APPENDIX T

VISUAL IMPACT ASSESSMENT FOR PIPELINE SEGMENTS IN MONONGAHELA AND GEORGE WASHINGTON NATIONAL FORESTS

Atlantic Coast Pipeline

Visual Impact Assessment for Pipeline Segments in Monongahela and George Washington National Forests

Updated

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ATLANTIC COAST PIPELINE
VISUAL IMPACT ASSESSMENT FOR PIPELINE SEGMENTS IN MONONGAHELA AND GEORGE WASHINGTON NATIONAL FORESTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICES

ACRONYMS

ACP	Atlantic Coast Pipeline
ANST	Appalachian National Scenic Trail
Atlantic	Atlantic Coast Pipeline, LLC
BRP	Blue Ridge Parkway
DEM	Digital Elevation Model
EIS	environmental impact statement
GIS	Geographic Information Systems
GWNF	George Washington National Forest
HDD	Hydraulic Directional Drill
KOP	Key Observation Point
MNF	Monongahela National Forest
MP	milepost
NPS	National Park Service
SIO	Scenic Integrity Objective
SMS	USFS Scenery Management System
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USGS	United States Geological Survey
VIA	Visual Impact Analysis

1.0 INTRODUCTION

1.1 OVERVIEW

Atlantic Coast Pipeline, LLC (Atlantic), conducted a visual impact assessment (VIA) to describe conditions and potential visual impacts for the segments of the proposed Atlantic Coast Pipeline (ACP) that cross the Monongahela National Forest (MNF) in West Virginia and George Washington National Forest (GWNF) in Virginia. This VIA also describes conditions and potential impacts to the Appalachian National Scenic Trail (ANST), which is located on the GWNF at the ACP crossing location, as well as the Blue Ridge Parkway (BRP), which is administered by the National Park Service (NPS). This VIA was completed by staff from ERM (Atlantic's contractor), as well as staff from Truescape, LTD, ERM's subcontractor responsible for preparing visual simulations to support the visual assessment. This report presents findings of field studies and desktop analysis.

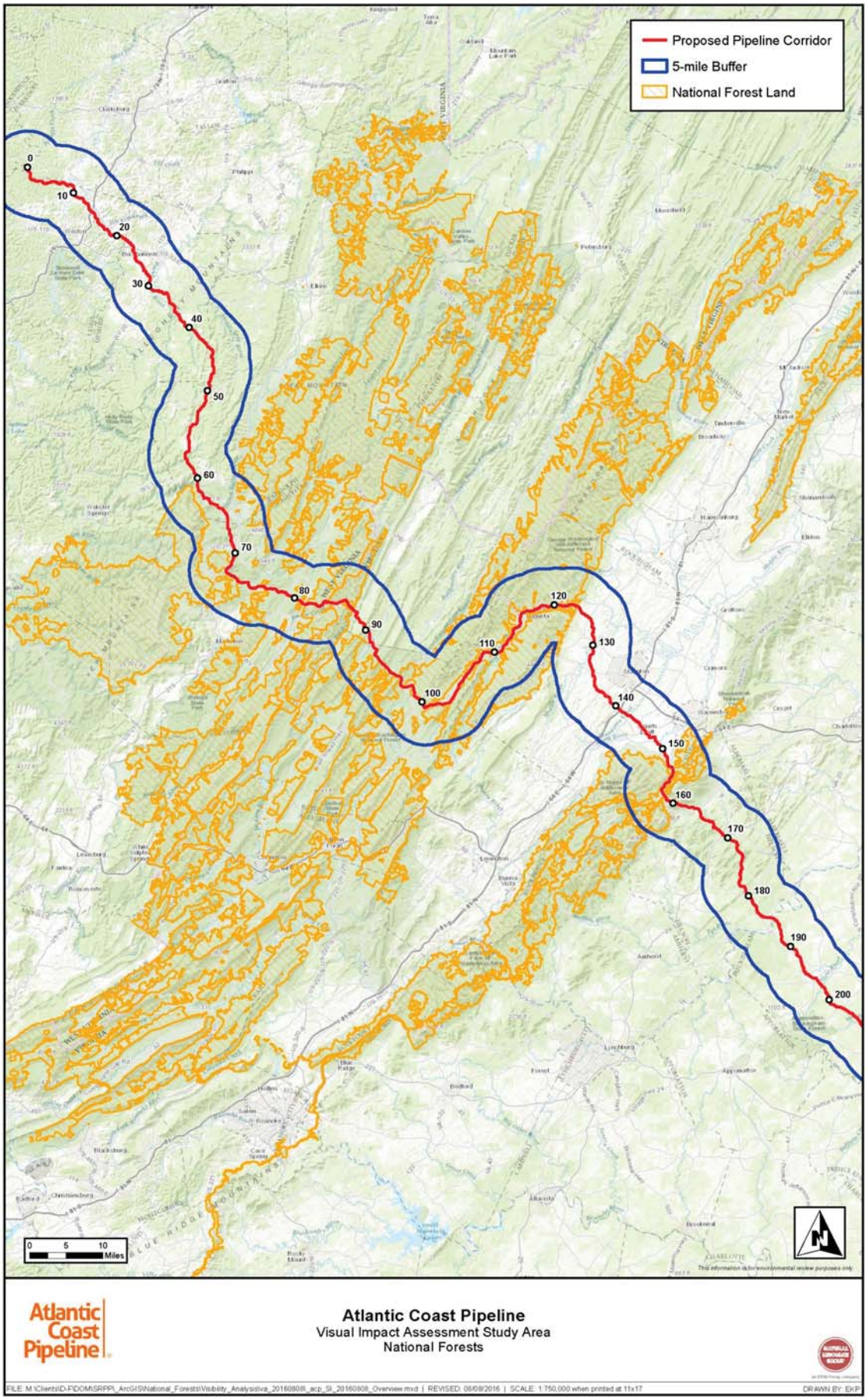
1.1.1 Seen Area Analysis and VIA Study Area

At the initiation of the VIA project, Atlantic met with the U.S. Forest Service (USFS) to understand the content and analyses that the USFS required for their decision-making process regarding consideration of visual impacts resulting from the proposed action.

A USFS memorandum dated September 14, 2015, states that a "seen area" analysis should be completed, including all land up to 5 miles from the ACP centerline up to 5 miles beyond the National Forest proclamation boundary (USFS, 2015). The seen area analysis is a required first step in evaluating visual impacts for the USFS (see Section 2). This analysis requires the use of topographic data in a Geographic Information System (GIS) to determine areas that would be visible from a given feature (in this case the ACP proposed route). The seen area analysis assumes clear weather and absolutely no intervening vegetation or structures (i.e., a "cleared ground surface" analysis. In this sense, the seen area analysis represents a "worst-case" scenario that requires verification through on-the-ground observations of actual views with existing vegetation and other features not included in the seen area topographic mapping.

Consistent with the USFS memo, the study area for this VIA consists of a 5-mile buffer around the ACP's proposed centerline, as shown in Figure 1-1. Unless otherwise specified, the analyses in this VIA reflect the proposed route filed with FERC on July 18, 2016. The seen area analysis is discussed in more detail in Section 2.1.

Figure 1-1: VIA Study Area for the ACP



1.1.2 Proposed Action

The ACP would cross approximately 5.5 miles of USFS-owned land within the MNF, as well as 14.6 miles of USFS-owned land within the GWNF. The landscape within the study area is generally characterized by mountainous terrain, largely covered by dense deciduous and evergreen forests. West of the Greenbrier River (within the MNF), the ACP corridor crosses the Appalachian Plateau physiographic region, an area characterized by relatively flat ridgetops at approximately 4,400 to 4,800 feet above sea level, incised by stream and river valleys as low as 2,300 feet. East of the Greenbrier River (the eastern MNF and western GWNF), the corridor is within the Valley and Ridge region. This area is characterized by narrow ridges running northeast-southwest, with maximum elevations between 3,200 and 3,800 feet, interspersed with broad stream and river valleys, often with elevations below 2,000 feet. East of the City of Staunton (in the GWNF Glenwood-Pedlar Ranger District), the corridor crosses through the Blue Ridge Mountain region, which reaches heights of approximately 3,500 feet along the BRP and ANST. River and stream valleys are often cleared and used for agriculture or livestock grazing, and also serve as north-south transportation routes.

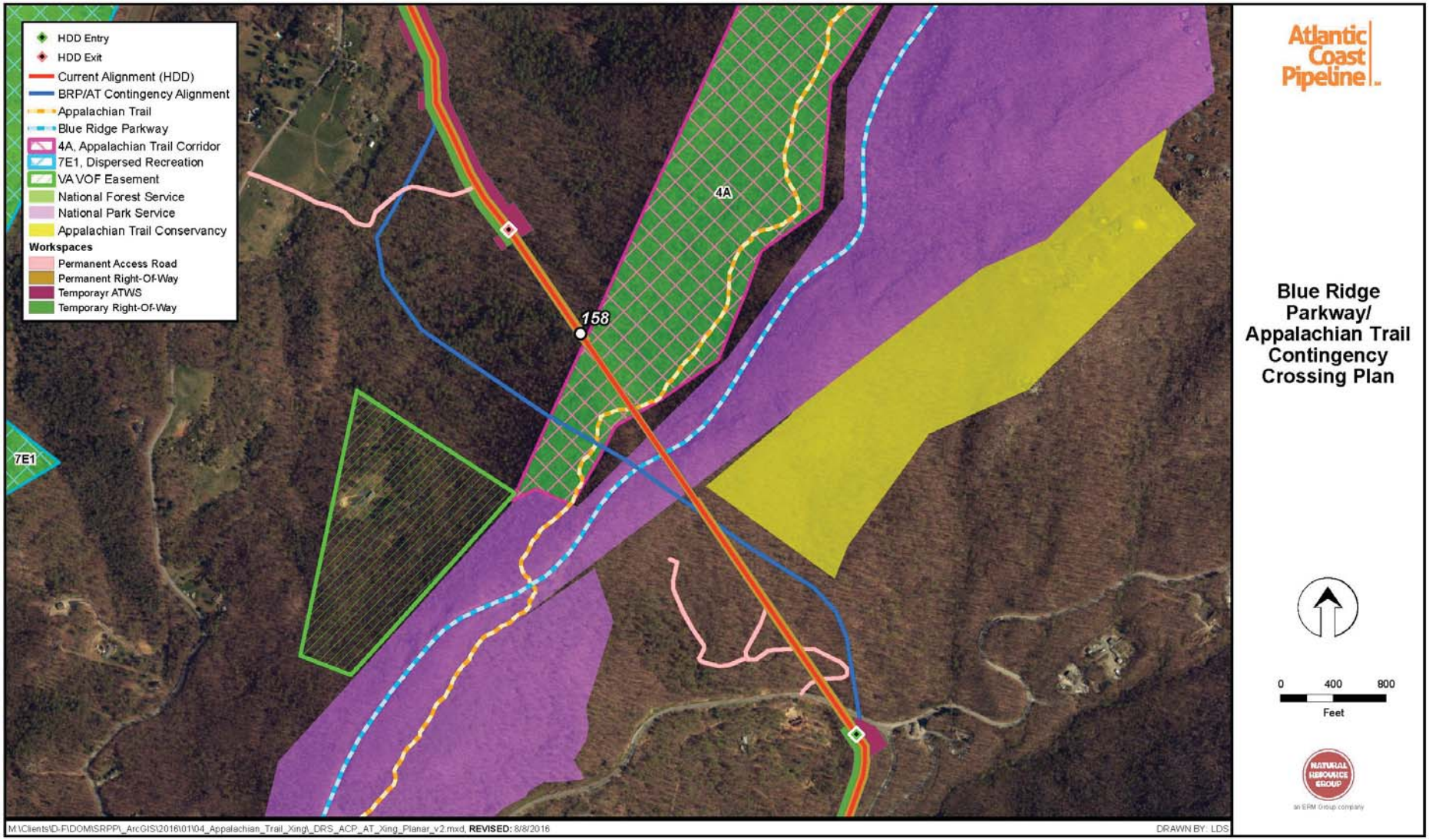
1.1.3 Contingency Analysis

Under the Proposed Action, the ACP corridor would cross underneath the Blue Ridge Mountains (including the BRP and ANST) using the Horizontal Directional Drill (HDD) process, from approximately milepost (MP) 157.8 to 158.7. Although Atlantic expects the HDD to be successful, the Project has also developed a contingency plan for crossing the BRP and ANST. Under the contingency plan, the ACP corridor would cross the BRP and ANST, the surrounding USFS and NPS lands, and a small amount of surrounding private land using the Direct Pipeline Drill directional bore process. Under the contingency plan, the remainder of the ACP corridor on private lands beyond the Direct Pipeline Drill would consist of typical trenched pipeline construction on both sides of the Blue Ridge. Figure 1-2 shows the contingency route relative to the proposed route, while Figure 1-3 shows a detail of the location of the entry and exit points for the contingency route bore.

1.2 U.S. FOREST SERVICE SCENERY MANAGEMENT SYSTEM

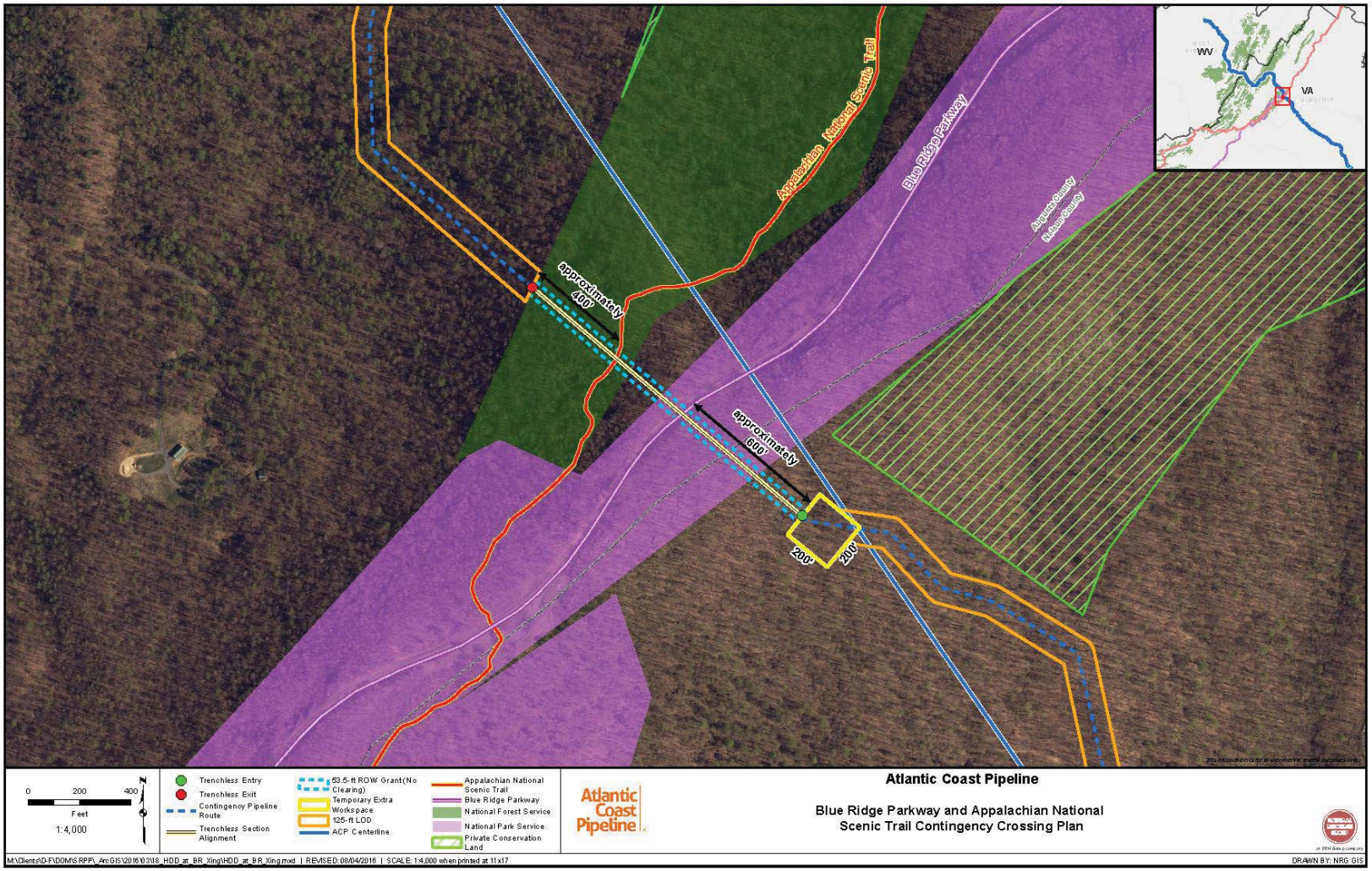
The information in this VIA, and particularly the evaluation of visual impacts in Section 4.0, is intended to be consistent with the USFS' Scenery Management System (SMS). The SMS, which is a "system for the inventory and analysis of the aesthetic values of National Forest lands" (U.S. Department of Agriculture [USDA] 1995), is described in *Agriculture Handbook 701, Landscape Aesthetics - A Handbook for Scenery Management*. 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 USFS professionals and forest managers. It takes into account a wide variety of existing and desired landscape 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. This section describes the major concepts of the SMS relevant to the VIA, and also provides the SMS ratings for the portions of the MNF and GWNF potentially affected by the ACP.

Figure 1-2: Contingency Route



T-8

Figure 1-3: Contingency Route Entry/Exit Areas



T-9

1.2.1 Distance Zones

Distance zones are 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 of…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).

1.2.2 Scenic Classes

Scenic classes recognize the idea that all National Forests have "value" as scenery. The classes, which range from 1 (most valuable scenery) to 7 (least valuable scenery) are a measurement that can be used to consistently evaluate the scenic value and relative scenic importance of a particular area. They are used in forest planning to compare values of scenery with other types of resources. The higher the scenic value (i.e., Scenic Classes 1 and 2), the more important it is to maintain.

1.2.3 Scenic Integrity Objectives

Whereas distance zones, scenic classes, and sensitivity levels express existing conditions within a forest, Scenic Integrity Objectives (SIOs) express the desired future aesthetic condition of a forest. "Scenic integrity is a continuum ranging over five levels of integrity from very high to very low" (USDA, 1995). SIO descriptions, as defined below, generally express a comparison to existing or preferred conditions (USDA, 1995):

- Very High: "landscapes where the valued landscape character 'is' intact with only minute if any deviations."

- High: "landscapes where the valued landscape character 'appears' intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident."

- Moderate: "landscapes where the valued landscape character 'appears slightly altered.' Noticeable deviations must remain visually subordinate to the landscape character being viewed."

- Low: "landscapes where the valued landscape character 'appears moderately altered' Deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural

openings, vegetative type changes or architectural styles outside the landscape being viewed."

- Very Low: "landscapes where the valued landscape character 'appears heavily altered.' Deviations may strongly dominate the valued landscape character."

Based on discussions with USFS personnel, Atlantic understands that SIO designations do not exist for the MNF. At a March 4, 2016 meeting with Atlantic, the USFS agreed that Scenic Class (which is available for MNF) would be an acceptable proxy for SIO. Atlantic understands that these two sets of designations are not the same. Scenic Classes are *descriptive*, while SIOs are *prescriptive*. For example, "heavily altered landscapes can be reclaimed [i.e., a higher SIO can be achieved] through future management activities and natural regeneration of vegetation" (USDA, 1995). Given the absence of SIO designations, scenic classes are the best available way to understand the ACP's potential visual impacts on the MNF. Figure 1-4 shows the SIO designations for the portions of GWNF within the VIA study area. Figure 1-5 shows the Scenic Classes for the portions of MNF within the VIA study area.

1.3 NATIONAL PARK SERVICE VISUAL IMPACT FRAMEWORK

The information in this VIA, and particularly the evaluation of visual impacts in Section 4.0, is intended to be consistent with NPS management designations and visual impact assessment techniques for the BRP.

The segment of the BRP crossed by the ACP is within the "Scenic Character" management zone, as defined in the 2013 General Management Plan and environmental impact statement (EIS) for the BRP. The Scenic Character zone identifies "areas of the parkway that would emphasize protection and sightseeing opportunities of the scenic landscapes and natural and cultural settings of the central and southern Appalachian highlands" (NPS, 2013). The general intent of the Scenic Character zone is to maintain "the visual variety of the parkway road's forested and pastoral/rural landscape settings consistent with early parkway design" (NPS, 2013).

While the Scenic Character management zone emphasizes high-quality visual experiences for BRP visitors, it does not require that views be absent of evidence of human activity. As such, the intent of the Scenic Character management zone is generally comparable to that of Medium or High SIO designations in GWNF.

Figure 1-4: Scenic Integrity Objectives, GWNF

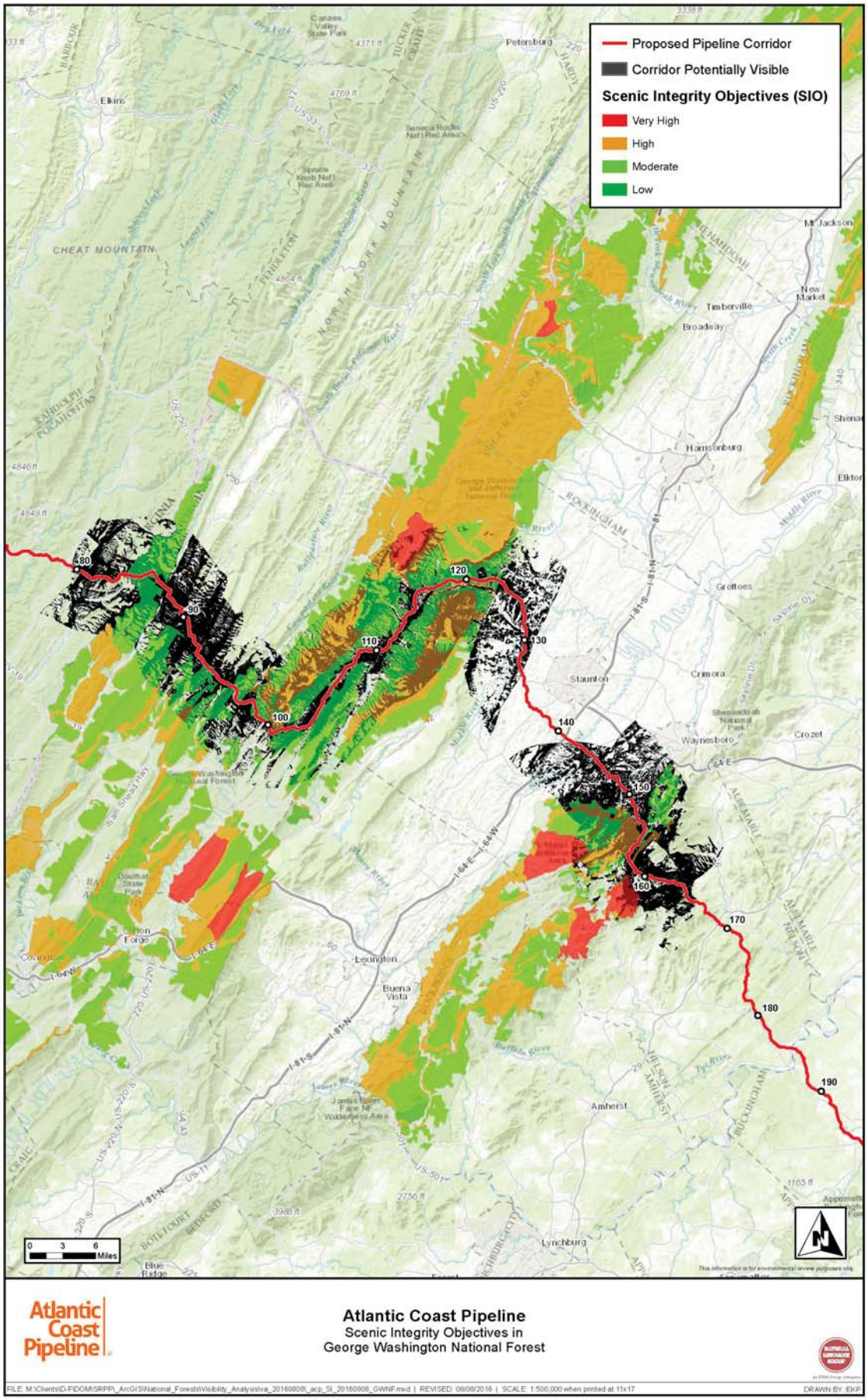
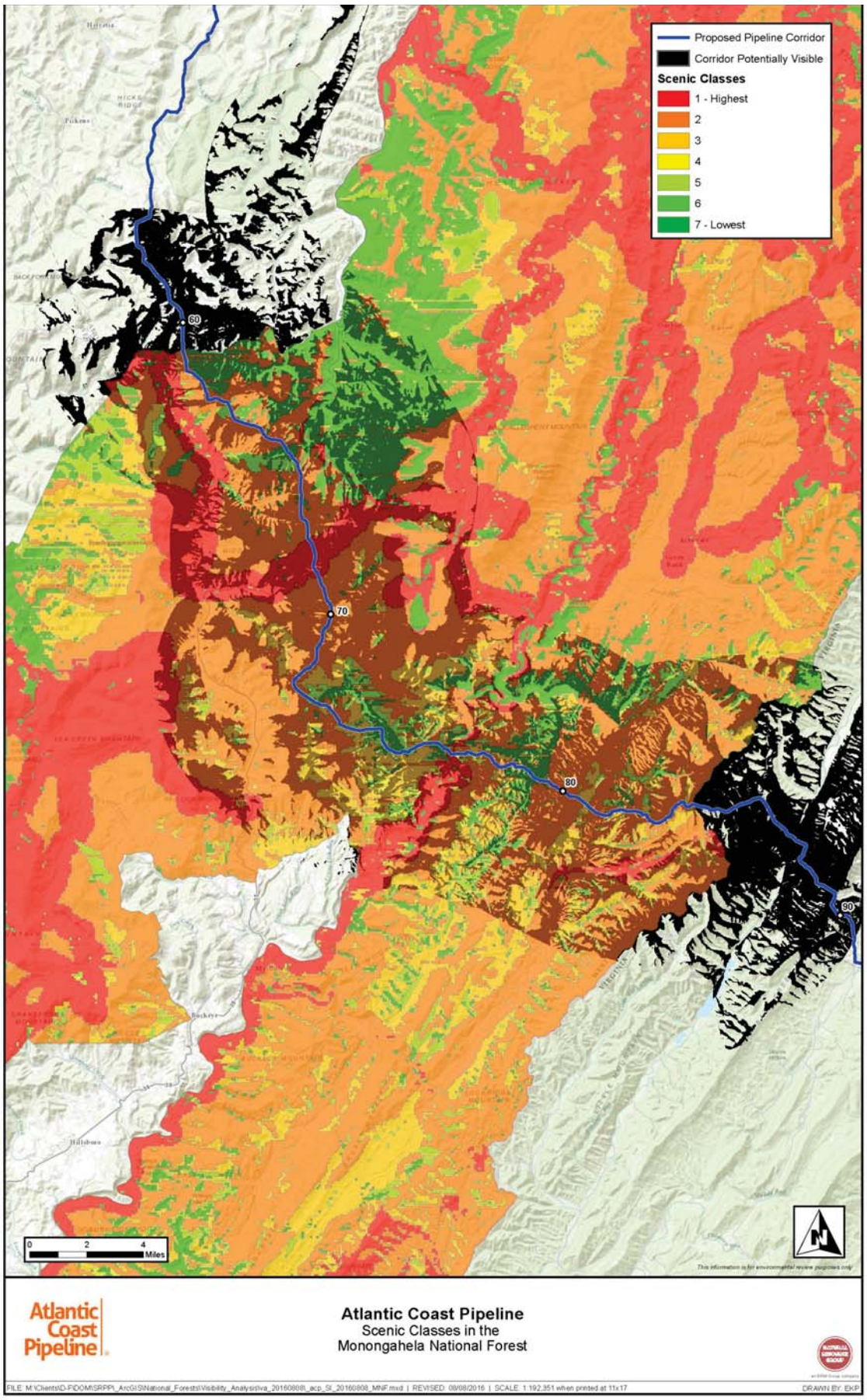


Figure 1-5: Scenic Classes, MNF



The NPS does not have an agency-wide equivalent of the USFS SMS. Instead, NPS manages visual resources and evaluates the visual impacts of proposed activities on a unit-by-unit basis. For the BRP, NPS uses a Scenery Conservation System to

> provide direction for inventory, analysis, and protection planning for desired conditions. This system is designed to maintain or improve the scenic landscape character and level of scenic quality of landscape areas viewed from parkway overlooks, vistas, and agricultural openings (NPS, 2013).

The basis for the NPS Scenery Conservation System is *The Blue Ridge Parkway Scenery Conservation System Guidebook*, a publication that is not readily available to Atlantic. Based on the information in the General Management Plan and EIS for the BRP, Atlantic understands that the Scenery Conservation System includes components that are similar to the USFS SMS, including a detailed inventory of existing scenic views, determinations of the sensitivity of those views to change, and identification of desired visual conditions (NPS, 2013).

Because of the linear nature of the BRP, NPS owns a relatively small amount of the land within the BRP viewshed. As a result,

> scenery conservation works with the idea of a "Borrowed Landscape." Maintaining scenery viewed from overlooks and along the parkway road involves working with 29 county governments, private landowners, developers, and other agencies. Because the scenery is borrowed from adjacent lands that are not administered by the National Park Service, the parkway's scenery system is not a direct control "management" system (NPS, 2013).

2.0 METHODS

Visual impacts are defined as the change in aesthetic value resulting from the introduction of modifications to the landscape. Atlantic initiated consultation with the USFS to identify and evaluate these impacts for the VIA. Impact assessment involved four primary steps:

- seen area analysis and identification of Key Observation Points (KOPs);
- field survey;
- simulation or other form of visual analysis to understand post-ACP visual conditions; and
- preparation of this report, summarizing visual conditions and impacts.

This section describes the methods used to complete each of the first three steps.

2.1 SEEN AREA ANALYSIS AND IDENTIFICATION OF KEY OBSERVATION POINTS

As described in Section 1.1.1., Atlantic prepared a seen area analysis as the initial step in evaluating visual impacts. The seen area analysis is based on the ACP preferred route (as mapped by Atlantic) and topography from 10-meter Digital Elevation Model (DEM) data provided by the United States Geological Survey (USGS). The analysis was performed using the Viewshed Analysis tool in ArcGIS, the industry standard for GIS mapping and analysis.

In addition to requesting the seen area analysis, the USFS provided lists of potential KOPs (along with latitude/longitude coordinates) to be evaluated in this study. Figures 2-1 through 2-3 show the seen area for the GWNF and MNF, as well as all originally-suggested KOPs. The USFS selected these KOPs to represent locations where the ACP crosses or could potentially be seen from roads, trails and floatable rivers, and other recreational or publicly used areas within National Forest lands (USFS 2015). Table 2-1 includes the list of suggested KOPs, as well as a determination, based on field work (see Section 2.2), of whether existing vegetation or other conditions permitted actual views of the ACP. Atlantic assigned unique ID numbers to each of these points for ease of identification.[1]

As requested by the USFS in its September communication, Atlantic met with the USFS on October 1, 2015 at Dominion Virginia Power's Staunton, VA offices to review the seen area analysis and list of KOPs, particularly the potential (or lack thereof) for actual views of the ACP, in light of existing vegetation at each KOP. As a result of this review, several KOPs were removed from further evaluation due to the absence of actual views of the proposed pipeline corridor. The discussion at the October 1 meeting also touched on concerns about potential views of the pipeline right-of-way from the ANST within the Three Ridges Wilderness area, including Bee Mountain. As a result of the October 1 meeting, Atlantic added four KOPs (numbers 38 through 41 in Table 2-1) to the list of KOPs provided by USFS.

[1] The seen area analysis and KOP identification process were performed twice: once in October 2015, and again in March 2016. The second analysis was necessitated by a major ACP reroute in early 2016. That reroute resulted in the elimination of several KOPs from analysis, and the addition of others. As a result, there are gaps in the KOP numbering sequence.

