

**ATLANTIC COAST PIPELINE, LLC  
ATLANTIC COAST PIPELINE**

**and**

**DOMINION ENERGY TRANSMISSION, INC.  
SUPPLY HEADER PROJECT**

**Supplemental Filing  
August 11, 2017**

**APPENDIX B**

**Revised West Virginia Protected Snake  
Conservation Plan**



August 10, 2017

**BY EMAIL**

Cliff Brown  
West Virginia Division of Natural Resources  
P.O. Box 67 – Ward Road  
Elkins, WV 26241

**Re: Supply Header Project and Atlantic Coast Pipeline Project  
Submittal of Revised West Virginia Protected Snake Conservation Plan**

Dear Mr. Brown,

Atlantic Coast Pipeline, LLC (Atlantic) and Dominion Energy Transmission, Inc. (DETI) are pleased to provide the attached Revised West Virginia Protected Snake Conservation Plan developed in cooperation with the Virginia Department of Game and Inland Fisheries to address potential impacts on protected snakes.

Potential timber rattlesnake (*Crotalus horridus*) habitat is crossed by the proposed Supply Header Project (SHP) within Wetzel County, West Virginia and by the proposed Atlantic Coast Pipeline Project (ACP) in Pocahontas County, West Virginia. Project specific conservation measures outlined in the attached plan will be implemented in Wetzel and Pocahontas Counties in West Virginia between April 1 and October 31 during Project construction. The conservation measures described in the attached conservation plan are intended to reduce and mitigate potential Project impacts to this species.

Atlantic and DETI are requesting your review and concurrence of the attached conservation plan, which is based on agency correspondence and the results of timber rattlesnake surveys to date along the SHP and ACP in West Virginia.

**Project and Company Background**

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc. (Dominion Energy), Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability

and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina. Atlantic has contracted with DETI, a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. For more information about the ACP, visit the company's website at [www.atlanticcoastpipeline.com](http://www.atlanticcoastpipeline.com). The ACP will be regulated by the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

In addition, DETI is proposing to construct and operate approximately 37.5 miles of pipeline loop and modify existing compression facilities in Pennsylvania and West Virginia. Approximately 33.6 miles of the project will be located within the State of West Virginia. This project, referred to as SHP, will enable DETI to provide firm transportation service of up to 1.5 million dekatherms per day to various customers, including Atlantic Coast Pipeline, LLC's ACP. The ACP will be a Foundation Shipper in the SHP and will utilize the SHP capacity to allow its shippers access to natural gas supplies from various DETI receipt points for further delivery to points along the ACP. For more information about the SHP, visit the company's website at [www.dominionenergy.com/supplyheader](http://www.dominionenergy.com/supplyheader). DETI is seeking authorization from the FERC under Section 7(c) of the Natural Gas Act to construct, own, operate, and maintain the SHP.

Atlantic and DETI look forward to coordinating with you on these projects. Please contact Richard B. Gangle at (804) 273-2814 or [Richard.B.Gangle@dominionenergy.com](mailto:Richard.B.Gangle@dominionenergy.com), if there are questions regarding these projects. Please direct written responses to:

Richard B. Gangle  
Dominion Energy Services, Inc.  
5000 Dominion Boulevard  
Glen Allen, Virginia 23060

Sincerely,



Robert M. Bisha  
Technical Advisor, Supply Header Project and Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion

Attachments:  
Revised West Virginia Protected Snake Conservation Plan



**ATLANTIC COAST PIPELINE, LLC**  
**ATLANTIC COAST PIPELINE**  
**Docket Nos. CP15-554-000**  
**CP15-554-001**

**and**



**DOMINION ENERGY**  
**TRANSMISSION, INC.**  
**SUPPLY HEADER PROJECT**  
**Docket No. CP15-555-000**

**West Virginia Protected Snake Conservation Plan**

**Prepared by**



**August 2017**

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- Attachment A: Figures
- Attachment B: Snake Photos

## **1.0 INTRODUCTION**

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc. (Dominion Energy), Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina. Atlantic has contracted with Dominion Energy Transmission, Inc. (DETI), a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic.

In conjunction with the ACP, DETI proposes to construct and operate approximately 37.5 miles of pipeline loop and modify existing compression facilities in Pennsylvania and West Virginia. This Project, referred to as the Supply Header Project (SHP), will enable DETI to provide firm transportation service to various customers, including Atlantic.

