different timescales.

The DEIS's use of a methane GWP of 25 is flawed for two reasons. DEIS at 4-260. First, FERC must explain the basis for its decision to use the 100-year, rather than 20-year, assessment of methane's impacts. *See id.* at n. 35. Authorities including the Environmental Protection Agency (EPA), the Obama Administration, and the Intergovernmental Panel on Climate Change ("IPCC") have emphasized the importance of acting quickly on climate change and the danger of reaching "tipping points" triggering cascading releases of GHGs within the coming decades.<sup>62</sup> A century-long assessment therefore is an inappropriate period to use to evaluate the impacts of the Project's methane emissions.

Second, even on the 100-year timeframe, the 100-year methane GWP used in the DEIS does not represent the best available science. The basis for this figure is unclear. FERC cites that it is relying on the EPA's requirements but it does not specifically cite to those requirements. *See* DEIS at 4-260. Nor are any EPA reports listed in Appendix O.

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<sup>61</sup> IPCC, *Climate Change 2013: The Physical Science Basis, Carbon and Other Biogeochemical Cycles* 473 (2013), available at [http://www.climatechange2013.org/images/report/WG1AR5\\_Chapter06\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_Chapter06_FINAL.pdf).

<sup>62</sup> IPCC, *Climate Change 2013: The Physical Science Basis, Long-term Climate Change: Projections, Commitments, and Irreversibility* 1029-1119 (2013), available at [http://www.climatechange2013.org/images/report/WG1AR5\\_Chapter12\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_Chapter12_FINAL.pdf) (discussing irreversible effects of climate change and tipping points); *see also* U.S. Envtl. Prot. Agency, Proposed Rule, Carbon Pollution: Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, [http://www2.epa.gov/sites/production/files/2014-05/documents/20140602proposal\\_cleanpowerplan.pdf](http://www2.epa.gov/sites/production/files/2014-05/documents/20140602proposal_cleanpowerplan.pdf) ("[r]ecognizing the urgent need for actions to reduce GHG emissions"); *see also* U.S. Global Change Research Program, *Climate Change Impacts in the United States: The Third National Climate Assessment* 657 (Jerry M. Melillo et al. eds 2014) ("delay by any of the major emitters makes meeting any such target even more difficult and may rule out some of the more ambitious goals"); *see also id.* at 5, 28, 592 (discussing tipping points and thresholds in climate system).

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As the U.S. Department of Energy (“DOE”) acknowledged in its report titled “Life Cycle Greenhouse Gas Perspective On Exporting Liquefied Natural Gas From The United States,” the IPCC’s superseding Fifth Assessment Report represents the best available science regarding methane’s GWP.<sup>63</sup> In previous EISs, FERC has acknowledged that the IPCC “is the leading international, multi-governmental scientific body for the assessment of climate change.” Atlantic Sunrise DEIS at 4-287 (Docket No. CP15-138-000); *see also* Mountain Valley Pipeline DEIS at 4-514 (Docket No. CP16-10-000); Atlantic Coast Pipeline DEIS at 4-509 (Docket No. CP15-554-000; PennEast Pipeline DEIS at 4-283 (Docket No. CP15-558-000); NEXUS Pipeline DEIS at 4-286; and Leidy South Project EA at 86 (Docket No. CP15-492-000). The omission of the IPCC from this DEIS is a stark departure from previous EISs and calls into question whether FERC is relying on the best available science when it comes to climate change.

The most recent IPCC report estimates that fossil methane has 36 times the GWP of carbon dioxide over a 100-year time frame and at least 86 times the GWP of carbon dioxide over a 20-year time frame.<sup>64</sup> Thus, the available evidence overwhelmingly indicates that the methane GWP FERC used in the DEIS is too low. Because the Fifth Assessment Report represents the best available science, FERC should use the GWPs identified therein.

CO011-9

## 2. FERC’s DEIS Fails to Consider Indirect Emissions

<sup>63</sup> DOE, Nat’l Energy Technology Lab., Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States (May 29, 2014), *available at* <http://www.energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf> (“DOE Life Cycle GHG Perspective”); *see also* IPCC, Climate Change 2013: The Physical Science Basis, Anthropogenic and Natural Radiative Forcing 714, Table 8.7 (2013), *available at* [http://www.climatechange2013.org/images/report/WG1AR5\\_Chapter08\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_Chapter08_FINAL.pdf) [hereinafter IPCC AR5].

<sup>64</sup> IPCC AR5. These figures represent the global warming potential of methane when climate feedbacks are included in the analysis. Although DOE used the estimates without climate feedbacks, that decision was unsupported; FERC must use the more comprehensive estimates.

CO011-9: Continued on following page.

**CO011 - Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club (continued)**

CO011-9  
(cont.)

The Commission's assessment of indirect GHG emissions is limited to direct emissions from construction and operation of the pipeline and related infrastructure. FERC acknowledges that operation of Projects "would support the increased transportation demand for natural gas in the Utica and Marcellus basins by increasing the capacity of Columbia Gas' system by up to 2,700,000 dekatherms per day" and "expand the capacity of Columbia Gulf's existing system to allow for an additional 860,000 dekatherms per day of natural gas delivery" to the Gulf Coast. DEIS at ES-2. FERC acknowledges that "the downstream end-use could result in about 52.3 million metric tons of carbon dioxide per year." *Id.* at 4-361. However, contrary to Commissioner Bay's recent statement, FERC failed to consider the "environmental effects of increased regional gas production from the Marcellus and Utica[.]" including "performing a life-cycle greenhouse gas emissions study[.]" *Nat'l Fuel Gas Supply Corp.*, 158 FERC ¶ 61,145 (2017) (Commissioner Bay, Separate Statement at 5). FERC cannot continue to ignore the effects on the climate from production, transport, and combustion.

EPA has asked the Commission to discuss "emissions associated with the production, transport, and combustion of the natural gas."<sup>65</sup> Natural gas production, processing, and transmission are a significant source of GHGs, particularly methane. Methane is the primary component of natural gas. Methane can be directly vented into the atmosphere or can escape from the wells, the gathering pipelines at the well pads and the larger pipelines in the distribution system, and the compressor stations that shuttle the gas through the distribution system.<sup>66</sup>

<sup>65</sup> Env'tl. Protection Agency, Comments on the Draft Guidance Manual for Environmental Report Preparation for Applications Filed Under the Natural Gas Act, Jan. 19, 2016.

<sup>66</sup> Dana R. Caulton et al., *Toward a better understanding and quantification of methane emissions from shale gas development*, Proc. Nat'l Acad. Sci. (Apr. 14, 2014), submitted herewith (evaluating methane emissions from fractured wells in the Southwestern Pennsylvania Marcellus shale region during drilling prior to gas flow stimulation and finding that "overall sites

**CO011-9:** See response to comments CO006-4 and IND031-1. Natural gas production, including drilling, exploring, and recovery of existing supplies, are not regulated by FERC and are outside the scope of this EIS.

CO011-9  
(cont.)

Estimates vary about the quantities of methane leaked into the atmosphere during the natural gas lifecycle, but some estimates range from 1.4 to over 15 percent of the total produced gas.<sup>67</sup> EPA has identified natural gas systems as the “single largest contributor to United States anthropogenic methane emissions,” with emissions from the oil and gas industry amounting to over 40 percent of total methane emissions.<sup>68</sup> Even when using an estimate of total methane emissions that many recent studies have criticized as too low, and a GWP that has been superseded by recent higher estimates, EPA concluded that methane emissions from the oil and gas industry constituted five percent of all CO<sub>2</sub>e emissions in the country.<sup>69</sup>

As discussed above, the climate change impacts of methane are of particular concern because methane has 86 times the GWP of CO<sub>2</sub> over 20 years, when considering the potential for positive climate carbon feedbacks.<sup>70</sup> The latest IPCC Report also found that methane has 70

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leak rates can be higher than current inventory estimates”); *see also* Anna Karion et al., *Methane emissions estimates from airborne measurements over a western United States natural gas field*, 40 *Geophysical Res. Letters* 4393-97 (2013) (measuring methane emissions from a producing oil and gas field in Utah, and finding emissions were five times the US EPA nationwide average estimate of leakage from the production and processing of natural gas).

<sup>67</sup> EPA’s Inventory of Greenhouse Gas Emissions and Sinks uses a “bottom-up” method based on engineering estimates of emissions from particular pieces of equipment or events multiplied by estimate of the census of such events. Many of these studies have estimated total lifecycle leak rates around 1.4 percent. *See, e.g.*, Jeffrey Logan et al., JOINT INST. FOR STRATEGIC ANALYSIS, *Natural Gas and the Transformation of the U.S. Energy Sector 5* (2012), available at <http://www.nrel.gov/docs/fy13osti/55538.pdf>. The academic literature published in 2014 on methane leakage over the natural gas lifecycle showed leakage rate measurements well in excess of 15 percent in some parts of the country. A review and short summary of those studies are available at <http://chesapeakeclimate.org/wp/wp-content/uploads/2015/01/2014-methane-leakage-studies.pdf>.

<sup>68</sup> EPA, Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 76 *Fed. Reg.* 52,738, 52,792 (Aug. 23, 2011).

<sup>69</sup> *Id.* at 52,791–92.

<sup>70</sup> IPCC AR5 at 714.

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CO011-9 (cont.)	<p>times the global temperature change potential, the change in global mean surface temperature resulting from emissions, of CO<sub>2</sub>.<sup>71</sup> Emissions of methane therefore will have a greater and more immediate effect on the climate than emissions of CO<sub>2</sub>.</p> <p>FERC's analysis, therefore, underestimates the emissions from the transport of the gas. It further completely fails to quantify the emissions from upstream production and transportation, giving the public and decision makers no information with which to form a decision. This head-in-the-sand approach is irrational and fails to meet the "hard look" standard of NEPA.</p>
CO011-10	<p style="text-align: center;"><b>3. FERC's Statement that it Cannot Determine Whether the Project Will Significantly Contribute to Climate Change Is Insufficient Under NEPA.</b></p> <p>NEPA is our "basic national charter for protection of the environment."<sup>72</sup> The statute makes environmental protection a part of the mandate of every federal agency, and requires federal agencies to take environmental considerations into account in their decision-making "to the fullest extent possible."<sup>73</sup> Accordingly, each agency must take a "hard look" at the environmental consequences of its proposed actions.<sup>74</sup></p> <p>FERC states that "[t]he [Projects'] emissions would increase the atmospheric concentration of GHGs, in combination with past and future emissions from all other sources, and contribute incrementally to climate change that produces the impacts [identified on p. 4-360]." DEIS at 4-361. However, FERC simply concluded that it "cannot determine whether the</p> <hr/> <p><sup>71</sup> <i>Id.</i></p> <p><sup>72</sup> 40 C.F.R. § 1500.1(a).</p> <p><sup>73</sup> 42 U.S.C. § 4332; <i>Calvert Cliffs Coordinating Comm. v. U.S. Atomic Energy Comm'n</i>, 449 F.2d 1109, 1112 (D.C. Cir. 1971).</p> <p><sup>74</sup> <i>Marsh v. Or. Natural Res. Council</i>, 490 U.S. 360, 378 (1989).</p>

**CO011-10:** Comment noted.

The EIS was prepared in accordance with NEPA, CEQ guidelines, and other applicable requirements. The EIS is consistent with FERC style, formatting, and policy regarding NEPA evaluation of climate change and cumulative impacts from climate change. However, we have updated section 4.13.2.11 to further address this comment.

CO011-10  
(cont.)

projects' contribution to cumulative impacts on climate change would be significant" because it "cannot determine the projects' incremental physical impacts on the environment caused by climate change[.]" *Id.* Such conclusory assertions do not satisfy the "hard look" requirement.

**E. The DEIS fails to take a hard look at cumulative impacts, including those impacts associated with gas development.**

In addition to considering the direct and indirect effects of the project, FERC must also consider cumulative impacts. A cumulative impact is the:

[I]mpact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.7. FERC's cumulative impact analysis in the DEIS is impermissibly restrictive and does not satisfy NEPA's "hard look" standard.