Figure 2-1: Seen Area Analysis and KOPs, GWNF (East)

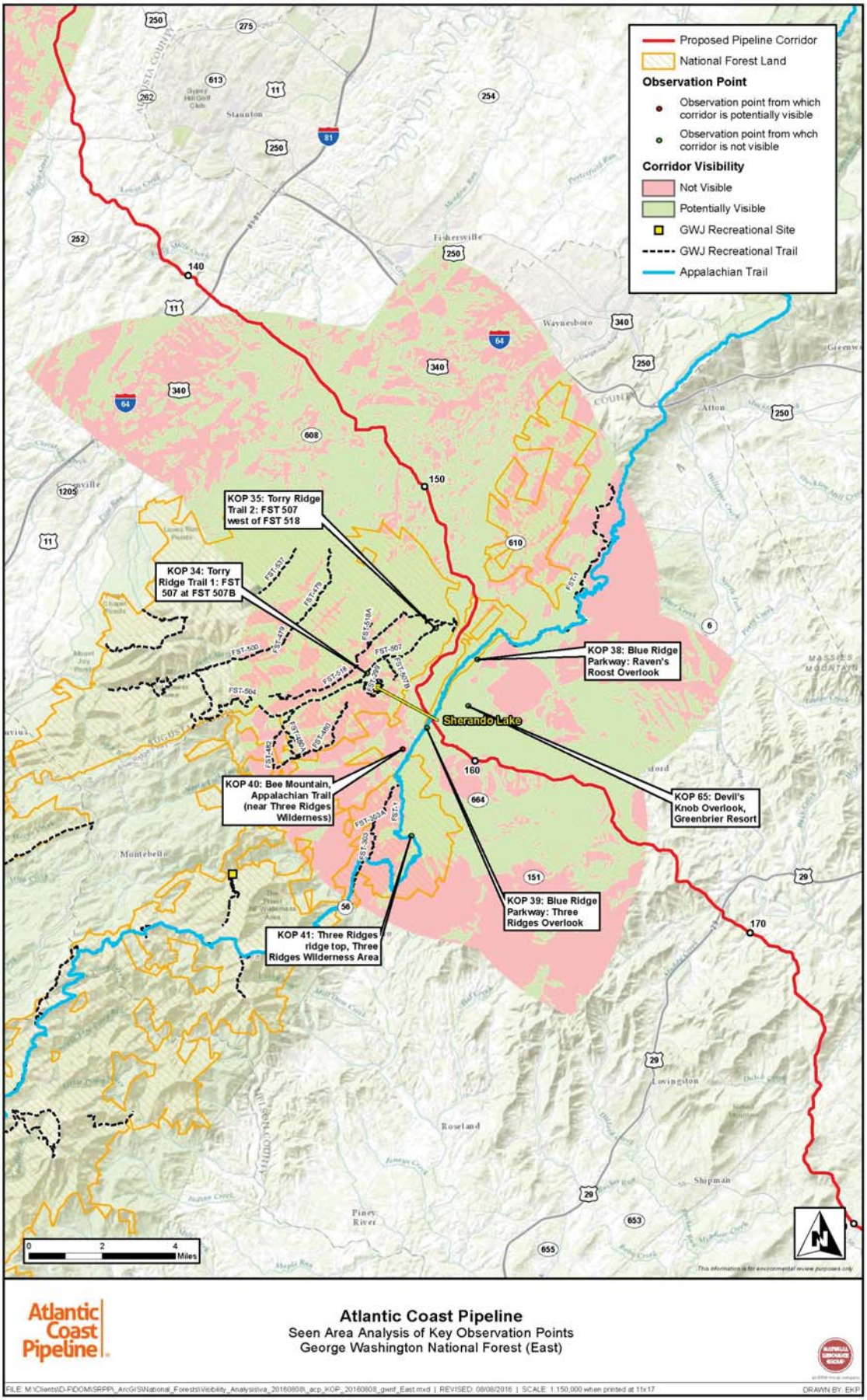


Figure 2-2: Seen Area Analysis and KOPs, GWNF (West)

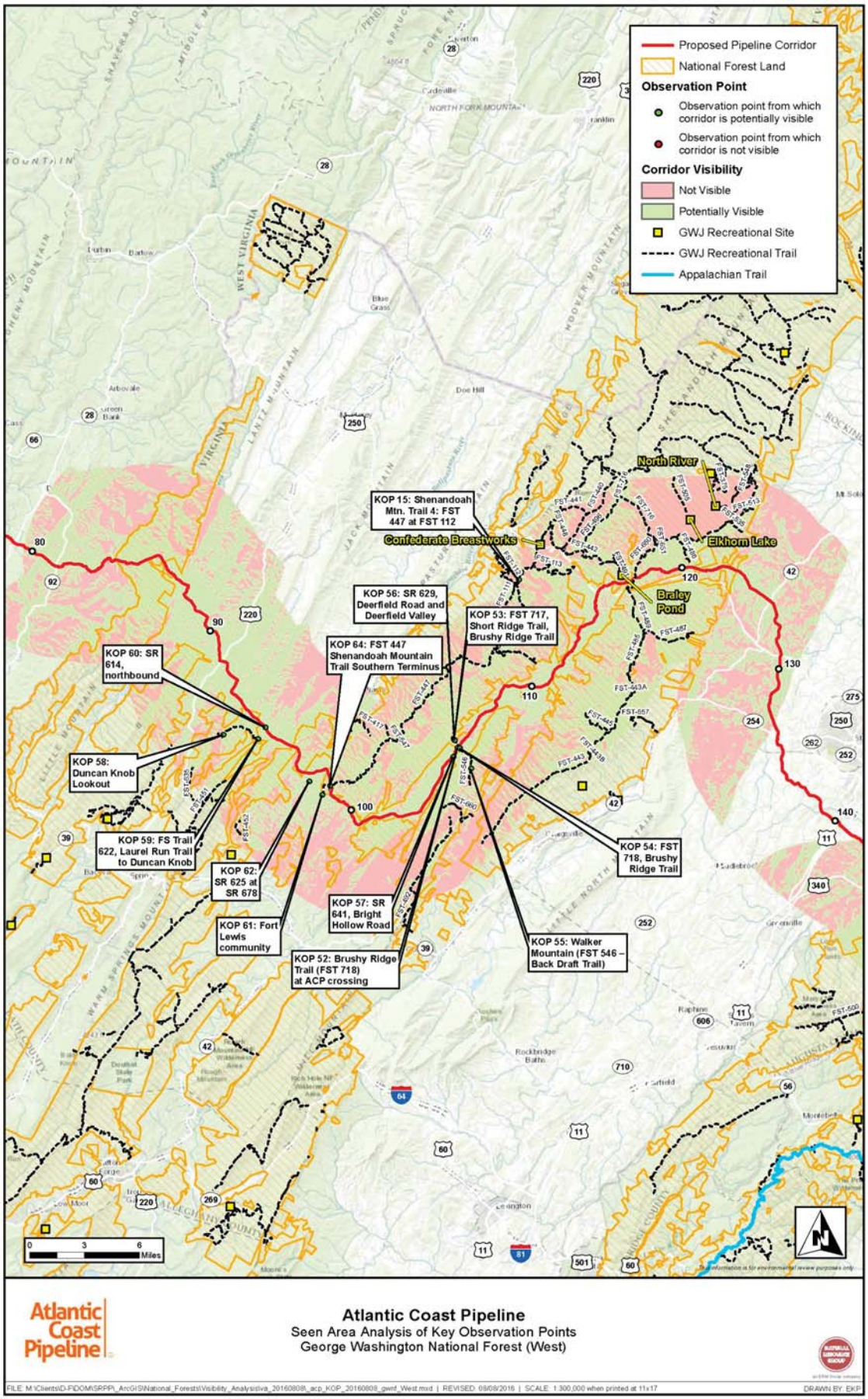


Figure 2-3: Seen Area Analysis and KOPs, MNF

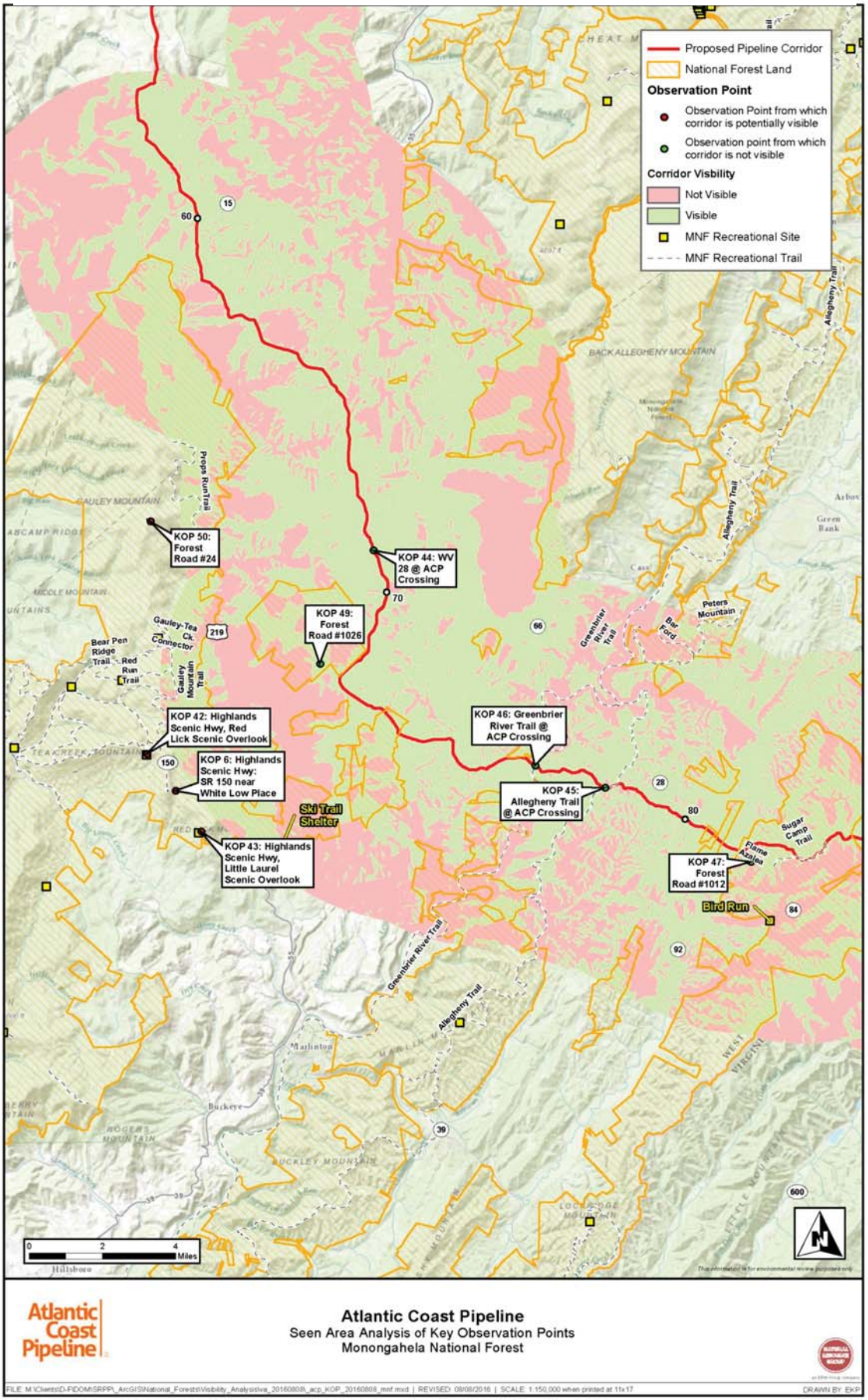


TABLE 2-1

Atlantic Coast Pipeline Key Observation Points

ID[1]	Location/Description	Latitude (decimal degrees)	Longitude (decimal degrees)	In Seen Area?	Observations and recommendations
Monongahela National Forest					
6	Highlands Scenic Hwy: SR 150 near White Low Place	38.325861	-80.149833	Yes	No further analysis: Intervening topography and vegetation make views of corridor unlikely.
42	Highlands Scenic Hwy, Red Lick Scenic Overlook	38.340653	-80.164013	Yes	No further analysis: Intervening topography and vegetation make views of corridor unlikely.
43	Highlands Scenic Hwy, Little Laurel Scenic Overlook	38.309747	-80.137148	Yes	No further analysis: Intervening topography and vegetation make views of corridor unlikely.
44	WV 28 @ ACP Crossing	38.420182	-80.049290	Yes	No further analysis: KOP is not on USFS-owned land.
45	Allegheny Trail @ ACP Crossing	38.325259	-79.934017	Yes	No further analysis: KOP is not on or visible from USFS-owned land.
46	Greenbrier River Trail @ ACP Crossing [2]	38.334449	-79.969086	Yes	No further analysis: Greenbrier River crossing location would not be on or visible from USFS-owned land
47	Forest Road #1012	38.295338	-79.861307	Yes	No further analysis: KOP is entirely forested, at similar elevation, and looking perpendicular to the corridor.
49	Forest Road #1026 [3]	38.375442	-80.076633	Yes	No further analysis: No clear view of corridor from this location. Open pasture at top of mountain, but views toward corridor are screened by trees.
50	Forest Road #24	38.432544	-80.161221	Yes	No further analysis: FR 24 runs along Gauley Mountain, which is heavily forested. While sporadic views through trees could exist, the corridor is nearly 6 miles away, with intervening topography and vegetation.
51	Forest Road #24	38.590442	-79.823805	Yes	
George Washington National Forest					
15	Shenandoah Mtn. Trail 4: Forest Service Trail (FST) 447 at FST 112	38.283878	-79.406025	Yes	New analysis recommended to reflect current ACP alignment.
34	Torry Ridge Trail 1: Torry Ridge Trail (FST 507) at FST 507B [4]	37.929205	-79.008426	Yes	New analysis recommended to reflect current ACP alignment and/or contingency route.
35	Torry Ridge Trail 2: Torry Ridge Trail (FST 507) west of FST 518 [5]	37.946467	-78.973737	Yes	NA: Analysis already completed.
38	Blue Ridge Parkway:[6] Raven's Roost Overlook	37.933781	-78.953122	Yes	NA: Analysis already completed.
39	Blue Ridge Parkway: [6] Three Ridges Overlook	37.907171	-78.979086	Yes	NA: Analysis already completed.
40	Bee Mountain, Appalachian National Scenic Trail (near Three Ridges Wilderness)	37.898960	-78.991512	Yes	Further analysis recommended.
41	Three Ridges ridge top, Three Ridges Wilderness Area	37.864571	-78.987966	Yes	No further analysis: Corridor is at top of ridge, well above viewer, and through dense forest. View is unlikely.
52	Brushy Ridge Trail (FST 718) at ACP crossing	38.151542	-79.470442	Yes	No further analysis: Corridor is at top of ridge, well above viewer, and through dense forest. View is unlikely.
53	FST 717, Short Ridge Trail, Brushy Ridge Trail	38.157792	-79.473510	Yes	No further analysis: Trail and overall mountainside are heavily forested. No obvious outcroppings or clearings where a clear view is likely.
54	FST 718, Brushy Ridge Trail	38.151175	-79.468091	Yes	No further analysis: Corridor is not on USFS land for most of Deerfield Valley, and parallels VA 629, making views unlikely.
55	Walker Mountain (FST 546 – Back Draft Trail)	38.135072	-79.457438	Yes	No further analysis: Trail and overall mountainside are heavily forested. No obvious outcroppings or clearings where a clear view is likely.
56	SR 629, Deerfield Road and Deerfield Valley	38.157551	-79.473170	Yes	No further analysis: View from publicly accessible area at base of fire tower is screened by vegetation.
57	SR 641, Bright Hollow Road	38.144371	-79.475055	Yes	No further analysis: Trail and overall mountainside are heavily forested. No obvious outcroppings or clearings where a clear view is likely.
58	Duncan Knob Lookout	38.164775	-79.704961	Yes	No further analysis: The ACP crossing of VA 614 is not on USFS land; nearby USFS land is moderate to low SIO.
59	FS Trail 622, Laurel Run Trail to Duncan Knob (trailhead shown in coordinates)	38.161151	-79.670111	Yes	No further analysis: Trail and overall mountainside are heavily forested. No obvious outcroppings or clearings where a clear view is likely.
60	SR 614, northbound	38.170135	-79.662638	Yes	No further analysis: Topography of this location makes views of corridor unlikely; corridor here would also be under pasture, not forest.
61	Fort Lewis community	38.115896	-79.606576	Yes	No further analysis: KOPs 60, 61, and 62 do not provide potential views of the ACP.
62	SR 625 at SR 678	38.126913	-79.619436	Yes	
63	Cowpasture River Crossing (general location in the vicinity of KOPs 61 and 62)	NA	NA	Yes	
64	Shenandoah Mountain Trail (FST 447) Southern Terminus	38.122953	-79.598759	Yes	The ACP route has changed since this KOP was identified; no simulation is available, but conditions and impacts are discussed qualitatively.
65	Devil's Knob Overlook, Wintergreen Resort [3]	37.915545	-78.958294	Yes	Further analysis recommended to reflect contingency route.

Notes

1 The ACP alignment has changed since the initial set of KOPs was identified. KOPs 1-5, 7-14, and 15-33 had potential views of the previous alignment, but no longer have a potential view of the current alignment. As a result, these ID numbers no longer appear in this table.

2 Subsequent to USFS identification of this KOP, the Greenbrier River crossing location was shifted approximately 1,200 feet north.

3 Modified location to approximately 3,000 feet east (crow-fly) of location provided by USFS.

4 Modified location to 3,555 feet southwest (crow-fly) of location provided by USFS.

5 Modified location to 2,165 feet northeast (crow-fly) from location provided by USFS.

6 KOP added by Atlantic to original list provided by USFS.

After announcement of the revised ACP route in February 2016, Atlantic re-initiated the KOP selection process with the USFS, provided a revised list of potential KOPs to the USFS, and discussed that list (and the visual impact assessment process in general) at a March 4, 2016 meeting with the USFS at the North River Ranger District in Harrisonburg, Virginia. The USFS provided a list of additional recommended KOPs via email on March 11. The resulting list of KOPs comprises numbers 42 through 65 in Table 2-1.

As a result of consultation with the USFS, Atlantic further revised the ACP route in July 2016. The current proposed route runs north of Fort Lewis. As a result, KOPs 61 through 64 no longer provide a potential view of the ACP corridor. The current route would cross the Shenandoah Mountain Trail at approximately MP 98.7. While field surveys did not include this location, and no KOP was identified to address this crossing, Section 3.2.6 describes this location, and Section 4.1.3 discusses visual impacts at this location.

2.2 FIELD SURVEYS

Atlantic conducted field surveys in October and November of 2015 and March 2016. The primary purpose of these field surveys was to gain a better understanding of actual conditions (terrain, vegetation, accessibility, etc.) at and near the KOPs provided by the USFS. Field surveys included driving along many of the state and USFS roads near the KOPs and throughout the pipeline corridor, to obtain a broad understanding of how the ACP corridor might (or might not) be visible within the region as a whole. Where feasible, conditions at each KOP were documented with photography.

The field surveys served as input into whether actual views of the ACP corridor existed (considering vegetation and site-specific conditions), as well as the type of analysis that could best characterize the ACP's potential visual impacts to USFS and NPS lands, as viewed from these locations.

2.2.1 2015 Field Surveys

Field work in 2015 (for the initial ACP route) consisted of direct visits to KOPs in late October 2015 (with the majority of leaves still on deciduous trees) and early November 2015 (primarily leaf-off conditions). During the October survey, Atlantic was able to visit most USFS-designated KOPs within the "seen area" (except for KOPs 34 and 35 in Table 2-1). The October survey also included observation of the general terrain, scenery, and visibility along the public and Forest Roads listed in Table 2-1. In general, the potential for views along those roads was similar to the potential for views at the nearest KOP. During the early November field survey, KOPs 38-41 were visited, and alternative locations (locations with clearer views of the ACP corridor) were identified for KOPs 34 and 35, as noted in Table 2-1.

Atlantic personnel discussed the results of the field surveys with the USFS at a meeting held in Roanoke, VA on November 19, 2015. At that meeting, Atlantic and the USFS agreed on the KOPs that required visual analysis, as well as the KOPs that did not require further analysis, based on field survey photography, topographic maps, and publicly available satellite maps and photos.

2.2.2 2016 Field Surveys

The February 2016 major route alteration for the ACP resulted in approximately 95 miles of new pipeline corridor that had not been discussed during previous consultation with the USFS. As described above, Atlantic and the USFS identified additional KOPs for this route alteration. The new KOPs were visited in mid-March 2016. The purpose and outcomes of the March 2016 field survey was similar in scope to the October and November 2015 surveys.

2.3 VISUAL ANALYSIS TYPES

Table 2-2 summarizes the recommended types of analysis for each of the KOPs for which actual views of the ACP corridor potentially exist. Section 2.3 describes these techniques. KOPs not included in Table 2-2 did not offer potential views of the ACP corridor, primarily due to the presence of vegetation between the viewer and the corridor.[2]

TABLE 2-2

Visual Analyses Conducted for KOPs Selected for Further Study

ID	Location	Type of Analysis
Monongahela National Forest		
	No KOPs on or within view USFS land, with views of the ACP corridor.	NA
George Washington National Forest		
15	Shenandoah Mtn. Trail 4: Forest Service Trail 447 near Tims Knob	Indicative Simulation
34	Torry Ridge Trail 1 (revised location, per Table 2-1)	Full simulation (Proposed Action) Full simulation (Contingency Plan)
35	Torry Ridge Trail 2 (revised location, per Table 2-1)	Full simulation
38	Blue Ridge Parkway: Raven's Roost Overlook	Full simulation
39	Blue Ridge Parkway: Three Ridges Overlook	Full simulation showing no trees at overlook
40	Appalachian National Scenic Trail: Bee Mountain, near Three Ridges Wilderness	Full simulation (Proposed Action) Full simulation (Contingency Plan)
65	Wintergreen Resort, Devil's Knob Overlook	Full simulation (Contingency Plan)

2.3.1 Indicative Simulation

In an indicative simulation, Truescape overlays aerial photography onto a digital terrain model, and then adds simple graphics (in this case, a red line) to indicate the approximate location of the ACP corridor. This technique is intentionally generalized and does not simulate the location and height of vegetation or other aboveground structures such as transmission lines. It is primarily intended to determine whether the ACP right-of-way could be seen from the KOP, and whether a more detailed simulation would be warranted.

2.3.2 Full Visual Simulations

As part of this project, Truescape developed a series of TrueView [3] photo simulations. TrueView is a high resolution photo simulation that accurately represents the "human field of

[2] While KOP 45 (Allegheny Trail) and KOP 46 provided a view of the pipeline corridor, those views were not on and/or near USFS-owned land, and were thus excluded from this analysis.

[3] A registered trademark of Truescape, Ltd.

view" that would be seen if standing at the actual KOP. Specifically, TrueView simulates a 124 degree horizontal field of view and a 55 degree vertical field of view.

The photographic base of each TrueView simulation consists of a series of nine overlapping photographs (from a 16 megapixel digital camera) that are digitally color-adjusted and "stitched" together to create a single, seamless image. Truescape then develops a 3D model of the terrain in the photograph, using detailed topographic mapping (including Lidar, where available). The terrain model is matched to the photograph using known surveyed locations within the field of view. Project components and right-of-way locations, based on information provided by Atlantic, are then included in the terrain model, which is incorporated into the base photography. Project information includes not only location, but also color and texture of aboveground facilities (if any). The result is an image that accurately displays the location of proposed ACP facilities and rights-of-way as they would appear to a viewer at each KOP.

3.0 RESULTS OF VISUAL ANALYSES

This section presents the results of the field surveys and visual analyses described in Section 2.0. Appendix A contains the photographs taken during the field surveys. Unless otherwise specified, the discussions in this section and the remainder of this VIA refer to conditions along the ACP's permanent right-of-way that would be present several years after completion of construction on the affected pipeline segment.

3.1 INDICATIVE SIMULATIONS

Atlantic conducted indicative simulations for one KOP, as listed in Table 2-2, using the methodology described in Section 2.3.1.

3.1.1 KOP 15: Shenandoah Mountain Trail 4

Figure 3-1 shows the raw baseline photography (prior to the digital "stitching" described in Section 2.3.2) and the indicative simulation image at KOP 15. The red line in this simulation shows the location of the corridor from the perspective of a view at this KOP. Based on these images, the ACP corridor would not actually be visible due to intervening vegetation. This KOP was not evaluated further.

3.2 FULL VISUAL SIMULATIONS (PROPOSED ACTION)

Atlantic conducted full visual simulations of six KOPs, as listed in Table 2-2, using the TrueView methodology described in Section 2.3.2. The subsections below present the simulations, showing the ACP corridor as it would be seen from each of these KOPs. This includes imagery of existing conditions, as well as separate simulations of views approximately one growing season, 5 years, and 15 to 20 years following construction. High-resolution, large-format versions of these simulations are provided in Appendix B.

3.2.1 KOP 34: Torry Ridge Trail 1

Figures 3-2, 3-3, and 3-4 show the full simulation images for KOP 34. Figure 3-4 shows this simulation with the visible and non-visible portions of the permanent right-of-way outlined in yellow, for viewer clarity due to the relatively dark atmospheric conditions during baseline photography and presence of shade at the KOP. From this KOP, the ACP corridor at approximately MP 157 would be visible as a narrow vegetated (but not forested) band on the far side of the Back Creek valley, approximately 1.2 miles to the southeast. Figures 3-2, 3-3, and 3-4 also show the ACP corridor up to approximately MP 157.7 as it starts to climb toward the BRP/ANST corridor, approximately 2.0 miles to the southeast. The visible portion of the right-of-way ends where Atlantic's proposed HDD would be located. Both of these views are in the middleground, as defined by USFS.

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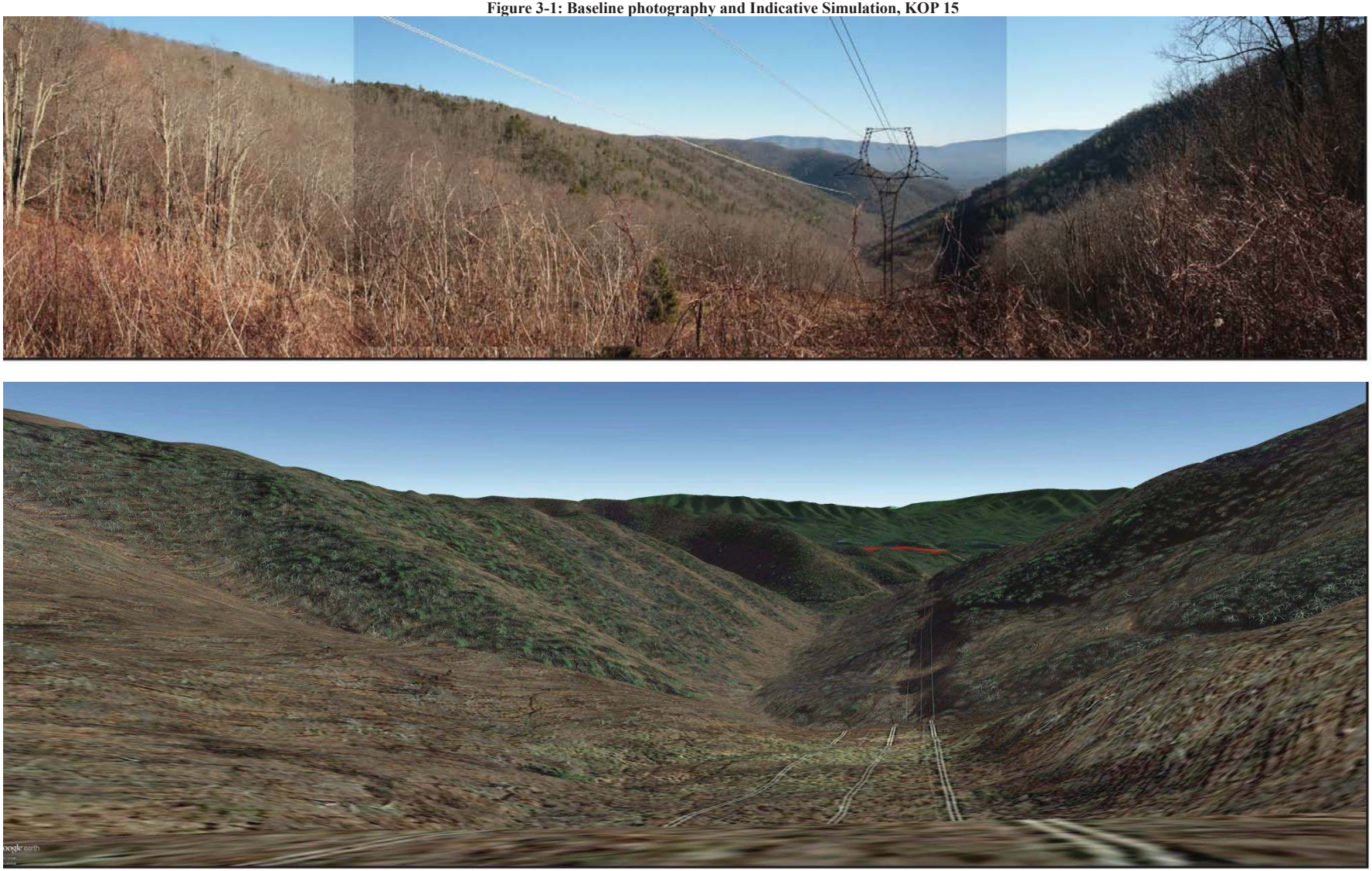
Figure 3-1: Baseline photography and Indicative Simulation, KOP 15



T-24

Figure 3-2: Full Simulation, KOP 34, Regrowth Following Construction

KOP34 - Torry Ridge Trail 1, Looking Southeast - **Existing View**

KOP34 - Torry Ridge Trail 1, Looking Southeast - **Following Construction**

Figure 3-3: Full Simulation, KOP 34, Regrowth 5 Years after Construction

T-26

Figure 3-4: Full Simulation, KOP 34, Regrowth 15-20 Years after Construction

3.2.2 KOP 35: Torry Ridge Trail 2

Figures 3-5, 3-6, and 3-7 show the full simulation images for KOP 35. From this KOP, the ACP corridor at approximately MP 155.5 would be visible as a narrow vegetated (but not forested) band on the far side of the Back Creek valley, approximately 0.7 mile to the southeast. This is in the middleground, as defined by the USFS. As shown in the simulation image, the view of the ACP corridor would be through mixed coniferous and deciduous vegetation. The corridor may thus be less visible during leaf-on conditions in spring, summer, and fall

3.2.3 KOP 38: Blue Ridge Parkway at Ravens Roost

Figure 3-8, 3-9, and 3-10 show the full simulation images for KOP 38. From this KOP, the ACP corridor would be clearly visible as a narrow band of vegetated open land wrapping around Torry Ridge (the mountain feature in the approximate center of the image), approximately from MPs 152 to 156 (from right to left). The corridor is approximately 0.75 mile from KOP 38 at its closest point (left of the bottom-center of the image, corresponding approximately to MP 156), with MP 152 approximately 2.5 miles away (right-center of the images, in shadow). These distances are in the middleground, as defined by the USFS. The appearance of the corridor would be similar to the cleared areas along Back Creek and Mount Torry Road, closer to the base of Torry Ridge.

3.2.4 KOP 39: Blue Ridge Parkway at Three Ridges Overlook

Figures 3-11, 3-12, 3-13, and 3-14 show the full simulation images for KOP 39. When baseline photography was taken in November 2015, the existing view from this KOP, a scenic overlook managed by the NPS, was obscured by trees. At the suggestion of the USFS, the simulation from this KOP was modified to reflect views of the ACP that would be present if the NPS chose to remove this vegetation, which would be consistent with the Preferred Alternative of the General Management Plan for the Parkway (NPS, 2013).

Subsequent to baseline photography and simulation development, NPS did, in fact, remove the screening vegetation in March 2016. As shown in the figures, viewers would have an axial view (facing southeast) of the ACP corridor at approximately MP 159 as it climbs over Piney Mountain, just south of Atlantic's proposed HDD. This segment of the corridor would be approximately 0.75 to 1.0 mile from the viewer, in the middleground, as defined by the USFS. The simulation in Figures 3-11, 3-12, and 3-13 show the likely conditions after construction, with no visual mitigation incorporated. Figure 3-14 shows the right-of-way at this location, approximately 15-20 years after construction, with the incorporation of shallow-rooted perennial shrubs within the right-of-way, planted as visual mitigation to break up the linear nature of the gap in forest.