## **2.0 PURPOSE**

The proposed Projects cross potential timber rattlesnake (*Crotalus horridus*) habitat within Wetzell and Pocahontas Counties in West Virginia. In West Virginia, the timber rattlesnake is ranked as “S3” (vulnerable) and is listed as Regional Foresters Sensitive Species within the Monongahela National Forest.

This *Conservation Plan* addresses potential impacts on the timber rattlesnake and its habitat as a result of construction activities associated with ACP and SHP. The conservation measures presented within this plan were developed using guidance provided in the VDGIF 2011 Canebrake Rattlesnake Conservation Plan and are intended to avoid or reduce impacts on the timber rattlesnake.

## **3.0 TIMBER RATTLESNAKE (*CROTALUS HORRIDUS*)**

### **3.1 Physical Appearance**

The timber rattlesnake is a large, venomous snake averaging 36 to 42 inches long. There is no obvious sexual dimorphism except for the fact that on average, males are typically larger than females. The timber rattlesnake is a heavy-bodied, venomous snake within the Viperidae family. It is the only species of rattlesnake found in West Virginia, and can be identified by the loreal pits found on each side of the face between the eye and nostril and the segmented rattle on the tip of the tail. There are typically two color morphs of the timber rattlesnake: a dark phase, which has a dark head and dark eyes, and a light phase, which has a yellow or brown head and yellowish eyes. The scales are keeled, giving the snake a rough textured appearance. The overall body coloration may be black, yellowish, or grayish usually with dark cross-bands (Pennsylvania Fish & Boat Commission [PFBC], 2010).

### **3.2 Habitat**

Timber rattlesnakes live 20 to 25 years in the wild and may den individually or communally (NatureServe, 2015). Home ranges typically extend one to two miles from denning sites in areas below 4,800 feet in elevation (Atlantic, 2017). Overwintering dens are typically rocky upland areas such as ledges, outcrops, talus slopes, rocky rights-of-way, etc. that contain deep crevices. These sites occur in relatively exposed areas or within close proximity to exposed areas and are usually located on slopes with

a southern or western aspect. Dens usually have rocky crevices, or other features that provide access to ancestral underground chambers to which the snakes return yearly for hibernation. These sites generally have rocky habitat containing a semi-open canopy close by that is used by gravid females for gestation (PFBC, 2010).

Foraging areas include a wide variety of habitats. Timber rattlesnakes are ambush predators, with small mammals making up the majority of their diet. Birds, bird eggs, and other animals are eaten on occasion (NatureServe, 2015). Timber rattlesnakes can be active at any time of day depending upon the time of year and weather conditions.

### **3.3 Detection and Active Season**

The snake's active period begins in April and ends in late October. Timber rattlesnakes can be extremely difficult to detect; however, they often use natural or man-made disturbed areas (e.g., clearcuts) for purposes requiring elevated body temperature. They are most active during summer months, and will often stay in the same location for several days to ambush prey, gestate, digest, shed, and court. Timber rattlesnakes mature at 3-6 years and reproduce every 3-4 years. Mating takes place during late summer, and litters of 7-18 are born the following August or September (VDGIF, 2011).

## **4.0 PROJECT SPECIFIC CONSTRUCTION CONSERVATION MEASURES**

### **4.1 Conservation Measures Within Known Ranges**

The following Project specific conservation measures will be implemented during active construction in Wetzel and Pocahontas Counties from April 1 through October 31:

- Atlantic and DETI will provide training to contractors working within Wetzel and Pocahontas Counties to properly identify and become familiar with the conservation measures for the timber rattlesnake.
- Periodic on-site construction briefings will be provided to all contractors by the Environmental Inspector (EI) or Contractor Foreman to provide verbal reinforcement of mitigation measures.
- One qualified biologist (Biological Monitor) with a Scientific Collecting Permit from the WVDNR will be present on site within each construction spread in Wetzel and Pocahontas Counties. This Biological Monitor will be available when called for any activities happening within the active construction spread.
- The Environmental Inspector will contact the Biological Monitor to relocate protected snakes if the snake is located within the workspace, may be harmed by construction activities, or causes a safety concern for construction personnel.
- The following will be expected of the Biological Monitors as a minimum:
  - habitat identification and requirements;
  - snake identification information;
  - state agency notification requirements; and
  - snake handling and relocation procedures.
- Visual inspections will be conducted by the Biological Monitor and/or EI for the presence of timber rattlesnakes prior to:
  - initial tree clearing activities;