CO011-11

**1. FERC's analysis of cumulative impacts is impermissibly restrictive and impermissibly excluded substantial cumulative impacts from past, present, and reasonably foreseeable gas development.**

FERC's cumulative impacts analysis is fatally flawed because it substantially limited the analysis area. For example, FERC states that it only considered other actions if those actions cause impacts "within all or part of the same geographic scope as the MXP or GXP[.]" DEIS at 4-320. For impacts to surface waters, groundwater, and aquatic resources, FERC used the HUC-12 sub-watershed boundary as the analysis area for the MXP. *Id.* at 4-321. For wetlands, FERC used the HUC-12 sub-watershed boundary for the MXP and 0.25-mile radius for the GXP. *Id.* For vegetation and wildlife, FERC used 2 miles from the MXP and 0.25 mile for the GXP. *Id.* For land use and special interest areas, FERC used 0.5 mile for both the MXP and GXP. *Id.* For air quality (operation), FERC used a 31-mile radius. *Id.* at 4-322.

**CO011-11:** Comment noted.

See response to comment CO011-6. There is no conflict between what NEPA requires for cumulative impact analysis and our approach as reflected in section 4.13.

CO011-11  
(cont.)

Based on these restrictive analysis areas, FERC concluded that, “as a whole, minimal cumulative effects are anticipated when the impacts of each project are added to the past, present, and reasonably foreseeable future projects within the MXP’s and GXP’s geographic scopes.” *Id.* at 4-361. Such a limited cumulative impacts analysis is plainly inconsistent with both the Council on Environmental Quality’s (“CEQ”) and Environmental Protection Agency’s (“EPA”) guidance on cumulative impacts.

The CEQ guidance recommends significantly expanding the cumulative impacts analysis area beyond the immediate area of the proposed action that is often used for the “project-specific analysis” related to direct and indirect effects:

For a project-specific analysis, it is often sufficient to analyze effects within the immediate area of the proposed action. When analyzing the contribution of this proposed action to cumulative effects, however, the geographic boundaries of the analysis *almost always should be expanded*. These expanded boundaries can be thought of as differences in hierarchy or scale. Project-specific analyses are usually conducted on the scale of counties, forest management units, or installation boundaries, *whereas cumulative effects analysis should be conducted on the scale of human communities, landscapes, watersheds, or airsheds*.

CEQ, *Considering Cumulative Effects under the National Environmental Policy Act*, p. 12 (1997) (emphasis added) (“CEQ NEPA Guidance”). CEQ further says that it may be necessary to look at cumulative effects at the “ecosystem” level for vegetative resources and resident wildlife, the “total range of affected population units” for migratory wildlife, an entire “state” or “region” for land use, and the “global atmosphere” for air quality. *Id.* at 15. FERC’s selected geographic scopes for surface waters, groundwater, aquatic resources, wetlands, vegetation, wildlife, land use, and special interest areas are not consistent with CEQ guidance.

EPA’s guidance states that “[s]patial and temporal boundaries should not be overly restrictive in cumulative impact analysis.” EPA, *Consideration of Cumulative Impacts in EPA Review of NEPA Documents*, p. 8 (1999). EPA specifically cautions agencies to not “limit the

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scope of their analyses to those areas over which they have direct authority or to the boundary of the relevant management area or project area.” *Id.* Rather, agencies “should delineate appropriate geographic areas including *natural ecological boundaries*” such as ecoregions or watersheds. *Id.* (emphasis added). Therefore, FERC’s assertion that, “for the most part, the area of potential cumulative impact is *limited to the area directly affected by the Project* and, depending on the resources, in the *adjacent areas*,” is plainly inconsistent with CEQ’s and EPA’s guidance on cumulative impacts. As a result, the cumulative impacts analysis is fatally flawed and cannot support FERC’s conclusion that there will be “minimal cumulative effects” upon construction and operation of the Projects.<sup>75</sup>

Moreover, FERC excluded the impacts of oil and gas production from its cumulative impacts analysis. FERC excluded these impacts despite “recognize[ing] that oil and natural gas exploration and production activities are *ubiquitous* in many of the counties crossed by the MXP” and involve similar construction methods that cause “erosion and sedimentation, and impacts on wetlands, waterbodies, and other natural resources.” DEIS at 4-320 (emphasis added). The “ubiquitous” nature of shale gas production is evident in Figure 1.

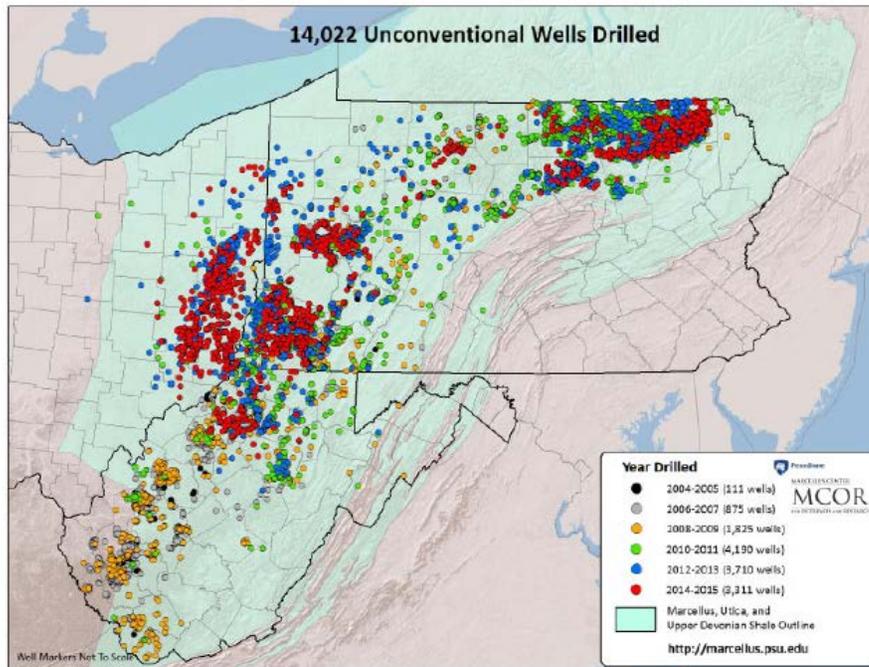
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<sup>75</sup> FERC provides no rationale explanation for selecting such restrictive analysis areas and, unlike previous EISs, did not even state that it relied on CEQ and EPA guidance to prepare its cumulative impacts analysis. *See* DEIS, App. O.

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(cont.)

Figure 1. Unconventional Wells Drilled in Ohio, Pennsylvania, and West Virginia (2004-2015).<sup>76</sup>



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<sup>76</sup> See Penn State, Marcellus Center for Outreach & Research, available at: <http://www.marcellus.psu.edu/images/tristate-Spud-Map-2014-2015---201512.jpg>.

CO011-11  
(cont.)

FERC attempts to justify its decision to exclude oil and gas production facilities “because the status, scale, and timing of these facilities are unknown.” *Id.* This statement does not make sense with regard to existing production facilities. Oil and gas production facilities are regulated by the West Virginia DEP’s Office of Oil and Gas. See <http://www.dep.wv.gov/oil-and-gas/Pages/default.aspx>. FERC should be able to consult with West Virginia DEP to determine the location of existing oil and gas production facilities in the counties that would be crossed by MXP should it be constructed. If Penn State’s Marcellus Center for Outreach and Research could acquire statewide oil and gas production locations from three different states to produce the map in Figure 1, then FERC should be able to consult with a single state agency to acquire similar data for the MXP. The notion that “these facilities are unknown” is unreasonable and really just an attempt by FERC to avoid disclosing and considering the substantial impacts of “ubiquitous” oil and gas production in the Projects’ cumulative impacts analysis.

FERC cannot ignore the cumulative impacts of reasonably foreseeable gas development either. As the D.C. Circuit has explained, “[r]easonable forecasting and speculation is . . . implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as ‘crystal ball inquiry.’” *Del. Riverkeeper Network v. FERC*, 753 F.3d 1304, 1310 (D.C. Cir. 2014) (quoting *Scientists’ Inst. For Pub. Info., Inc. v. Atomic Energy Comm’n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973)); see also *N. Plains Res. Council v. Surface Transp. Bd.*, 668 F.3d 1067, 1078-79 (9th Cir. 2011). By claiming that it need not consider reasonably foreseeable future impacts of gas drilling because such “facilities are unknown,” FERC is attempting to “shirk [its] responsibilities” by characterizing future environmental impacts of gas drilling as “crystal ball inquiry,” thus violating NEPA. *Del. Riverkeeper Network v. FERC*, 753 F.3d at 1310.

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Finally, the temporal scope of the cumulative impacts analysis is too restrictive.

According to FERC:

The temporal scope for cumulative actions includes past, present, and reasonably foreseeable projects and actions where the duration of time for construction, operation, and/or restoration overlaps with the timeframe for construction, operation, and restoration of the MXP and GXP.

DEIS at 4-322. While FERC claims that it included “operation” of projects facilities into its calculus for analyzing cumulative impacts, it is clear that it excluded projects from the analysis if they did not overlap in construction and restoration, even though the projects would significantly overlap in operation.

For example, according to FERC, “MXP pipeline construction activities would occur within the HUC-12 sub-watershed of . . . 18 waterbodies[.]” DEIS at 4-335. FERC further states that “11 past, present, or reasonably foreseeable future actions/projects are located within the same HUC-12 subwatershed as portions of MXP[.]” *Id.* at 4-336. However, FERC excluded five of these projects stating that “they are outside the temporal scope for cumulative impacts” because “construction of [these projects] was completed in 2016” or “will be completed prior to construction beginning on the MXP[.]”<sup>77</sup> *Id.* Under this rationale, if a project was completed on one day and construction of another project in the same area began the following day, there would be no cumulative impacts on the water resources in that area. This ignores the fact that “the most devastating environmental effects may not result from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions *over time.*” CEQ NEPA Guidance at 1 (emphasis added).

<sup>77</sup> While this statement was in reference to cumulative impacts on groundwater, FERC extended this rationale to surface waters as well. *See* DEIS at 4-337.

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FERC must revise or supplement the DEIS to expand the geographic and temporal scopes for considering cumulative impacts and to consider the past, present, and reasonably foreseeable future impacts of oil and gas production.

2. FERC's analysis of cumulative impacts on specific resource areas is inadequate.

CO011-12

a. Water Resources and Wetlands

According to FERC, "there are six projects within the geographic scope (HUC-12 subwatershed) of the MXP[.]" DEIS at 4-337. FERC continues, however, that "the MXP is most likely to contribute to a cumulative impact on surface water when combined with the Rover Pipeline Project or the [Leach XPress Project ("LXP")." *Id.* FERC made the same assertion with regard to wetlands. *See id.* at 4-338. This is due to FERC's assumption that the Rover Pipeline Project and LXP "are constructed within the same temporal scope[.]" *Id.* at 4-337. As stated above, this demonstrates why the temporal scope of the cumulative impacts analysis on water resources and wetlands is too restrictive.

With respect to wetlands, FERC claims that "[a]ll FERC-regulated natural gas pipelines are held to similar robust standards for construction at wetlands and waterbodies[.]" *Id.* at 4-338. Recent events during construction of the Rover Pipeline call the robustness of FERC's standards into question. On April 13-14, 2017, the Ohio Environmental Protection Agency ("OEPA") discovered two releases of drilling fluids into wetlands. *See* OEPA Notices of Violation, Incident Nos. 1704-70-0756 and 1704-76-0751.<sup>78</sup> The first incident resulted in "an estimated 50,000 gallons of drilling fluids" being released into "an estimated 30,000 square foot area of the wetland." OEPA, Notice of Violation 1704-70-0756. The second incident resulted in "an

<sup>78</sup> The OEPA's Notices of Violation were included in Rover's submission to FERC in Docket No. CP15-93-000. *See* Accession No. 20170418-5244.

**CO011-12:** The Commission is taking appropriate steps to investigate issues associated with construction of the Rover Pipeline. That investigation is beyond the scope of environmental review for the MXP.