Figure 3-5: Full Simulation, KOP 35, Regrowth Following Construction

KOP35 - Torry Ridge Trail 2, Looking Southeast - **Existing View**

KOP35 - Torry Ridge Trail 2, Looking Southeast - **Following Construction**

Figure 3-6: Full Simulation, KOP 35, Regrowth 5 Years after Construction

KOP35 - Torry Ridge Trail 2, Looking Southeast - **Existing View**

KOP35 - Torry Ridge Trail 2, Looking Southeast - **Proposed View 75' Permanent ROW (5 Year Tree Growth)**

T-30

Figure 3-7: Full Simulation, KOP 35, Regrowth 15-20 Years after Construction

Figure 3-8: Full Simulation, KOP 38, Regrowth Following Construction

KOP38 - Raven's Roost, Blue Ridge Parkway Overlook, Looking Northwest - **Existing View**

KOP38 - Raven's Roost, Blue Ridge Parkway Overlook, Looking Northwest - **Following Construction**

T-32

Figure 3-9: Full Simulation, KOP 38, Regrowth 5 Years after Construction

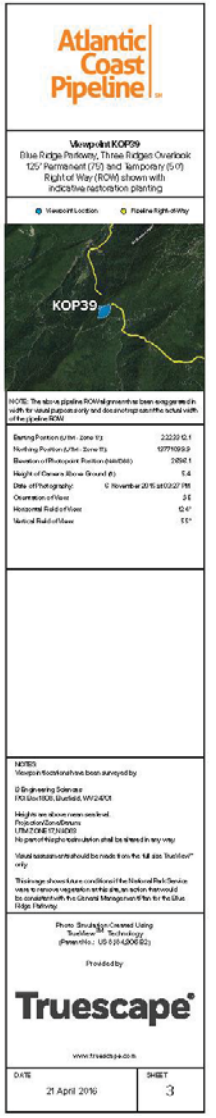
T-33

Figure 3-10: Full Simulation, KOP 38, Regrowth 15-20 Years after Construction

Figure 3-11: Full Simulation, KOP 39, Regrowth Following Construction

KOP39 - Blue Ridge Parkway, Three Ridges Overlook, Looking Southeast - **Existing View**

KOP39 - Blue Ridge Parkway, Three Ridges Overlook, Looking Southeast - **Following Construction**



T-35

Figure 3-12: Full Simulation, KOP 39, Regrowth 5 Years after Construction

KOP39 - Three Ridges Overlook, Blue Parkway Overlook, Looking Southeast - **Existing View**

KOP39 - Three Ridges Overlook, Blue Parkway Overlook, Looking Southeast - **Proposed View 75' Permanent ROW (5 Year Tree Growth)**

T-36

Figure 3-13: Full Simulation, KOP 39, Regrowth 15-20 Years after Construction

KOP39 - Three Ridges Overlook, Blue Parkway Overlook, Looking Southeast - **Existing View**

KOP39 - Three Ridges Overlook, Blue Parkway Overlook, Looking Southeast - **Proposed View 75' Permanent ROW (15/20 Year Tree Growth)**

T-37

Figure 3-14: Full Simulation, KOP 39, Regrowth 15-20 Years after Construction with Vegetative Restoration

3.2.5 KOP 40: Appalachian National Scenic Trail (Bee Mountain)

Figures 3-15, 3-16, and 3-17 show the full simulation images for KOP 40. Figure 3-18 shows this simulation with the permanent right-of-way outlined in yellow, for viewer clarity. From this KOP, the segment of the ACP corridor within the "seen area" (see Section 2.1) is approximately MP 160 along Piney Mountain, approximately 2.25 miles from the KOP (within the middleground, as defined by the USFS). The yellow lines in Figure 3-18 show the location of the right-of-way if it could be seen through the existing dense vegetation on Piney Mountain. As shown in the Figures, Project-related changes in color, line, texture, and other characteristics considered in the SMS would be imperceptible from this KOP, even in leaf-off conditions (i.e., November, when the baseline imagery was captured).

3.2.6 KOP 64: Shenandoah Mountain Trail Southern Terminus

As discussed in Section 2.1, the route of the ACP has changed since KOP 64 was identified; as a result, no baseline or simulation images of this location exist. The ACP corridor would cross the trail at approximately MP 98.7. From this location, the right-of-way would extend approximately 200 feet in either direction before turning, effectively ending the view corridor. At the trail's intersection with the right-of-way, the ACP corridor would be a dominant visual feature, although views of the ACP corridor from the trail would only be present within a few hundred feet of the crossing, due to the presence of screening vegetation.

3.3 CONTINGENCY PLAN SIMULATIONS

To evaluate the potential visual impacts of the contingency plan for the HDD crossing of the BRP and ANST, Atlantic conducted indicative and full simulations from KOPs on the eastern and western side of the crossing area. The results of those simulations are discussed below.

3.3.1 KOP 34: Torry Ridge Trail 1

KOP 34 presents potential views of the BRP HDD contingency corridor from the west. Figure 3-19 shows the full simulation image of the BRP HDD contingency corridor at KOP 34. Figure 3-20 shows this simulation with the permanent right-of-way outlined in yellow, for viewer clarity due to the relatively dark atmospheric conditions during baseline photography and presence of shade at the KOP. From this KOP, the ACP contingency corridor from approximately MP 157 to MP 158 would be visible as a narrow vegetated (but not forested) band on the far side of the Back Creek valley, approximately 1.2 to 2.0 miles to the southeast. Both of these views are in the middleground, as defined by USFS.

3.3.2 KOP 40: Appalachian National Scenic Trail (Bee Mountain)

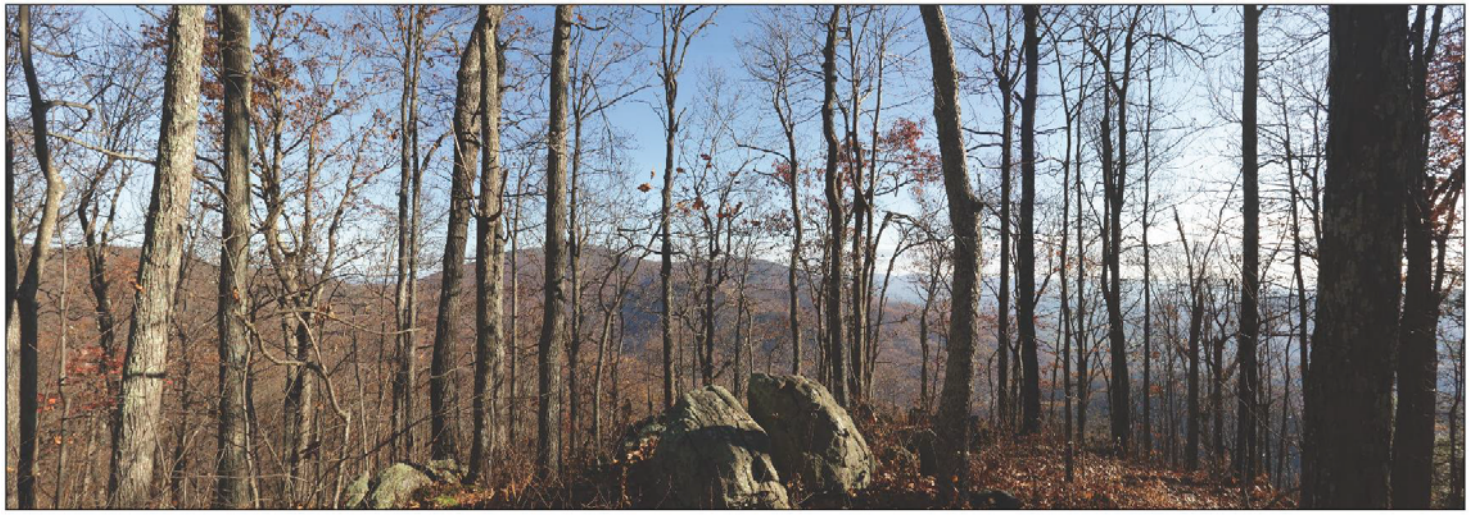
Figure 3-21 shows the simulated views of the BRP HDD contingency corridor from KOP 40, while Figure 3-22 shows this simulation with the permanent right-of-way outlined in yellow, for viewer clarity. From this KOP, actual views of the BRP HDD contingency corridor would be minimal to nonexistent, due to the presence of dense vegetation, even in leaf-off conditions.

Figure 3-15: Full Simulation, KOP 40, Regrowth Following Construction

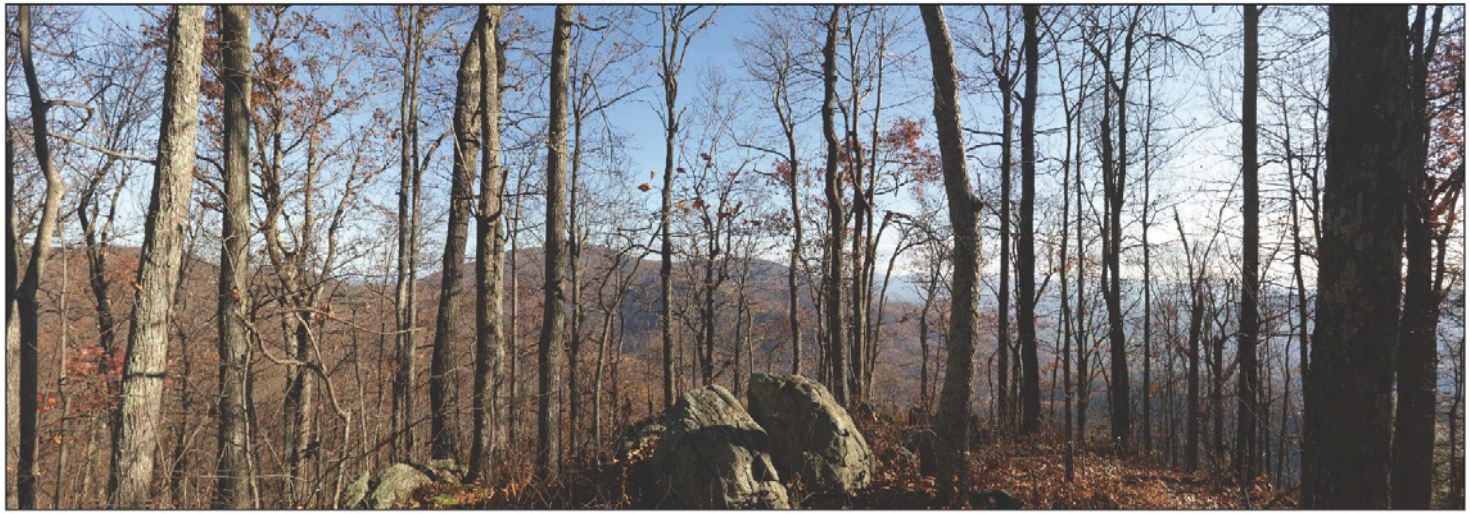
KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Existing View**

KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Following Construction**

Figure 3-16: Full Simulation, KOP 40, Regrowth 5 Years after Construction



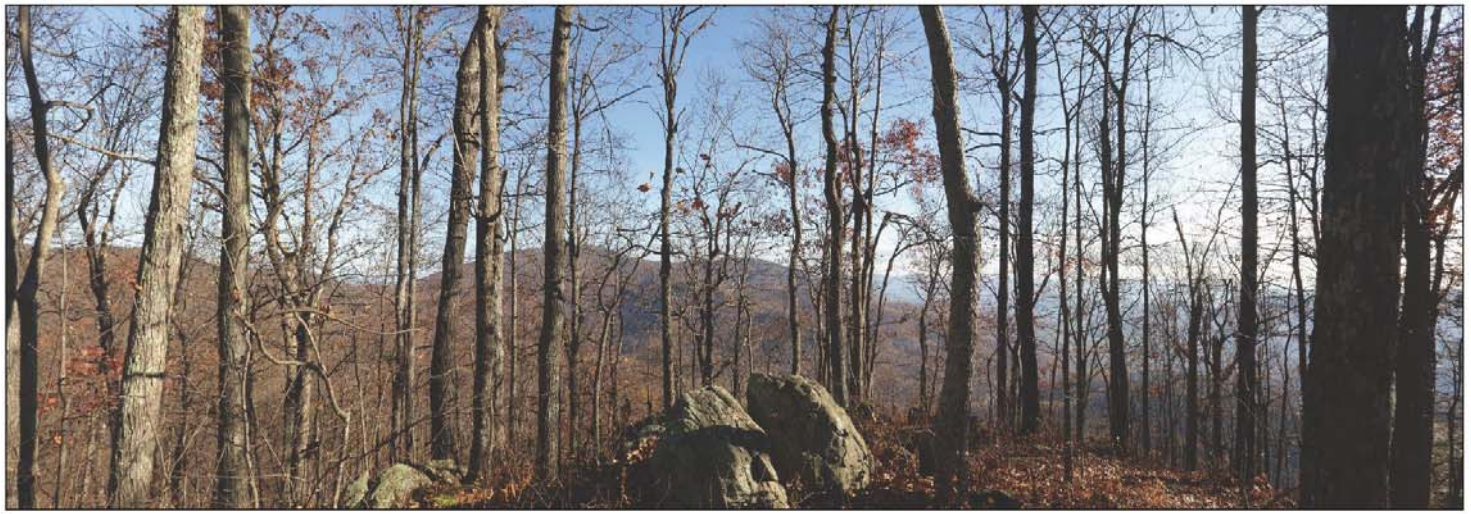
KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Existing View**



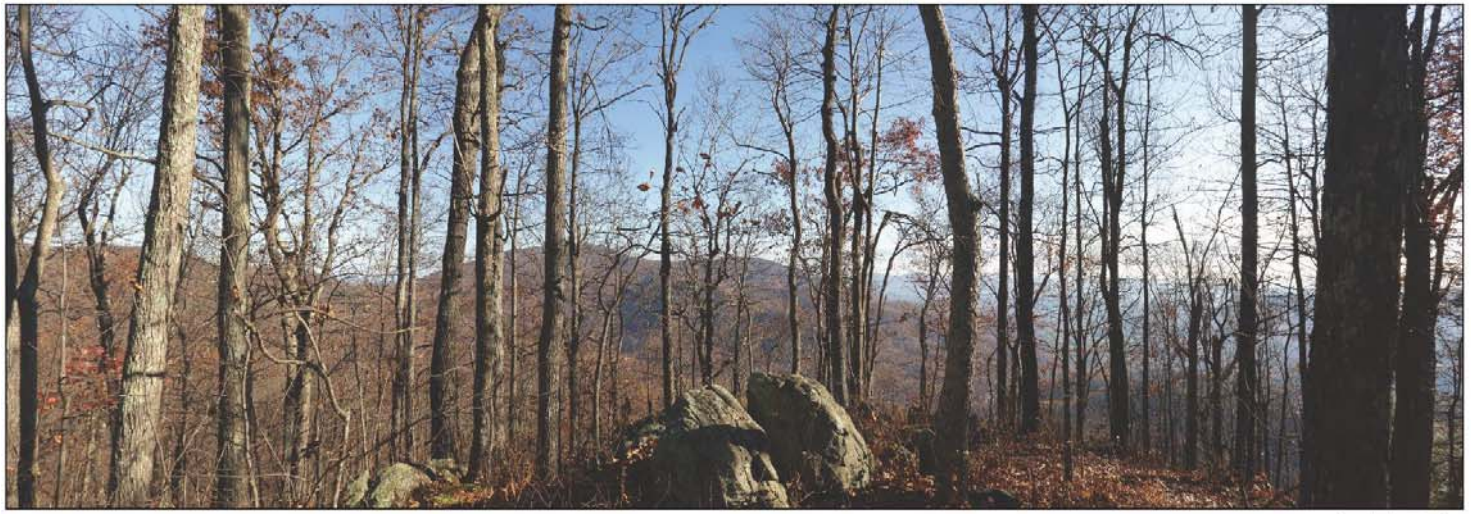
KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Proposed View 75' Permanent ROW (5 Year Tree Growth)**

T-41

Figure 3-17: Full Simulation, KOP 40, , Regrowth 15-20 Years after Construction

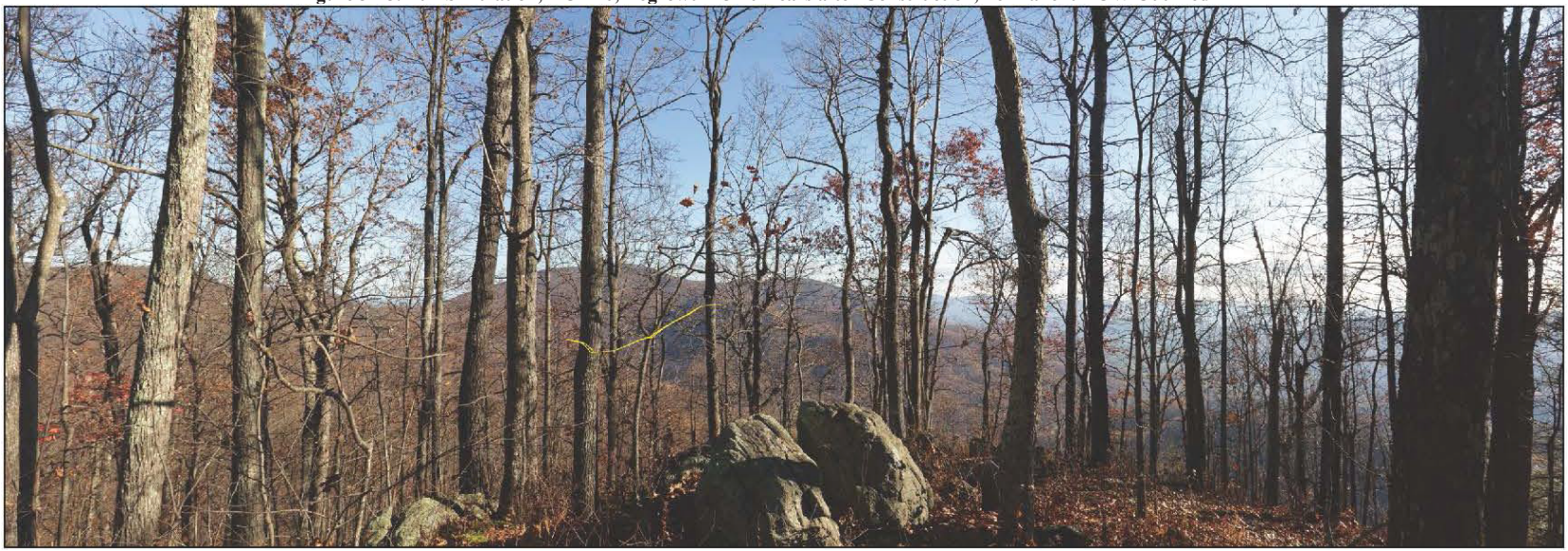


KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Existing View**



KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Proposed View 75' Permanent ROW (15/20 Year Tree Growth)**

Figure 3-18: Full Simulation, KOP 40, Regrowth 15-20 Years after Construction, Permanent ROW Outlined



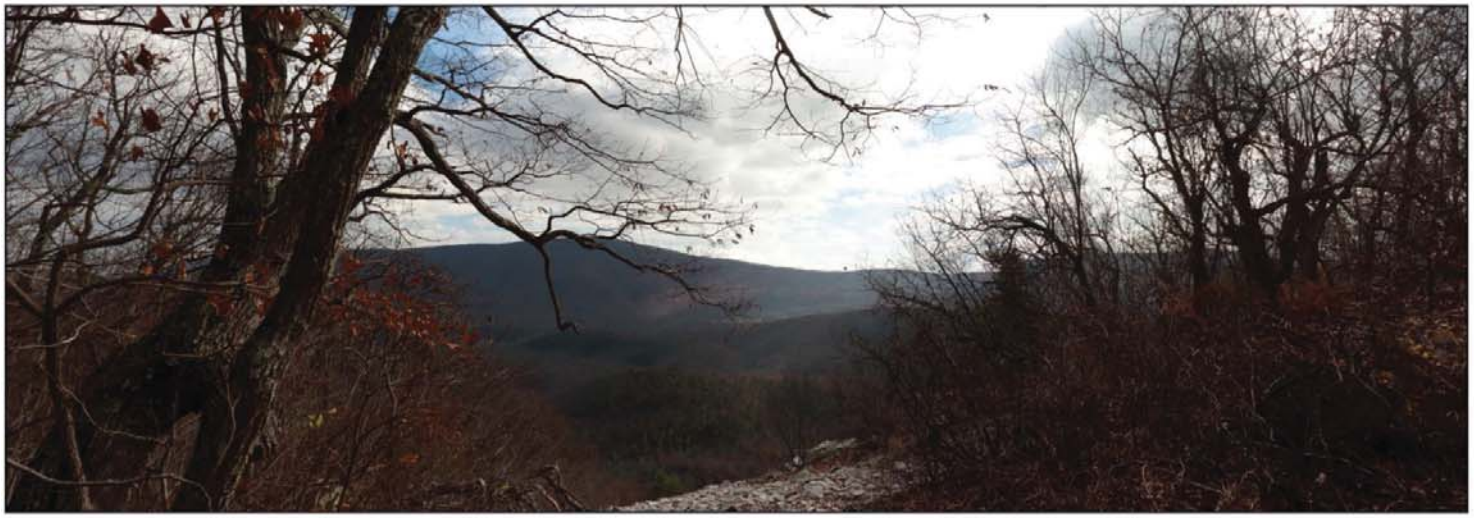
T-43

Figure 3-19: Full Simulation, KOP 34, Contingency Plan

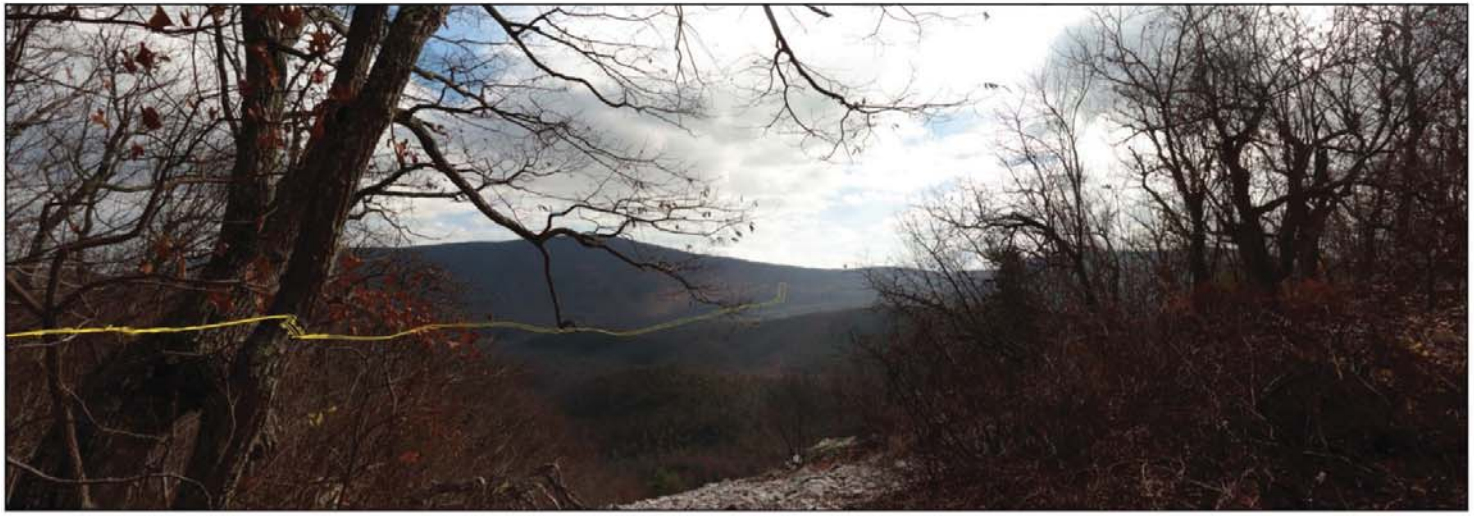
Viewpoint KOP34 - Torry Ridge Trail 1, Looking Southeast - **Existing View**

Viewpoint KOP34 - Torry Ridge Trail 1, Looking Southeast - **Proposed View**

Figure 3-20: Full Simulation, KOP 34, Contingency Plan, Permanent ROW Outlined



Viewpoint KOP34 - Torry Ridge Trail 1, Looking Southeast - **Existing View**



Viewpoint KOP34 - Torry Ridge Trail 1, Looking Southeast - **Proposed View (Right Of Way Overlayed)**

Figure 3-21: Full Simulation, KOP 40, Contingency Plan

Viewpoint KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Existing View**

Viewpoint KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Proposed View**

Figure 3-22: Full Simulation, KOP 40, Contingency Plan, Permanent ROW Outlined

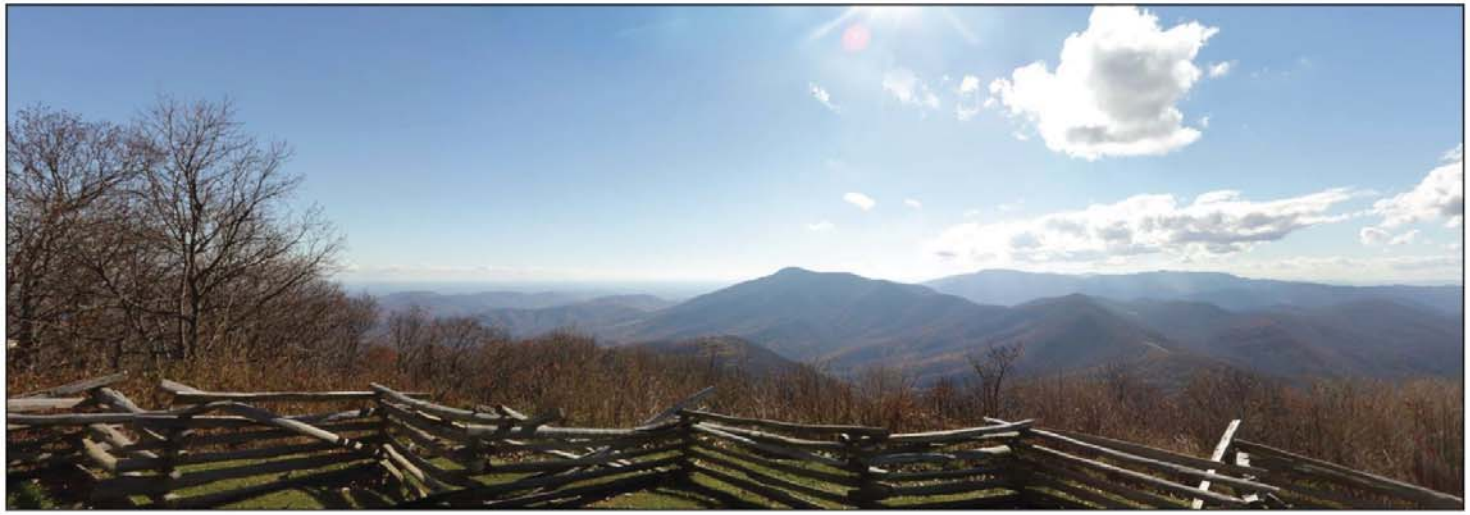
Viewpoint KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Existing View**

Viewpoint KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Proposed View (Right Of Way Overlayed)**

3.3.3 KOP 65: Devils Knob Overlook

Figure 3-23 shows the full simulation image of the ACP contingency corridor at KOP 65 (the fencing shown here has since been replaced), with the permanent right-of-way outlined in yellow, for viewer clarity. From this KOP, the corridor, approximately 1.0 mile away, would be blocked by vegetation at the edge of the Devils Knob Overlook. Individual viewers could potentially obtain a view of the contingency corridor by standing at the extreme edge of the overlook (i.e., at the edge of the vegetation, where the slope begins to drop off); however, the typical viewer, standing in the designated overlook area, would not be able to see the contingency corridor as it exits the potential directional bore crossing (if used) of the BRP on the east side of the Blue Ridge Mountains.

Figure 3-23: Full Simulation, KOP 65, Contingency Plan, Permanent ROW Outlined



Viewpoint KOP65 - Devil's Knob, Looking South - **Existing View**

Viewpoint KOP65 - Devil's Knob, Looking South - **Proposed View (Right Of Way Overlayed)**

T-49

4.0 DISCUSSION OF POTENTIAL IMPACTS

This section discusses the potential visual impacts of the ACP on the MNF and GWNF, as well as on the NPS-managed BRP, based on the visual analyses presented in Section 3.0.

4.1 GEORGE WASHINGTON NATIONAL FOREST AND BLUE RIDGE PARKWAY

4.1.1 USFS Scenic Integrity Objectives

Table 4-1 lists the KOPs in GWNF for which visual analyses were conducted (see Section 3.0), as well as the SIO present both at the KOP itself and generally within the viewshed (the area visible to an observer at the KOP). Figure 1-2 shows SIOs in the study area within the GWNF. Table 4-2 shows the length of ACP corridor centerline within the GWNF by SIO. Approximately 13.9 miles of the ACP corridor's 14.3 mile crossing of GWNF-owned land would be through areas with medium SIO. The remaining 0.4 mile would be through areas with High SIO (including approximately 0.1 mile where there would be no aboveground evidence of the corridor, due to the HDD crossing of the BRP and ANST).

TABLE 4-1

Summary of Scenic Integrity Objectives for KOPs in GWNF

		Scenic Integrity Objective	
ID	Location	At KOP	In Viewshed
34	Torry Ridge Trail 1 (revised location, per Table 2-1)	High	High
35	Torry Ridge Trail 2 (revised location, per Table 2-1)	High	High
38	Blue Ridge Parkway: Raven's Roost Overlook	NA[2]	Moderate
39	Blue Ridge Parkway: Three Ridges Overlook	NA[2]	NA[3]
40	ANST: Bee Mountain, near Three Ridges Wilderness	Very High	Very High
64[4]	Shenandoah Mountain Trail near MP	Moderate	Moderate
65	Devil's Knob (Wintergreen Resort)—Contingency only	NA[2]	Low

[1] Existing transmission ROW in this viewshed has a Low SIO. The ACP corridor itself is not on USFS-owned land, and has no SIO.
[2] KOP is not on USFS-owned land, and thus has no assigned SIO.
[3] Scenic Integrity Objectives have not been defined by USFS and/or a Scenic Integrity Objective definition has not been provided.
[4] Scenic Integrity Objectives have not been defined by USFS and/or a Scenic Integrity Objective definition has not been provided.

4.1.2 NPS Scenery Conservation System Considerations

As described in Section 1.3, the ACP would cross a segment of the BRP (approximately at MP 158.2) that is within the Scenic Character management zone. Based on available information, Atlantic understands that the objectives of the Scenic Character management zone are generally consistent with High to Medium SIO, as defined for the USFS SMS.

TABLE 4-2

Scenic Integrity Objectives crossed by ACP in GWNF

Begin Milepost	End Milepost	Miles Crossed	Scenic Integrity Objective	Begin Milepost	End Milepost	Miles Crossed	Scenic Integrity Objective
83.9	86.7	3.9	Moderate	115.8	116.2	0.4	Moderate
86.8	86.9	0.1	Moderate	116.4	116.5	0.1	Moderate
93.7	94.3	0.7	Moderate	116.8	120.6	3.8	Moderate
96.1	96.3	0.4	Moderate	121.1	122.4	1.3	Moderate
96.5	96.6	0.2	Moderate	122.4	122.7	0.3	High
96.9	97.5	0.8	Moderate	122.7	123.2	0.5	Moderate
99.3	99.7	0.5	Moderate	154.0	155.1	1.1	Moderate
105.9	106.0	0.1	Moderate	158.0	158.1	0.1	High[1]

[1] The ACP corridor would cross this portion of the GWNF underground, as part of the HDD crossing of the Blue Ridge Parkway and ANST; as a result, there would be no aboveground evidence of the corridor in this location.

4.1.3 Visual Impacts of the ACP in the GWNF and from the BRP

4.1.3.1 Discussion

The 21 KOPs for GWNF presented in Table 2-1 were intended to be representative of a wide variety of publicly accessible views from USFS-owned land within the GWNF. As described in Section 2.3, only 7 of these 21 KOPs provided potential views of the ACP corridor. Views of the corridor may be available from other locations within GWNF boundaries (although not on USFS-owned land), such as public roads; however, topography and the screening effect of existing forests would greatly limit the number of such views (see Appendix A).