- staging or movement of construction equipment and vehicles; and
- commencement of excavation.
- The Biological Monitor and/or EI will conduct or coordinate daily visual sweeps of:
  - workspace around heavy equipment and prior to moving equipment that has been parked for 4 hours or more; and
  - open trench lines and bore pits a minimum of once daily and prior to backfilling.
- If timber rattlesnakes are encountered within the construction corridor, the following will occur:
  - stop all work within the immediate area of the snake;
  - immediately contact the permitted Biological Monitor;
  - document snake location (e.g., photographed and noted in inspection reports);
  - identify (i.e., confirm species type);
  - the Biological Monitor will relocate the snake;
  - record and report encounter and all measures taken to the designated Atlantic or DETI representative; and
  - no work will commence until the snake has left/ been safely relocated from the work area.
- All timber rattlesnake snake encounters will be reported to the WVDNR at the completion of Project construction.

## **4.2 Conservation Measures Project Wide**

The following Project specific conservation measures will be implemented during active construction **Project wide** year round:

- A “No Kill” policy will be adopted that includes all snake species.
- Atlantic and DETI will provide training to contractors to properly identify and become familiar with the conservation measures for the timber rattlesnake.
- All Atlantic and DETI contractors will adhere to posted speed limits on county and state roads as well as adhere to the construction speed limits on unpaved private access roads to increase detectability of snakes on the road in an effort to reduce road mortalities.
- Any incidental take of a timber rattlesnake will be reported to the WVDNR within 48 hours of the incident by the designated Atlantic or DETI representative.

## **4.3 Habitat Conservation Measures**

### **4.3.1 Upland Habitats**

In non-cultivated uplands, the full permanent easement (50 or 75-feet-wide) will be maintained in an herbaceous state. This will likely benefit timber rattlesnakes by providing additional basking opportunities on the newly created edge habitats and potentially foraging habitat.

## **4.4 Compensatory Mitigation**

There will be no permanent loss of protected snake habitat and, due to the implementation of the conservation measures discussed above, adverse impacts to individual timber rattlesnakes are not