CO011-12  
(cont.)

estimated 2 million gallons of drilling fluids” being released into “an estimated 500,000 square foot area of the wetland.” OEPA, Notice of Violation 1704-76-0751. This second incident impacted “a Category 3 wetland adjacent to the Tuscarawas River[.]” *Id.* Category 3 wetlands have “superior habitat, or superior hydrological or recreational functions.” OEPA, Ohio Rapid Assessment Method for Wetlands v. 5.0, p. 3 (Feb. 1, 2001), *available at* [http://www.epa.state.oh.us/portals/35/401/oram50um\\_s.pdf](http://www.epa.state.oh.us/portals/35/401/oram50um_s.pdf). Category 3 wetlands “are typified by high levels of diversity, a high proportion of native species, and/or high functional values” and include “wetlands which contain or provide habitat for threatened or endangered species, are high quality mature forested wetlands, vernal pools, bogs, fens, or which are scarce regionally and/or statewide.” *Id.*

According to the FEIS for the Rover Pipeline, “[t]he pipeline route would be monitored and the circulation of drilling mud would be observed throughout the HDD operation for indications of an inadvertent drilling mud release” and “[i]f a release is observed or suspected, Rover would immediately implement corrective actions.” Rover FEIS at 2-31 (Docket No. CP15-93-000, Accession No. 20160729-4001). In addition, Rover would “notify the appropriate agencies [such as OEPA] immediately upon discovery by telephone, e-mail, and/or facsimile of any inadvertent release to a wetland or waterbody.” *Id.*, App. G-1 at 2. Did Rover follow these procedures in response to these two incidents? According to OEPA’s Notices of Violation, the drilling fluid releases were “discovered” on April 13 and 14, 2017. It is unclear whether OEPA discovered these releases during its own inspection or whether it was reported to OEPA by Rover. In light of Rover’s release of millions of gallons of drilling fluid into Category 3 in Ohio, FERC must reassess the “robustness” of its standards for reviewing contingency plans and monitoring compliance during construction.

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<p>CO011-12 (cont.)</p>	<p>Moreover, the exclusion of oil and gas production facilities and associated roads renders FERC’s conclusion that there would only be an “overall minor short-term cumulative impact on surface waters” invalid. DEIS at 4-337. For example, the current path of the MXP crosses Riggins Run, Brush Run, and Ned’s Run from MP 39 – MP 43 south and west of the town of Ashley in Doddridge County. See DEIS, App. B-1 at 17-18. These streams either flow directly into McElroy Creek or into other streams that flow into McElroy Creek. There are numerous oil and/or gas wells and access roads in this area. See Ex. 1. At no point did FERC consider the cumulative impacts of the MXP and the existing oil and gas wells and access roads on these waterbodies. Without analyzing how existing oil and gas roads, which FERC acknowledges are ubiquitous, it cannot conclude that the cumulative impacts on these and other waterbodies will be “minor” and/or “short-term.”</p>
<p>CO011-13</p>	<p style="text-align: center;"><b>b. Vegetation and Wildlife</b></p> <p>FERC failed to take a hard look at the cumulative effects of shale gas development on vegetation and wildlife. FERC acknowledges that “cumulative impacts [of MXP and other projects] could be significant.” DEIS at 4-399 – 4-341. In particular, FERC states that it is “still evaluating the significance of the MXP on large [core forest areas (“CFAs”)] that are considered suitable habitat for the cerulean warbler.” <i>Id.</i> at 4-341. FERC has “recommended Columbia Gas prepare a Migratory Bird Plan and consider special mitigation measures for minimizing impacts on large CFAs in the MXP area.” <i>Id.</i> That plan, however, was not included in the DEIS, depriving the public of the opportunity to review and comment on it during this comment period. Due to FERC’s acknowledgement that impacts on CFAs “could be significant” without special mitigation measures outlined in a Migratory Bird Plan, it was unreasonable for FERC to publish</p>

**CO011-13:** Potential cumulative impacts are addressed in section 4.13. The Commission has consistently found that “the environmental effects from natural gas production are generally neither caused by a proposed pipeline (or other natural gas infrastructure) project nor are they reasonably foreseeable consequences of our approval of an infrastructure project.”

Our discussion of potential impact on Core Forest Areas is presented in sections 4.5.4 and 4.6.2. Potential cumulative impact on Core Forest Areas is presented in section 4.13.2.4.

Supplemental information filed for the projects is publicly available on the FERC website ([www.ferc.gov](http://www.ferc.gov)) using the eLibrary link. The absence of the mitigation contained in a Migratory Bird Plan will only lessen potential impact.

See response to comment CO011-1 (scope of analysis area).

CO011-13  
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the DEIS before preparation of the Migratory Bird Plan. FERC should issue a revised or supplemental DEIS that includes Columbia Gas' Migratory Bird Plan.

The analysis area was also too restrictive. FERC utilized a 2-mile geographic scope for analyzing cumulative impacts on vegetation and wildlife. *See* DEIS at 4-321. CEQ specifically recommends considering cumulative effects on wildlife at the "ecosystem" level for resident wildlife and the "total range of affected population units" for migratory wildlife. *See* Cumulative Effects under the National Environmental Policy Act, p. 15. This is particularly important in the context of pipeline expansions and related shale gas development. For example, according to recent research published in Environmental Science & Technology:

Potential effects [of shale gas drilling] on terrestrial and aquatic ecosystems can result from many activities associated with the extraction process and the rate of development, such as road and pipeline construction, well pad development, well drilling and fracturing, water removal from surface and ground waters, establishment of compressor stations, and by unintended accidents such as spills or well casing failures . . . The cumulative effect of these potential stressors will depend in large part on the rate of development in a region. Depending on extent of development, oil and gas extraction has the potential to have a large effect on associated wildlife, habitat and aquatic life.

Brittingham, M.C., et al., Ecological Risks of Shale Oil and Gas Development to Wildlife, Aquatic Resources and their Habitats, Environmental Science & Technology, pp. 11035-11037 (Sept. 4, 2014) (citations omitted) (Ex. 2). Shale gas development "changes the landscape" as "[I]and is cleared for pad development and associated infrastructure, including pipelines, new and expanded roads, impoundments, and compressor stations[.]" *Id.* at 11037 (citations omitted). "Seismic testing, roads, and pipelines bisect habitats and create linear corridors that fragment the landscape." *Id.*

"Habitat fragmentation is one of the most pervasive threats to native ecosystems and occurs when large contiguous blocks of habitat are broken up into smaller patches by other land uses or bisected by roads, transmission lines, pipelines or other types of corridors." *Id.* "Habitat

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fragmentation is a direct result of shale development with roads and pipelines having a larger impact than the pads.” *Id.* (citations omitted). In Bradford County, PA, “forests became more fragmented primarily as a result of the new roads and pipelines associated with shale development, and development resulted in more and smaller forest patches with loss of core forest (forest > 100 m from an edge) at twice the rate of overall forest loss.” *Id.* (citation omitted). “Pipelines and roads not only resulted in loss of habitat but also created new edges.” *Id.* “Fragmentation from linear corridors such as pipelines, seismic lines, and roads can alter movement patterns, species interactions and ultimately abundance depending on whether the corridor is perceived as a barrier or territory boundary or used as an avenue for travel and invasion into habitats previously inaccessible.” *Id.* (citations omitted).

According to the NYDEC, “development of one horizontal [shale] well requires over 3300 one-way truck trips.” *Id.* at 11038 (citation omitted). “This is a concern because roads of all types have a negative effect on wildlife through direct mortality, changes in animal behavior, and increased human access to areas, and these negative effects are usually correlated with the level of vehicular activity.” *Id.* (citations omitted). “Even after a well is drilled and completed, new roads and pipelines provide access for more people, which results in increased disturbance.” *Id.* “In Wyoming, Sawyer et al. found that mule deer migratory behavior was influenced by disturbance associated with coal bed gas development and observed an increase in movement rates, increased detouring from established routes, and overall decreased use of habitat along migration routes with increasing density of well pads and roads. *Id.* (citation omitted).

Shale gas development “is associated with both short-term and long-term increases in noise.” *Id.* “In the short term, site clearing and well drilling, [high volume hydraulic fracturing], and construction of roads, pipelines and other infrastructure are a limited time disturbance

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similar to disturbance and sound associated with clearing land and home construction.” *Id.*

(citation omitted). “Depending on number of wells drilled, construction and drilling can take anywhere from a few months to multiple years.” *Id.*

“Compressor stations, which are located along pipelines and are used to compress gas to facilitate movement through the pipelines, are a long-term source of noise and continuous disturbance.” *Id.* (citation omitted). “Because chronic noise has been shown to have numerous costs to wildlife, compressors have potential to have long-term effects on habitat quality. *Id.* (citation omitted). “For many species of wildlife, sound is important for communication, and noise from compressors can affect this process through acoustical masking and reduced transmission distances.” *Id.* “Studies on effects of noise from compressors on songbirds have found a range of effects including individual avoidance and reduced abundance, reduced pairing success, changes in reproductive behavior and success, altered predator-prey interactions, and altered avian communities . . . Greater sage-grouse (*Centrocercus urophasianus*) gather at leks where males display in order to attract females.” *Id.* “Lek attendance declined in areas with chronic natural gas-associated noise and, experimentally, sage-grouse were shown to experience higher levels of stress when exposed to noise.” *Id.* (citations omitted).

“Because of the large overlap between the Appalachian shale play and core forest habitat in the East, many forest species are vulnerable to development.” *Id.* at 11040. “Area-sensitive forest songbirds are primarily insect-eating Neotropical migrants, are an important component of forest ecosystems, and, as a group, many have declined in numbers in response to forest fragmentation.” *Id.* (citations omitted). “These birds are area-sensitive because breeding success and abundance are highest in large blocks of contiguous forest, and numerous research studies have documented negative effects of fragmentation on abundance and productivity[.]” *Id.* “The

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impact that shale development has on this group of species will depend on the scale and extent of development.” *Id.* “By some estimates, less than 10% of potential shale gas development has occurred in the Appalachian basin [and] [i]f this is the case, there is the potential for a 10-fold increase in the amount of shale gas development which would likely have negative impacts on area-sensitive forest songbirds and other forest specialists. *Id.* (emphasis added) (citation omitted).

“Development of shale resources, which clears land for well pads and roads, is occurring across a large portion of the native range of brook trout, especially in Pennsylvania.” *Id.* (emphasis added) (citation omitted). “If remaining high-quality stream reaches become unsuitable to brook trout, there may be further fragmentation of the larger meta-population.” *Id.*

“Rare species with limited ranges are always a concern when development occurs” and “any type of disturbance can be very detrimental to them.” *Id.* “Freshwater mussels are an additional taxonomic group of interest because of already high numbers of listed species and relative sensitivity to toxicants.” *Id.* (citation omitted). “The endangered Indiana Bat, (*Myotis sodalis*), is another example of a species where a large portion of its native range is within areas of shale development.” *Id.* (citation omitted). “Gillen and Kiviat 2012 reviewed 15 species that were rare and whose ranges overlapped with the Marcellus and Utica shale by at least 35%.” *Id.* “The list included the West Virginia spring salamander (*Gyrinophilus subterraneus*), a species that is on the IUCN Red List as endangered and whose range overlaps 100% with the shale layers.” *Id.* This salamander “requires high quality water and is sensitive to fragmentation suggesting that this species is at great risk to oil and gas development.” *Id.* “The list also included eight Plethodontid salamanders, a group that tends to be vulnerable because of the

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overlap between their range and shale layers, their dependence on moist environments and sensitivity to disturbance.” *Id.* at 11040-11041.

“Habitat fragmentation, effects on water quality and quantity, and cumulative effects on habitats and species of concern have already been identified as problems and are expected to increase in magnitude as shale resource development continues to expand.” *Id.* at 11043.

Brittingham et al. (2014) “suggests that species and habitats most at risk are ones where there is an extensive overlap between a species range or habitat type and one of the shale plays (leading to high vulnerability) coupled with intrinsic characteristics such as limited range, small population size, specialized habitat requirements, and high sensitivity to disturbance.” *Id.*

“Examples include core forest habitat and forest specialists, sagebrush habitat and specialists, vernal pond inhabitants, and stream biota.” *Id.*

Brittingham et al. (2014) demonstrates the substantial impact that shale gas drilling is having and will continue to have on wildlife throughout the Marcellus and Utica shale region. Such impacts will only worsen if FERC continues facilitating such drilling by authorizing infrastructure projects such as the one proposed here without analyzing the cumulative impacts on wildlife, disclosing that information to the public, and incorporating it into FERC’s decisionmaking process.