As shown in Figures 3-3 through 3-13, middleground and background views of the ACP corridor would be most likely to occur from the two BRP overlooks and gaps in vegetation along the Torry Ridge Trail. Potential views from the ANST as it crosses the summit of Bee Mountain (KOP 40) would be through existing vegetation. As demonstrated by Figures 3-11 through 3-13, the ACP corridor would be imperceptible from this location. No potential views of the ACP corridor would be available from this location during leaf-on conditions. No views are available from the summit of Three Ridges Mountain (KOP 41) due to dense mature tree vegetation, particularly along the ANST.

Viewers at most of the modeled KOPs would be able to perceive the contrast in color and line, but the ACP would not dominate the landscape, due primarily to the viewing distance. The ACP corridor would be visible only from areas with open views of the potential right-of-way where it crosses forested areas. From the Torry Ridge Trail and BRP overlooks, these changes would take the form of a thin linear strip of open land in an otherwise forested area. Depending on the time of year a viewer would see this as a light green, tan, or brown stripe amid darker green (leaf-on) or gray-brown (leaf-off) forest, or a white stripe if snow cover were present.

From the BRP Ravens Roost overlook (KOP 38), while the corridor would be visible within the forested area at the base of Torry Ridge (the ridge in the middle of Figure 3-6), it would be one of several visible human-made features, including roads and buildings. As such,

the ACP corridor at KOP 38 would not be inconsistent with NPS management objectives for visual resources.

The corridor would be visible from the BRP Three Ridges overlook (KOP 39) approximately 0.75 to 1.0 mile from the viewer, in the middleground, as defined by USFS. With no additional vegetative plantings, the ACP corridor would be clearly visible from this location, to a greater degree than from the Ravens Roost overlook (KOP 38) or other KOPs - although it would not dominate the viewshed, due to its distance from the viewer. With no mitigation, the ACP corridor at KOP 39 would likely be inconsistent with NPS management objectives for visual resources. If Atlantic were to commit to planting additional shrubs along the right-of-way, these plantings would help to reduce the contrast between the right-of-way and surrounding areas, and would reduce the inconsistency with NPS management objectives.

Hikers along the southern end of the Shenandoah Mountain Trail would see the ACP corridor crossing in the immediate foreground and foreground, where the ACP crosses the trail. In this location, alteration of the landscape would include permanent replacement of existing forest with open land (typically grasses and low shrubs). This change in vegetation type would dominate the view, and would thus be inconsistent with SMS objectives in this location. The viewing area for these changes would be relatively small—limited to the area immediately near each intersection of the corridor with an existing road or trail. Outside of this immediate viewing location, trees and terrain (as visible on publicly available aerial photography and topographic maps) would likely minimize or eliminate the ability to see the remainder of the ACP corridor, particularly during leaf-on conditions.

The Shenandoah Mountain Trail crossing is the only known case in the GWNF where the ACP corridor would be visible from USFS-owned land in the immediate foreground or foreground. To the degree that other similar crossings exist, the views and visual effects at such locations would be similar to those described for the Shenandoah Mountain Trail crossing. Middleground and background views and visual effects from other USFS-owned land would be similar in nature to those described above. The ACP pipeline route would have no aboveground facilities within the GWNF except for small, widely-spaced mainline valves.

4.1.3.2 Summary

Based on the discussion above, the relationship between the ACP and SIOs in the GWNF would be as follows:

- Views from Torry Ridge (KOPs 34 and 35) would be somewhat inconsistent with the High SIO assigned to the area of the Blue Ridge Mountains visible from the Torry Ridge KOPs. The changes in form, line, color, texture, and pattern associated with the ACP right-of-way would be somewhat evident (although by no means dominant) on the landscape.

- Views of the ACP corridor from the Raven's Roost overlook (KOP 38) would not be inconsistent with NPS management objectives for visual resources, since the corridor would be one amongst many human-made features on the landscape.

- Views of the ACP corridor from the Three Ridges overlook (KOP 39) would likely be inconsistent with NPS management objectives, given the proximity to the viewer, the axial nature of the view, and the corridor's contrast with surrounding forest. To mitigate this effect, Atlantic has committed to planting shrubs and other low vegetation in the right-of-way, to reduce visual contrast (see Figure 3-13).

- Views of the ACP corridor from Bee Mountain on the ANST (KOP 40) would be imperceptible. As a result, the Project would be consistent with SIO designations from this location.

- Views from KOP 64, the Shenandoah Mountain Trail near MP 98.7, would be inconsistent with the Moderate SIO designation, because views of the right-of-way where it intersects the trail would not be "visually subordinate to" the surrounding landscape character. The extent of such inconsistency would be limited to within a few hundred feet of the intersection location, due to the presence of dense forest.

As discussed in Section 4.1.1, only approximately 0.3 mile of the ACP corridor would disturb the land surface in portions of the GWNF with a High SIO. In these areas, changes in landscape character associated with the ACP or other human activities are intended to be imperceptible. While land disturbance associated with the ACP would be inconsistent with High SIO designations, the ability to view the corridor where it crosses High SIO land would be extremely limited. The segment itself (between MPs 122.4 – 122.7) is very short (0.3 mile),[4] and there are no views of this corridor segment from nearby public roads or trails on USFS property.[5]

The remainder of GWNF-owned land crossed by the ACP has a medium SIO, a designation where human activities may be visible but where natural landscapes should be dominant. The ACP would be consistent with this designation: the corridor would be visible, but would not dominate the view, except in the area immediately surrounding any ACP crossings of public roads or trails.

4.2 MONONGAHELA NATIONAL FOREST

4.2.1 USFS Scenic Classes

The ten KOPs for MNF in Table 2-1 were intended to be representative of a wide variety of publicly accessible views within the forest; however, field surveys (see Section 2.2) determined that none of these KOPs offered potential views of the ACP corridor, due to existing vegetation. Figure 1-3 shows Scenic Classes in the study area within the MNF,[6] while Table 4-3 shows the length of ACP corridor centerline within USFS-owned portions of the MNF by Scenic Class. Of the approximately 6.9 miles of USFS-owned land crossed by the ACP in MNF,

[4] Due to ACP route revisions, mileposts cited here are for reference only, and are not used to calculate distance.

[5] Field observations in October 2015 confirmed that topography and vegetation prevented views from the Wild Oak National Recreation Trail— Forest Service Trail 716—approximately 2 miles from the High SIO segment of the ACP.

[6] Mapping provided by USFS includes Scenic Class designations for the entire MNF, including USFS-owned land and private land not owned or managed by USFS.

approximately 5.8 miles would be through areas with very high or high scenic value, another 1.1 miles would be through areas with high scenic value, and less than 0.1 mile would be through an area with medium to high scenic value.

TABLE 4-3

Summary of Scenic Classes crossed by ACP in MNF

Begin Milepost	End Milepost	Miles Crossed	Scenic Class[1]
71.2	71.5	0.6	2
73.1	73.6	0.9	2
80.4	80.6	0.3	2
80.6	80.6	0.1	3
80.7	80.9	0.3	2
81.2	81.3	0.1	2
81.3	81.4	0.1	3
81.4	81.4	0.1	2
81.4	81.8	0.6	3
81.8	83.2	2.6	2
83.2	83.3	0.2	3
83.3	83.6	0.5	2
83.6	83.7	0.1	3
83.7	83.9	0.4	2
83.9	83.9	<0.1	4

[1] Scenic classes correspond to the following general definitions:
2 "high" scenic value.
3 "medium-high" scenic value.
4 "medium" scenic value

4.2.2 Visual Impacts of the ACP in MNF

Views of the ACP corridor may be available from USFS-owned land within MNF, aside from the KOPs identified in Table 2-1. Middleground and background views of the ACP corridor would be particularly sporadic in the MNF due to screening from existing forest. To the degree that such views exist, visual effects in such locations would be similar in nature to those described for the KOPs in GWNF.

Views of the ACP corridor within the MNF would be most likely to occur where the corridor crosses or is collocated with a public road or trail in forested areas (although few such instances appear to exist on USFS-owned land). In such cases, alteration of the landscape would occur in the immediate foreground and foreground, where existing forest would be permanently replaced with open land (typically grasses and low shrubs). The change in vegetation type would dominate the view, particularly where viewers are able to look down the axis of the ACP corridor. The viewing area for these changes would be relatively small—limited to the area immediately near each intersection of the corridor with an existing road or trail. Outside of this immediate viewing location, trees and terrain would likely minimize or eliminate the ability to see the ACP corridor, particularly during leaf-on conditions. The ACP pipeline route would have no aboveground facilities within the MNF except for small, widely-spaced mainline valves.

As discussed in Section 4.2.1, a portion of the ACP corridor would cross areas of the MNF with very high or high Scenic Class designations. For purposes of analysis, this VIA assumes that a high or very high Scenic Class designation carries the same management intent as a High SIO designation: changes in landscape character associated with the ACP or other human activities are intended to be imperceptible.

In locations where the ACP crosses high or very high Scenic Class designations on MNF lands, the ACP would be inconsistent with MNF scenery management goals. In such locations, the removal of forest along the corridor would be clearly visible for an observer at that location. That finding notwithstanding, public opportunities to view the ACP corridor from or on USFS-owned land within the MNF would be limited. No such locations were identified through this process.

4.2.3 Visual Impacts of the ACP Contingency Plan

Under the HDD Contingency Plan, the ACP corridor would cross the BRP and ANST via a shorter, shallower tunnel. The right-of-way on the ground surface above this tunnel, including the crossing of the BRP and ANST would not be disturbed or affected. Views of the corridor from other segments of the BRP and ANST would be similar to those under the Proposed Action, except that the extent of the cleared corridor on either side of the Blue Ridge would appear to be slightly longer.

As shown in the simulations in Figures 3-14 through 3-18, the contingency crossing area corridor would be visible from KOPs to the west of the crossing (i.e., Torry Ridge), but not from KOPs to the east of the crossing. Comparing Proposed Action and contingency plan simulations from KOP 34 (Torrey Ridge) and KOP 40 (Bee Mountain) shows that the incremental difference in disturbed area during operations between Proposed Action and contingency plan is minimal. As with the proposed action, views of the ACP contingency corridor from KOP 40 would be minimal and only available during leaf-off conditions. Viewers on the ANST and BRP would not experience any changes in scenery conditions at the ACP crossing under either scenario. As a result, the visual impacts of the contingency plan would be essentially the same as the visual impacts of the proposed action.

5.0 REFERENCES

National Park Service. 2013. *Final Blue Ridge Parkway General Management Plan/Environmental Impact Statement.* January 2013. Accessed on November 20, 2015. Available online at: http://parkplanning.nps.gov/document.cfm?parkID=355&projectID=10419&documentID=51305.

U.S. Department of Agriculture. 1995. *Agriculture Handbook 701, Landscape Aesthetics-A Handbook for Scenery Management*.

U.S. Forest Service. 2015. *Recommended Key Observation Points for Proposed Atlantic Coast Pipeline On the George Washington and Jefferson National Forests and the Monongahela National Forest.* E-mail from Ted Coffman, received on September 14, 2015.

-------. 2016. *ACP – Visuals – KOP route 6.* Email from Ted Coffman, received on March 11, 2016.

ATLANTIC COAST PIPELINE ENVIRONMENTAL SURVEY

National Forest Visual Impact Assessment Report

APPENDIX A

Field Survey Photo Pages

Field Survey Photos, Monongahela National Forest

Unless otherwise specified, all images are in the general direction of the nearest proposed portions of the ACP corridor.

KOP 06: Highlands Scenic Highway near White Low Place

KOP 42: Highlands Scenic Highway at Red Lick Scenic Overlook

KOP 43: Highlands Scenic Highway at Little Laurel Scenic Overlook

KOP 44: WV 28 at ACP Crossing, Looking East (left) and Northwest (right)

KOP 45: Greenbrier River Trail near ACP Corridor Crossing looking East (left) and West (right)
Note: Crossing location has shifted south of this position since photos were taken.

KOP 46: Allegheny Trail Crossing, looking East (top) and West (bottom)

KOP 47:
Entrance to FR 1012 (view of ACP Corridor not accessible)

KOP 49: FR 1026

Slaty Fork, WV, looking in the direction of KOP 50. Actual KOP (FR 24) not accessible.

Field Survey Photos, George Washington National Forest

Unless otherwise specified, all images are in the general direction of the nearest proposed portions of the ACP corridor.

KOP 15: Shenandoah Mountain Trail 4, Looking West (ACP corridor no longer in this view)

KOP 40: Bee Mountain (Appalachian Trail)

KOP 41: Three Ridges ridge top, Three Ridges Wilderness Area

KOP 52: ACP crossing at FST 718 (Brushy Ridge Trail/Back Draft Trail), looking North (left) and South (top)

KOP 53: Trailhead of FST 717 (Short Ridge Trail)

KOP 54: Trailhead of FST 718 (Brushy Ridge Trail/Back Draft Trail)

KOP 58: Duncan Knob Lookout

KOP 61: Route 624 at Route 625 (Fort Lewis Area)

KOP 62: Route 625 at Route 678 (Fort Lewis Area)

KOP 63: ACP corridor in vicinity of Cowpasture River crossing (looking west)

KOP 64: Near Southern Terminus of Shenandoah Mountain Trail

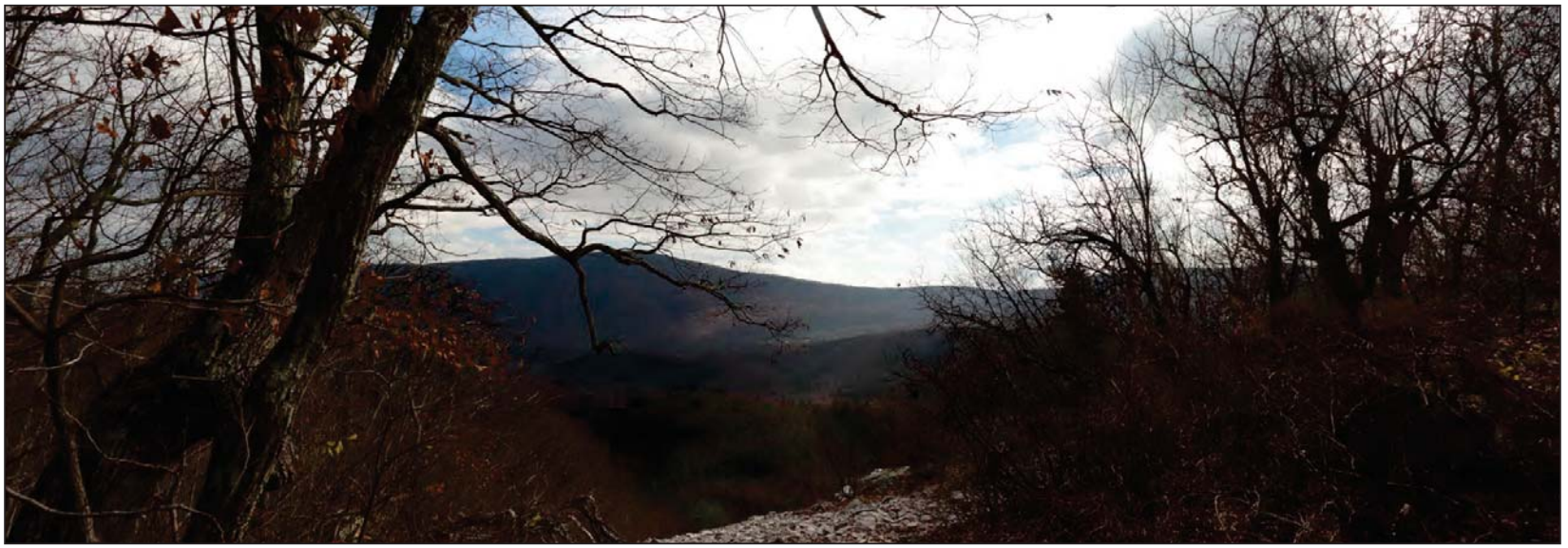
KOP 65: Devil's Knob Overlook, Wintergreen Resort

ATLANTIC COAST PIPELINE ENVIRONMENTAL SURVEY

National Forest Visual Impact Assessment Report

APPENDIX B

High-Resolution, Large-Format Full Visual Simulation Images



KOP34 - Torry Ridge Trail 1, Looking Southeast - **Existing View**

KOP34 - Torry Ridge Trail 1, Looking Southeast - **Following Construction**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline

ERM - ACP Pipeline ROW
Additional Forestry

Viewpoint KOP34

Torry Ridge Trail 1
with Contingency Right of Way (ROW) shown

Viewpoint Location Project Area

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2214670.3**
Northing Position (UTM - Zone 17):	**13778971.8**
Elevation of Photopoint Position (NAVD88):	**2644.2**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6-Nov-15 at 04.04 PM**
Orientation of View:	**SE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint location has been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

Heights are above mean sea level.
Projection/Zone/Datum:
UTM ZONE 17, NAD83

No part of this photo simulation shall be altered in any way.

Visual assessments should be made from the full size TrueView™ only.

Photo Simulation Created Using
TrueView™ Technology
(Patent No.: US 8,184,906 B2)

Provided by

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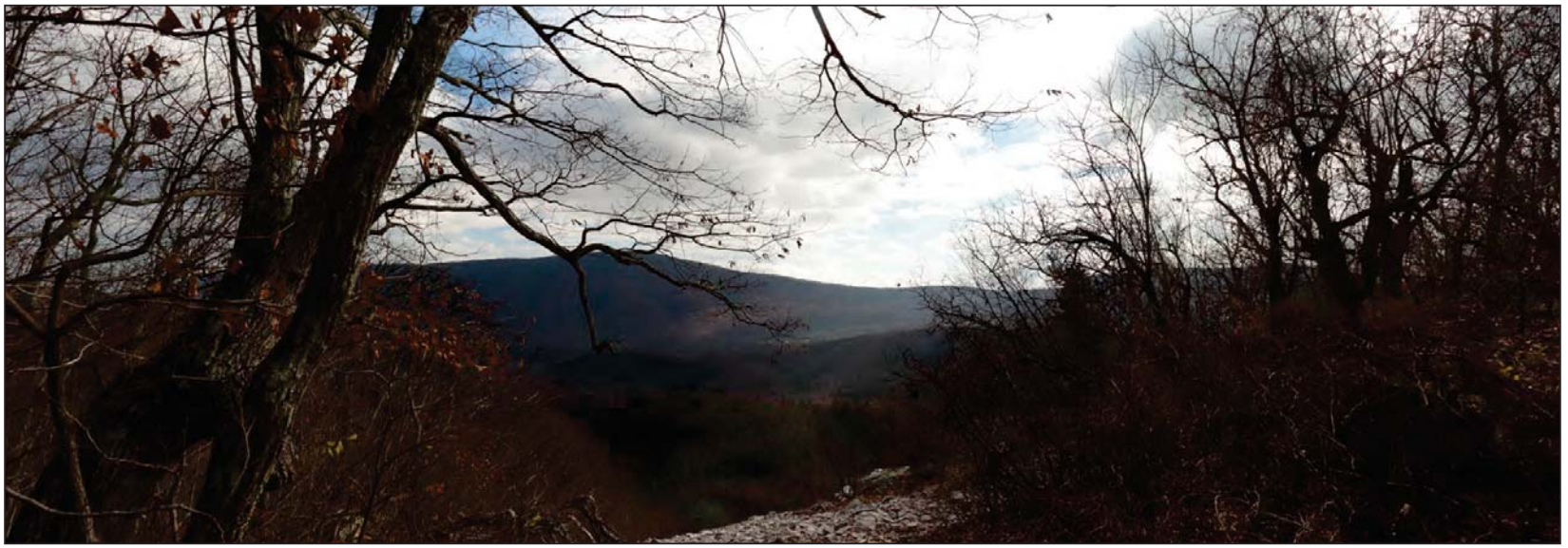
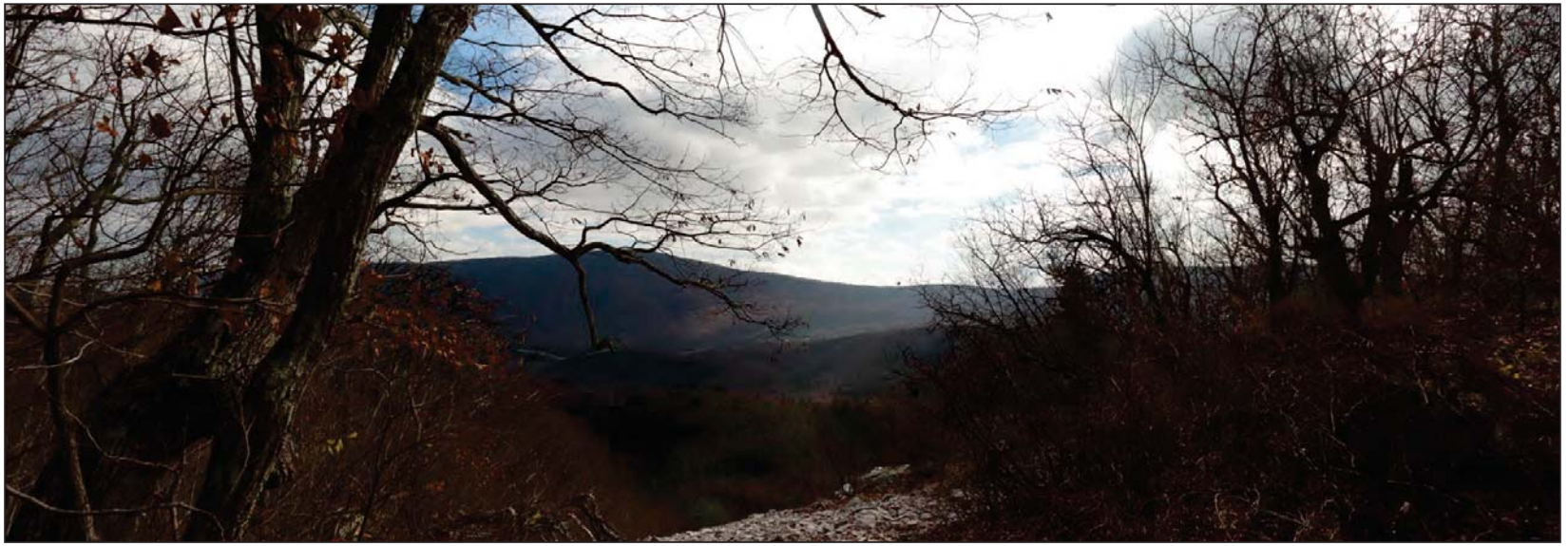


KOP34 - Torry Ridge Trail 1, Looking Southeast - **Existing View**



KOP34 - Torry Ridge Trail 1, Looking Southeast - **Proposed View 75' Permanent ROW (5 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP34

Torry Ridge Trail 1

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2214670.3**
Northing Position (UTM - Zone 17):	**13778971.8**
Elevation of Photopoint Position (NAVD88):	**2655.1**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 10:58 AM**
Orientation of View:	**SE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint locations have been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

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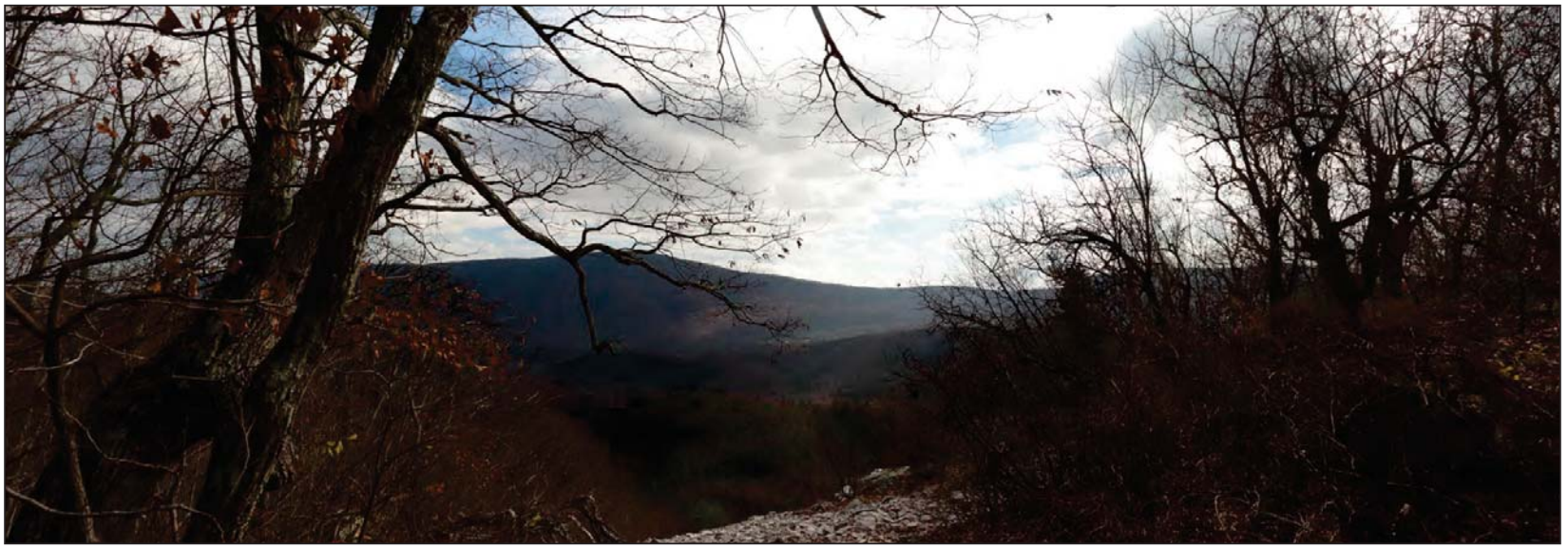

KOP34 - Torry Ridge Trail 1, Looking Southeast - **Existing View**

KOP34 - Torry Ridge Trail 1, Looking Southeast - **Proposed View 75' Permanent ROW (15/20 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP34

Torry Ridge Trail 1

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2214670.3**
Northing Position (UTM - Zone 17):	**13778971.8**
Elevation of Photopoint Position (NAVD88):	**2655.1**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 10:58 AM**
Orientation of View:	**SE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint locations have been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

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KOP35 - Torry Ridge Trail 2, Looking Southeast - **Existing View**

KOP35 - Torry Ridge Trail 2, Looking Southeast - **Following Construction**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline SM

Viewpoint 03

Torry Ridge Trail 2

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2224536.8**
Northing Position (UTM - Zone 17):	**13785472.0**
Elevation of Photopoint Position (NAVD88):	**2456.0**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 01:35 PM**
Orientation of View:	**SE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint locations have been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

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KOP35 - Torry Ridge Trail 2, Looking Southeast - **Existing View**

KOP35 - Torry Ridge Trail 2, Looking Southeast - **Proposed View 75' Permanent ROW (5 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP35

Torry Ridge Trail 2

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2224536.8**
Northing Position (UTM - Zone 17):	**13785472.0**
Elevation of Photopoint Position (NAVD88):	**2456.0**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 12:35 PM**
Orientation of View:	**SE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint locations have been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

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KOP35 - Torry Ridge Trail 2, Looking Southeast - **Existing View**

KOP35 - Torry Ridge Trail 2, Looking Southeast - **Proposed View 75' Permanent ROW (15/20 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP35

Torry Ridge Trail 2

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2224536.8**
Northing Position (UTM - Zone 17):	**13785472.0**
Elevation of Photopoint Position (NAVD88):	**2456.0**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 12:35 PM**
Orientation of View:	**SE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint locations have been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

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KOP38 - Raven's Roost, Blue Ridge Parkway Overlook, Looking Northwest - **Existing View**

KOP38 - Raven's Roost, Blue Ridge Parkway Overlook, Looking Northwest - **Following Construction**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

Viewpoint 05

Raven's Roost, Blue Ridge Parkway Overlook

Viewpoint Location
Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2230689.4**
Northing Position (UTM - Zone 17):	**13780972.7**
Elevation of Photopoint Position (NAVD88):	**3188.8**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 03:55 PM**
Orientation of View:	**NW**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:
Viewpoint locations have been surveyed by:

i3 Engineering Sciences
P.O. Box 1808, Bluefield, WV 24701

Heights are above mean sea level.
Projection/Zone/Datum:
UTM ZONE 17, NAD83
No part of this photosimulation shall be altered in any way.

Visual assessments should be made from the full size TrueView™ only.

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KOP38 - Raven's Roost, Blue Ridge Parkway Overlook, Looking Northwest - **Existing View**

KOP38 - Raven's Roost, Blue Ridge Parkway Overlook, Looking Northwest - **Proposed View 75' Permanent ROW (5 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP38

Raven's Roost,
Blue Ridge Parkway Overlook

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2230689.4**
Northing Position (UTM - Zone 17):	**13780972.7**
Elevation of Photopoint Position (NAVD88):	**3188.8**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 02:55 PM**
Orientation of View:	**NW**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:
Viewpoint locations have been surveyed by:

i3 Engineering Sciences
P.O. Box 1808, Bluefield, WV 24701

Heights are above mean sea level.
Projection/Zone/Datum:
UTM ZONE 17, NAD83
No part of this photosimulation shall be altered in any way.

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KOP38 - Raven's Roost, Blue Ridge Parkway Overlook, Looking Northwest - **Existing View**

KOP38 - Raven's Roost, Blue Ridge Parkway Overlook, Looking Northwest - **Proposed View 75' Permanent ROW (15/20 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP38

Raven's Roost,
Blue Ridge Parkway Overlook

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2230689.4**
Northing Position (UTM - Zone 17):	**13780972.7**
Elevation of Photopoint Position (NAVD88):	**3188.8**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 02:55 PM**
Orientation of View:	**NW**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:
Viewpoint locations have been surveyed by:

i3 Engineering Sciences
P.O. Box 1808, Bluefield, WV 24701

Heights are above mean sea level.
Projection/Zone/Datum:
UTM ZONE 17, NAD83
No part of this photosimulation shall be altered in any way.

Visual assessments should be made from the full size TrueView™ only.

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KOP39 - Blue Ridge Parkway, Three Ridges Overlook, Looking Southeast - **Existing View**

KOP39 - Blue Ridge Parkway, Three Ridges Overlook, Looking Southeast - **Following Construction**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

Viewpoint KOP39
Blue Ridge Parkway, Three Ridges Overlook
125' Permanent (75') and Temporary (50')
Right of Way (ROW) shown with
indicative restoration planting

Viewpoint Location
Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2223312.1**
Northing Position (UTM - Zone 17):	**13771099.9**
Elevation of Photopoint Position (NAVD88):	**2696.1**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 03:27 PM**
Orientation of View:	**SE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:
Viewpoint locations have been surveyed by:

i3 Engineering Sciences
P.O. Box 1808, Bluefield, WV 24701

Heights are above mean sea level.
Projection/Zone/Datum:
UTM ZONE 17, NAD83
No part of this photosimulation shall be altered in any way.

Visual assessments should be made from the full size TrueView™ only.

This image shows future conditions if the National Park Service were to remove vegetation at this site, an action that would be consistent with the General Management Plan for the Blue Ridge Parkway.

Photo Simulation Created Using
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KOP39 - Three Ridges Overlook, Blue Parkway Overlook, Looking Southeast - **Existing View**

KOP39 - Three Ridges Overlook, Blue Parkway Overlook, Looking Southeast - **Proposed View 75' Permanent ROW (5 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP39

Three Ridges Overlook,
Blue Parkway Overlook

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2223312.1**
Northing Position (UTM - Zone 17):	**13771099.9**
Elevation of Photopoint Position (NAVD88):	**2696.1**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 02:27 PM**
Orientation of View:	**SE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:
Viewpoint locations have been surveyed by:

i3 Engineering Sciences
P.O. Box 1808, Bluefield, WV 24701

Heights are above mean sea level.
Projection/Zone/Datum:
UTM ZONE 17, NAD83
No part of this photosimulation shall be altered in any way.

Visual assessments should be made from the full size TrueView™ only.

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KOP39 - Three Ridges Overlook, Blue Parkway Overlook, Looking Southeast - **Existing View**

KOP39 - Three Ridges Overlook, Blue Parkway Overlook, Looking Southeast - **Proposed View 75' Permanent ROW (15/20 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP39

Three Ridges Overlook,
Blue Parkway Overlook

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2223312.1**
Northing Position (UTM - Zone 17):	**13771099.9**
Elevation of Photopoint Position (NAVD88):	**2696.1**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 02:27 PM**
Orientation of View:	**SE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:
Viewpoint locations have been surveyed by:

i3 Engineering Sciences
P.O. Box 1808, Bluefield, WV 24701

Heights are above mean sea level.
Projection/Zone/Datum:
UTM ZONE 17, NAD83
No part of this photosimulation shall be altered in any way.