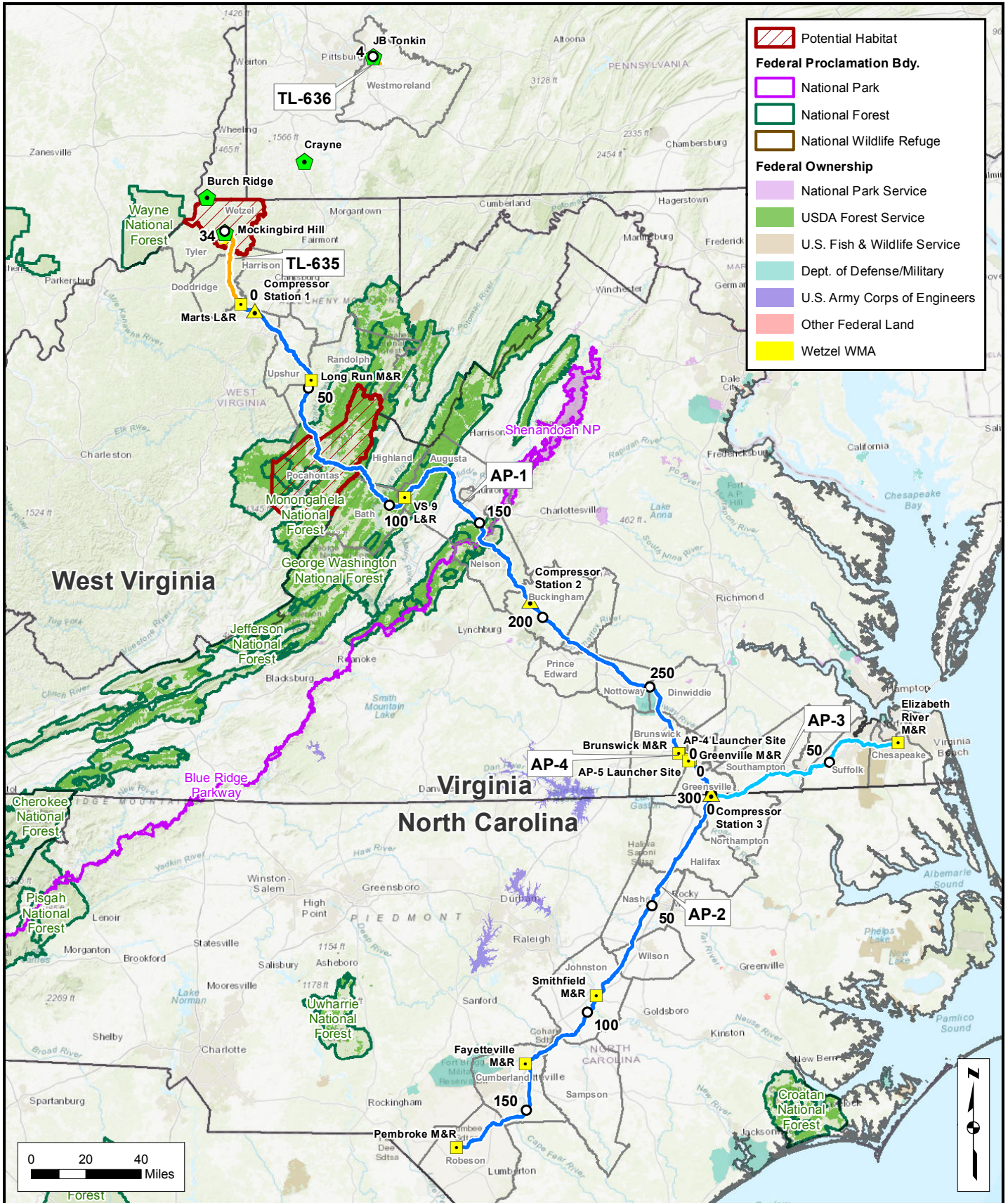


anticipated, therefore there is no compensatory mitigation planned for impacts at this time. As noted in section 4.3.1, timber rattlesnakes are likely to benefit with the creation of a new pipeline right-of-way through any forested areas crossed by the Project. However, if permanent loss of habitat and compensatory mitigation becomes a requirement for Project approval, Atlantic and DETI will consult with WVDNR.

## 5.0 REFERENCES

- Atlantic Coast Pipeline, LLC. 2017. Allegheny Woodrat and Timber Rattlesnake Survey Report. Filed July 28, 2017. Prepared by AllStar Ecology on behalf of Environmental Resources Management (ERM) for Atlantic Coast Pipeline, LLC. ERM, Minneapolis, MN.
- NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application] *Crotalus horridus*. Version 7.1. NatureServe, Arlington, Virginia. Available [http://explorer.natureserve.org/servlet/NatureServe?sourceTemplate=tabular\\_report.wmt&loadTemplate=species\\_RptComprehensive.wmt&selectedReport=RptComprehensive.wmt&summaryView=tabular\\_report.wmt&elKey=100455&paging=home&save=true&startIndex=1&nextStartIndex=1&reset=false&offPageSelectedElKey=100455&offPageSelectedElType=species&offPageYesNo=true&post\\_processes=&radiobutton=radiobutton&selectedIndexes=100455&selectedIndexes=858638&selectedIndexes=858493](http://explorer.natureserve.org/servlet/NatureServe?sourceTemplate=tabular_report.wmt&loadTemplate=species_RptComprehensive.wmt&selectedReport=RptComprehensive.wmt&summaryView=tabular_report.wmt&elKey=100455&paging=home&save=true&startIndex=1&nextStartIndex=1&reset=false&offPageSelectedElKey=100455&offPageSelectedElType=species&offPageYesNo=true&post_processes=&radiobutton=radiobutton&selectedIndexes=100455&selectedIndexes=858638&selectedIndexes=858493). (Accessed September 9, 2015).
- Pennsylvania Fish & Boat Commission Natural Diversity Section. 2010. Timber Rattlesnake Presence-Absence Survey Guidelines. Available [http://herpetologicalassociates.com/PFBC\\_Rattlesnake\\_Guidelines.pdf](http://herpetologicalassociates.com/PFBC_Rattlesnake_Guidelines.pdf). (Accessed September 9, 2015).
- Virginia Department of Game and Inland Fisheries. 2011. Canebrake Rattlesnake Conservation Plan. Bureau of Wildlife Resources. VDGIF, Richmond, VA. 25 pp.

**Attachment A**  
**Figures**



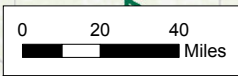
**Potential Habitat**

**Federal Proclamation Bdy.**

- National Park
- National Forest
- National Wildlife Refuge

**Federal Ownership**

- National Park Service
- USDA Forest Service
- U.S. Fish & Wildlife Service
- Dept. of Defense/Military
- U.S. Army Corps of Engineers
- Other Federal Land
- Wetzel WMA