According to Souther et al. (2014):

The few studies that consider cumulative impacts suggest that shale-gas development will affect ecosystems on a broad scale . . . As cumulative impacts’ methodology and knowledge improve, research should move toward detecting synergies between shale development and other likely drivers of extinction, such as climate change, as site-specific or single variable risk assessments likely underestimate threats to ecological health.

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CO011-13  
(cont.)

Souther et al. (2014), Biotic impacts of energy development from shale: research priorities and knowledge gaps. *Frontiers in Ecology and the Environment* 12(6): 334 (Ex. 3). These researchers further state that:

Using criteria related to the environmental risks and current understanding of these impacts, we suggest that top research priorities are related to probabilistic events that lead to contamination of fresh water, such as equipment failure, illegal activities, accidents, chemical migration, and wastewater escape, *as well as cumulative ecological impacts of shale development.*

*Id.* at 337 (emphasis added).

The U.S. Fish and Wildlife Service has expressed concerns about the potential noise impacts of National Fuel's Tuscarora Lateral Project on wildlife:

Since the project involves the increase of horsepower at one compressor station and the construction of a new station, we recommend the FERC request data on operating noise levels at the compressor stations, and an analysis be completed of how the project noise levels will affect wildlife. Noise levels over background levels can adversely affect wildlife, particularly songbirds, that rely on call identification for successful breeding. If noise levels will exceed background levels, the environmental document should identify mitigation measures that will be employed to reduce noise impacts on wildlife such as vegetation screening or barriers.

U.S. Fish and Wildlife Service January 27, 2015 Letter to FERC (Docket CP14-112-000, Accession No. 20150202-0104). While these comments were specific to the Tuscarora Lateral Project, the same rationale applies for other projects as well, such as the one at issue here where Columbia is constructing 10 new compressor stations as part of the MXP and GXP. The DEIS, however, contains no discussion of the potential noise impacts on wildlife resulting from these new compressor stations. FERC may not rely on an EIS that does not include an analysis of the cumulative noise impacts on wildlife associated with these and other compressor station upgrades in the region. In addition to the noise impacts from new and expanded compressor stations, the cumulative noise impacts of shale gas development on wildlife must be considered.

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CO011-13  
(cont.)

It is likely that the dramatic increase in shale gas drilling in Pennsylvania has already disrupted wildlife populations. For example, in 2012, the New York Department of

Environmental Conservation (“NYDEC”) revised its “Bobcat Management Plan” because:

Observations by hunters and trappers, and reports from the general public suggest that bobcat populations are increasing and expanding throughout New York State outside of their historic core range in the Taconic, Catskill, and Adirondack mountains and into central and western New York. *In addition, emigration of bobcats from Pennsylvania has likely fostered growth of the bobcat population in the southern tier of the state* (Matt Lovallo, Pennsylvania Game Commission, personal communication).

New York Department of Environmental Conservation. Management Plan for Bobcat in New

York State 2012-2017. p. 8. 2012 (emphasis added). *available at:*

[http://www.dec.ny.gov/docs/wildlife\\_pdf/finalbmp2012.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/finalbmp2012.pdf). The plan further stated:

The presence of bobcat in New York’s Southern Tier has *increased dramatically* over the past decade. What began as occasional sightings along the New York/Pennsylvania border has progressed to large numbers of observations, trail camera photos, and incidental captures and releases by trappers. *Over the past five years* there have been 332 bobcat observations documented in the harvest expansion area[.]

*Id.* at 17 (emphasis added). The following figure, showing the number confirmed bobcat

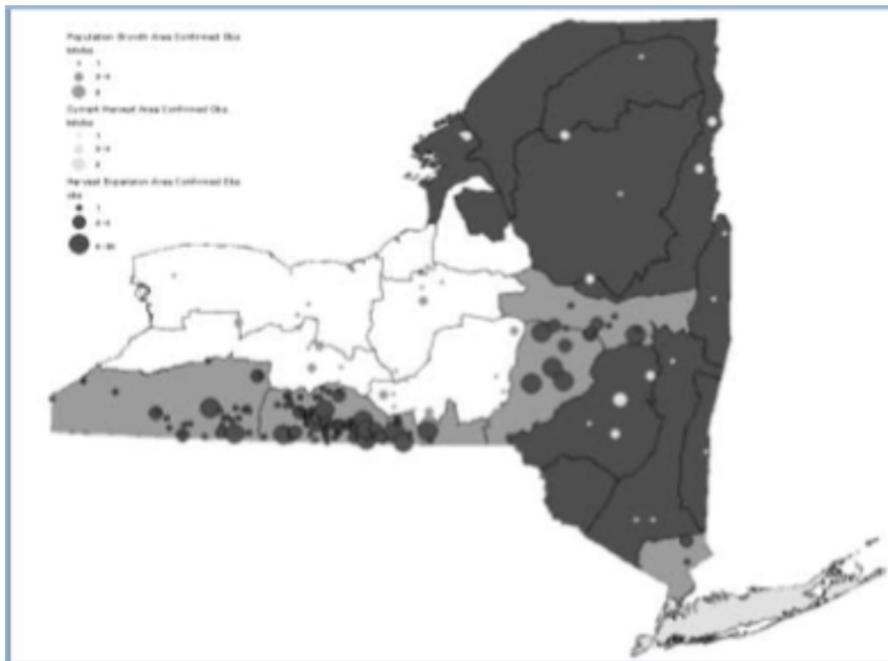
observations in New York from 2006-2011, reveals a concentration of observations along the

Pennsylvania border:

**Figure 2: Total Confirmed Bobcat Observations, 2006-2011.**

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CO011-13  
(cont.)



Source: NYDEC Bobcat Management Plan, p. 17.

While NYDEC was documenting an increase in bobcat observations in the southern tier of New York between 2006-2011, hundreds and then thousands of shale gas wells were being drilled in the northern tier of Pennsylvania. *See* Figure 2 above. As Figure 2 indicates, between 2006-2011, gas companies drilled at least 4,858 shale gas wells in Pennsylvania. Many of these wells were drilled in Pennsylvania's northern tier. Thus, at the same time the gas industry began and then rapidly escalated gas drilling across the northern tier of Pennsylvania, the bobcat population in the southern tier of New York "increased dramatically." Since there has been no shale gas development in New York throughout this time period due to a moratorium (and now ban)<sup>79</sup> on

<sup>79</sup> *See* New York State Department of Conservation and Natural Resources, *High-Volume Hydraulic Fracturing in NYS*, available at <http://www.dec.ny.gov/energy/75370.html>.

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CO011-13 (cont.) shale gas development, this suggests that the rapid increase in shale gas development in Pennsylvania may be causing “emigration of bobcats from Pennsylvania” into southern New York.

National Fuel’s 2013 Annual Report suggests why this could be happening. For example, National Fuel stated that the drilling operations of its exploration and production subsidiary, Seneca Resources, occur 24-hours a day. *See* National Fuel 2013 Annual Report, p. 3, available at [http://s2.q4cdn.com/766046337/files/doc\\_financials/2013/NFG\\_SAR\\_13\\_Final.pdf](http://s2.q4cdn.com/766046337/files/doc_financials/2013/NFG_SAR_13_Final.pdf) (emphasis added). If Seneca and other shale gas drilling companies are operating in remote, forested areas 24-hours a day, then it is reasonable to assume that those operations have significant consequences on wildlife that depend on remote, forested habitat for survival, not just in Pennsylvania, but in West Virginia as well. FERC must examine the impacts that 24-hour shale gas drilling operations are having on wildlife populations, not only in this region but throughout the Appalachian Basin. Failing to adequately consider these “inter-regional” cumulative impacts on wildlife populations would “eviscerate NEPA.” *Natural Resources Defense Council v. Hodel*, 865 F.2d 288, 299 (D.C. Cir. 1988).

c. Special Status Species

CO011-14 In addition to wildlife in general, FERC failed to take a hard look at cumulative impacts on special status species. The entire section on special status species is just eight paragraphs in a 532-page EIS. *See* DEIS at 4-341 – 4-343. Regarding the MXP, FERC states that USFWS “expressed concerns regarding stream crossings and potential adverse effects to the federally endangered snuffbox and clubshell mussels and their habitat.” As a result, FERC states that “until consultations on sensitive mussel species are complete, we conclude some of the other

**CO011-14:** See General Comment FA001-1 from Department of Interior and response to comment FA002-4.

Table 4.1-2 in the Geology section (section 4.1.2.1) identifies 1,650 oil and gas wells within 0.25 mile of the MXP that were considered in our cumulative impacts analysis. Additionally, revised section 4.13.1 includes a discussion of gas production facilities in the vicinity of the MXP. Table 4.13-2 has been revised to include natural gas wells in the MXP area.

CO011-14  
(cont.)

projects, in combination with the MXP, could have a minor cumulative impact on sensitive mussel species.” *Id.* at 4-343. These concerns should be even more prescient in light of the “ubiquitous” nature of oil and gas development in the region.

FERC, however, only considered “the projects listed in table 4.13-2” in considering cumulative impacts on special status species. DEIS at 4-343. That table does not include any oil and gas production facilities. Thus, FERC’s conclusion that there would only be a “minor cumulative effect on sensitive mussel species” is based on the absence of any consideration of the cumulative impacts of past, present, and reasonably foreseeable oil and gas development. When oil and gas facilities and roads are included in the equation, it is possible that the “minor” cumulative impacts FERC is projecting could actually be major cumulative impacts. The failure to consider the “ubiquitous” oil and gas production facilities and roads that already exist in conjunction with the impacts of MXP and other projects in Table 4.13-2 is arbitrary and capricious. FERC should revise or supplement the DEIS to consider the cumulative impacts of oil and gas development on all special status species.

CO011-15

**d. Air Quality**

FERC failed to take a hard look at the cumulative impacts of the Projects and other past, present and reasonably foreseeable future projects, including oil and gas production facilities, on air quality. While FERC acknowledges that “[o]peration of the MXP and GXP would result in permanent air quality impacts associated with the new and modified compressor stations over the lifetime of the projects” (DEIS at 4-354), it largely relies on other permitting authorities to avoid taking a hard look at the air quality impacts in the DEIS. *See id.* at 4-356 (“All projects that trigger permitting due to the potential emissions would be required to both obtain a construction permit and operate under any required operating permits.”).

**CO011-15:** Comment noted.

See revisions to section 4.13.1, including a discussion of gas production facilities in the vicinity of the MXP.

CO011-15  
(cont.)

The fact that other project sponsors would need to comply with applicable air regulations does not excuse FERC from its obligation of analyzing in depth these cumulative impacts. FERC has an independent duty to review the environmental and human health impacts of the Project and cannot simply rely on the regulatory efforts by the EPA and DEP. *See, e.g., Idaho v. Interstate Commerce Comm'n*, 35 F.3d 585, 595-96 (D.C. Cir. 1994) (agency fails to take a “hard look” when it “defers to the scrutiny of others”); *North Carolina v. Fed. Aviation Admin.*, 957 F.2d 1125, 1129-30 (4th Cir. 1992) (“[NEPA] precludes an agency from avoiding the Act’s requirements by simply relying on another agency’s conclusions about a federal action’s impact on the environment.”)

Moreover, the issuance of a permit simply means that a polluting source has met a “minimum condition”; it does not establish that a project will have no significant impact under NEPA. *Calvert Cliff’s Coordinating Comm. v. U.S. Atomic Energy Comm’n*, 449 F.2d 1109, 1123 (D.C. Cir. 1971); *WildEarth Guardians v. U.S. Office of Surface Mining, Reclamation & Enforcement*, 104 F. Supp 3d 1208, 1227-28 (D. Colo. 2015) (rejecting argument that coal mine’s compliance with the Clean Air Act exempts mine from review for significant impacts to the environment under NEPA because “[i]t is the duty of OSM [Office of Surface Mining] to determine where a mining plan modification would contribute to such an effect, whether or not the mine is otherwise in compliance with the Clean Air Act’s emissions standards.”)