Visual assessments should be made from the full size TrueView™ only.

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KOP39 - Three Ridges Overlook, Blue Parkway Overlook, Looking Southeast - **Existing View**

KOP39 - Three Ridges Overlook, Blue Parkway Overlook, Looking Southeast - **Proposed View 75' Permanent ROW with Indicative Restoration**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP39

Three Ridges Overlook,
Blue Parkway Overlook

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2223312.1**
Northing Position (UTM - Zone 17):	**13771099.9**
Elevation of Photopoint Position (NAVD88):	**2696.1**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**6 November 2015 at 02:27 PM**
Orientation of View:	**SE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:
Viewpoint locations have been surveyed by:

i3 Engineering Sciences
P.O. Box 1808, Bluefield, WV 24701

Heights are above mean sea level.
Projection/Zone/Datum:
UTM ZONE 17, NAD83
No part of this photosimulation shall be altered in any way.

Visual assessments should be made from the full size TrueView™ only.

Photo Simulation Created Using
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KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Existing View**

KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Following Construction**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline

ERM - ACP Pipeline ROW Additional Forestry

Viewpoint KOP40

Bee Mountain, Appalachian Trail
with Contingency Right of Way (ROW) shown

Viewpoint Location Project Area

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2219906.9**
Northing Position (UTM - Zone 17):	**13760771.3**
Elevation of Photopoint Position (NAVD88):	**3068.4**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**5-Nov-15 at 2:04 p.m.**
Orientation of View:	**NE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint location has been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

Heights are above mean sea level.
Projection/Zone/Datum:
UTM ZONE 17, NAD83

No part of this photo simulation shall be altered in any way.

Visual assessments should be made from the full size TrueView™ only.

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DATE	SHEET
21 April 2016	5

KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Existing View**

KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Proposed View 75' Permanent ROW (5 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline SM

KOP40

Bee Mountain,
Appalachian Trail

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2219906.9**
Northing Position (UTM - Zone 17):	**13760771.3**
Elevation of Photopoint Position (NAVD88):	**3011.0**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**5 November 2015 at 09:59 AM**
Orientation of View:	**NE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint locations have been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

Photo Simulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)

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DATE	SHEET
19 July 2016	12

KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Existing View**

KOP40 - Bee Mountain, Appalachian Trail, Looking Northeast - **Proposed View 75' Permanent ROW (15/20 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline SM

KOP40

Bee Mountain,
Appalachian Trail

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**2219906.9**
Northing Position (UTM - Zone 17):	**13760771.3**
Elevation of Photopoint Position (NAVD88):	**3011.0**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**5 November 2015 at 09:59 AM**
Orientation of View:	**NE**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint locations have been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

Photo Simulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)

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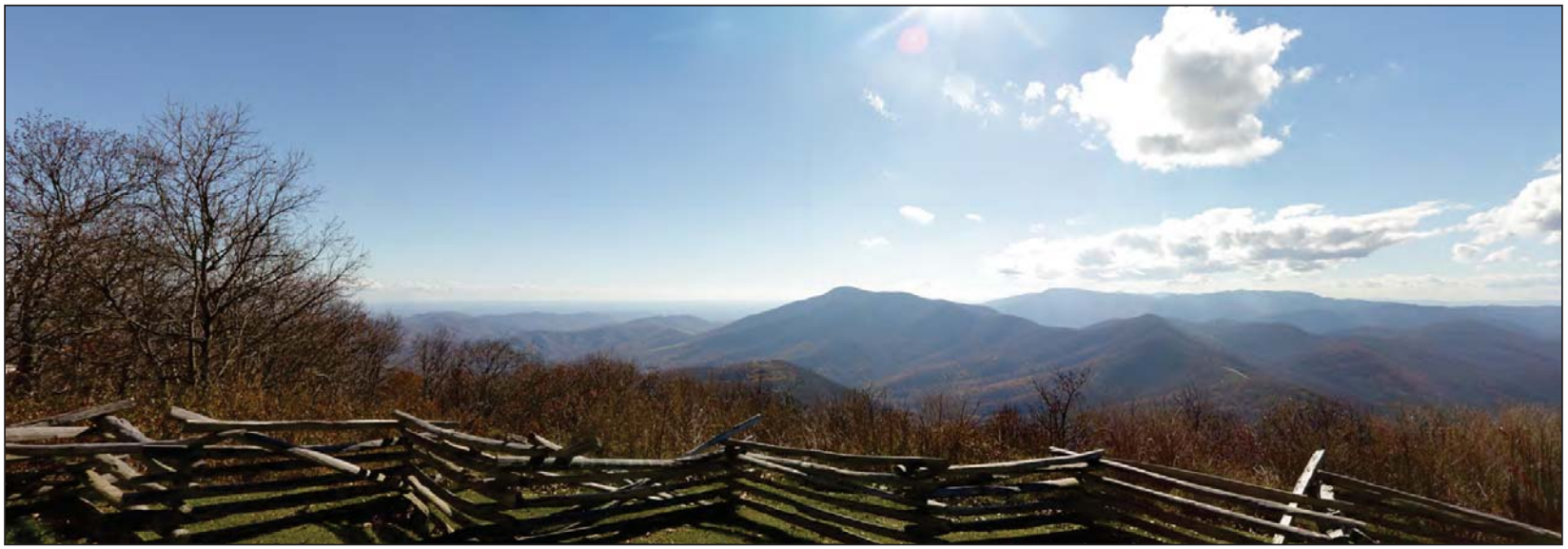
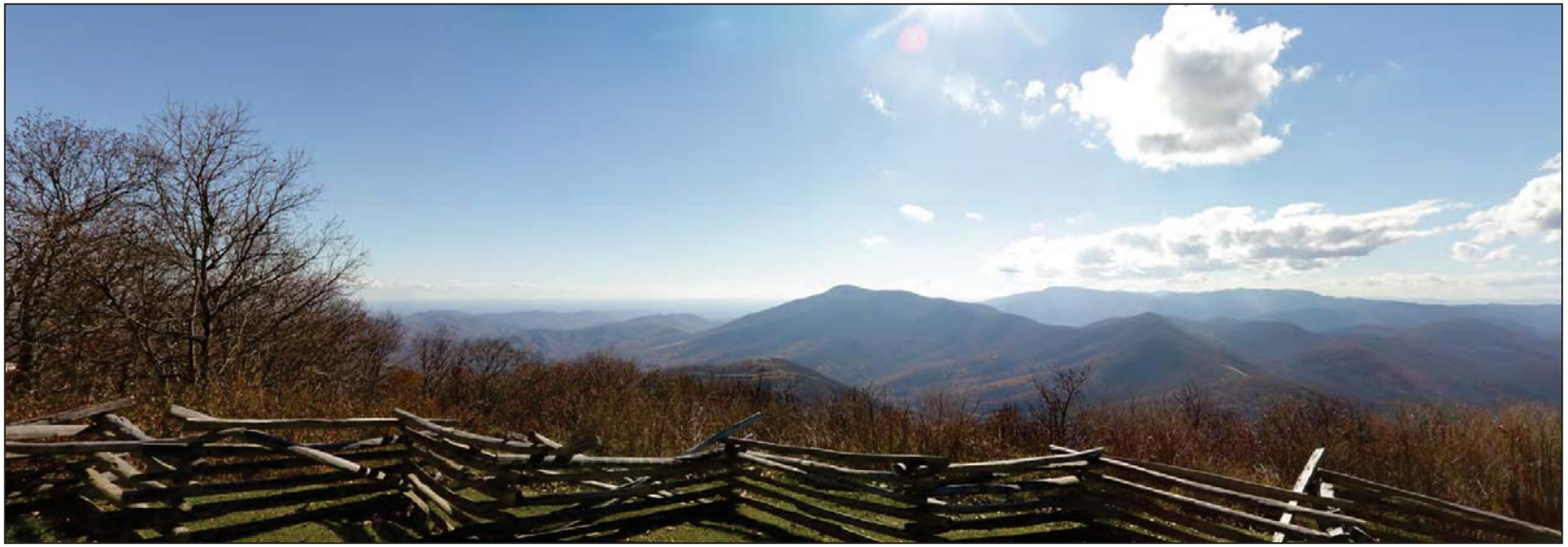


KOP65 - Devil's Knob, Looking South - **Existing View**



KOP65 - Devil's Knob, Looking South - **Following Construction**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline

ERM - ACP Pipeline ROW
Additional Forestry

Viewpoint KOP65

Devil's Knob
with Contingency Right of Way (ROW) shown

Viewpoint Location Project Area

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**222925.1**
Northing Position (UTM - Zone 17):	**113774276.5**
Elevation of Photopoint Position (NAVD88):	**3729.1**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**5-Nov-15 at 2:50 p.m.**
Orientation of View:	**S**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint locations have been precision surveyed by:

Rick Casteel & Adam Bosley
I3 Engineering
LLC

Heights are above mean sea level.
Projection/Zone/Datum:
UTM ZONE 17, NAD83

No part of this photo simulation shall be altered in any way.

Visual assessments should be made from the full size TrueView™ only.

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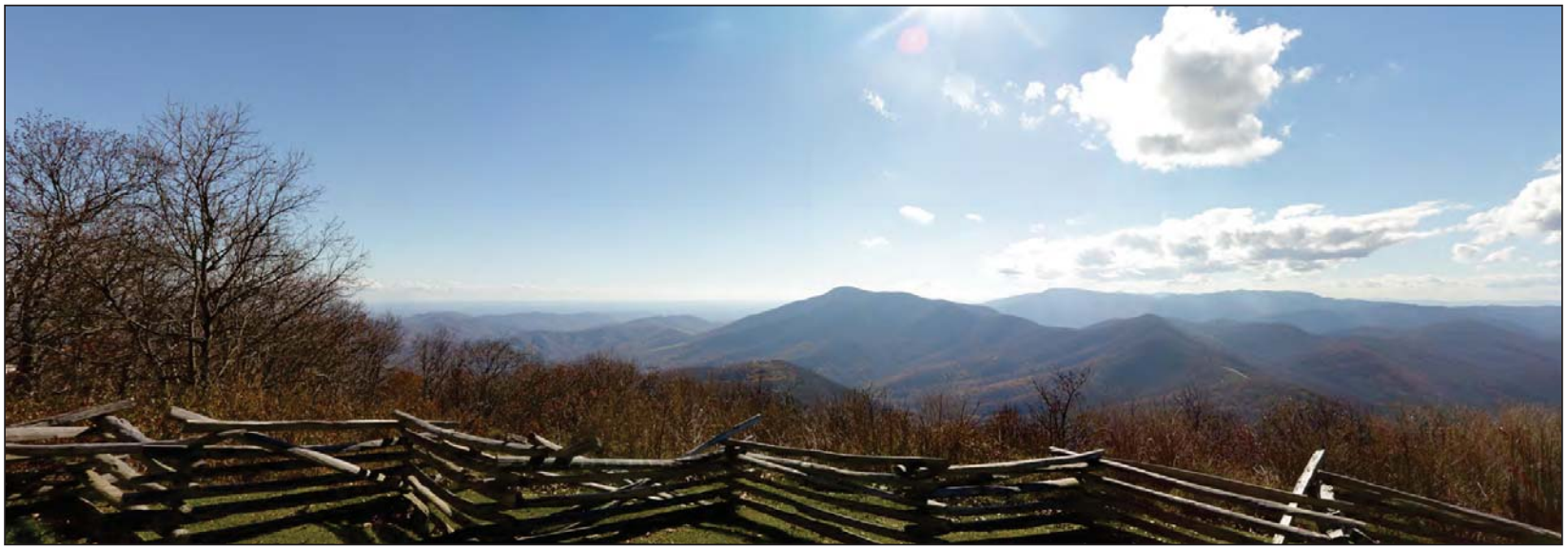

KOP65 - Devil's Knob Overlook, Looking South - **Existing View**

KOP65 - Devil's Knob Overlook, Looking South - **Proposed View 75' Permanent ROW (5 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP65

Devil's Knob Overlook

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**222925.1**
Northing Position (UTM - Zone 17):	**113774276.5**
Elevation of Photopoint Position (NAVD88):	**3729.1**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**5 November 2015 at 02:50 PM**
Orientation of View:	**5**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint locations have been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

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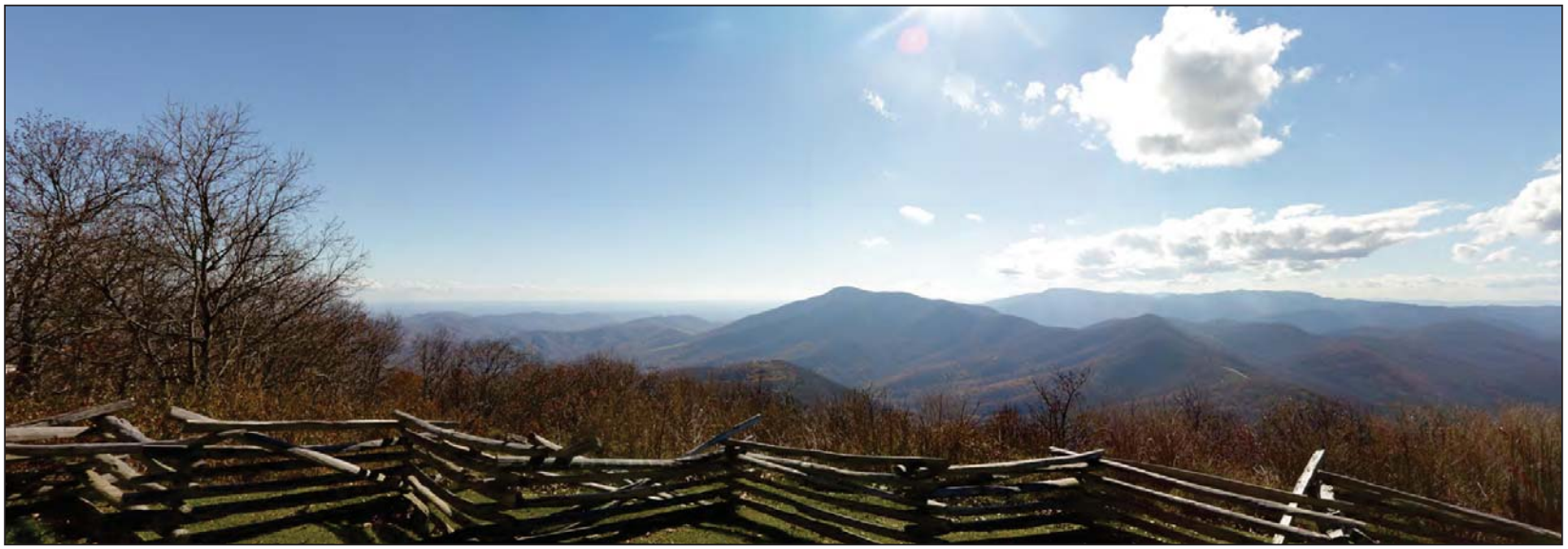

KOP65 - Devil's Knob Overlook, Looking South - **Existing View**

KOP65 - Devil's Knob Overlook, Looking South - **Proposed View 75' Permanent ROW (15/20 Year Tree Growth)**

For on-screen display:
Scale bar to be 4 inches (101.6mm wide)
Viewing distance is 19.7 inches (50 cm)

Atlantic Coast Pipeline℠

KOP65

Devil's Knob Overlook

Viewpoint Location Pipeline Right-of-Way

NOTE: The above pipeline ROW alignment has been exaggerated in width for visual purposes only and does not represent the actual width of the pipeline ROW.

Easting Position (UTM - Zone 17):	**222925.1**
Northing Position (UTM - Zone 17):	**113774276.5**
Elevation of Photopoint Position (NAVD88):	**3729.1**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**5 November 2015 at 02:50 PM**
Orientation of View:	**5**
Horizontal Field of View:	**124°**
Vertical Field of View:	**55°**

NOTES:

Viewpoint locations have been terrain-aligned using 1/9 and 1/3 arc degrees terrain, sourced from USGS and with a camera mounted gps unit.

Photo Simulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)

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19 July 2016	15

APPENDIX U

RACIAL, ETHNIC, AND POVERTY STATISTICS FOR CENSUS TRACTS WITHIN 1 MILE OF THE ATLANTIC COAST PIPELINE AND SUPPLY HEADER PROJECT

TABLE U-1

Racial, Ethnic, and Poverty Statistics for Census Tracts Within 1 Mile of the Atlantic Coast Pipeline and Supply Header Project

Project/Location	Total population [a]	White (%) [a, b]	Black or African American (%) [a]	American Indian and Alaska Native (%) [a]	Asian (%) [a]	Native Hawaiian and Other Pacific Islander (%) [a]	Some other race (%) [a]	Two or more races (%) [a]	Hispanic or Latino origin (of any race) (%) [a]	Total Minority Population (%) [a]	Median income (dollars) [a]	Percent Below Poverty Level (%) [a]
United States	314,107,084	73.8	12.6	0.8	5	0.2	4.7	2.9	16.9	26.2	$26,714	15.6
ATLANTIC COAST PIPELINE												
West Virginia	1,853,881	93.6	3.2	0.2	0.7	0	0.3	2	1.3	6.4	$22,148	18.1
Harrison	69,069	95.8	1.7	0.4	0.5	0.2	0.1	1.3	1.4	4.2	N/A	N/A
CT 313	2,595	98.3	0.7	0	0	0	0.2	0.8	1	1.7	$25,184	12.5
CT 314 [c]	2,860	94.7	0	0	1.5	0	0.3	3.5	0.3	5.3	$20,998	15.5
Lewis	16,412	97.2	0.9	0	0.2	0.1	0	1.7	0.2	2.9	N/A	N/A
CT 9672 [c]	3,549	95.5	0	0	0.3	0	0	4.2	0	4.5	$19,656	22
CT 9673	3,818	98.7	0.1	0	0	0.5	0	0.7	0	1.3	$24,754	9.8
CT 9674	2,596	99.2	0	0	0.3	0	0	0.4	0.8	0.7	$20,677	19.5
Pocahontas [f]	8,710	96.7	1.5	0.1	0	0	0	1.7	0.4	3.3	N/A	N/A
CT 9601.01 [d]	1,186	99.9	0	0	0	0	0.1	0	0.8	0.1	$23,185	13
CT 9601.02	1,172	93.1	5.5	0	0	0	0	1.4	0	6.9	$20,815	15.1
CT 9602 [d]	3,800	95.8	1	0	0	0	0	3.2	0.4	4.2	$17,764	23
Randolph	29,446	97	1.4	0.2	0.3	0.1	0.1	0.9	0.7	3	N/A	N/A
CT 9659 [c]	4,087	97.2	1.8	1	0	0	0	0	1	2.8	$18,578	16.1
CT 9664 [d]	5,579	98.8	0.3	0	0	0	0	0.9	0.2	1.2	$23,344	12.4
CT 9665 [d]	4,541	96.9	2.8	0.1	0	0	0	0.2	0.1	3.1	$15,620	21.7
Upshur	24,487	97.6	0.9	0.1	0.2	0.2	0.1	0.9	1.1	2.4	N/A	N/A
CT 9666 [d]	4,690	97.8	0	0.3	0	0	0	1.9	0	2.2	$20,761	20.9
CT 9668	3,673	99.5	0.5	0	0	0	0	0	3.6	0.5	$17,829	27.1
CT 9669	3,347	98.6	0	0	1.4	0	0	0	0	1.4	$26,125	17.1
CT 9670	4,870	96.4	2.1	0	0	1	0	0.5	0	3.6	$20,640	17.4
CT 9671	4,361	98.9	0	0	0	0	0	1.1	0	1.1	$20,290	16.7
Virginia	8,185,131	69.3	19.3	0.3	5.8	0.1	2.2	3.1	8.4	30.8	$31,329	11.5
Amelia [e]	12,764	72.5	24.9	0.5	0.1	0.1	0.5	1.4	0.9	27.5	N/A	N/A
CT 9301	6,697	71.3	26.1	0.2	0.2	0	0.7	1.4	1.4	28.6	$30,589	10.8
Augusta [f]	73,707	93	4.1	0.3	0.6	0	1	1	2.3	7	N/A	N/A
CT 701 [d]	5,477	74.5	22.6	0	0.6	0	1.5	0.8	2.8	25.5	$15,487	13.2
CT 702	3,666	90.9	0.8	0	0.3	0.1	7	0.8	9.4	9	$28,977	12.4
CT 708	5,868	96.2	2.6	0	0.3	0	0	0.9	0.3	3.8	$28,306	8.1
CT 709	4,822	94.9	3.4	0	0	0	0	1.7	1.5	5.1	$27,757	9.9

TABLE U-1 (cont'd)

Racial, Ethnic, and Poverty Statistics for Census Tracts Within 1 Mile of the Atlantic Coast Pipeline and Supply Header Project

Project/Location	Total population [a]	White (%) [a, b]	Black or African American (%) [a]	American Indian and Alaska Native (%) [a]	Asian (%) [a]	Native Hawaiian and Other Pacific Islander (%) [a]	Some other race (%) [a]	Two or more races (%) [a]	Hispanic or Latino origin (of any race) (%) [a]	Total Minority Population (%) [a]	Median income (dollars) [a]	Percent Below Poverty Level (%) [a]
CT 711.01	4,163	93.7	3.2	0	0	0	1.1	2	1.5	6.3	$26,220	18.7
CT 711.02	5,934	97.5	2.1	0.5	0	0	0	0	2	2.6	$26,604	3.8
CT 712	5,876	93.6	3.8	0.1	1.2	0	0.3	1	0.4	6.4	$27,698	7.3
Bath [f]	4,644	91.7	5.9	0	0	0	0	2.3	1.8	8.2	N/A	N/A
CT 9201 [c, d]	4,644	91.7	5.9	0	0	0	0	2.3	1.8	8.2	$26,429	9.3
Brunswick	16,961	41.7	56.4	0.3	0	0	0.5	1.1	1.9	58.3	N/A	N/A
CT 9301	3,511	43.7	52.3	1.5	0	0	0	2.5	0	56.3	$22,048	16.9
CT 9302.01	2,301	24	75.2	0	0.2	0	0.2	0.3	0.8	75.9	$14,922	20.8
CT 9302.03 [c, d]	4,321	34.9	63.2	0	0	0	1.1	0.8	5.4	65.1	$18,389	28.9
CT 9303	5,231	60.1	39.3	0	0	0	0.1	0.5	0.4	39.9	$19,258	24.6
Buckingham	17,072	62.2	34.7	0	0.2	0	0.7	2.1	2	37.7	N/A	N/A
CT 9301.01 [c]	4,200	68.3	27.9	0	0	0	2.1	1.8	5.6	31.8	$22,752	26.6
CT 9302.01	5,954	54.4	42.7	0.1	0.3	0.1	0.4	2	1.2	45.6	$16,396	20.7
CT 9302.02 [d]	4,239	71.7	23.7	0	0.6	0	0.3	3.7	0.6	28.3	$23,583	22.5
Cumberland	9,916	63.1	34.4	0.7	0	0	0	1.8	0.1	36.9	N/A	N/A
CT 9301	6,375	64.3	33.4	1.1	0	0	0	1.1	0	35.6	$22,036	15.5
CT 9302	3,541	60.8	36.3	0	0	0	0	2.9	0.3	39.2	$26,778	24
Dinwiddie	27,993	64.8	32.7	0.1	0.3	0	0.4	1.6	2.7	35.1	N/A	N/A
CT 8401	5,446	71.7	27.1	0	0.4	0	0	0.7	0.3	28.2	$25,418	17.6
CT 9801	-	-	-	-	-	-	-	-	-	0	-	-
Greensville	11,911	38.2	59.7	0.4	0.4	0	0.4	1	2	61.9	N/A	N/A
CT 8801.01 [c]	4,253	41.8	57	0.5	0	0	0.3	0.4	1.3	58.2	$20,532	18.4
CT 8802 [c]	4,391	37.6	60.9	0.1	1.1	0	0	0.3	0	62.4	$20,473	21.5
Highland [f]	2,258	99.8	0	0	0	0	0	0.2	0	0.2	N/A	N/A
CT 9701 [d]	2,258	99.8	0	0	0	0	0	0.2	0	0.2	$23,482	12.5
Isle of Wight [e]	35,518	71.4	23.4	0.1	1.1	0	1	3	2.3	28.6	N/A	N/A
CT 2804	3,773	84.2	15.6	0.2	0	0	0	0	0.5	15.8	$24,411	13.2
Nelson [f]	14,892	83.6	13.6	0.2	0.4	0	1.6	0.5	3.3	16.3	N/A	N/A
CT 9501	5,588	79.7	18.7	0.3	0.7	0	0.1	0.5	1.3	20.3	$25,272	19.8
CT 9502	4,965	90.2	7.2	0	0.6	0	1	1	2.8	9.8	$30,657	6.9
CT 9503	4,339	81.1	14.5	0.2	0	0	4.1	0	6.5	18.8	$23,182	15
Nottoway	15,756	56.4	39.4	0.3	0.3	0	2.1	1.6	3.9	43.7	N/A	N/A
CT 1	6,395	50.3	43.5	0.6	0.5	0	3.6	1.5	5.9	49.7	$19,181	20.8

TABLE U-1 (cont'd)

Racial, Ethnic, and Poverty Statistics for Census Tracts Within 1 Mile of the Atlantic Coast Pipeline and Supply Header Project

Project/Location	Total population [a]	White (%) [a, b]	Black or African American (%) [a]	American Indian and Alaska Native (%) [a]	Asian (%) [a]	Native Hawaiian and Other Pacific Islander (%) [a]	Some other race (%) [a]	Two or more races (%) [a]	Hispanic or Latino origin (of any race) (%) [a]	Total Minority Population (%) [a]	Median income (dollars) [a]	Percent Below Poverty Level (%) [a]
CT 2	2,731	71.6	26.3	0	0	0	1	1.2	1	28.5	$26,161	20.3
CT 3	6,620	56	40.6	0.2	0.2	0	1.2	1.8	3.3	44	$20,084	21.3
CT 9801	10	0	100	0	0	0	0	0	0	100	-	0
Prince Edward	23,140	63.7	33.6	0.1	1.2	0	0.5	1	2.4	36.4	N/A	N/A
CT 9301	7,241	53.3	42.6	0	3.4	0	0.3	0.3	1	46.6	$16,842	36
Rockbridge [f]	22,367	93.9	2.9	0.2	0.7	0.1	0.7	1.6	1.5	6.2	N/A	N/A
CT 9301 [d]	8,117	94.1	2.7	0	1.2	0.2	0	1.7	0.9	5.8	$24,280	14.5
CT 9302	4,087	96.7	0.5	0	0.6	0	1.3	0.9	1.8	3.3	$20,586	15.2
Southampton	18,364	61	36.3	0.3	0.1	0	0.3	2.1	1.3	39.1	N/A	N/A
CT 2004	6,298	61.4	36.2	0.3	0	0	0.7	1.4	1	38.6	$27,520	16.4
CT 2005	3,516	53.1	42.7	0	0.5	0	0.1	3.7	0.3	47	$22,512	13.3
Chesapeake, City of	228,168	62.5	29.8	0.3	3.2	0.1	1.1	2.9	4.9	37.4	N/A	N/A
CT 205	1,381	47.7	28.2	0	2.4	0	21.4	0.3	29.5	52.3	$21,671	7.1
CT 206	4,240	82	15	0	0.3	0	0	2.7	7.1	18	$29,805	7.3
CT 207	5,305	22.3	75.1	0	0	0	0	2.5	5.7	77.6	$22,972	15.5
CT 209.03 [c]	2,588	26	70.5	0.2	1.8	0	0	1.5	4.7	74	$32,525	9.9
CT 209.04	8,616	59.9	31.7	0	4.3	0	0.2	3.9	2.9	40.1	$41,867	10.2
CT 209.05	2,753	78.7	17.1	0	3.9	0	0	0.3	12.5	21.3	$34,107	7.7
CT 213.01	5,401	68.1	27.8	0.2	1.4	0.2	1.1	1.4	3.5	32.1	$36,708	7.8
CT 213.02	9,740	59.1	33	0	2.1	0	1.2	4.5	5.8	40.8	$42,722	6.5
CT 214.01	1,884	65.9	28.3	0.5	0	0	2.3	3	2.3	34.1	$39,132	8.3
CT 214.02	6,534	75.2	19.7	0	1.8	0	0.2	3.2	0.9	24.9	$34,986	10
CT 214.03	4,586	59.2	30.6	0.8	0	0	6.6	2.7	8.3	40.7	$23,675	12.8
CT 214.04	7,620	22	75	0	1.5	0	1.4	0.2	6.7	78.1	$26,045	14.9
CT 215.01	10,725	51.1	38.6	0.5	3.9	0	1.9	4.1	6.8	49	$36,667	10.5
Franklin, City of	8,534	38.8	58	0	0.9	0	0.2	2.2	0.6	61.3	N/A	N/A
CT 901 [d]	4,830	60.4	35	0	1.4	0	0.3	3	1	39.7	$26,535	7.7
CT 902	3,704	10.7	87.9	0	0.2	0	0	1.2	0	89.3	$12,684	48.9
Suffolk, City of	85,477	52.3	41.9	0.1	1.4	0	0.6	3.8	3.3	47.8	N/A	N/A
CT 753.02	2,271	71.8	20.4	0.4	1	0	1.1	5.3	1.7	28.2	$34,259	19.2
CT 754.02	4,117	53.7	40	0	0.8	0	1.6	4	6.8	46.4	$44,191	5.2
CT 754.03	4,314	46	46	0	1.2	0	3.1	3.8	4.4	54.1	$41,023	5.8
CT 754.04	971	90.7	9.3	0	0	0	0	0	0	9.3	$41,773	1.3

TABLE U-1 (cont'd)

Racial, Ethnic, and Poverty Statistics for Census Tracts Within 1 Mile of the Atlantic Coast Pipeline and Supply Header Project

Project/Location	Total population [a]	White (%) [a, b]	Black or African American (%) [a]	American Indian and Alaska Native (%) [a]	Asian (%) [a]	Native Hawaiian and Other Pacific Islander (%) [a]	Some other race (%) [a]	Two or more races (%) [a]	Hispanic or Latino origin (of any race) (%) [a]	Total Minority Population (%) [a]	Median income (dollars) [a]	Percent Below Poverty Level (%) [a]
CT 754.05	2,192	92.5	6.9	0	0	0.4	0	0.2	0.5	7.5	$36,129	1.7
CT 755.01	4,735	46.2	48.2	0	0.7	0	0.1	4.8	1.2	53.8	$26,866	20.4
CT 755.02	4,370	51.8	40.5	0	5	0	0.7	2	2.3	48.2	$36,964	7
CT 757.02	3,555	74.6	22.4	0	0	0	0	3	2.4	25.4	$37,386	7.6
CT 757.03	1,344	70.3	29.7	0	0	0	0	0	0	29.7	$26,313	4.9
CT 758.01	2,872	80.2	17.2	0.9	0.3	0	0.2	1.2	0.6	19.8	$26,891	4.7
CT 758.02	1,677	53.5	44.1	0	1	0	0	1.4	0	46.5	$24,979	7.9
CT 758.03	1,343	75.9	20.5	0	0	0	0	3.6	2.6	24.1	$33,772	15.3
North Carolina	9,750,405	69.6	21.5	1.2	2.4	0.1	3	2.3	8.7	30.5	$24,957	17.6
Cumberland	324,002	52	36.2	1.2	2.3	0.3	2.5	5.4	10.4	47.9	N/A	N/A
CT 14 [d]	6,038	47.7	45.4	3.1	0	0	0.3	3.5	5.4	52.3	$20,906	23.6
CT 26 [c]	4,041	69	25.7	1.5	1.2	0	0.1	2.5	0.4	31	$27,145	17.2
CT 27	8,742	69.8	20.7	0	2.3	0.4	2.5	4.3	6.3	30.2	$28,/829	8.2
CT 28	6,538	80.2	12.1	1.7	0.2	0.7	0.8	4.3	2.3	19.8	$26,374	12.2
CT 29	4,639	67.3	24	1.3	1.8	0	0	5.7	5.6	32.8	$26,484	17.1
CT 30.01	11,543	65	19.3	5.5	1.2	0	3.7	5.3	10.5	35	$31,878	8.9
CT 30.02	2,789	69.2	24.1	3.4	0	0	1	2.3	9.5	30.8	$25,432	13.4
CT 37	7,035	72.4	22.2	1.1	0.2	0	0	4.2	6.3	27.7	$29,625	13.1
Halifax	53,803	40	51.6	3.3	0.8	0	0.9	3.4	2.4	60	N/A	N/A
CT 9306	4,085	36.4	57	0.7	1.2	0	1.2	3.5	2	63.6	$17,943	26.6
CT 9308	5,667	8.3	51	29.3	1.2	0.1	1.6	8.5	3.4	91.7	$15,304	29.7
CT 9309	5,026	9.1	88.6	0.1	1.6	0	0	0.7	0	91	$13,533	34
CT 9310 [d]	3,285	25.4	67.1	1.3	0.2	0	0	6	1.1	74.6	$18,516	17.3
CT 9301	3,272	24.4	73.8	0.1	0	0	0	1.7	0.3	75.6	$14,967	40.2
Johnston	175,343	78.5	15.1	0.4	0.7	0	3.1	2.2	13.1	21.5	N/A	N/A
CT 401	6,263	85.5	13.2	0	0	0	0.9	0.4	8.8	14.5	$22,975	22.8
CT 403.01	3,535	53.7	20.7	1.8	0	0	22.6	1.2	40	46.3	$15,600	41.2
CT 404	4,335	82.6	10.5	0	0.1	0	6	0.7	16.7	17.3	$22,165	20.3
CT 406 [d]	3,354	59.1	27.6	0	0.6	0	11.6	1.1	15.5	40.9	$17,420	23.6
CT 407 [c]	3,399	60.9	27	0.2	7.1	0	2.5	2.2	6.4	39	$18,182	18.3
CT 412.02	5,413	87.4	7.5	0.5	0.1	0	4.4	0	31.2	12.5	$17,267	35.7
CT 413	5,686	76.8	14.7	0.4	0	0	3.9	4.2	9.4	23.2	$20,622	23.1
CT 414	6,768	71	14.5	0	1	0	11.5	2.1	17.3	29.1	$20,698	26.8