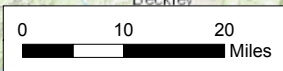
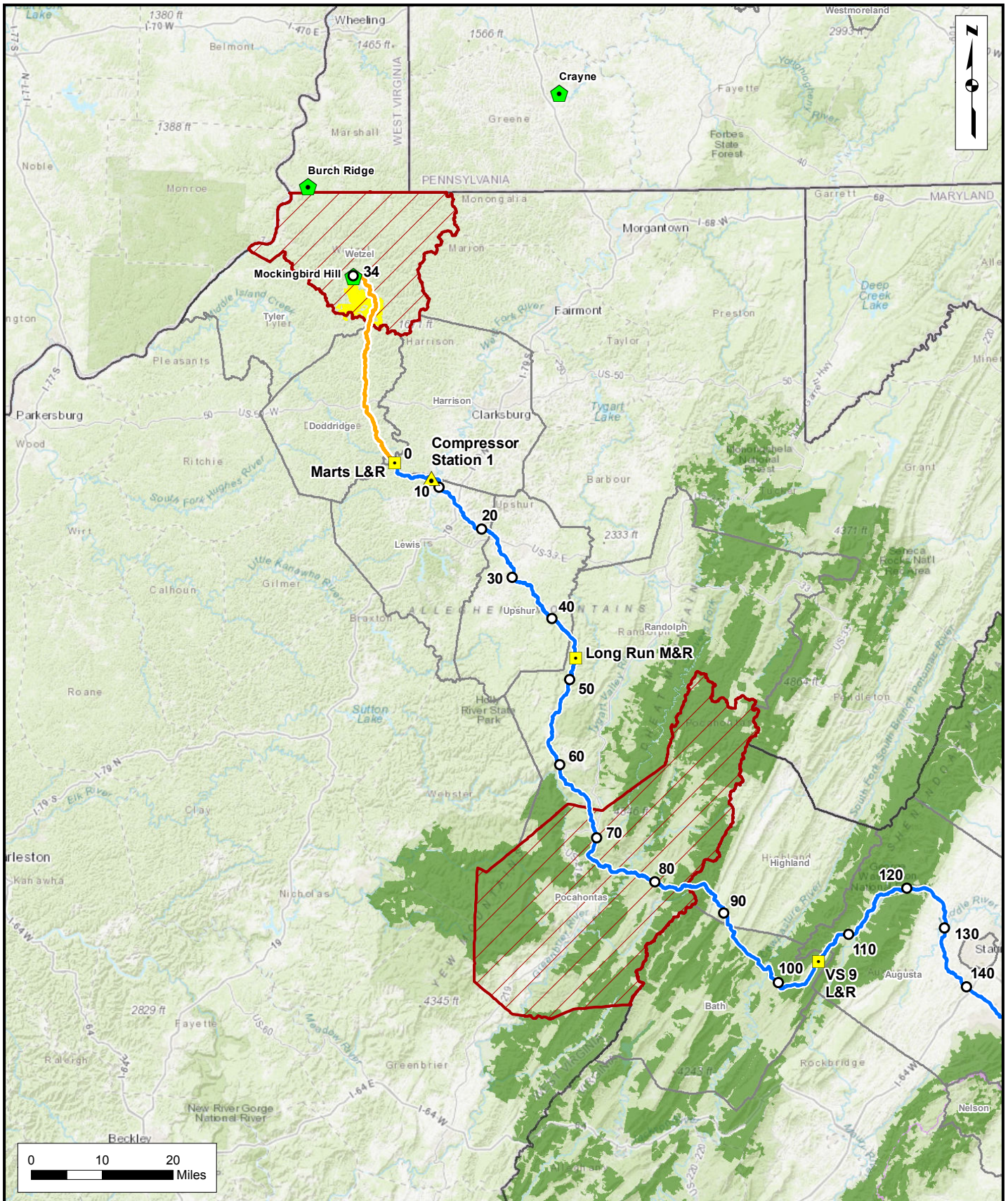


- ACP Mainline
- ACP Lateral
- SHP Loop
- Proposed Compressor Station
- Proposed M & R Site
- Existing Compressor Station

**Atlantic Coast Pipeline and Supply Header Project**  
**Figure 1**  
**Project Overview Map**







- ACP Mainline
- SHP Loop
- ▲ Compressor Station
- M & R Site
- Existing Compressor Station
- Timber Rattlesnake Potential Habitat
- National Forest Service Land
- National Park Service Land
- Wetzel WMA

## Atlantic Coast Pipeline and Supply Header Project

### Figure 2 Timber Rattlesnake Potential Habitat



**Attachment B**  
**Snake Photos**





Photo 1: Timber rattlesnake (Photo: J.D. Wilson)



Photo 2: Timber rattlesnake (Photo: Paula Waggy)