CO011-16

**F. FERC must avoid overbuilding pipeline infrastructure**

Commenters are concerned that FERC and the gas industry are engaged in a rapid overbuilding of infrastructure in the Appalachian basin. In considering the impact of new construction projects, FERC’s policy is to consider, among other factors, the possibility of overbuilding natural gas infrastructure. *Certification of New Interstate Natural Gas Pipeline*

**CO011-16:** See response to comment CO009-21.

CO011-16 (cont.)	<p><i>Facilities</i>, 88 FERC ¶ 61,227, p. 2 (1999), <i>clarified</i>, 90 FERC ¶ 61,128 (2000), <i>further clarified</i>, 92 FERC ¶ 61,094 (2000) (“Certificate Policy Statement”). FERC must consider and address the potential for overbuilding before it may issue a certificate for the Projects.</p> <p>“The financial dynamics of the natural gas industry encourage overbuilding of natural gas pipelines” and a “weak regulatory process and a lack of coordinated planning for natural gas infrastructure facilitate this process.” Institute for Energy Economics and Financial Analysis, <i>Risks Associated With Natural Gas Pipeline Expansion in Appalachia</i>, p. 4 (Apr. 2016) (“IEEFA Report”), available at <a href="http://ieefa.org/wp-content/uploads/2016/05/Risks-Associated-With-Natural-Gas-Pipeline-Expansion-in-Appalachia-April-2016.2.pdf">http://ieefa.org/wp-content/uploads/2016/05/Risks-Associated-With-Natural-Gas-Pipeline-Expansion-in-Appalachia-April-2016.2.pdf</a>. “[C]urrent low natural gas prices in the Marcellus and Utica region are driving a race among natural gas pipeline companies that want to capitalize on low prices by building new pipeline capacity to higher-priced markets.” <i>Id.</i> at 5. “Some upstream producers of natural gas . . . have also moved into the pipeline construction business [which] . . . promises a relatively stable revenue stream compared to the volatility of the natural gas drilling business.” <i>Id.</i> at 6. However, “[s]uch short-term balance sheet considerations . . . do not translate into rational planning of long-term infrastructure.” <i>Id.</i></p>
CO011-17	<p><b>G. Conclusion</b></p> <p>FERC must prepare a revised or supplemental DEIS that (i) considers in more detail the purpose and need for the project and range of alternatives; (ii) discloses information that is critical to the public’s understanding of how the Projects will impact the environment and communities; (iii) takes a hard look at the direct, indirect, and cumulative effects of the Projects; and (iv) considers mitigation practices, especially for impacts to wetlands, wildlife habitat, and air quality. By underestimating the severity of the impacts of the Projects, FERC is also</p>

**CO011-17:** Comment noted. The EIS discusses the No-Action Alternative in section 3.1.

CO011-17  
(cont.)

underestimating the need for mitigation practices, and the benefits to society that would come from requiring the applicant to avoid, minimize, or mitigate those adverse impacts. When significant adverse impacts cannot be mitigated, the agency should consider a No Action alternative. Finally, with the large number of pipelines that have been construction and that are currently pending before FERC, the agency must consider whether it is permitting the overbuilding of pipeline infrastructure.

Dated: April 24, 2017

Respectfully submitted,

/s/ Ryan Talbott  
Ryan Talbott  
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**Note to reader:** This comment letter included a GoogleEarth map and two publications, which were cited within the letter:

Brittingham, Margaret C., et al. 2014. *Ecological Risks of Shale Oil and Gas Development to Wildlife, Aquatic Resources and their Habitats*. Environmental Science & Technology. September 4, 2014. 48, 11034 – 11047.

and

Souther, Sara, et al. 2014. *Biotic impacts of energy development from shale: research priorities and knowledge gaps*. Frontiers in Ecology and the Environment. 12(6): 330-338.

To view the full comment letter, including the map and the two attached publications, please go to the website: <http://www.ferc.gov>. Using the “eLibrary” link, select “Advanced Search” from the eLibrary menu and enter 20170424-5602 in the “Numbers: Accession Number” field.

**CO011 - Allegheny Defense Project, Ohio Valley Environmental Coalition, and Sierra Club (continued)**

**CERTIFICATE OF SERVICE**

Pursuant to Rule 2010 of FERC's Rules of Practice and Procedure, 18 C.F.R. § 385.2010,  
I hereby certify that I have this day served the foregoing document upon each person designated  
on this official list compiled by the Secretary in this proceeding.

Dated: April 24, 2017

Respectfully submitted,

/s/ Ryan Talbott  
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**CO012 – Keep Southeast Nashville Healthy**

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

In the Matter of the Application of:

Columbia Gulf Transmissions, LLC

Docket No. CP16-361-000

Filed: April 24, 2017

**COMMENTS OF KEEP SOUTHEAST NASHVILLE HEALTHY  
ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE  
PROPOSED GULF XPRESS (GXP) PROJECT**

Keep Southeast Nashville Healthy (KSNH) files these comments on the Draft Environmental Impact Statement (DEIS) prepared by Commission staff for the TransCanada Corporation (TransCanada)<sup>1</sup> and its proposed Gulf Xpress Project, Docket No. CP16-361-000 (the Project).<sup>2</sup> According to TransCanada, the Project is designed to increase the company's ability to quickly transport more natural gas to markets in the Gulf Coast region.<sup>3</sup>

CO012-1

Although TransCanada proposes to construct and operate seven new natural gas compressor stations in Kentucky, Tennessee, and Mississippi as part of its Gulf Xpress Project,<sup>4</sup> these comments will focus on only one of the compressor stations, specifically, the proposed 42,000 horsepower Cane Ridge Compressor Station (Compressor Station),<sup>5</sup>

<sup>1</sup> Columbia Gas Transmission, LLC, an indirect, wholly owned subsidiary of Columbia Pipeline Group, filed an application with the Commission in April 2016. DEIS at 1-1. On July 1, 2016, TransCanada Corporation acquired Columbia Pipeline Group, Inc. *Id.* See also <https://www.cpg.com/> ("Effective July 1, 2016, TransCanada Corporation acquired Columbia Pipeline Group, Inc., and eventually this website will be retired."). These comments will refer to the applicant as TransCanada for ease of reference.

<sup>2</sup> The DEIS covers both the Gulf Xpress Project and the Mountaineer Xpress Project, *see* DEIS at ES-1, but these comments will be limited to the Gulf Xpress Project. We welcome any questions about these comments and the opportunity, if necessary, to provide additional or clarifying information.

<sup>3</sup> DEIS at ES-2.

<sup>4</sup> DEIS at ES-2.

<sup>5</sup> TransCanada's Part 70 Operating Permit Application submitted to the Metropolitan Health Department on May 26, 2016.

**CO012-1:** We note that these comments pertain specifically to the proposed GXP Cane Ridge Compressor Station.

See response to comments CO009-1 and CO009-3 regarding the adequacy of our NEPA analysis.

**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-1  
(cont.)

which would be located in a densely populated and residential area of Metropolitan Nashville, Tennessee. Having ignored or minimized the significance of the Compressor Station's size and proposed location, the DEIS's analysis of the Compressor Station's impacts is legally deficient under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality's (CEQ) regulations. In addition, the DEIS's conclusion that the project will not have a significant impact on the environment is unsupported by substantial evidence in the record. More specifically, after summarizing the factual background related to the proposed location of the Compressor Station, these comments will focus on the following alleged deficiencies:

- the Commission does not discuss or establish a public purpose for the project;
- neither the Commission nor TransCanada assert a need for the Project in whole or in part;
- the DEIS is based on incomplete, inadequate, or withheld information;
- the analysis of alternatives is inadequate under Section 1502 of CEQ regulations;
- the Commission did not adequately analyze environmental justice or socioeconomic issues;
- the Commission does not adequately examine impacts to air quality and improperly assumes that adverse impacts will be addressed in the permitting process;
- the Commission fails to analyze the lifecycle of greenhouse gases and climate change impacts;
- the Commission's noise impact analysis is inadequate;
- the DEIS does not adequately account for the karst terrain;
- the existence of endangered species in proximity to the Compressor Station is not adequately analyzed;
- the DEIS ignores safety issues;
- the DEIS fails to consider the indirect impacts of shale gas drilling such as the lifecycle of greenhouse gases and climate change; and
- the Commission did not address the cumulative impacts of additional emissions sources in the Nashville area.

CO012-2

Based on the deficiencies identified in these comments, we respectfully request that the Commission issue a revised draft EIS for public comment. Alternatively, the Commission must issue a supplemental draft EIS for public comment.

**CO012-2:** Comment noted.

**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-3 We respectfully ask that the Commission include this letter in the administrative record for its proceedings under the National Environmental Policy Act, the Natural Gas Act, and the agency’s Certificate Policy Statement in docket number CP16-361-000.

**I. BACKGROUND**

CO012-4 Nashville, Tennessee is the 25th most populous city in the United States;<sup>6</sup> its metropolitan statistical area includes 1,700,000 people,<sup>7</sup> and it is expected to grow by more than 1,000,000 more residents over the next 15 years.<sup>8</sup> Not only is Nashville one of the most densely populated areas in Tennessee, as the following three maps show, but the Compressor Station is proposed for one of the most densely populated areas of the county. The area is likely to become even more dense; it is projected to see the highest rate of development over the next 15 years as compared to other neighborhoods in Nashville, as shown below.

The first map depicts the population density of Middle Tennessee per census tract. Metropolitan Nashville-Davidson County is located at the center of the map, and the Compressor Station’s proposed location is within one of the densest population clusters:

<sup>6</sup> Lance Williams, “Nashville now one of 25 largest cities in the U.S.,” TENNESSEAN (May 22, 2014), available at <http://www.tennessean.com/story/money/2014/05/22/nashville-now-one-largest-cities-us/9464115/>.

<sup>7</sup> DEIS at 4-218.

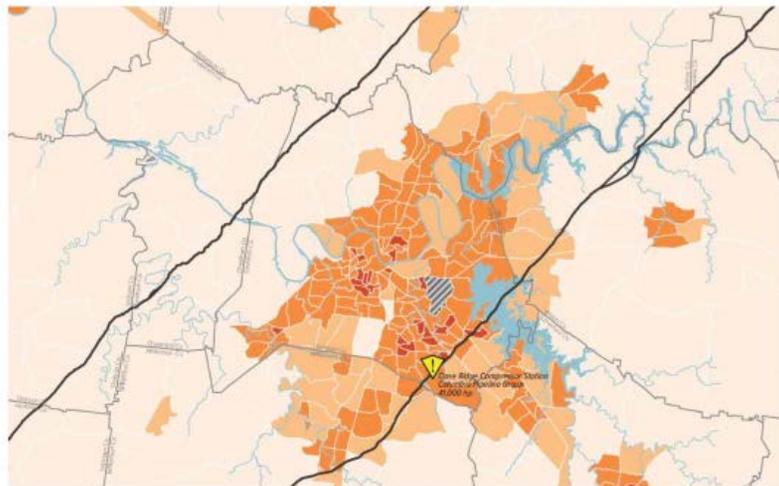
<sup>8</sup> Nashville Area Metropolitan Planning Organization, 2040 Regional Transportation Plan (2016), available at [http://www.nashvillempo.org/docs/2040RTP/Adopted/Chapter3\\_Trends.pdf](http://www.nashvillempo.org/docs/2040RTP/Adopted/Chapter3_Trends.pdf).

**CO012-3:** This comment letter, along with all the other comments received on the draft EIS, were filed to the project docket numbers and are part of the official record.

**CO012-4:** Demographic information provided by the commentor is noted. Environmental justice considerations associated with the GXP are discussed in section 4.9.9.2.

CO012 – Keep Southeast Nashville Healthy (continued)

CO012-4  
(cont.)