TABLE U-1 (cont'd)

Racial, Ethnic, and Poverty Statistics for Census Tracts Within 1 Mile of the Atlantic Coast Pipeline and Supply Header Project

Project/Location	Total population [a]	White (%) [a, b]	Black or African American (%) [a]	American Indian and Alaska Native (%) [a]	Asian (%) [a]	Native Hawaiian and Other Pacific Islander (%) [a]	Some other race (%) [a]	Two or more races (%) [a]	Hispanic or Latino origin (of any race) (%) [a]	Total Minority Population (%) [a]	Median income (dollars) [a]	Percent Below Poverty Level (%) [a]
Nash	95,174	55.1	37.8	0.7	0.8	0	3.4	2.3	6.4	45	N/A	N/A
CT 107	2,538	39.1	55.1	0	1.3	0	0	4.4	1.8	60.8	$22,102	11.4
CT 108	7,087	79.1	20.2	0.3	0.1	0	0.2	0.2	0.8	21	$30,743	9.9
CT 111.01	5,582	49.5	43.7	0	0	0	3	3.9	7.7	50.6	$26,202	11.7
CT 111.02	7,647	65.8	29	3.2	0	0	0.9	0.9	1.6	34	$22,013	19.1
CT 113	5,163	72.9	9.4	0	0	0	15.4	2.2	23.6	27	$22,208	13.4
CT 114	4,748	52	27.9	0.5	0.4	0	18.1	1.1	24.6	48	$23,612	18.1
Northampton	21,310	40.1	56.4	0.2	0.1	0.1	0.2	2.9	1.7	59.9	N/A	N/A
CT 9201	5,141	65.1	32.6	0	0	0	0	2.4	1.8	35	$24,813	16.4
CT 9203 [c]	6,180	19.1	75.6	0.2	0.1	0	0	5.1	0.4	81	$17,625	32.3
Robeson	134,913	30.8	24.1	37.6	0.8	0.1	3.8	2.9	8.1	69.3	N/A	N/A
CT 9601.01	4,057	54	34.4	5.3	0	0	4.1	2.1	22.1	45.9	$17,859	43
CT 9601.02	4,970	54.9	21.5	16.7	0.5	0	2.5	3.8	9.3	45	$17,449	23.3
CT 9602.01	5,879	46.4	30.7	16	0	0	2.9	4	5	53.6	$19,557	22.5
CT 9602.02	4,446	22.5	9.8	58.5	0.9	0	4.4	3.9	19.6	77.5	$18,844	33.1
CT 9603	7,167	36.6	35.9	22.1	0.3	0.5	2.2	2.3	20.7	63.3	$16,283	43.8
CT 9604.01	7,782	9.1	2	82.4	0.7	0	0.6	5.2	0.7	90.9	$17,623	36.3
CT 9604.02	3,654	11.2	7.3	73.9	1.3	0	4.3	2	5.8	88.8	$19,864	29.4
CT 9605.01 [c]	3,612	4.5	9.3	81.3	0	0	0.2	4.7	0.7	95.5	$17,737	32.3
CT 9606	6,920	16	10.9	67.3	1.1	0	4.1	0.7	6.5	84.1	$17,718	29.8
CT 9607.01	6,253	22.4	6.1	54.2	1	0	12.7	3.5	20.2	77.5	$19,694	36.3
Sampson	63,842	58.5	26	1.7	0.3	0	10.8	2.7	17.5	41.5	N/A	N/A
CT 9703.01	5,932	75.2	15.2	0.1	0.3	0	5.2	4.1	13.4	24.9	$25,698	18.7
Wilson	81,499	51.1	38.6	0.4	0.9	0.1	6.9	2.1	9.8	49	N/A	N/A
CT 15	5,668	69.6	15.2	0	0.1	0	12.4	2.6	17	30.3	$26,142	13.1
CT 16	3,179	69.2	20.4	1.1	0.4	0	8.8	0	8.8	30.7	$26,047	17.6
SUPPLY HEADER PROJECT												
Pennsylvania	12,758,729	81.9	10.9	0.2	3	0	2	2	6.1	18.1	$26,729	13.5
Greene	38,171	92.3	5.4	0.5	0.2	0	0.3	1.3	1.3	7.7	N/A	N/A
CT 9702	3,204	93.2	6.5	0	0.1	0	0	0.3	0.9	6.9	$23,707	10.4
CT 9703 [d]	4,520	98.9	0.2	0	0.2	0	0.1	0.6	0.3	1.1	$26,172	12.4
CT 9705.01	5,130	57.3	33.3	2.8	0.3	0.1	2.1	4.2	7.2	42.8	$15,159	4.2

TABLE U-1 (cont'd)

Racial, Ethnic, and Poverty Statistics for Census Tracts Within 1 Mile of the Atlantic Coast Pipeline and Supply Header Project

Project/Location	Total population [a]	White (%) [a, b]	Black or African American (%) [a]	American Indian and Alaska Native (%) [a]	Asian (%) [a]	Native Hawaiian and Other Pacific Islander (%) [a]	Some other race (%) [a]	Two or more races (%) [a]	Hispanic or Latino origin (of any race) (%) [a]	Total Minority Population (%) [a]	Median income (dollars) [a]	Percent Below Poverty Level (%) [a]
Westmoreland	362,587	95.1	2.3	0.1	0.9	0	0.2	1.3	1	4.8	N/A	N/A
CT 8017.02	4,607	99.9	0	0.1	0	0	0	0	0.3	0.1	$32,063	4.2
CT 8017.03	2,750	99.8	0.2	0	0	0	0	0	0.4	0.2	$24,167	4.3
CT 8019 [d]	6,605	95.6	1	0	1.1	0	0	2.2	0.3	4.3	$25,504	4.7
CT 8020.01 [c]	2,562	96.1	1	0	2.5	0	0.1	0.4	0.8	4	$29,909	3.1
CT 8020.02	7,673	94.8	0.7	0.2	3.3	0	0.1	1	1.2	5.3	$31,727	6.6
CT 8021.02 [c]	6,048	96.5	0	0	1.8	0	0	1.6	3.2	3.4	$37,182	5.7
West Virginia	1,853,881	93.6	3.2	0.2	0.7	0	0.3	2	1.3	6.4	$22,148	18.1
Doddridge	8,282	97.2	0.9	0.1	0	0	0	1.8	1	2.8	N/A	N/A
CT 9650 [d]	3,906	97.8	0.4	0.3	0	0	0	1.6	0.7	2.3	$19,244	11
Harrison	69,069	95.8	1.7	0.4	0.5	0.2	0.1	1.3	1.4	4.2	N/A	N/A
CT 314 [c]	2,860	94.7	0	0	1.5	0	0.3	3.5	0.3	5.3	$20,998	15.5
Lewis	16,412	97.2	0.9	0	0.2	0.1	0	1.7	0.2	2.9	N/A	N/A
CT 9672 [c]	3,549	95.5	0	0	0.3	0	0	4.2	0	4.5	$19,656	22
Marshall	32,716	97.8	0.9	0.3	0.4	0	0.2	0.5	0.9	2.3	N/A	N/A
CT 209	4,435	98.1	1.1	0.1	0.3	0	0	0.3	0	1.8	$22,830	11.4
Ritchie	10,221	98.3	0.4	0	0	0	0	1.3	0.6	1.7	N/A	N/A
CT 9623 [d]	4,333	98.5	0.3	0	0	0	0	1.2	1.2	1.5	$19,398	21
Tyler	9,084	98.8	0.2	0.1	0	0	0	0.8	0.6	1.1	N/A	18
CT 9620	2,161	99.4	0	0.4	0	0	0	0.3	0	0.7	$18,830	16.8
Wetzel	16,314	98.6	0.1	0	0.5	0.1	0	0.7	0.6	1.4	N/A	N/A
CT 304	2,936	99.5	0	0.2	0	0	0	0.3	0.5	0.5	$18,190	24.6
CT 305 [c, d]	4,251	98.6	0	0	0.6	0.3	0	0.5	0	1.4	$19,390	23.6

Sources:

[a] U.S. Census Bureau 2014.

[b] White Alone, Not Hispanic or Latino

[c] Census tract contains permanent aboveground facility.

[d] Census tract contains contractor yard.

[e] Includes census tracts within one mile of the proposed pipeline facilities and major aboveground facilities, but does not contain any project facilities.

[f] Counties with federal lands crossed by the projects.

Grey highlighted values indicate percentage exceeds thresholds defined in text, and is an environmental justice population.

APPENDIX V

SUMMARY OF COMMUNICATIONS WITH FEDERALLY RECOGNIZED INDIAN TRIBES FOR THE ATLANTIC COAST PIPELINE AND SUPPLY HEADER PROJECT

TABLE 1-1

Summary of Communications with Federally Recognized Indian Tribes for the Atlantic Coast Pipeline and Supply Header Project

Tribe	Date	Summary	Filed to the Docket
Absentee-Shawnee Tribe of Indians of Oklahoma	7/29/2014	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/17/2014	Follow-up letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/28/2014	Initial letter from DTI to the Tribe requesting comments on the SHP.	9/18/2015
	12/4/2014	Follow-up telephone phone call (message) from Atlantic and DTI to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments for the ACP and SHP.	10/31/2016
Catawba Indian Nation	10/17/2014	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	11/12/2014	Letter from the Tribe to Atlantic requesting a cultural resources survey for the ACP.	9/18/2015
	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	6/22/2016	Email from the Tribe to FERC requesting additional information on the ACP and SHP.	9/15/2016
	8/8/2016	Letter from Atlantic and DTI to the Tribe (sent at FERC's request) providing updated project descriptions and maps for the ACP and SHP.	8/15/2016
	8/25/2016	Letter from the Tribe to Atlantic/DTI in which the Tribe states there are no concerns regarding cultural resource sites in the ACP and SHP project areas. The Tribe additionally asked to be notified in the event of an unanticipated find.	9/1/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016
Cherokee Nation	7/29/2014	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/17/2014	Follow-up letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	12/4/2014	Follow-up telephone call (message) from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	12/19/2014	Voicemail message from the Tribe regarding the ACP.	9/18/2015

TABLE 1-1 (continued)

Summary of Communications with Federally Recognized Indian Tribes for the Atlantic Coast Pipeline and Supply Header Project

Tribe	Date	Summary	Filed to the Docket
	12/19/2014	Email from Atlantic to the Tribe transmitting copies of Atlantic's 7/29/14 and 10/17/14 letters requesting comments on the ACP.	9/18/2015
	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016
Delaware Nation	7/29/2014	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/17/2014	Follow-up letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/28/2014	Initial letter from DTI to the Tribe requesting comments on the SHP.	9/18/2014
	12/1/2014	Letter from the Tribe to FERC in which the Tribe states that no sites of interest to the Tribe will be affected by the ACP. The Tribe additionally asked to be notified in the event of an unanticipated find.	9/18/2015
	2/11/2015	Letter from the Tribe to DTI in which the Tribe states that no sites of interest to the Tribe will be affected by the SHP. The Tribe additionally asked to be notified in the event of an unanticipated find.	9/18/2015
	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015
	1/8/2016	Email from the Tribe to Atlantic concurring with the unanticipated discoveries plan for the MNF.	1/29/2016
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016

TABLE 1-1 (continued)

Summary of Communications with Federally Recognized Indian Tribes for the Atlantic Coast Pipeline and Supply Header Project

Tribe	Date	Summary	Filed to the Docket
Delaware Tribe of Indians	7/29/2014	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/17/2014	Follow-up letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/28/2014	Initial letter from DTI to the Tribe requesting comments on the SHP.	9/18/2014
	12/4/2014	Follow-up telephone phone call (message) from Atlantic/DTI to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	6/21/2016	Email from the Tribe to FERC in which the Tribe states that its land interests in Virginia are in Accomack and Northampton Counties and its land interests in West Virginia are in Brooke, Hancock, Marshall, and Ohio Counties. (Note: the ACP and SHP do not cross these Counties.)	9/15/2016
	8/10/2016	Letter from Atlantic and DTI to the Tribe (sent at FERC's request) providing updated project descriptions and maps for the ACP and SHP.	8/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016
Eastern Band of Cherokee Indians	7/29/2014	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/17/2014	Follow-up letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	11/5/2014	Email from the Tribe to FERC in which the Tribe states that the ACP is outside the aboriginal territory of the Cherokee people.	9/18/2015
	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	9/7/2016	Letter from the Tribe to FERC in which the Tribe states that the ACP and SHP are within the aboriginal territory of the Cherokee. The Tribe additionally requested updated project information and copies of archaeological survey reports.	9/22/2016
	10/5/2016	Letter from Atlantic to the Tribe providing updated information on the ACP and SHP and transmitting copies of archaeological survey reports for the projects.	10/17/2016

TABLE 1-1 (continued)

Summary of Communications with Federally Recognized Indian Tribes for the Atlantic Coast Pipeline and Supply Header Project

Tribe	Date	Summary	Filed to the Docket
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	9/7/2016	Letter from the Tribe to FERC requesting topographic maps and survey reports.	9/22/16
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/5/2016	Letter from Atlantic and DTI to the Tribe transmitting Phase I archaeological survey reports and updated, revised route maps and renewing requests for comments on the ACP and SHP.	10/31/2016
Eastern Shawnee Tribe of Oklahoma	7/29/2014	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/17/2014	Follow-up letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/28/2014	Initial letter from DTI to the Tribe requesting comments on the SHP.	9/18/2014
	12/4/2014	Follow-up telephone phone call (message) from Atlantic/DTI to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/15
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	8/1/2016	Email from the Tribe to FERC requesting a follow-up telephone call.	9/15/2016
	8/4/2016	Follow-up telephone call from FERC to the Tribe in which the Tribe requested additional information on the ACP.	9/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016
Pamunkey Tribe	4/24/2015	Initial letter from Atlantic to the Commonwealth recognized Tribe requesting comments on the ACP.	9/18/2015
	8/5/2015	Initial letter from Atlantic to the federally recognized Tribe requesting comments on the ACP.	9/18/2015
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016

TABLE 1-1 (continued)

Summary of Communications with Federally Recognized Indian Tribes for the Atlantic Coast Pipeline and Supply Header Project

Tribe	Date	Summary	Filed to the Docket
Seneca-Cayuga Nation	10/28/2014	Initial letter from DTI to the Tribe requesting comments on the SHP.	9/18/2015
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015
	12/4/2014	Follow-up phone call from NRG to the Tribe requesting comments on the SHP.	9/18/2015
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016
Seneca Nation of Indians	10/28/2014	Initial letter from DTI to the Tribe requesting comments on the SHP.	
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015
	12/4/2014	Follow-up phone call from NRG to the Tribe requesting comments on the SHP.	
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	7/5/2016	Email from the Tribe to FERC expressing interest in the ACP and SHP and requesting an archaeological survey in undisturbed areas.	9/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016
The Shawnee Tribe	7/29/2014	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/17/2014	Follow-up letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/28/2014	Initial letter from DTI to the Tribe requesting comments on the SHP.	
	12/4/2014	Follow-up phone call from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	12/4/2014	Follow-up phone call from DTI to the Tribe requesting comments on the SHP.	
	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015

TABLE 1-1 (continued)

Summary of Communications with Federally Recognized Indian Tribes for the Atlantic Coast Pipeline and Supply Header Project

Tribe	Date	Summary	Filed to the Docket
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016
Stockbridge Munsee Community	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	4/24/2015	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	4/30/2015	Letter from the Tribe to Atlantic deferring consultation on the ACP.	9/18/2015
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
Tonawanda Band of Seneca	10/28/2014	Initial letter from DTI to the Tribe requesting comments on the SHP.	9/18/2015
	12/4/2014	Follow-up phone call from DTI to the Tribe requesting comments on the SHP.	
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	6/23/2016	Telephone call from FERC to the Tribe in which the Tribe requested additional information on the ACP and SHP.	
	8/8/2016	Letter from Atlantic and DTI to the Tribe (sent at FERC's request) providing updated project descriptions and maps for the ACP and SHP.	8/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016
Tuscarora Nation of New York	7/29/2014	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/17/2014	Follow-up letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	12/4/2014	Follow-up phone call from NRG to the Tribe requesting comments on the ACP.	9/18/2015
	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015

TABLE 1-1 (continued)

Summary of Communications with Federally Recognized Indian Tribes for the Atlantic Coast Pipeline and Supply Header Project

Tribe	Date	Summary	Filed to the Docket
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	6/23/2016	Telephone call from FERC to the Tribe in which the Tribe requested additional information on the ACP and SHP.	9/15/2016
	8/8/2016	Letter from Atlantic and DTI to the Tribe (sent at FERC's request) providing updated project descriptions and maps for the ACP and SHP.	8/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016
	10/18/2016	Letter from Atlantic and DTI to the Tribe transmitting updated route maps and renewing requests for comments on the ACP and SHP.	10/31/2016
United Keetoowah Band of Cherokee Indians	7/29/2014	Initial letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/17/2014	Follow-up letter from Atlantic to the Tribe requesting comments on the ACP.	9/18/2015
	10/29/2014	Email from the Tribe to Atlantic deferring consultation on the ACP.	9/18/2015
	3/25/2015	Consultation letter from FERC to the Tribe requesting comments on the ACP and SHP.	9/18/2015
	10/28/2015	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting a draft archaeological survey report and draft unanticipated discoveries plan for the MNF.	10/30/2015
	6/21/2016	Email from FERC to the Tribe requesting comments on the ACP and SHP.	9/15/2016
	8/29/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated draft archaeological survey report for the MNF. (Note: this letter also references an updated unanticipated discoveries plan for the MNF; however, a copy of the plan inadvertently was omitted from this submittal.)	9/15/2016
	10/4/2016	Letter from Atlantic to the Tribe, a MNF Tribal Partner, transmitting an updated unanticipated discoveries plan for the MNF. (Note: the updated plan inadvertently was omitted from a submittal on 8/29/2016.)	10/31/2016

[a] In addition to the communications listed above, Atlantic provided copies of draft survey reports and unanticipated finds plans for the MNF (by letters dated 10/28/2015, 8/29/2016, and 10/4/2016) to the Oneida Indian Nation and Onondaga Nation, both of whom are MNF Tribal Partners.

APPENDIX W

CUMULATIVE IMPACTS

TABLE W-1 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS WITHIN THE GEOGRAPHIC SCOPE OF INFLUENCE FOR THE ATLANTIC COAST PIPELINE AND SUPPLY HEADER PROJECT

TABLE W-1

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
ATLANTIC COAST PIPELINE								
FERC-Jurisdictional Projects								
AP-1	Mountain Valley Pipeline Project	EQT Midstream Partners, LP	Harrison, Lewis	See section 4.13.2.2	0.0	0.7 mile northwest	Anticipated in-service December 2018	Present
AP-1	Virginia Southside Expansion Project	Transcontinental Gas Pipe Line Company, LLC	Brunswick	See section 4.13.2.2	0.6	0.3 mile west	Completed September 2015	Past
AP-1	Virginia Southside Expansion Project II	Transcontinental Gas Pipe Line Company, LLC	Brunswick	See section 4.13.2.2	0.6	0.3 mile west	Anticipated completion Winter 2017	Present
AP-1	WB Xpress Project	Columbia Gas Transmission, LLC	Randolph	See section 4.13.2.2	55-56	<0.25 mile	Anticipated to start in January 2017; in-service June and October 2018	Present
Nonjurisdictional Projects								
AP-1	Brunswick Power Station	Dominion Virginia Power	Brunswick	1.358-megawatt, natural gas-fired power station	0.6	Brunswick M&R Station	Estimated completion by Summer 2016	Past
AP-1	Atlantic Coast Pipeline Utility Services	Atlantic Coast Pipeline, LLC	Brunswick	Utility services for the Brunswick M&R Station	0.6	Brunswick M&R Station	To coincide with construction of the M&R Station	Present
AP-1	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Brunswick	Microwave tower at the Brunswick M&R Station	0.6	Brunswick M&R Station	To coincide with construction of the M&R Station	Present
AP-1	Atlantic Coast Pipeline Utility Services	Atlantic Coast Pipeline, LLC	Lewis	Utility services for Compressor Station 1	7.5	Compressor Station 1	To coincide with construction of Compressor Station 1	Present
AP-1	Atlantic Coast Pipeline, Pipeline Relocation and Road Upgrade	Atlantic Coast Pipeline, LLC	Lewis	Relocate existing gathering and storage pipelines and upgrade an existing road within/near Compressor Station 1	7.5	Compressor Station 1	To coincide with construction of Compressor Station 1	Present
AP-1	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Lewis	Microwave tower at Compressor Station 1	7.5	Compressor Station 1	To coincide with construction of Compressor Station 1	Present

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-1	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Randolph	Microwave tower at the Long Run M&R Station	47.3	Long Run M&R Station	To coincide with construction of the Long Run M&R Station	Present
AP-1	Atlantic Coast Pipeline Utility Services	Atlantic Coast Pipeline, LLC	Buckingham	Utility services for Compressor Station 2	191.5	Compressor Station 2	To coincide with construction of Compressor Station 2	Present
AP-1	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Buckingham	Microwave tower at Compressor Station 2	191.5	Compressor Station 2	To coincide with construction of Compressor Station 2	Present
AP-1	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Prince Edward	Microwave tower at or adjacent to Valve Site 12	225.8	Valve Site 12	To coincide with construction of MLV 12	Present
AP-1	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Nottoway	Microwave tower at or adjacent to Valve Site 13	245.2	Valve Site 13	To coincide with construction of MLV 13	Present
AP-2	Atlantic Coast Pipeline Office Building	Atlantic Coast Pipeline, LLC	Northampton	A new office building for pipeline operations to be built on the same site as Compressor Station 2	0.0	Compressor Station 3	To coincide with construction of Compressor Station 3	Present
AP-2	Atlantic Coast Pipeline Utility Services	Atlantic Coast Pipeline, LLC	Northampton	Utility services for Compressor Station 3 and office building	0.0	Compressor Station 3	To coincide with construction of Compressor Station 3	Present
AP-2	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Northampton	Microwave tower at Compressor Station 3	0.0	Compressor Station 3	To coincide with construction of Compressor Station 3	Present
AP-2	Atlantic Coast Pipeline Office Building	Atlantic Coast Pipeline, LLC	Johnston	A new office building for pipeline operations to be built on the same site as the Smithfield M&R Station	92.7	Smithfield M&R Station	To coincide with construction of the M&R station	Present
AP-2	Atlantic Coast Pipeline Utility Services	Atlantic Coast Pipeline, LLC	Johnston	Utility services for the Smithfield M&R Station and office	92.7	Smithfield M&R Station	To coincide with construction of the M&R Station	Present
AP-2	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Johnston	Microwave tower at the Smithfield M&R Station	92.7	Smithfield M&R Station	To coincide with construction of the M&R Station	Present
AP-2	Piedmont Facility Modifications	Piedmont Natural Gas	Johnston	Piping modifications and additions for interconnect at the Smithfield M&R Station	92.7	Smithfield M&R Station	Construction in Winter 2018	Present

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-2	Piedmont Facility Modifications	Piedmont Natural Gas	Cumberland	Piping modifications and additions for the interconnect at the Fayetteville M&R Station	132.9	Fayetteville M&R Station	Construction in Winter 2018	Present
AP-2	Atlantic Coast Pipeline Utility Services	Atlantic Coast Pipeline, LLC	Cumberland	Utility services for the Fayetteville M&R Station	132.9	Fayetteville M&R Station	To coincide with construction of the M&R Station	Present
AP-2	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Cumberland	Microwave tower at the Fayetteville M&R Station	132.9	Fayetteville M&R Station	To coincide with construction of ACP aboveground facilities	Present
AP-2	Piedmont Pipeline	Piedmont Natural Gas	Robeson	26 miles of 20-inch natural gas pipeline	182.9	Crosses; Pembroke M&R Station	Anticipated Winter 2018	Present
AP-2	Piedmont Aboveground Facilities	Piedmont Natural Gas	Robeson	Piping modifications and additions for the interconnect at the Pembroke M&R Station	182.9	Pembroke M&R Station	Construction in Winter 2018	Present
AP-2	Atlantic Coast Pipeline Utility Services	Atlantic Coast Pipeline, LLC	Robeson	Utility services for the Pembroke M&R Station	182.9	Pembroke M&R Station	To coincide with construction of the M&R Station	Present
AP-2	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Robeson	Microwave tower at the Pembroke M&R Station	182.9	Pembroke M&R Station	To coincide with construction of the M&R Station	Present
AP-3	Atlantic Coast Pipeline Utility Services	Atlantic Coast Pipeline, LLC	Chesapeake	Utility services for the Elizabeth River M&R Station	82.6	Elizabeth River M&R Station	To coincide with construction of the M&R Station	Present
AP-3	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Chesapeake	Microwave tower at the Elizabeth River M&R Station	82.6	Elizabeth River M&R Station	To coincide with construction of the M&R Station	Present
AP-3	Virginia Natural Gas pipeline	Virginia Natural Gas	Chesapeake	Approximately 5 miles of 20-inch-diameter natural gas pipeline	Unknown	Unknown	Anticipated in 2017	Present
AP-5	Greensville Power Station	Dominion Virginia Power	Greensville	1,600-megawatt natural gas-fueled power station	1.0	Greensville M&R Station	Anticipated construction mid-2016 and completion by 2019	Present
AP-5	Atlantic Coast Pipeline Utility Services	Atlantic Coast Pipeline, LLC	Greensville	Utility services for the Greensville M&R Station	1.0	Greensville M&R Station	To coincide with construction of the M&R Station	Present

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-5	Atlantic Coast Pipeline Communications Network	Atlantic Coast Pipeline, LLC	Greensville	Microwave tower at the Greensville M&R Station	1.0	Greensville M&R Station	To coincide with construction of the M&R Station	Present
Residential, Commercial, Industrial, and Municipal Developments								
AP-1	Northwest Lewis Water Extension	Lewis County Commission	Lewis	Extension of water service to homes located in areas served by individual wells	4.0	0.9 mile south	Construction schedule unknown	RFFA
AP-1	Upshur County Development Authority Industrial Park	Upshur County Development Authority	Upshur	Improvements to the industrial park including water, sewer, and gas service	26.2	4.6 miles northeast	In progress	Past
AP-1	Linwood-Snowshoe Wastewater Project	Pocahontas Public Service District	Pocahontas	Construction of a new wastewater treatment system	69.4	0.6 mile east	Construction schedule unknown	RFFA
AP-1	Stone Valley Planned Unit Development	Unknown	Augusta	Remaining portion of a mixed-use planned unit development, including 247 townhouse lots and 128 single family residential lots	145.9	Crossed	Completed	Past
AP-1	Wintergreen Resort	Wintergreen Pacific LLC and Pacific Group Resorts	Nelson	Luxury hotel	159.0	<0.25 mile east	2016 with a projected opening in 2017	RFFA
AP-1	Spruce Creek Resort and Market	Nelson Hilltop, LLC and Rockfish Valley Investments, LLC	Nelson	Approximately 100-acre resort and market development straddling Spruce Creek	162.5 - 162.7	Crosses	Construction schedule unknown	RFFA
AP-1	Water Treatment Plant Project	Water and Sewer Committee	Buckingham	Construction of a new water treatment facility	198.0	3.8 miles northwest	In progress	Past
AP-1	Foreign Affairs Security Training Center	U.S. Department of State	Dinwiddie	Training center for diplomatic security personnel within Fort Pickett	250.0	5.1 miles south-southwest	Construction schedule unknown	Past
AP-1	Greensville Power Station	County	Greensville	Road improvements and utilities	284.0	Crossed	Construction schedule unknown	RFFA
AP-2	Halifax Solar Power Project	Duke Energy Renewables	Halifax	20-megawatt (alternating current) solar project	12.0	7.4 miles northwest	In progress	RFFA
AP-2	Bone Development, Inc.	Bone Development, Inc.	Nash	Residential development	50.8	Crossed	Construction schedule unknown	RFFA

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-2	Elm City Solar Facility	Duke Energy	Wilson	Expansion of existing solar facility	60.0	9.5 miles southeast	Estimated in-service date of 4th quarter; 2015; status unknown; may be complete	Past
AP-2	TR Lamm Subdivision	TR Lamm Subdivision	Wilson	10 to 11 planned platted lots	67.8	Crossed	Construction schedule unknown	RFFA
AP-2	McClauren Subdivision	McClauren Subdivision	Cumberland	36-lot residential development	131.6	Crossed	Construction schedule unknown	RFFA
AP-2	St. Pauls Johnson Brothers Facility	Johnson Brothers Utility and Paving Company	Robeson	New asphalt plant	166.6	2.2 miles southeast	In progress – Phase I completed in July 2014	Past
AP-2	Chemtex Cellulosic Biofuel Plant	Chemtex	Sampson	New biofuel plant facility	Unknown	Unknown	Planned; Construction schedule unknown	RFFA
AP-2	Enviva Project	Enviva	Sampson	New wood pellet production facilities	Unknown	Unknown	Anticipated completion in 2017	Present
AP-3	Market Street SAVE Project	Virginia Natural Gas	Suffolk	Replacement of 20,000 feet of main and service lines	60.7	4.4 miles south	Construction schedule unknown	RFFA
AP-3	Planter's Station	Planters Station LLC	City of Suffolk	Planned residential development, +200 homes	63.1	0.4 mile south	Construction began early 2016	Past
AP-3	Bridlewood Estates	Bridlewood Estates	City of Suffolk	Recently constructed residential development	65.8	0.1 mile south	Completed	Past
AP-3	Red Top Raw Water Main	City of Chesapeake	City of Chesapeake	Water main	68.9	Adjacent	Construction schedule unknown	RFFA
AP-3	Future connection between Colony Manor and future regional stormwater facility	City of Chesapeake	City of Chesapeake	Stormwater line	76.0	0.1 mile north	Construction schedule unknown	RFFA
AP-3	Co-Part Auto Auction Expansion	Copart	City of Chesapeake	Lot expansion	76.6	0.1 mile north	Construction schedule unknown	RFFA
AP-3	W.L. Black & Associates Waste Transfer	W.L. Black & Associates	City of Chesapeake	Conditional Use Permit	78.6	0.1 mile north	Construction schedule unknown	RFFA
AP-3	Copart Auto Auction Expansion	Copart Auto Auction	Suffolk	Southward extension of auto auction yard	68.8	1.2 miles southwest	Planned; Construction schedule unknown	RFFA
AP-3	WL Black and Associates Waste Transfer Facility	WL Black and Associates	Chesapeake	Waste water transfer facility	78.5	0.1 mile north	Construction schedule unknown	RFFA