LEGEND

- Compressor Station - Proposed
- Pipeline

Census Tracts by Population Density:

- People Per Square Mile<sup>2</sup>
- < 500
  - 501 - 1,000
  - 1,001 - 5,000
  - > 5,000

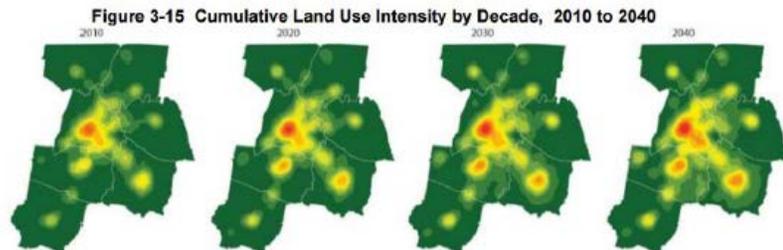


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Map created by: Jovani Saccor (jsaccor@seec.org) and Shannon Griffin (sgriffin@seec.org)  
Last updated: October 21, 2016  
Data sources: US Census Bureau, CDC, USGS, etc.



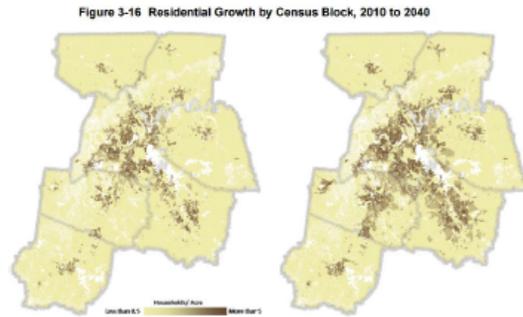
These next two maps show (a) the projected regions of development (again with Metropolitan Nashville-Davidson County at the center of the map) and (b) the projected land use and residential growth of the area, both of which show concentrated development along the same corridor where the Compressor Station is proposed:



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**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-4  
(cont.)



Nashville Area Metropolitan Planning Organization, *2040 Regional Transportation Plan*, at 3-8 and 3-9 (2016).<sup>9</sup>

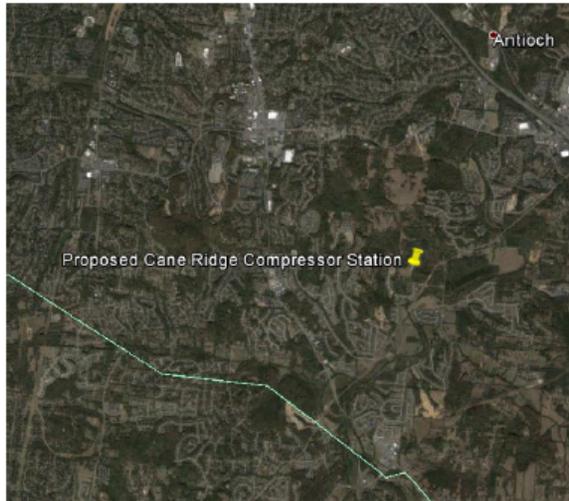
The projected growth in southeast Nashville was also recently captured by the city’s long-range plan, which included an historical perspective: “The Southeast Community continues to grow at a striking pace. In 1990, the total population of the Southeast Community plan area was 63,324 people. According to the U.S. Census, in 2000 the Southeast Community had 77,318 residents, an increase of approximately 22 percent over the ten-year period from 1990 to 2000. In 2010, according to the U.S. Census, the Southeast Community had 100,569 people, an increase of approximately 30 percent since 2000, and about 3,500 more people than forecasted in the early 1990s.”<sup>10</sup> The current aerial photo from October 2016 shows yet more dense residential development,<sup>11</sup> which stands in stark contrast to the description of the area in the DEIS as land that is zoned agricultural.<sup>12</sup>

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<sup>9</sup> Available at: [http://www.nashvillempo.org/docs/2040RTP/Adopted/Chapter3\\_Trends.pdf](http://www.nashvillempo.org/docs/2040RTP/Adopted/Chapter3_Trends.pdf).  
<sup>10</sup> NashvilleNext: A General Plan for Nashville & Davidson County, Vol. III (Southeast) (June 22, 2015), available at [http://www.nashville.gov/Portals/0/SiteContent/Planning/docs/CommPlans2015/next-vol3-Southeast%20Nashville\\_Final.pdf](http://www.nashville.gov/Portals/0/SiteContent/Planning/docs/CommPlans2015/next-vol3-Southeast%20Nashville_Final.pdf).  
<sup>11</sup> Google Earth Satellite Photo (Oct. 23, 2016).  
<sup>12</sup> DEIS at 4-199.

**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-4  
(cont.)



Further, according to the Metropolitan Nashville Planning Department’s website, approximately 100 development applications or filings have been recently submitted to the Department for the South Nashville/Antioch/Percy Priest area.<sup>13</sup>

Finally, as discussed below, the DEIS recognizes that the the demographic composition of the community surrounding the proposed Compressor Station is an environmental justice community.<sup>14</sup>

CO012-5

**I. NO PURPOSE OR NEED FOR THE PROJECT HAS BEEN IDENTIFIED BY THE COMMISSION THAT WOULD JUSTIFY THE COMPRESSOR STATION’S ENVIRONMENTAL IMPACTS.**

The Commission has failed to identify a public purpose for the Compressor Station, account for market trends that undercut the project’s proposed purpose, or

<sup>13</sup> See <http://www.nashville.gov/Planning-Department.aspx>.

<sup>14</sup>Exec. Order No. 12898, 3 C.F.R. 859 (1995) reprinted as amended in 42 U.S.C. § 4321 (1994 & Supp. VI 1998).

**CO012-5:** Comment noted. See response to comment CO006-6, CO009-3, and CO011-1.

After the issuance of the final EIS, the Commission will make the determination of whether the projects are in the public convenience and necessity. This evaluation and subsequent decision is based on many factors, including the final EIS and associated recommendations, market analysis, ensuring just and reasonable rates, and engineering analyses. The Commission considers the local, regional, and national benefits of each project against any adverse impacts. This determination has not been made for the proposed projects at this time.

**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-5  
(cont.)

identify any need for the project apart from fulfilling contractual relationships of private parties.

Assessment of the need for a pipeline is a critical component of a DEIS for a Commission-regulated project under both NEPA and the Natural Gas Act. With respect to NEPA, project purpose and need are relevant because “the goals of an action delimit the universe of the action’s reasonable alternatives,” and enable agencies to exclude from consideration those alternatives that will not achieve the purpose of the project. *See Theodore Roosevelt Conservation P’ship v. Salazar*, 661 F.3d 66, 73 (D.C. Cir. 2011) (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991)). An agency is not obligated to consider alternatives that do not meet the project’s purpose. *Partners in Forestry Co-op. v. U.S. Forest Serv.*, 638 Fed. Appx. 456 (6th Cir. 2015). However, an agency is not obligated to accept an applicant’s preferred alternative where the applicant fails to justify the need for the project to begin with. *See Soda Mountain Wilderness Council v. Norton*, 424 F. Supp. 2d 1241, 1262 (E.D. Cal. 2006) (“NEPA forces agencies to explain what it is they seek to do, why they seek to do it, what the environmental impacts may be of their proposed action, and what alternatives might be available to the agency that might lessen environmental impact. Without a clear ‘what and why’ statement, the public is kept in the dark.”). *Cf. 1000 Friends of Wisconsin v. U.S. Department of Transportation*, No. 11-0545, 2015 WL 2454271 (E.D. Wis. May 22, 2015) (finding no need for major highway in light of outdated demographic information).

In addition, under the Natural Gas Act, the Commission may only grant a certificate for a project that is “required by the present and future public necessity and convenience.” 15 U.S.C. §717f(e). “[O]therwise such application shall be denied.” *Id.* To

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**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-5 (cont.) assess whether a project meets the statutory “public necessity and convenience” standard, the Commission balances a project’s benefits, such as need, against burdens imposed on customers and property owners.<sup>15</sup> Because the establishment of project need plays a key role in the Commission’s ultimate decision regarding issuance of a certificate, the Commission must identify such a need in a revised draft EIS or supplemental draft EIS.

CO012-6 **A. The DEIS Inadequately Establishes the Public Purpose for the Project.**  
The Commission does not offer its own analysis of need for the Compressor Station (at all or in the proposed location), or question TransCanada’s very general claims that the purpose of the Project is to expand its existing system’s capacity.<sup>16</sup> For example, the DEIS does not address the fact that market demand for new gas-fired power generation is static or perhaps dropping. Without this information, the Commission cannot fairly evaluate alternatives to TransCanada’s proposal, and it misleads the public’s review of its impacts.<sup>17</sup>  
Although the standard for purpose and need statements is deferential to the agency, it is not without limits. For example, in rebuffing a challenge to a highway project’s purpose and need statement,<sup>18</sup> the Sixth Circuit recently explained that “[t]he Purpose and Need Statement is reasonable because it is supported by detailed study of

**CO012-6:** See response to comment CO012-5.

<sup>15</sup> *Certificate Policy Statement* at 23, 25 (“Depending on the type of project, there are three major interests that may be adversely affected by approval of major certificate projects, and that must be considered by the Commission. These are: the interests of the applicant’s existing customers, the interests of competing existing pipelines and their captive customers, and the interests of landowners and surrounding communities. There are other interests that may need to be separately considered in a certificate proceeding, such as environmental interests. . . . The amount of evidence necessary to establish the need for a proposed project will depend on the potential adverse effects of the proposed project on the relevant interests.”), available at <https://www.ferc.gov/legal/maj-ord-reg/PL99-3-000.pdf>.

<sup>16</sup> DEIS § 1.1.2 at 1-3.

<sup>17</sup> See *Hughes Watershed Conservancy v. Glickman*, 81 F.3d 437, 446 (4th Cir. 1996) (holding that “misleading economic assumptions can . . . defeat the second function of an EIS by skewing the public’s evaluation of a project”).

<sup>18</sup> *Coal. for Advancement of Reg’l Transp. v. Fed. Highway Admin.*, 576 F. App’x 477, 487-89 (6th Cir. 2014).

**CO012 – Keep Southeast Nashville Healthy (continued)**

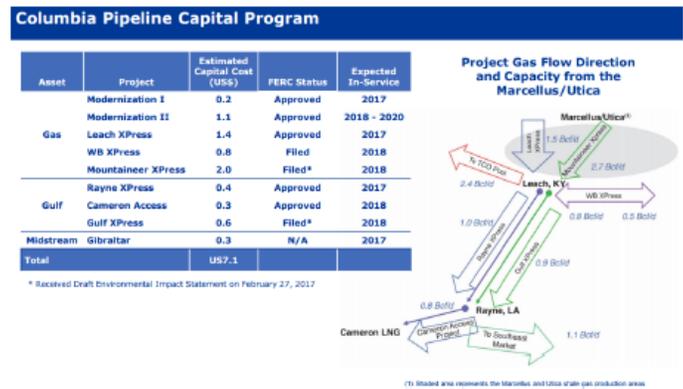
CO012-6  
(cont.)

existing traffic, safety, and other cross-river mobility problems, and described the use of extensive socioeconomic data and state-of-the-art modeling of future travel conditions to project future transportation needs of the region.”<sup>19</sup> Here, the DEIS falls far short of this standard.

CO012-7

i. *The purpose of the project will not benefit the community impacted by the Compressor Station.*

The DEIS does not establish a public benefit for the Project or Compressor Station. Section 1.1.2 of the DEIS describes the purpose of the Project to expand the capacity of TransCanada’s existing system to allow for an additional 860,000 Dth/d of natural gas delivery to high-demand southern markets in Mississippi and Louisiana.<sup>20</sup> The only information about where the natural gas will be shipped appears to be the statement in the DEIS informing the public that TransCanada has executed four agreements with shippers to identified receipt points.<sup>21</sup> Additional information available on TransCanada’s website suggests that the Project may be designed for the export market:

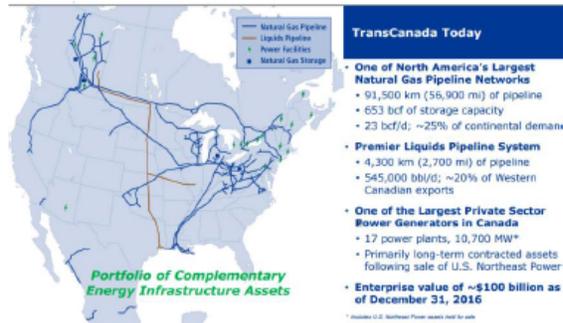


<sup>19</sup> *Id.* at 488.  
<sup>20</sup> DEIS at 1-3.  
<sup>21</sup> DEIS at 1-3.

**CO012-7:** The Council on Environmental Quality’s NEPA regulations require the Commission to “briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” (40 CFR 1502.13). The draft EIS includes an appropriate purpose and need statement in section 1.1.2 in compliance with NEPA. The Commission’s decision on whether to authorize the GXP will be based on an evaluation under the Certificate Policy Statement of whether there is a need for the project and if it will serve the public interest. In balancing the public benefits against the potential adverse consequences, this evaluation considers many factors, including but not limited to impacts to landowners and communities affected by the construction.

CO012 – Keep Southeast Nashville Healthy (continued)

CO012-7  
(cont.)



TransCanada Corporate Profile (April 2017).<sup>22</sup> Namely, these slides show (1) the Gulf Xpress project facilitating the flow of Marcellus/Utica gas from Leach, Kentucky to Rayne, Louisiana “To Southeast Market” and (2) the Louisiana-based lines terminating in the Gulf rather than extending to other places in the “Southeast.”

In addition, TransCanada’s customer for this project appears to be Antero Resources, which has provided additional information about the Project’s privately beneficial purpose in its own materials:

In the second quarter of 2015, Antero entered into 700 MMcf/d of incremental firm transportation agreements with Columbia Pipeline Group through Columbia’s Mountaineer Xpress (“MXP”) and Gulf Xpress (“GXP”) pipeline projects. Both projects are expected to be placed in service in the fourth quarter of 2018. Antero will have a firm commitment on MXP of 700 MMcf/d to Leach, Kentucky, where the Company will be able to sell its gas at TCO based pricing. Antero will have the further option, through its firm transportation agreement with GXP, to ship approximately 180 MMcf/d of the 700 MMcf/d to the Gulf Coast. These firm transportation agreements result in Antero’s firm transportation portfolio growing to 4.8 Bcf/d by the end of 2018, enabling Antero to sell its expected gas production at currently favorable price indices such as TCO, Chicago, and CGTLA.<sup>23</sup>

<sup>22</sup> Available at: [http://www.transcanada.com/docs/Investor\\_Centre/TransCanada-Corporate-Profile.pdf](http://www.transcanada.com/docs/Investor_Centre/TransCanada-Corporate-Profile.pdf).

<sup>23</sup> Antero Resources Press Release (July 15, 2015) (emphasis added), available at <http://investors.anteroresources.com/investors-relations/press-releases/press-release-details/2015/Antero-Resources-Announces-Second-Quarter-2015-Operations-Update/default.aspx>.

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**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-7 (cont.)	<p>The DEIS inappropriately determined that the project will serve a public purpose when it is a joint venture between private parties. Because the DEIS does not address whether the project purpose will serve the public necessity and convenience, it is deficient.</p>
CO012-8	<p>ii. <i>The economy of the community impacted by the Compressor Station will be negatively constrained and impacted.</i></p> <p>Because of Nashville’s air quality impairments, the proposed Compressor Station has the potential to pose a threat to public health rather than providing a public benefit. Under the Clean Air Act, the EPA sets ambient air standards for a variety of pollutants, and Middle Tennessee has a history of violating these standards for air certain pollutants.<sup>24</sup> Policymakers are justifiably concerned that the area could fall out of attainment with current ambient air standards or forthcoming standards that are stricter. A report included in the Appendix to these comments argues:</p> <p>The greater Nashville area is currently in compliance with the National Ambient Air Quality Standards (NAAQS) for ozone, although the margin of compliance is small. The NAAQS as defined by the U.S. Environmental Protection Agency (EPA) is 0.070 parts per million (ppm), defined as the annual fourth highest daily maximum 8-hour average concentration averaged over three years.<sup>1</sup> Using the Hendersonville, Tennessee monitor as the representative ozone monitoring site, the design value for Nashville as determined for monitored data over the 2013-2015 time period is 0.067 ppm. However, more than one ozone monitor in the greater Nashville area has measured an ozone design value above 0.070 ppm in the recent past. In fact, the Hendersonville monitor had an ozone design value in excess of the 0.070 ppm NAAQS in all four of the prior three year time periods, <i>i.e.</i>, 2009-2011, 2010-2012, 2011-2013, and 2012-2014. . . .</p> <p>Newly released EPA ozone modeling data also show that future ozone levels around Nashville are very sensitive to changes in levels for ozone precursor emissions. Compared to other areas of the United States, relatively small changes in ozone precursor emissions from new/modified sources around Nashville can elicit a much larger response in the ambient ozone levels. Extrapolating from new EPA modeling studies suggest that the two proposed</p>

<sup>24</sup> See Section V for more information.

**CO012-8:** If the area around the proposed Cane Ridge Compressor Station were out of attainment, we would evaluate all non-permitted emissions under General Conformity. In this case, that would principally be limited to construction and fugitive emissions. See section 4.11.1.1.1 for further discussion of General Conformity.

The Metropolitan Government of Nashville & Davidson County has a federally delegated responsibility under the Clean Air Act to permit air emissions in its jurisdiction and attain regional air quality compliance to the air quality standards set for each region by the EPA and/or state administrators under the Clean Air Act.

During our environmental review, we present models of operational emissions of criteria air pollutants to disclose local air quality impacts and assure that proposed interstate natural gas facilities authorized by the Commission meet the National Ambient Air Quality Standards (NAAQS) at their fencelines. Modeling results demonstrate that the GXP compressor stations would not exceed the NAAQS and the area air quality would continue to remain protective of human health and public welfare for all listed pollutants.

See section 4.11.1.2 for further information on ambient air quality, regulatory standards, construction and operation air impacts, modeling studies, mitigation, and permitting requirements for the GXP. See section 4.13.2.9.2 for a discussion of air quality cumulative impacts with GXP including the Broad Run Expansion Project.

**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-8  
(cont.)

compressor stations would generate sufficient NOx precursor emissions to reduce the ozone NAAQS compliance margin in Nashville by 50%, assuming no change in meteorological conditions from the 2013-2015 baseline period.<sup>25</sup>

The DEIS assumes a condition of attainment and does not address the fact that non-attainment has consequences beyond the designation given to a region when its air quality is worse than the National Ambient Air Quality Standards (NAAQS). A non-attainment designation has real economic impacts: “There are increased costs to businesses and consumers due to special requirements for vehicles, fuels sold in the area, and for commercial and consumer products. As of 2014, the Nashville area is considered in compliance with the standards. If the standards are strengthened by EPA, it is likely the Nashville area may fall out of compliance.”<sup>26</sup>

Using reported emissions and background concentration data, the Commission should have evaluated the effect of the addition of emissions from the Compressor Station and other major sources proposed contemporaneously, such as a 60,000 horsepower compressor station proposed in north Nashville, on Metro Nashville’s attainment status.<sup>27</sup> The Commission will have more precise information, but for reference sake we have provided a place to begin this kind of analysis: For example, TransCanada has provided modeled “impact” figures for criteria pollutants; these figures represent the additional contribution to the concentration of a pollutant in ambient air at any given time. TransCanada used AERMOD to model impact. We constructed an approximate “budget” of allowable emissions before NAAQS are exceeded by comparing

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<sup>25</sup> D. Howard Gebhart, *The Siting of New Proposed Nitrogen Oxide (NOx) Emission Sources in the Greater Nashville Region and Implications for Ozone NAAQS Compliance* (Jan. 17, 2017), Attachment A.

<sup>26</sup> NashvilleNext Natural Resources Plan at p. 230, available at [http://www.nashville.gov/Portals/0/SiteContent/Planning/docs/NashvilleNext/PlanVolumes/next-volume2-Elements\\_NRHA.pdf](http://www.nashville.gov/Portals/0/SiteContent/Planning/docs/NashvilleNext/PlanVolumes/next-volume2-Elements_NRHA.pdf).

<sup>27</sup> This issue will be more fully discussed in the section related to Cumulative Impact Analysis.

**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-8  
(cont.)

background levels of criteria emissions to the budget ceiling, represented by the NAAQS concentration. We used Metro’s background concentrations for all of the calculations, because the background concentrations reported by TransCanada and other permittee vary considerably.

*Approximate NAAQS “Budget” for Metro Nashville*

Pollutant	Averaging period	NAAQS max concentration (µg/m <sup>3</sup> )	Background levels, Metro (µg/m <sup>3</sup> )	Percentage of NAAQS “budget” used by background levels	Percentage remaining in the “budget”
NO <sub>2</sub>	1-hour	188.00	73.33	0.39	0.61
	Annual	100.00	16.13	0.16	0.84
CO	1-hour	40000.00	2060.00	0.05	0.95
	8-hour	10000.00	1831.00	0.18	0.82
PM2.5	24-hour	35.00	19.70	0.56	0.44
	Annual	12.00	9.76	0.81	0.19
PM10	24-hour	150.00	30.00	0.20	0.80
PM2.5/10	N/A	N/A	N/A	N/A	N/A
VOC	N/A	N/A	N/A	N/A	N/A
SO <sub>2</sub>	1-hour	196.00	18.31	0.09	0.91
	3-hours (SECONDARY)	365 (24 hours)	18.31	N/A	N/A

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Davidson County is closer to the NAAQS budget ceiling for some pollutants than other. For example, background levels of PM2.5 (averaged annually) occupy 81% of the budget, leaving Davidson County with only 20% to fill with new sources of emissions.

Using reported emissions and background concentration data, we compared the cumulative emissions and NAAQS levels to roughly indicate if the addition of the proposed Compressor Station and another large compressor station proposed for the county, the proposed Joelton Compressor Station, will threaten Davidson County’s attainment status. Overlooking the variation in model outputs given the limited purposes of this exercise, we added the companies’ self-reported modeled impacts to the

**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-8 (cont.) background concentration provided by Metro then divided this sum by the maximum concentration of the pollutant associated with NAAQS.

*Percentage Self-Reported Modeled Impact<sup>28</sup>*

Pollutant	Averaging period	Self-reported modeled impact, Joelton (µg/m <sup>3</sup> )	Self-reported modeled impact, Cane Ridge (µg/m <sup>3</sup> )	NAAQS max concentration (µg/m <sup>3</sup> )	Background levels, Metro (µg/m <sup>3</sup> )	Percentage self-reported modeled impact
NO <sub>2</sub>	1-hour	31.23	7.70	188.00	73.33	0.60
	Annual	0.65	N/A	100.00	16.13	N/A
CO	1-hour	31.69	23.30	40000.00	2060.00	0.05
	8-hour	25.21	9.50	10000.00	1831.00	0.19
PM2.5	24-hour	0.68	0.40	35.00	19.70	0.59
	Annual	0.04	0.00	12.00	9.76	0.82
PM10	24-hour	N/A?	0.40	150.00	30.00	N/A
PM2.5/10	N/A	N/A?	N/A	N/A	N/A	N/A
VOC	N/A	N/A?	N/A	N/A	N/A	N/A
SO <sub>2</sub>	1-hour	N/A?	0.70	196.00	18.31	N/A
	3-hours (SECONDARY)		0.2 (24-hr avg)	365 (24 hours)	18.31	N/A

An NO<sub>2</sub> (1-hour averages) concentrations consume more of the budget than the other pollutants. The additional NO<sub>2</sub> contributions modeled and reported by the companies contribute to a substantial increase in the percentage of the NO<sub>2</sub> NAAQS budget: background concentrations of NO<sub>2</sub> occupy 39% of the budget, while the percent of the budget used increases to 60% with the contributions of the new compressor stations. In order to understand the cumulative impact, we completed the same calculations for TransCanada’s self-modeled impacts and Metro’s SCREEN3 modeled impacts for Kinder Morgan’s proposed compressor station in northeast Metro Nashville (Joelton). Background concentrations of NO<sub>2</sub> occupy 39% of the budget, while the percent of the budget increases to 73% with the contributions of the new compressor

<sup>28</sup> The Cane Ridge self-reported modeled impacts for each pollutant are significantly lower than those reported by Kinder Morgan.