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-3	City of Chesapeake Future Stormwater Outfall and Related Facilities	City of Chesapeake	Chesapeake	Stormwater outfall improvements and associated activities	79.9	<0.25 mile north	Phased construction starting in 2015	Past
AP-3	Chesapeake Energy Center Decommissioning/ Fly Ash Removal	Dominion Virginia Power	Chesapeake	Decommissioning of four coal-fired generating units and removal of fly ash stored at the site	81.5	0.1 mile south	Construction schedule unknown	RFFA
AP-3	Military Highway 36-inch-diameter water main	City of Chesapeake	Chesapeake	Construction of water main	81.5	<0.2 mile north	Construction schedule unknown	RFFA
AP-3	Battlefield Boulevard Pressure Improvement	Virginia Natural Gas	Chesapeake	Install new 6-inch-diameter pipeline	82.6	2.1 miles southeast	Anticipated in Winter and Spring of 2015; status unknown; may be complete	Past
AP-3	Red Top Raw Water Transmission Main	City of Chesapeake	Suffolk	Installation of a raw water tank and pump station, a 1-million gallon concrete ground storage tank, site piping, and other site improvements.	63.9 - 66.8	Adjacent, <0.25 mile	Anticipated phased construction between 2015 and 2017	Present
AP-3	Suffolk Gate 1 Heater Installation	Virginia Natural Gas	Suffolk	Installation of water bath for heating gas	Unknown	Unknown	Construction schedule unknown	RFFA
AP-5	Dominion Power Plant road and sewer lines (nonjurisdictional activities)	Dominion Virginia Power	Greensville	Installation of road and sewer lines	1.0	Adjacent (south)	Proposed; activities will likely coincide with construction of the ACP	Present
Transportation Projects								
AP-1	Route 633 (Virso Road) Bridge Replacement over Bush River	Virginia Department of Transportation	Prince Edward	Bridge replacement	22.7	15.1 miles southwest	In progress; completion date unknown	Past
AP-1	Route 687(Jackson River Turnpike) – Cowardin Run Bridge Replacement	Virginia Department of Transportation	Bath	Bridge replacement	94.1	14.0 miles southwest	Completed in November 2014	Past
AP-1	Route 250 (Highland Turnpike) – Crab Run Bridge Replacement	Virginia Department of Transportation	Highland	Widening of existing bridge	114.0	9.7 miles west	Completed in November 2012	Past
AP-1	Augusta County – Route 250 (Shenandoah Mountain Road) Ramseys Draft Bridge Replacement	Virginia Department of Transportation	Augusta	Bridge replacement	115.0	1.5 miles northwest	Completed in Spring 2015	Past

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-1	Augusta County – Route 250 (Hankey Mountain Highway) Calfpasture River Bridge Replacement	Virginia Department of Transportation	Augusta	Bridge replacement	116.3	0.5 mile south	Completed in Spring 2015	Past
AP-1	Augusta County – Route 250 (Hankey Mountain Highway) White Oak Draft Bridge	Virginia Department of Transportation	Augusta	Bridge replacement	120.2	0.5 mile south-southeast	Completed in Spring 2016	Past
AP-1	Augusta County – Route 616 (Dam Tower Road)	Virginia Department of Transportation	Augusta	Two-mile-long road widening	128.9	10.5 miles east	Anticipated in Summer 2018	Present
AP-1	Augusta County – Route 801 (Hangers Mill Road) Jennings Branch Bridge	Virginia Department of Transportation	Augusta	Replacement of truss bridge with new structure	129.2	0.5 mile east	Completed in 2015	Past
AP-1	Augusta County – Route 250 (Churchville Avenue) – Bridge Replacement Over Whiskey Creek	Virginia Department of Transportation	Augusta	Replacement of two-lane bridge	129.2	0.5 mile west	Under construction	Past
AP-1	Augusta County – Route 612 and Route 792 Intersection Improvements	Virginia Department of Transportation	Augusta	Improve intersection alignments	131.0	8.2 miles west-northwest	Anticipated in Spring 2016: status unknown	Past
AP-1	Augusta County – Route 262 (Woodrow Wilson Parkway) and Route 613 (Spring Hill Road)	Virginia Department of Transportation	Augusta	Intersection improvement project	131.1	4.8 miles east	Construction pending funding	RFFA
AP-1	Augusta County – Interstate 81 Southbound Pavement Rehabilitation	Virginia Department of Transportation	Augusta	Repaving of 1.5 miles of Interstate 81	140.9	Crosses	Completed in Summer 2015	Past
AP-1	Augusta County – Interstate 64, Exit 91 Improvements and Route 285 (Tinkling Spring Road)	Virginia Department of Transportation	Augusta	Improvements to entrance/exit ramps, expanding lanes near intersection, bridge widening	144.0	3.2 miles northeast	Completed in Fall 2015	Past
AP-1	Augusta County – Route 608 (Tinkling Springs Road)	Virginia Department of Transportation	Augusta	Intersection improvement project	144.0	2.5 miles northeast	Completed in December 2015	Past
AP-1	Augusta County – Route 610 Improvements	Virginia Department of Transportation	Augusta	Half-mile-long road widening	146.5	0.5 mile southeast	Anticipated in 2017 and 2018	Present

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-1	Route 29 Shoulder Widening, Nelson County	Virginia Department of Transportation	Nelson	Shoulder widening at various locations from intersection with Highway 6 (River Road) to the north at the Albemarle County border.	169.0	0.7 mile southwest	Anticipated April to December 2015; status unknown	Past
AP-1	Route 623 (Stagebridge Road) Bridge Superstructure Replacement over Rockfish River	Virginia Department of Transportation	Nelson	Bridge replacement	170.7	1.1 miles northeast	Completed in September 2014	Past
AP-1	Route 20 (Constitution Route)	Virginia Department of Transportation	Buckingham	Intersection improvement	198.1	5.6 miles northeast	In progress; status unknown	Past
AP-1	Route 20 over Slate River	Virginia Department of Transportation	Buckingham	Bridge replacement	198.1	8.7 miles northeast	In progress; anticipated completion in 2017	Present
AP-1	Route 460 Bridge Replacement	Virginia Department of Transportation	Nottoway	Bridge replacement	245.2	1.7 miles south	In progress; anticipated completion in Summer 2017	Present
AP-1	Route 708 (Namozine Road) Bridge Replacement	Virginia Department of Transportation	Dinwiddie	Bridge replacement	251.5	14.4 miles east	Anticipated in Fall 2017	Present
AP-1	Route 600/226 Roundabout and Route 1/226 Improvements	Virginia Department of Transportation	Dinwiddie	Two existing intersections will be replaced with roundabouts	255.7	22.5 miles northeast	In progress; estimated completion in Winter 2016	Past
AP-1	Route 633 Improvements	Virginia Department of Transportation	Greensville	Pavement replacement along 1.5 miles	291.0	2.2 miles southwest	Completed in August 2012	Past
AP-2	U.S. 158 Widening Project	North Carolina Department of Transportation	Halifax	Widening of U.S. 158 from the Interstate-95/North Carolina 46 interchange west of Garysburg to the Murfreesboro Bypass	8.2	Crosses	In development	RFFA
AP-2	U.S. 70 Corridor	North Carolina Department of Transportation	Johnston	Raleigh to Morehead City major road expansion from U.S. Highway to Interstate Highway	92.2	Crosses	In development	RFFA
AP-2	Fayetteville Outer Loop	North Carolina Department of Transportation	Cumberland	New road construction and existing road improvements	133.0	6.3 miles west	In progress – 2016 through 2020	Present
AP-2	I-95 Diverging Diamond Interchange in Lumberton	North Carolina Department of Transportation	Robeson	Intersection improvement project	178.0	9.2 miles south-southeast	In progress – anticipated completion in Spring 2016; status unknown	Past

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-2	Complete 540	North Carolina Department of Transportation	Johnston	Completion of Highway 540 toll road	Unknown	Unknown	Anticipated Spring 2018 to Spring 2022	Present
AP-3	Route 659 Bridge Over Flat Swamp Creek	Virginia Department of Transportation	Southampton	Bridge replacement	17.0	1.0 mile north	In progress; anticipated completion in Winter 2016	Past
AP-3	Route 35 Bridge Replacement over Tarrara Creek	Virginia Department of Transportation	Southampton	Bridge replacement	19.0	0.9 mile southeast	Anticipated in July 2016	Past
AP-3	Route 671 over Nottoway River	Virginia Department of Transportation	Southampton	Replacement of two major bridges	33.0	1.4 miles northwest	Anticipated Summer 2019 to Summer 2021	Present
AP-3	Route 671 Widening	Virginia Department of Transportation	Southampton	Widening from two to five lanes between Delaware and Shady Brooke Roads	33.0	1.3 miles north-northwest	Completed in September 2013	Past
AP-3	General Thomas Highway and Rose Valley Road widening	Virginia Department of Transportation	Southampton	Road widening to accommodate increased truck traffic	34.0	0.5 mile north	In progress through 2017 or 2018	Present
AP-3	Route 58/Holland Road Improvements	Virginia Department of Transportation	Suffolk	Widening two-lane road to five lanes, with bike lanes	57.3	4.1 miles south	Anticipated in Summer 2021	RFFA
AP-3	Route 460 Project in Southeast Virginia	Virginia Department of Transportation	Suffolk	Widening two-lane road to four lanes	59.0	Crosses	Anticipated; schedule unknown	RFFA
AP-3	I-64 High Rise Bridge Waterproof and Repair Deck	Virginia Department of Transportation	Chesapeake	Bridge repair and deck replacement	80.7	0.9 mile southeast	Anticipated Summer 2016	Past
AP-3	Gilmerton Bridge Replacement	Virginia Department of Transportation	Chesapeake	Bridge replacement	81.9	<0.1 mile north	Completed in 2015	Past
AP-3	Dominion Boulevard Improvements	Virginia Department of Transportation	Chesapeake	Widening two-lane highway to four lanes	82.6	1.4 miles southeast	In progress; estimated completion in April 2017	Present
Electric Generation and Transmission Projects								
AP-1	Oak Mound – Waldo Run 138 kV Transmission Project	Trans-Allegheny Interstate Line Company (TrAILCo), a FirstEnergy Company	Harrison	A new 18-mile-long 138 kV transmission line	8.6	9.7 miles northeast	Anticipated completion in December 2015; status unknown	Past
AP-1	Buckhannon – Glen Falls 138kV Transmission Project	Trans-Allegheny Interstate Line Company (TrAILCo), a FirstEnergy Company	Harrison, Lewis	New 138 kV transmission line	8.6	5.1 miles northeast	Anticipated completion in December 2015; status unknown	Past

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-1	Dooms – Lexington Transmission Line Rebuild Project	Dominion	Augusta	Replacement of original 500 kV lattice-style transmission towers with new, galvanized steel towers between Lexington and Dooms	142.8	Crosses	Completed in December 2015	Past
AP-1	Brunswick Power Line	Dominion Virginia Power	Brunswick	13.5 miles of 500 kV electric transmission line	267.1 - 279.1	Adjacent	In progress; estimated completion by Summer 2016	Past
AP-2	Rocky Mount – Wilson Transmission Line – Elm City Solar Facility	Duke Energy	Nash	Construction of electric transmission tap	60.0	10.0 miles east	In progress – Fall 2014 through Spring 2016	Past
AP-2	Wilson –Zebulon 230 kV Line	Duke Energy	Wilson	Line rebuild	65.0	12.4 miles west	Completed in Summer 2015	Past
AP-2	Greenville – Zebulon 230 kV Line Relocation	Duke Energy	Wilson	Line relocation	70.0	11.7 miles east	Completed in Spring 2015	Past
AP-2	Black Creek-Wilson Line Switch	Duke Energy	Wilson	Install new line switch	70.0	8.8 miles east	Anticipated Winter 2016 through Summer 2017	Present
AP-2	Lee-Selma 115 kV Line	Duke Energy	Johnston	Line relocation	95.0	4.3 miles east	Anticipated Spring 2016 through Summer 2017	Present
AP-2	Erwin-Selma 230 kV Line	Duke Energy	Johnston	Line replacement	103.0	9.5 miles west	Anticipated Summer 2015 through Winter 2016	Past
AP-2	Clinton-Erwin 230 kV Line	Duke Energy	Sampson	Line replacement	117.0	3.9 miles northwest	In progress – Summer 2014 through Spring 2016; status unknown	Past
AP-2	Fort Bragg Woodruff – Manchester	Duke Energy	Cumberland	Install reconductor line	134.0	12.8 miles west	In progress – Fall 2014 through Spring 2017	Present
AP-2	Erwin-Fayetteville 115 kV – Change and Relocate	Duke Energy	Cumberland	Relocate structures for North Carolina Department of Transportation project	142.0	7.7 miles northwest	Completed in Spring 2015	Past
AP-2	Fayetteville Vander 115 kV Line – Tap to Vander	Duke Energy	Cumberland	Install new tap line	142.0	2.7 miles west	In progress – Summer 2014 through Spring 2016; status unknown	Past
AP-2	Fayetteville Dupont 115 kV Line – Cumberland Solar	Duke Energy	Cumberland	Install new tap line	142.0	6.8 miles west	In progress – Winter 2014 through Spring 2016; status unknown	Past
AP-2	Fayetteville Dupont 115 kV Line – Grays Creek Tap	Duke Energy	Cumberland	Install new tap line	142.0	6.8 miles west	Completed in Summer 2015	Past

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-2	Fayetteville Dupont 115 kV Line – Line Switches	Duke Energy	Cumberland	Install line switches	142.0	6.8 miles west	In progress – Winter 2014 through Winter 2016	Past
AP-2	Weatherspoon Plant – Fayetteville Solar Farm Tap	Duke Energy	Robeson	Install tap for solar facility	167.0	2.8 miles southeast	In progress – Fall 2014 through Spring 2016; status unknown	Past
AP-2	Weatherspoon Plant – Solar Tap	Duke Energy	Robeson	Install tap for solar facility	167.0	2.3 miles southeast	In progress – Fall 2014 through Summer 2016	Past
AP-2	Weatherspoon Plant – LOF 115 kV Structure Replace	Duke Energy	Robeson	Replace existing structures	170.0	10.6 miles south	Anticipated – Winter 2016 through Spring 2017	Present
AP-2	Weatherspoon- Raeford 230 kV Line Relocate	Duke Energy	Robeson	Line relocation	170.0	11.6 miles northwest	In progress – Summer 2015 through Fall 2018	Present
AP-2	Weatherspoon- Raeford 230 kV Line Replacement	Duke Energy	Robeson	Line replacement	170.0	Crosses	In progress – Summer 2015 through Spring 2017	Present
AP-2	Weatherspoon – LOF 115 kV	Duke Energy	Robeson	Convert to remote control	180.0	3.2 miles south	Complete – Spring 2014 through Fall 2015	Past
U.S. Forest Service Projects [b]								
AP-1	Upper Greenbrier North Project	U.S. Forest Service/Monongahela National Forest (MNF)	Pocahontas	Timber stand improvement (including mechanical and chemical methods), timber harvest and prescribed fire areas, road decommissioning, riparian restoration, and recreational trail improvements/expansions at various locations throughout the Upper Greenbrier River Watershed	85.8	11.4 miles north	Decision Notice/Finding of No Significant Impact No. 4 issued in May 2015; components of this project currently in various stages of implementation	Past
AP-1	Re-issuance of Forest-wide Outfitter and Guide Permit for Snowshoe Resort Management Categorical Exclusion (CE)	U.S. Forest Service/MNF	Pocahontas	Authorization for a new 10-year permit for commercial guiding for backpacking, hiking, mountain biking, snowshoeing, Nordic skiing, and fishing on various parts of the MNF.	Forestwide; see table 4.8.9-1	Forestwide; see table 4.8.9-1	Scoping Start 10/2016; Decision Expected: 12/2016; Implementation Expected: 01/2017	RFFA

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-1	Wildlife Openings Environmental Assessment (EA)	U.S. Forest Service/MNF	Pocahontas	Maintenance of wildlife openings across the Forest through mowing, prescribed fire, herbicide, and other treatments, and will include long-term strategies for determining, prioritizing, and treating existing and new areas.	Forestwide; see table 4.8.9-1	Forestwide; see table 4.8.9-1	On hold	RFFA
AP-1	Columbia Gas Road Right-of-Way Special Use Permit (Amendment 1) CE	U.S. Forest Service/MNF	Pocahontas	Columbia Gas Transmission, LLC has applied for an amendment (#1) to an existing permit for an access road not currently authorized. This access road already exists on the ground and needs maintenance, which would be addressed if appropriate.	73 - 83	Varies [b]	In Progress. Scoping Start 09/14/2016; Decision Expected: 10/2016; Implementation Expected: 10/2016	Past
AP-1	West Fork of Greenbrier Rail With Trail Development EA	U.S. Forest Service/MNF	Pocahontas	Grant the West Virginia State Rail Authority a long-term easement and authorization to return 27.2 miles of railroad right-of-way to active railroad status, and construct a parallel 21-mile trail segment.	73 - 83	Varies [b]	On hold	RFFA
AP-1	Forestwide Maintenance of Open and Semi Open Lands, Roadside Corridors, and Utility Rights-of-Way EA	U.S. Forest Service/George Washington National Forest (GWNF)	Highland, Bath, Augusta	Open maintenance of 14,000 acres of permanent grass and shrublands, 59,000 acres of road corridors, and 6,500 acres of existing gas and power line utility rights-of-way across the entire Forest	Forestwide; see table 4.8.9-1	Forestwide; see table 4.8.9-1	In Progress. Comment Period 10/03/2016; Decision Expected: 02/2017; Implementation Expected: 02/2017	RFFA
AP-1	Campground Concession Special Use Authorization (Re-Issue) CE	U.S. Forest Service/GWNF	Bath	The Lake Moomaw Recreation Areas concessionaire special use authorization will expire 12/31/16. A prospectus for concession-operated campgrounds, day use areas, and marina areas will be issued for reissuance of these special use permits.	93 – 106	Varies [b]	Developing Proposal. Est. Scoping Start: 06/2016; Decision Expected: 10/2016; Implementation Expected 01/2017	RFFA

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-1	Loves Run Yellow Pine Restoration Project CE	U.S. Forest Service/GWNF	Augusta	Use prescribed fire and mechanical treatments to promote the restoration of Short Leaf and Pitch Pine species within a 266 acre (approximate) project area.	112 – 123; 155	Varies [b]	Developing Proposal. Est. Scoping Start: 10/2016; Decision Expected: 03/2017; Implementation Expected: 05/2017	RFFA
AP-1	Elkhorn Rx CE	U.S. Forest Service/GWNF	Bath	Prescribed burn on the 1,100 acre Elkhorn burn unit.	93 – 106	Varies [b]	On hold	RFFA
AP-1	Hearthstone Dam Rehabilitation EA	U.S. Forest Service/GWNF	Augusta	Rehabilitation to bring the dam into State of Virginia compliance standards	112 – 123; 155	Varies [b]	Developing Proposal. Est. Comment Period: 10/2016; Decision Expected: 02/2017; Implementation Expected: 02/2017	RFFA
AP-1	South Archer Project EA	U.S. Forest Service/GWNF	Augusta	Several hundred acres of thinning and regeneration treatments to improve wildlife habitat.	112 – 123; 155	Varies [b]	In Progress. Scoping Start: 08/03/2015; Est. Comment Period: 01/2016; Decision Expected: 12/2016; Implementation Expected: 01/2017	RFFA
AP-1	Verizon Virginia Fiber Optic Line CE	U.S. Forest Service/GWNF	Augusta	Installation of Fiber Optic Line in existing utility corridor.	112 – 123; 155	Varies [b]	Developing Proposal. Est. Scoping Start: 10/2016; Decision Expected: 10/2016; Implementation Expected: 10/2016	Past
AP-1	Wallace and Marshall Tracts Prescribed Burns CE	U.S. Forest Service/GWNF	Bath	Rx burn about 276 acres on the Wallace Tract and 56 acres on the Marshall Tract for wildlife habitat improvement and convert areas from cool season grasses to warm season grasses.	93 – 106	Varies [b]	In Progress. Scoping Start: 01/12/2015; Decision Expected: 10/2015; Implementation Expected: 01/2016	Past
AP-1	Border Restoration Project CE	U.S. Forest Service/GWNF	Bath	Prescribe burn 31,475 acres within 23 areas on National Forest and VDGIF property as part of the Appalachian Fire Learning Network.	93 – 106	Varies [b]	On hold	RFAA

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
AP-1	Fiber Optic Line on Warm Spring Mountain CE	U.S. Forest Service/GWNF	Bath	Bury approximately 12,000 feet of fiber optic cable in an existing utility corridor.	93 – 106	Varies [b]	Developing Proposal. Est. Scoping Start: 07/2016; Decision Expected: 09/2016; Implementation Expected: 09/2016	Past
AP-1	Hidden Valley Campground Host Site Improvements CE	U.S. Forest Service/GWNF	Bath	Upgrade Hidden Valley Campground host with an electrical hookup.	93 – 106	Varies [b]	On hold	RFAA
AP-1	Lockridge Cross Region Collaborative Prescribe Burn Project CE	U.S. Forest Service/GWNF	Bath	Prescribe fire is proposed for multiple burn units totaling an estimated 12 acres in conjunction with a 1,239 acres prescribe burn on the Marlinton RD of the MNF in Region 9. This will be part of the Fire Learning Network.	93 – 106	Varies [b]	In Progress. Scoping Start: 10/13/2016; Decision Expected: 12/2016; Implementation Expected: 04/2017	RFFA
AP-1	Paddy Knob Early Successional Habitat CE	U.S. Forest Service/GWNF	Bath	Create early successional habitat in the vicinity of Paddy Knob.	93 – 106	Varies [b]	On hold	RFAA
SUPPLY HEADER PROJECT								
FERC-Jurisdictional Projects								
TL-635	Mountain Valley Pipeline Project	EQT Midstream Partners, LP	Harrison, Doddridge, Wetzel, Tyler,	See section 4.13.2.2	0.7	Crosses	Anticipated in-service December 2018	Present
TL-635	Rover Pipeline Project	Rover Pipeline LLC	Doddridge, Tyler	See section 4.13.2.2	11.7 - 11.9	Adjacent	Anticipated in-service date in 2017	Present
TL-635	Clarington Project	Dominion Transmission, Inc.	Marshall	See section 4.13.2.2	Burch Ridge Compressor Station	Burch Ridge Compressor Station	Anticipated completion in December 2016	Past
TL-635	Monroe to Cornwell Project	Dominion Transmission, Inc.	Doddridge, Wetzel	See section 4.13.2.2	Mockingbird Hill Compressor Station	Mockingbird Hill Compressor Station	Anticipated in-service late 2016	Past
TL-636	Texas Eastern Appalachia Market 2014 Project	Texas Eastern Transmission, LP	Westmoreland	See section 4.13.2.2	0.0	3.5 miles southeast of TL-636; 7.6 miles southeast of the JB Tonkin Compressor Station	Completed in 2014	Past

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
TL-635	Mountaineer Xpress Project	Columbia Gas Transmission, LLC	Doddridge, Wetzel	See section 4.13.2.2	10.0	1 mile west	Anticipated to start in November 2017; in-service November 2018	Present
TL-636	Natrium to Market Project	Dominion Transmission, Inc.	Greene, Westmoreland	See section 4.13.2.2	Crayne Compressor Station; JB Tonkin Compressor Station	Crayne Compressor Station; JB Tonkin Compressor Station	Completed 2014	Past
TL-635	Leach Xpress Project and Rayne Xpress Expansion Project	Columbia Gas Transmission, LLC and Columbia Gulf Transmission, LLC	Greene, Marshall	See section 4.13.2.2	33.5	15 miles northeast	Anticipated November 2016 through November 2017	
Nonjurisdictional Projects								
TL-635	Hastings Compressor Station	Dominion Transmission, Inc.	Wetzel	Replace existing gathering compressor units	Mockingbird Hill Compressor Station	1.0 mile west of Mockingbird Hill Compressor Station	Proposed	RFFA
Commercial, Industrial, and Municipal Developments								
TL-635	Hundred Littleton Public Service District Extension	Wetzel County Commission	Wetzel	Extension of water service to areas in the Hundred Littleton Public Service District that currently rely on private wells and cisterns	32.5	13.0 miles northeast	Construction schedule unknown	RFFA
TL-635	Pine Grove Sewage Collector Project	Town of Pine Grove	Wetzel	Improvements to the Town of Pine Grove sewage collection system	Mockingbird Hill Compressor Station	1.2 miles north-northwest	Construction schedule unknown	RFFA
Transportation Projects								
TL-636	Jeannette to Amos K. Bypass	Pennsylvania Department of Transportation	Westmoreland	Road expansion project	3.8	6.7 miles northeast	Completed in 2013 or 2014	Past
TL-636	PA 66 Beaver Run to 356	Pennsylvania Department of Transportation	Westmoreland	Road resurfacing and widening	JB Tonkin Compressor Station	5.3 miles northeast	Completed in 2014	Past
Electric Generation and Transmission Projects								

TABLE W-1 (cont'd)

Past, Present, and Reasonably Foreseeable Future Actions within the Geographic Scope of Influence for the Atlantic Coast Pipeline and Supply Header Project

Project/ Facility	Project Name	Proponent	Common Counties/Cities	Description	Nearest Approx. Milepost or Facility	Approx. Distance and Direction from Project	Status	Past, Present, or RFFA [a]
TL-635	Buckhannon – Glen Falls 138kV Transmission Project	Trans-Allegheny Interstate Line Company (TrAILCo), a FirstEnergy Company	Harrison	New 138 kV transmission line from West Milford Substation to existing Buckhannon to Glen Falls 138 KV transmission line	0.0	8.5 miles east	Anticipated completion in December 2015; status unknown	Past
TL-635	Oak Mound – Waldo Run 138 kV Transmission Project	Trans-Allegheny Interstate Line Company (TrAILCo), a FirstEnergy company	Harrison, Doddridge	An 18-mile-long 138 kV transmission line from the existing Oak Mound Substation, located in the Clark District of Harrison County and the Waldo Run Substation	11.8	Crosses	Anticipated completion in December 2015; status unknown	Past

[a] Past, Present, or Reasonably Foreseeable Future Action (RFFA) classification is based on the project's construction schedule in relation to Atlantic's and DTI's currently proposed schedules.

[b] Additional information about each project can be found at: http://www.fs.fed.us/sopa/forest-level.php?110921 for the MNF and at http://www.fs.fed.us/sopa/forest-level.php?110808 for the GWNF.

FIGURE W-1 POTENTIAL EFFECT ZONE FOR CUMULATIVE IMPACTS

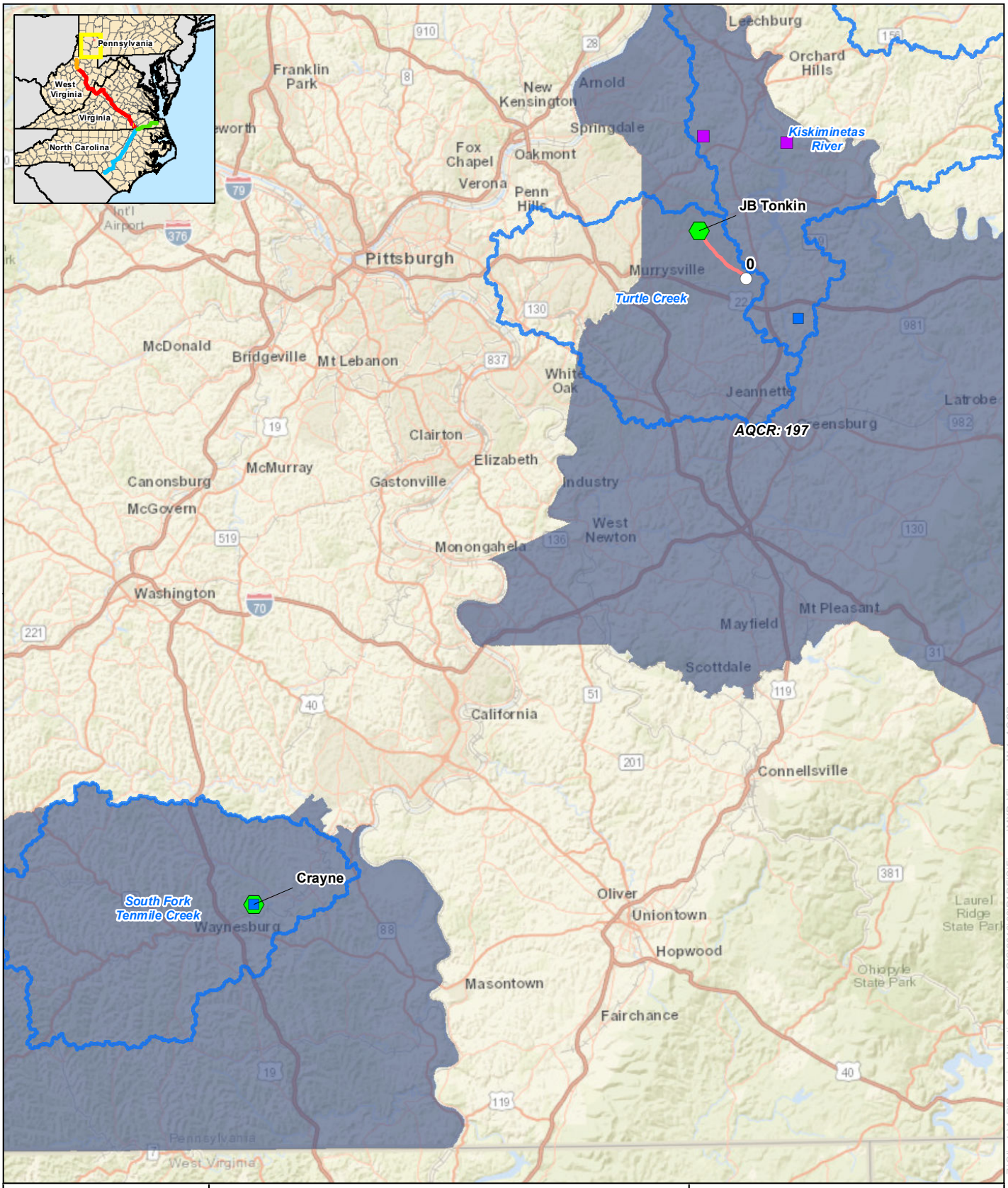

Figure W-1
Potential Effect Zone for Cumulative Impacts
Atlantic Coast Pipeline and Supply Header Project

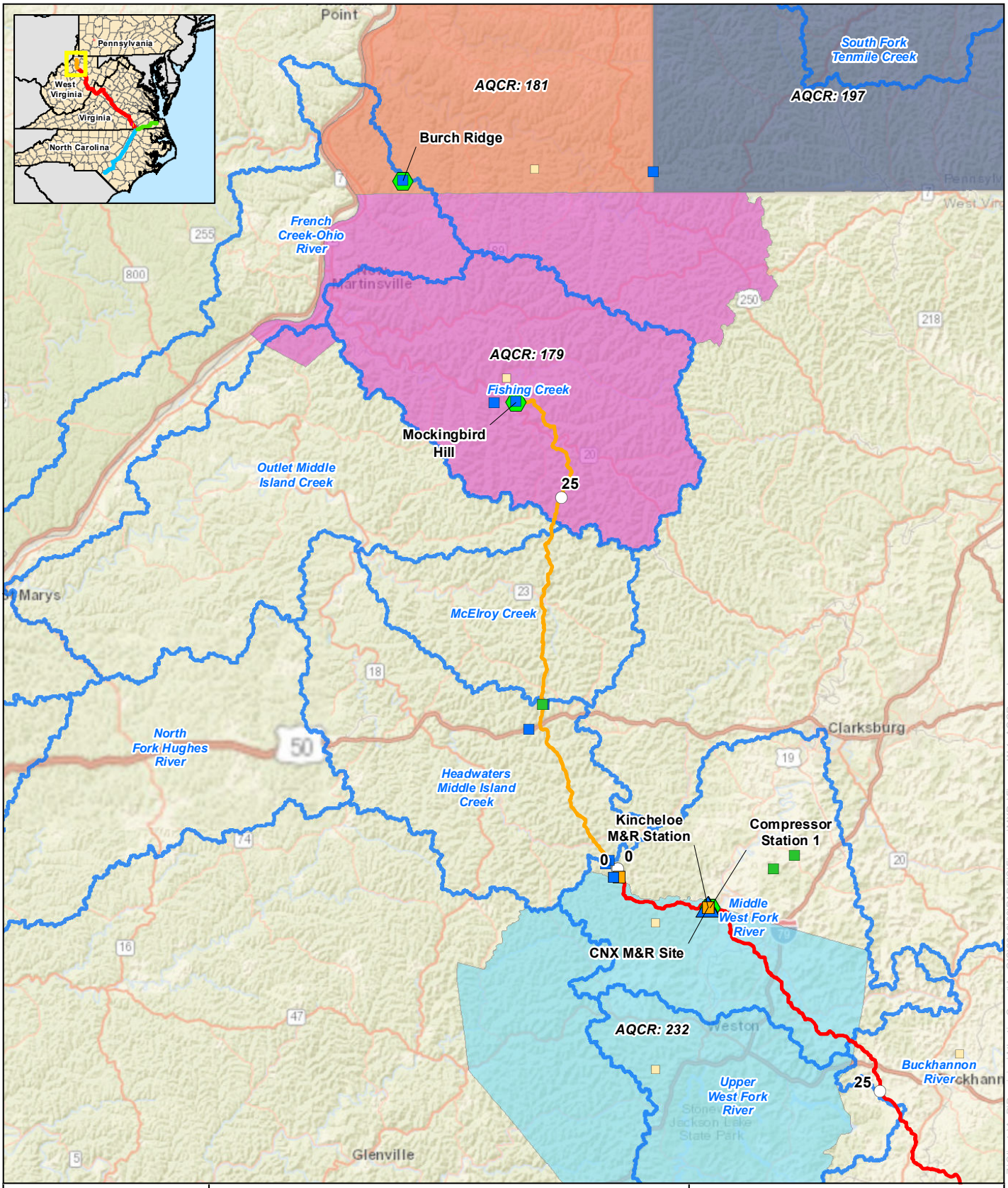

Figure W-1
Potential Effect Zone for Cumulative Impacts
Atlantic Coast Pipeline and Supply Header Project

Map 2 of 9

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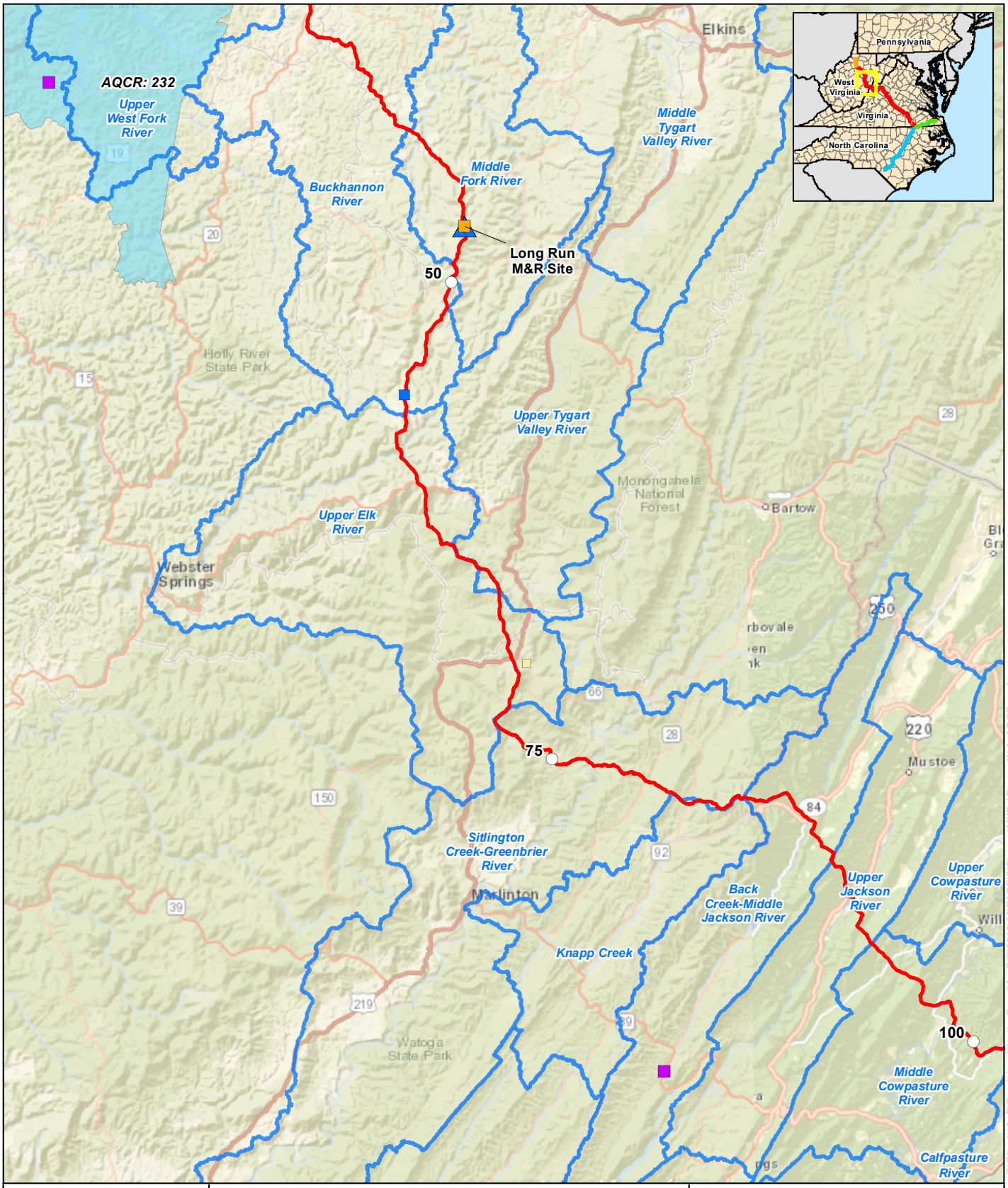
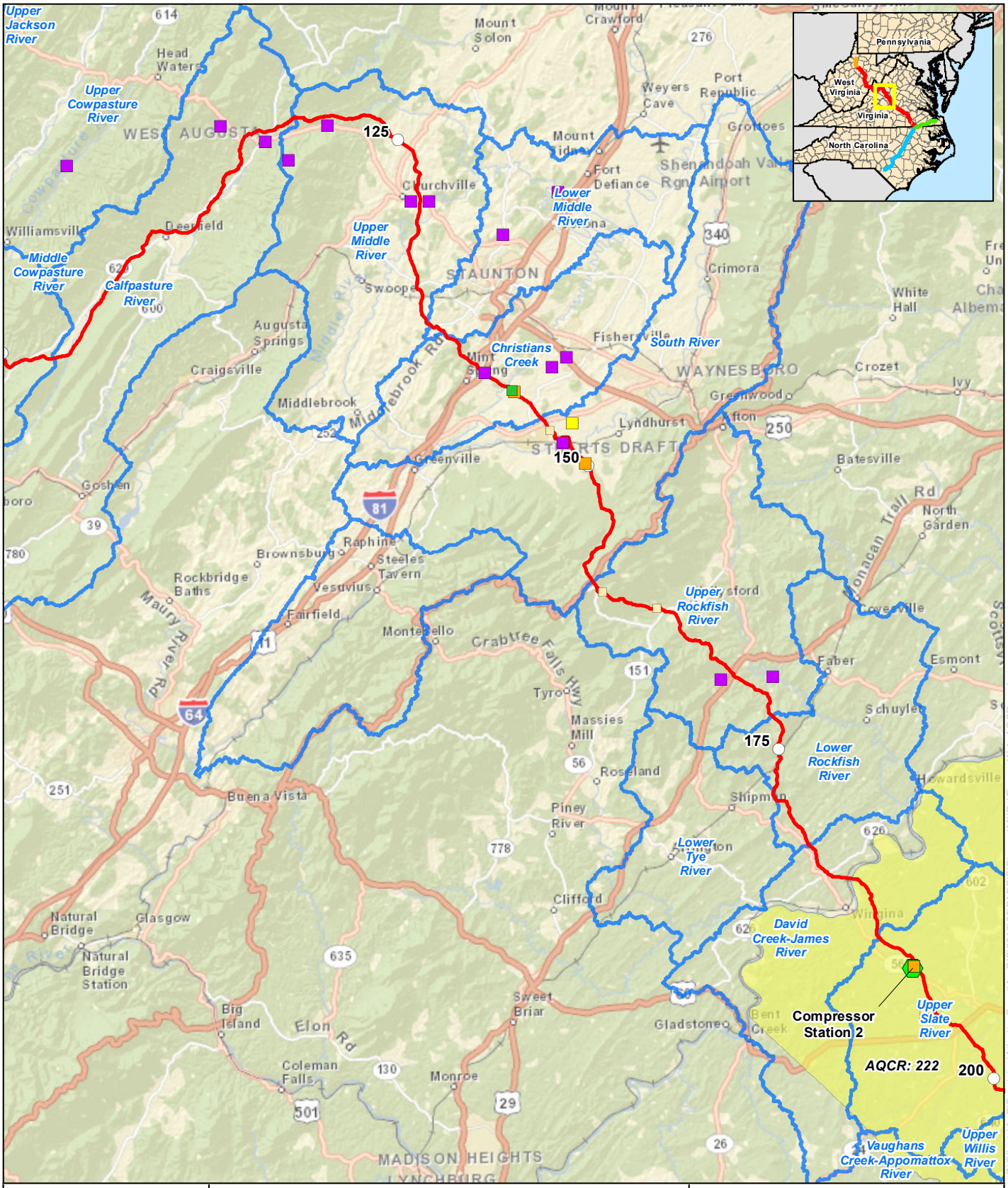


Figure W-1
Potential Effect Zone for Cumulative Impacts
Atlantic Coast Pipeline and Supply Header Project



Map 4 of 9

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Figure W-1

Potential Effect Zone for Cumulative Impacts

Atlantic Coast Pipeline and Supply Header Project

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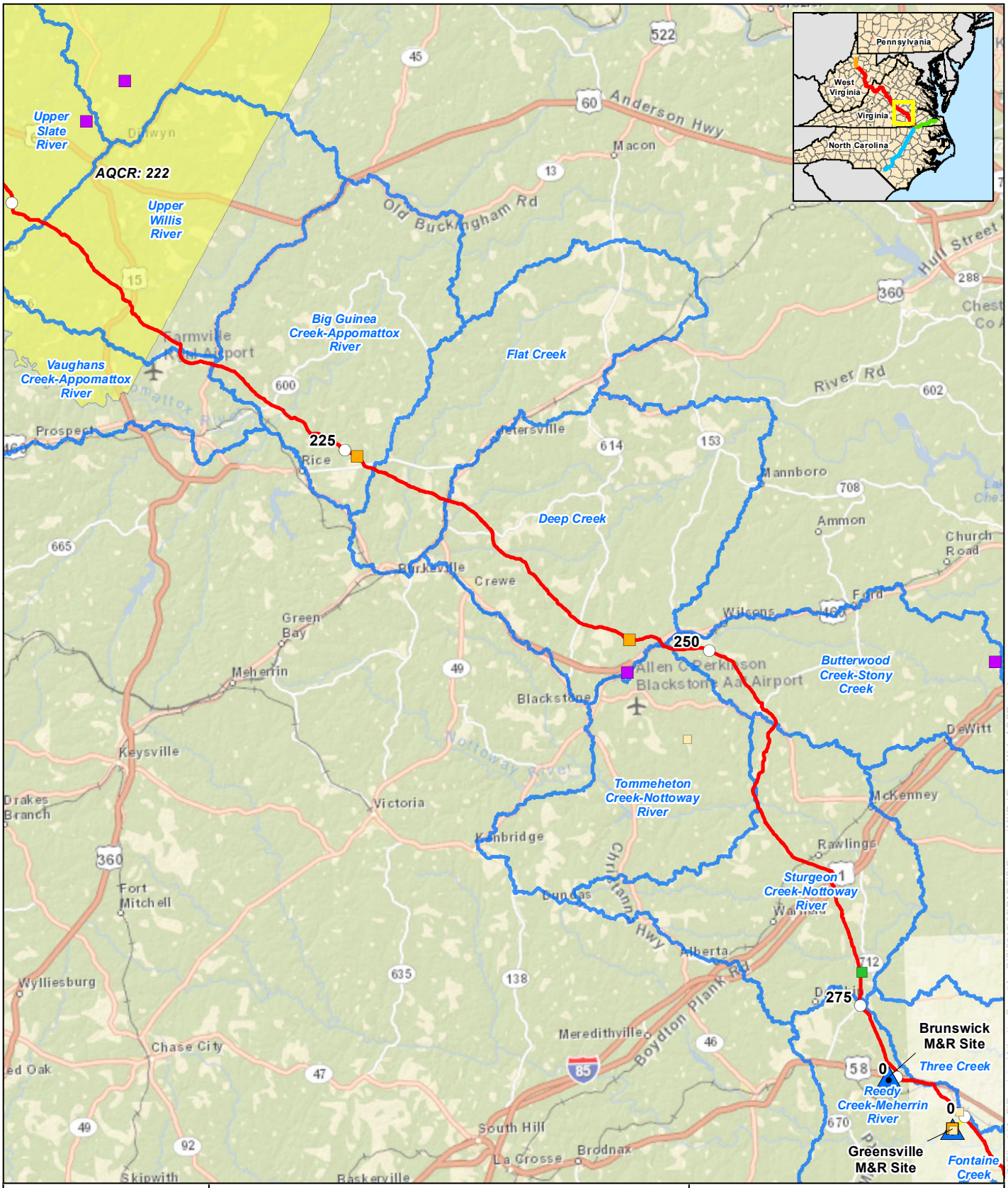
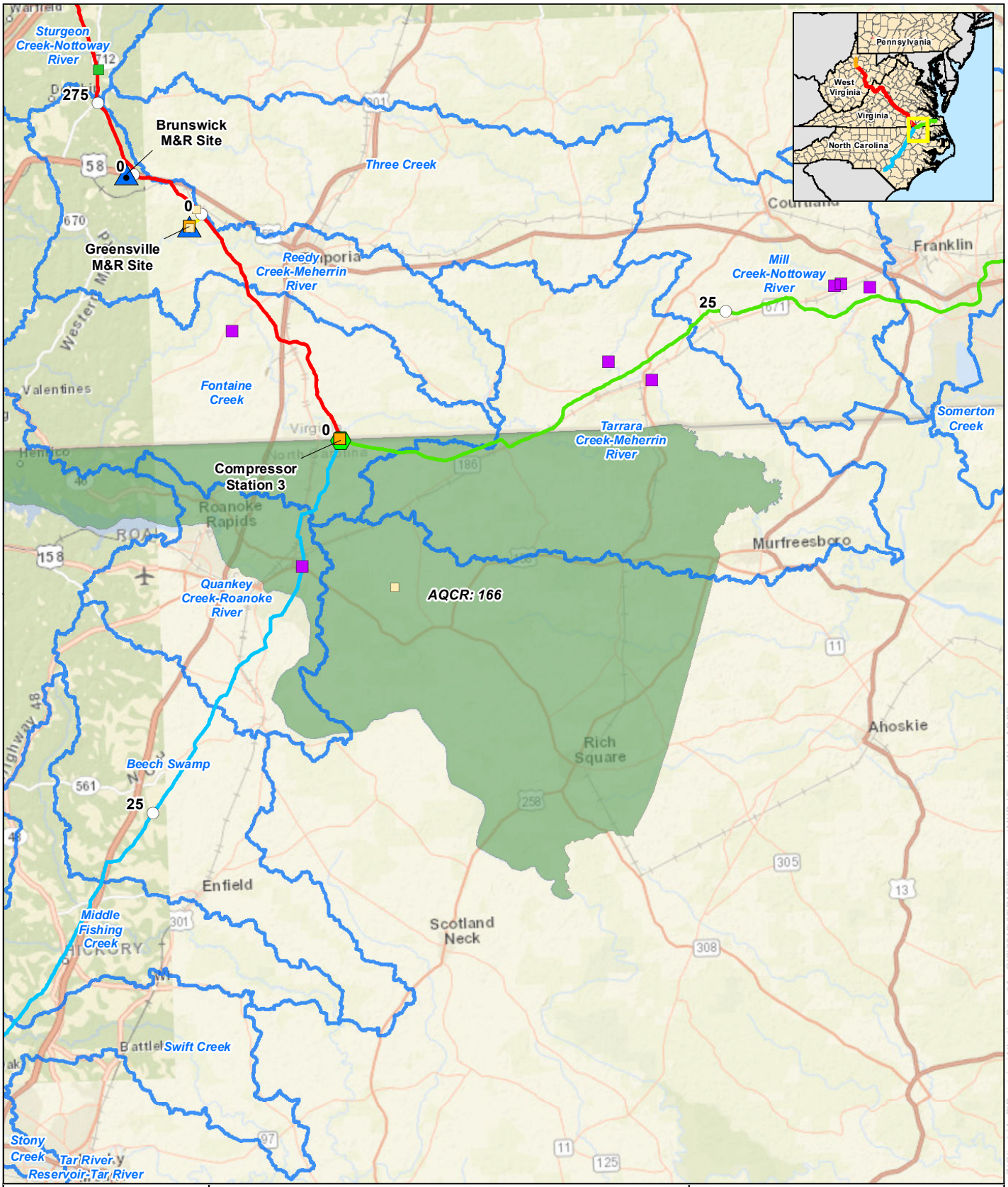


Figure W-1
Potential Effect Zone for Cumulative Impacts
Atlantic Coast Pipeline and Supply Header Project



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Map 6 of 9

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Figure W-1

Potential Effect Zone for Cumulative Impacts

Atlantic Coast Pipeline and Supply Header Project

Milepost
Compressor Station
M and R Station
Watershed Boundary (HUC 10)
AQCR = Air Quality Control Region

Nearby Project Type
Comm/Ind/Mun
Electric Transmission
FERC-Jurisdictional
Nonjurisdictional
Residential
Transportation
USFS

SHP Proposed Route (TL-635)
SHP Proposed Route (TL-636)
ACP Proposed Route (AP-1)
ACP Proposed Route (AP-2)
ACP Proposed Route (AP-3)
ACP Proposed Route (AP-4)
ACP Proposed Route (AP-5)

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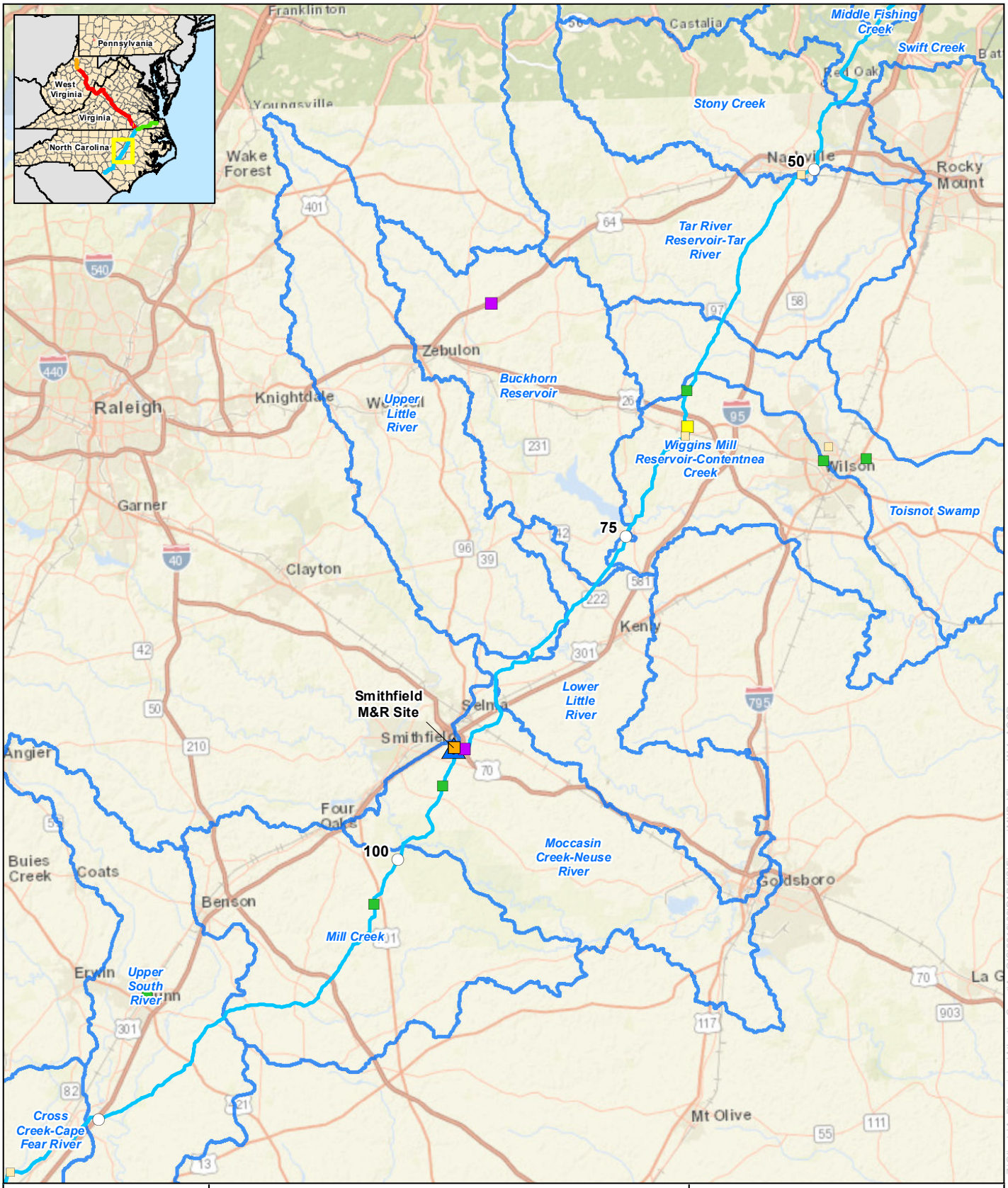

Pennsylvania
West Virginia
Virginia
North Carolina
Franklinton
Castalia
Middle Fishing Creek
Swift Creek
Red Oak
Youngsville
Stony Creek
Wake Forest
Nashville
50
Rocky Mount
401
64
Tar River Reservoir-Tar River
540
58
97
Zebulon
Buckhorn Reservoir
440
Raleigh
Knightdale
Upper Little River
26
95
Wiggins Mill Reservoir-Contentnea Creek
231
Wilson
Garner
Toisnot Swamp
75
42
96
39
40
Clayton
581
222
Kenly
42
301
Smithfield M&R Site
Selma
Lower Little River
795
50
Smithfield
Angier
210
70
Four Oaks
Buies Creek
Coats
100
Moccasin Creek-Neuse River
Goldsboro
Benson
Mill Creek
Erwin
Upper South River
70
La G
903
301
117
82
21
Mt Olive
55
111
Cross Creek-Cape Fear River
13
0 2 4 Miles
N
W
E
S
Map 7 of 9
For Environmental Review Purposes Only
Figure W-1
Potential Effect Zone for Cumulative Impacts
Atlantic Coast Pipeline and Supply Header Project
Milepost
Compressor Station
M and R Station
Watershed Boundary (HUC 10)
AQCR = Air Quality Control Region
Nearby Project Type
Comm/Ind/Mun
Electric Transmission
FERC-Jurisdictional
Nonjurisdictional
Residential
Transportation
USFS
SHP Proposed Route (TL-635)
SHP Proposed Route (TL-636)
ACP Proposed Route (AP-1)
ACP Proposed Route (AP-2)
ACP Proposed Route (AP-3)
ACP Proposed Route (AP-4)
ACP Proposed Route (AP-5)
Source: Z:\Clients\A_DtDominion\Atlantic_Coast\ArcGIS\2016\08\PADEIS\Figures\MXDs\Figure_W-1_AQCR.mxd
Date: (12/6/2016)

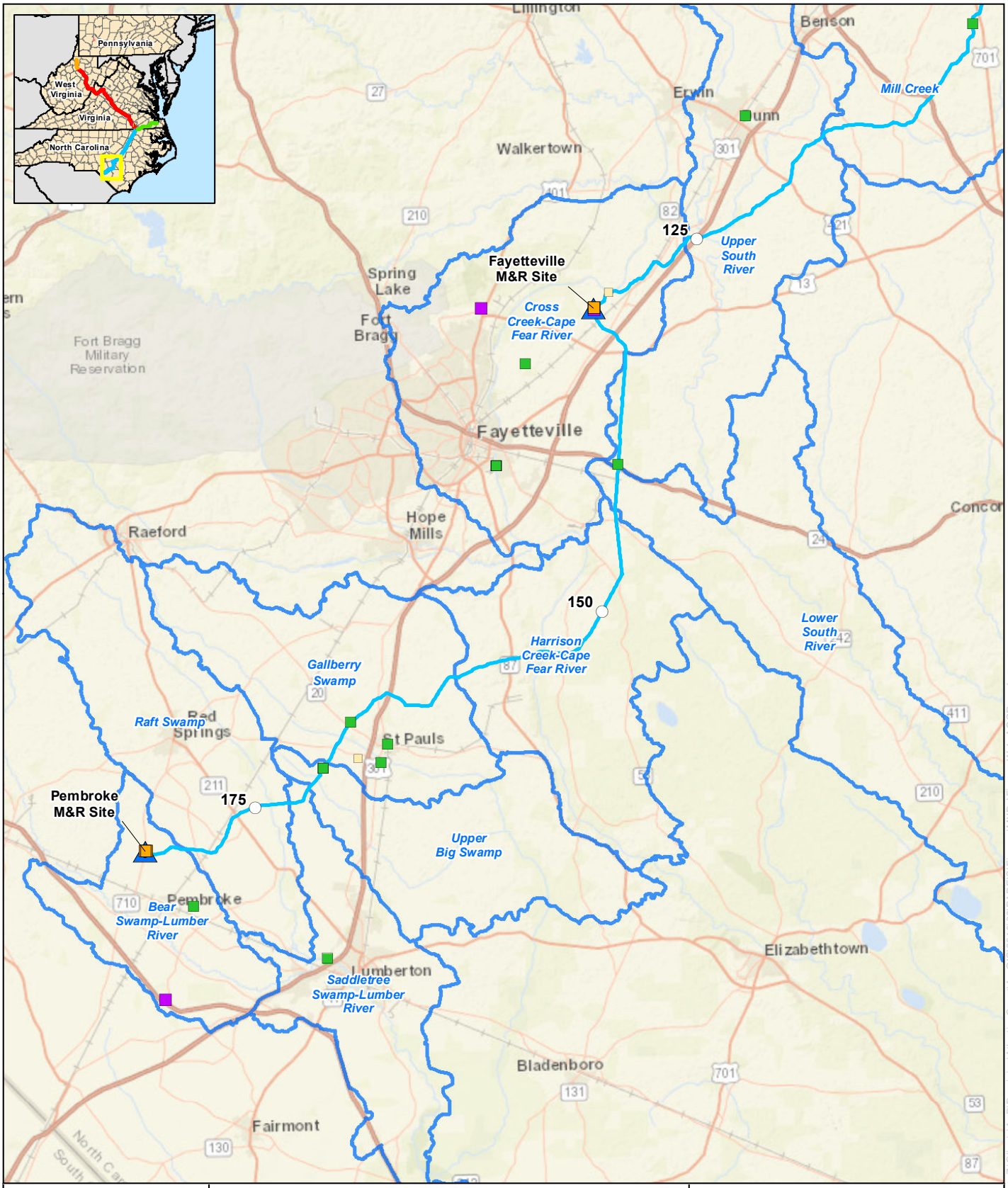
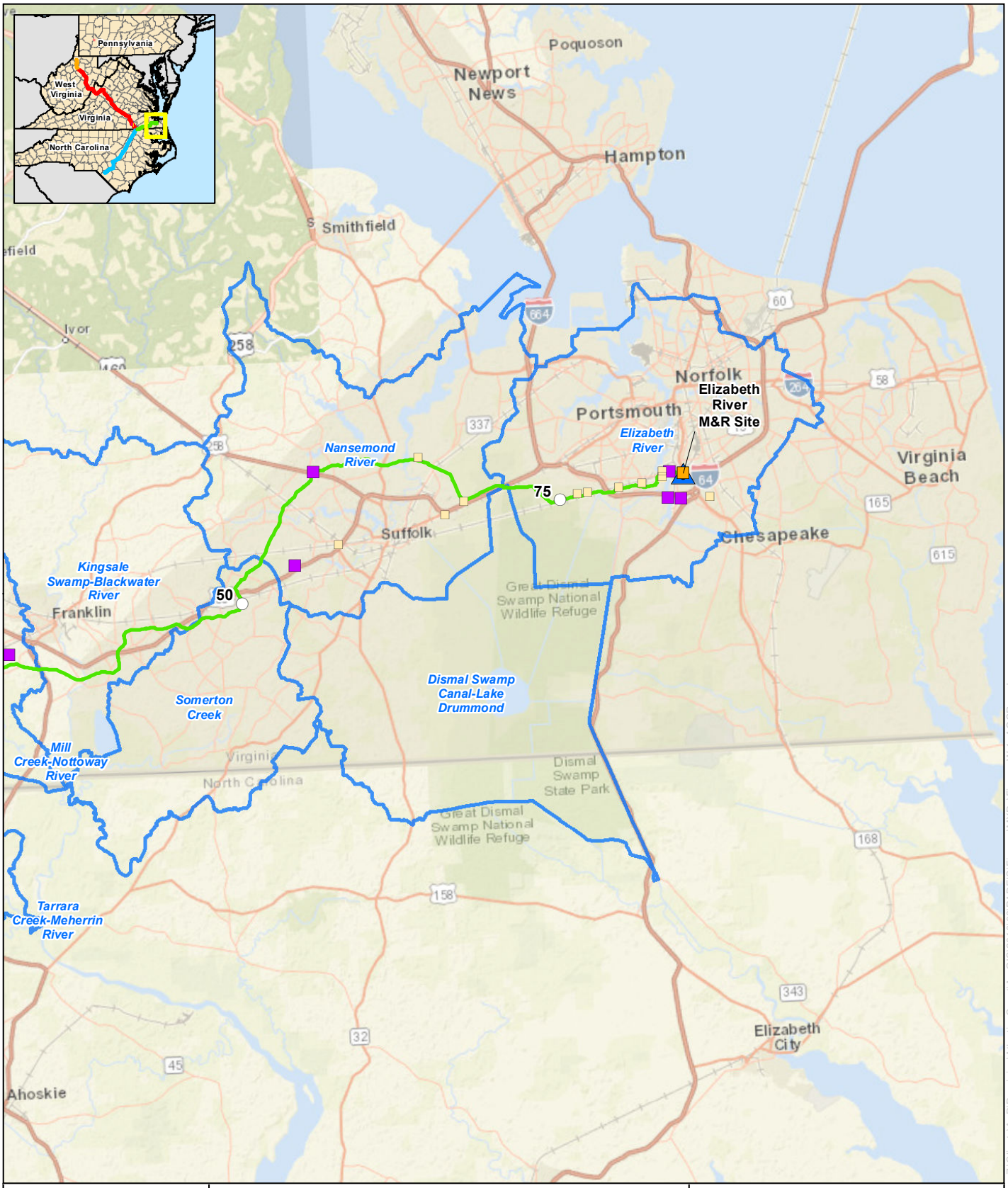


Figure W-1
Potential Effect Zone for Cumulative Impacts
Atlantic Coast Pipeline and Supply Header Project

Map 8 of 9

For Environmental Review Purposes Only



0 2 4 Miles

N W E S

Map 9 of 9

For Environmental Review Purposes Only

Figure W-1

Potential Effect Zone for Cumulative Impacts

Atlantic Coast Pipeline and Supply Header Project

Milepost
Compressor Station
M and R Station
Watershed Boundary (HUC 10)
AQCR = Air Quality Control Region

Nearby Project Type
Comm/Ind/Mun
Electric Transmission
FERC-Jurisdictional
Nonjurisdictional
Residential
Transportation
USFS

SHP Proposed Route (TL-635)
SHP Proposed Route (TL-636)
ACP Proposed Route (AP-1)
ACP Proposed Route (AP-2)
ACP Proposed Route (AP-3)
ACP Proposed Route (AP-4)
ACP Proposed Route (AP-5)

Source: Z:\Clients\A_DiDominion\Atlantic_Coast\ArcGIS\20160808\PADEIS\Figures\MXDs\Figure_W-1_AQCR.mxd

Date: (12/6/2016)

APPENDIX X

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Appendix X

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APPENDIX Y

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Appendix Y

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Merjent, 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.