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**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-8  
(cont.)

stations. Finally, when we completed the same calculations for TransCanada’s self-modeled impacts and Metro’s AERMOD modeled impacts for Joelton, the percent of the budget occupied by NO<sub>2</sub> increases from 40% to 54% with the contributions of the new compressor stations. The additional NO<sub>2</sub> contributions modeled and reported by the companies contributes to a substantial increase in the percentage of the NO<sub>2</sub> NAAQS budget.

In addition, the additional 248 tons of NO<sub>x</sub> emissions that could be released yearly by the two proposed compressor stations could contribute to a 1.1% increase in ozone levels. If these ozone levels are recorded at the Hendersonville monitoring station downwind of Metro Nashville, they could reduce the margin of compliance at this station by one-third.<sup>29</sup> The burden on the Nashville community was not—but should have been—evaluated by the Commission in the DEIS.

CO012-9

**B. The DEIS Fails to Assert or Establish a Project Need.**

Section 1.1 of the DEIS is supposed to describe the “Protects Purpose and Need.” It does not. The DEIS is therefore legally deficient. *See* Section 1.1.2 (discussing project purpose but not need).<sup>30</sup> Even if one were one to assume the Project is needed to increase capacity to meet market demand, the size of the Project and the 42,000 horsepower capacity of the Compressor Station beg the question as to whether there is enough gas to support the need for added capacity long-term. The need for added infrastructure to

<sup>29</sup> Gebhart, Howard D. “The Siting of New Proposed Nitrogen Oxide (NO<sub>x</sub>) Emission Sources in the Greater Nashville Region and Implications for Ozone NAAQS Compliance.” 19 January 2017.

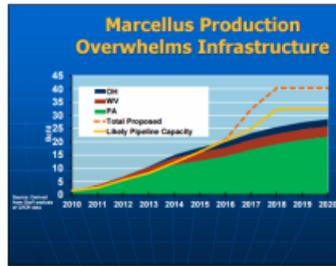
<sup>30</sup> DEIS at 1-2 to 1-3.

**CO012-9:** See response to comment CO012-5.

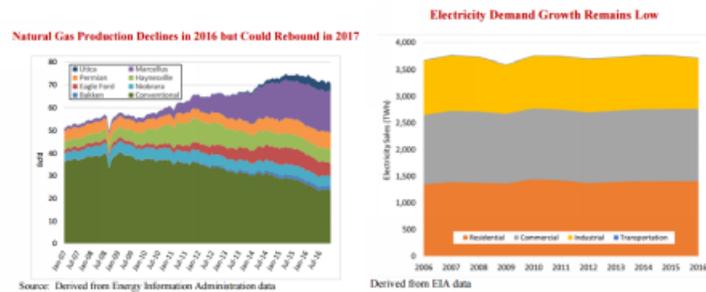
CO012 – Keep Southeast Nashville Healthy (continued)

CO012-9  
(cont.)

transport Marcellus Gas is contracting, and sufficient pipeline capacity will be in place to handle Marcellus production according to the Commission's own projections.<sup>31</sup>



In April 2017, the Commission also conceded that production for natural gas declined in 2016, that electricity demand has been stagnant for a decade, and that the largest increases of capacity are coming from renewables:



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<sup>31</sup> Chart from FERC State of Markets Presentation (March 2015), available at <http://www.ferc.gov/CalendarFiles/20150319162231-A-3.pdf> (lines show growth in pipeline capacity). See also *Marcellus-Utica Could Soon Be Overpiped*, Kallanish Energy (February 1, 2016), available at <https://www.kallanishenergy.com/2016/02/01/marcellus-utica-could-soon-be-overpiped/>.

CO012 – Keep Southeast Nashville Healthy (continued)

CO012-9  
(cont.)

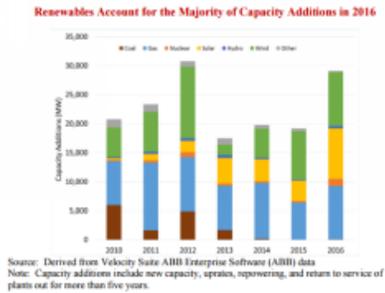


Chart from FERC State of Markets Presentation (April 2017).<sup>32</sup> In fact, in February 2017, then-Commissioner Norman Bay wrote a separate statement to an order issuing a certificate to encourage the Commission to consider more than private contracts when establishing “need” pursuant to its certificate reviews under section 7(c) of the Natural Gas Act.<sup>33</sup>

The certificate policy statement, which was issued in 1999, lists a litany of factors for the Commission to consider in evaluating need. Yet, in practice, the Commission has largely relied on the extent to which potential shippers have signed precedent agreements for capacity on the proposed pipeline. This is a useful proxy for need, because presumably shippers would not sign up for capacity unless it was needed. **But focusing on precedent agreements may not take into account a variety of other considerations, including, among others:** whether the capacity is needed to ensure deliverability to new or existing natural gas-fired generators, whether there is a significant reliability or resiliency benefit; whether the additional capacity promotes competitive markets; whether the precedent agreements are largely signed by affiliates; or whether there is any concern that anticipated markets may fail to materialize. As an example of the latter consideration, LNG import terminals that were built during the early 2000 time period became stranded as shale gas increasingly substituted for LNG imports from overseas. **There are other long-term issues that weigh in favor of examining whether other evidence, in addition to precedent agreements, can help the Commission evaluate project need.**

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<sup>32</sup> Available at: <https://www.ferc.gov/market-oversight/reports-analyses/st-mkt-ovr/2016-som.pdf>.

<sup>33</sup> No. 20170203-3051; 158 FERC ¶ 61,145 at 92 (Feb. 3, 2017).

**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-9  
(cont.)

Thus, because the Commission is not able to evaluate alternatives to the Project and Compressor Station until it has determined the purpose and need, and because no public purpose was established and no need identified, the draft EIS is “so inadequate as to preclude meaningful analysis,” and the Commission must prepare a revised DEIS and release it for public comment.<sup>34</sup> Alternatively, the Commission must issue a supplemental DEIS that addresses the new information that it received and continues to receive from Columbia since the publication of the draft EIS.<sup>35</sup>

CO012-10

**II. THE DEIS FOR THE CANE RIDGE COMPRESSOR STATION IS BASED ON INCOMPLETE, INADEQUATE, AND WITHHELD INFORMATION**

The National Environmental Policy Act (NEPA) requires federal agencies to prepare a “detailed” environmental impact statement for every “major federal action significantly affecting the quality of the human environment.”<sup>36</sup> The EIS is fundamentally an information dissemination tool: it allows federal agencies and the public to understand the environmental impacts of proposed actions before they are commenced and resources are irretrievably committed.<sup>37</sup> Courts have described this process as one designed to bring “clarity and transparency” to federal decisions that affect the environment.<sup>38</sup> Its centerpiece is the involvement of the public. The Act affords interested citizens an

**CO012-10:** Comment noted. See response to comment CO009-1.

<sup>34</sup> *Id.* § 1502.9(a).

<sup>35</sup> See 40 C.F.R. § 1502.9(c).

<sup>36</sup> 42 U.S.C. § 4332(C); *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 757 (2004).

<sup>37</sup> See, e.g., *Ariz. Cattle Growers’ Ass’n v. Cartwright*, 29 F. Supp. 2d 1100, 1116 (D. Ariz. 1998) (quoting *Or. Envtl. Council v. Kunzman*, 817 F.2d 484, 492 (9th Cir. 1987) (The NEPA requirement to issue an EIS serves two purposes: to “ensure[] that federal agencies have sufficiently detailed information to decide whether to proceed with an action in light of potential environmental consequences” and “to provide[] the public with information on the environmental impact of a proposed action and encourage[] public participation in the development of that information.”).

<sup>38</sup> *N.C. Wildlife Fed’n v. N.C. Dep’t of Transp.*, 677 F.3d 596, 603 (4th Cir. 2012) (citing *Pub. Citizen*, 541 U.S. at 756-57).

**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-10  
(cont.)

opportunity to raise the issues that they are concerned about during the scoping process<sup>39</sup> and then comment again on a thorough agency analysis of the likely impacts of the proposed action in the DEIS.<sup>40</sup>

A DEIS must be as complete as possible to allow informed public comment on the proposed project.<sup>41</sup> The public is entitled to review, and NEPA obligates the Commission to provide, the agency's analysis of the significance of the impacts.<sup>42</sup> But for many potential impacts of the Compressor Station, the Commission cannot and does not provide its analysis of the significance of impacts.

CO012-11

**A. The Basis for the Decision to Site the Compressor Station in a Densely Populated Residential Area Has Not Been Adequately Disclosed to the Public**

The Commission has repeatedly asked TransCanada for additional information to justify its request for a Certificate of Convenience and Necessity.<sup>43</sup> Unfortunately, critical information is still missing from the public record. Namely, earlier this year, the Commission asked for more data related to the fact that comments during the scoping process raised concerns “regarding the siting of the Cane Ridge Compressor Station within a densely populated residential area.”<sup>44</sup> In response, just five days later, TransCanada stated that “the siting of the compressor station was determined, among other considerations, for the need to maximize the optimum hydraulic efficiency needed

**CO012-11:** It is not unprecedented for metropolitan areas to incorporate natural gas infrastructure as part of their energy supply plans. See revised section 3.6.2 for additional information on hydraulic studies and alternative sites evaluated for the Cane Ridge Compressor Station. See also response to comments CO003-5 and IND055-1.

<sup>39</sup> 40 C.F.R. § 1501.7.

<sup>40</sup> *Id.* § 1503.4.

<sup>41</sup> See *id.* § 1502.9(a) (“The draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of the Act. If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion. The agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action.”).

<sup>42</sup> *Id.* § 1502.16(a)-(b) (requiring agencies to discuss “[d]irect effects *and their significance*” and “[i]ndirect effects *and their significance*”) (emphases added).

<sup>43</sup> See Docket No. 20160617-3036 (June 17, 2016); Docket No. 20160824-3015 (Aug. 24, 2016).

<sup>44</sup> See January 23, 2017 Letter.

**CO012 – Keep Southeast Nashville Healthy (continued)**

CO012-11  
(cont.)

to meet the required Gulf XPress Shipper volume. As a result of these hydraulic studies, TransCanada Gulf determined that each compressor station must be located within an approximate one-mile radius of the optimal compressor station location.” Virtually all of the materials used to justify this response were filed under seal with TransCanada, which claimed that the material is “critical energy infrastructure information.”<sup>45</sup>

More specifically, when the Commission asked TransCanada to explain its need to site the Compressor Station in a densely populated residential area, TransCanada responded that it determined the “optimal location” by inputting the equidistant point between existing compressor stations into the hydraulic studies. In other words, the “optimal location” was not determined by the hydraulic studies, it was predetermined based on TransCanada’s inputs:

Due to the full utilization of existing facilities for this Project, the locations of existing compressor stations on the existing pipelines were a primary driver for determining the optimal locations of the proposed compressor stations. The optimal locations for the seven proposed compressor stations are the pipeline mileposts equidistant along the pipeline between the eight existing compressor stations. As such, the optimal location was an input to the hydraulic studies and not a result of such studies. The hydraulic studies conducted by TransCanada Gulf were initiated on the basis that the optimal location for the proposed compressor stations was the point along the existing pipelines equidistant between two existing compressor stations.<sup>46</sup>

The TransCanada “equidistant” concept may sound reasonable in a theoretical vacuum, but it is absurd to accept that siting need not be adjusted to account for major challenges (*i.e.*, urban *v.* rural) at the calculated equidistant point.<sup>47</sup> The Commission should require proof that TransCanada is not using the term “optimal” as a synonym for

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<sup>45</sup> See Jan. 31, 2017 Letter.

<sup>46</sup> Jan. 31, 2017 Letter from TransCanada to FERC.

<sup>47</sup> *Cf.* 15 U.S.C. § 717b-1 (addressing state and location safety considerations and land use near the location).