Federal Energy Regulatory Commission
Office of Energy Projects
Washington, DC 20426

Atlantic Coast Pipeline and Supply Header Project

Final Environmental Impact Statement

Volume IV

Atlantic Coast Pipeline, LLC
Dominion Energy Transmission, Inc.

Docket Nos. CP15-554-000, CP15-554-001, CP15-555-000, and CP15-556-000
FERC/EIS-0274F

Cooperating Agencies:

U.S. Department of Agriculture – Forest Service

U.S. Army Corps of Engineers

U.S. Environmental Protection Agency

U.S. Fish and Wildlife Service

West Virginia Department of Environmental Protection

West Virginia Division of Natural Resources

July 2017

This environmental impact statement was prepared by the staff of the Federal Energy Regulatory Commission to assess the potential environmental impacts of the Atlantic Coast Pipeline and Supply Header Project (Docket Nos. CP15-554-000, CP15-554-001, CP15-555-000, and CP15-556-000), proposed for construction in West Virginia, Virginia, North Carolina, and Pennsylvania. The cooperation and assistance of the U.S. Department of Agriculture – Forest Service; U.S. Army Corps of Engineers; U.S. Environmental Protection Agency; U.S. Fish and Wildlife Service; West Virginia Department of Environmental Protection; and West Virginia Division of Natural Resources was greatly appreciated.

Atlantic Coast Pipeline and Supply Header Project

Final Environmental Impact Statement

Table of Contents

VOLUME IV – LIST OF APPENDICES (provided on CD)

APPENDIX Z

COMMENTS ON THE DRAFT EIS AND RESPONSES

Atlantic Coast Pipeline and Supply Header Project

Comments on the Draft EIS and Responses

INTRODUCTION

Approximately 1,230 parties submitted a total of 1,675 timely letters in response to the draft EIS. Multiple form letters and petitions were also submitted in response to the draft EIS. In addition, we held 10 public comment sessions during the draft EIS comment period, which provided interested parties with an opportunity to present verbal comments on our analysis of the environmental impacts of the projects as described in the draft EIS. A total of 620 people commented at the sessions.

This appendix presents our responses to relevant comments provided on the draft EIS. Letters are classified as follows:

- FA: Federal agencies and elected officials;
- NAT: Native American Tribes
- SA: State/Commonwealth agencies and elected officials
- LA: Local agencies and elected officials
- CO: Companies and Organizations
- LO: Landowners
- PM: Public Comment Sessions
- A: Applicant
- IND: Individuals

Due to the volume of comments received from individuals, and similarities in the issues identified by commentors, we categorized these letters based on landowner status. Letters received from affected landowners (as defined in 18 CFR 157.6(d)(2)) and who were identified on Atlantic's and DETI's landowner lists are included in category "LO" listed above, and responses to each comment are provided. Tables Z-1 and Z-2 address comments received from individuals who do not fall into the "affected landowner" category and were not clearly identified on Atlantic's and DETI's landowner lists. For those comments, table Z-1 lists the accession number, name of the commentor, and a comment code. Table Z-2 provides our responses to the comment codes.

INDEX

COMPANIES AND ORGANIZATIONS

LANDOWNERS

PUBLIC COMMENT SESSIONS

APPLICANT

INDIVIDUALS

We note that the clarity of some letter images is low due to the necessity of reducing the files for our responses in this appendix. Appendix Z and each of the comment letters are available for viewing in their native formats on the FERC eLibrary website (www.ferc.gov) to resolve any issues with image constraints due to printing.[1]

[1] Comment letters are available for viewing on the FERC Internet website (http://www.ferc.gov). Using the "eLibrary" link, select "General Search" from the eLibrary menu, enter an appropriate date range and "Docket No." excluding the last three digits (i.e., CP15-554 or CP15-555), and follow the instructions. For assistance, call 1-866-208-3676 or e-mail FERCOnlineSupport@ferc.gov.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA1 – U.S. Senators and Representatives

Congress of the United States
Washington, DC 20510

February 9, 2017

Ms. Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426
Re: Docket #CP15-554– Atlantic Coast Pipeline

Dear Ms. Bose:

We write with regard to the December 30, 2016 release of the Draft Environmental Impact Statement (DEIS) for the Atlantic Coast Pipeline project (ACP) by the Federal Energy Regulatory Commission's (FERC) staff. We appreciate the continued work on this project by FERC and the need to provide low cost, reliable, and clean natural gas to our constituents and businesses across the eastern third of our state.

FA1-1

As you know, a number of our offices previously requested that the public process related to this project be as robust and transparent as possible. We are thankful for the FERC staff's ongoing outreach and public engagement in North Carolina.

The DEIS stated that while there will be temporary and permanent environmental impacts associated with the ACP, the "implementation [of] impact avoidance, minimization, and mitigation measures as well as their adherence to [FERC staff] recommendations to further avoid, minimize, and mitigate these impacts, the majority of project [environmental] effects would be reduced to less-than-significant levels."

Also important, the DEIS stated that the ACP would bring both short-term and long-term economic benefits to this region of our state. The eight counties in our state through which the ACP would traverse have an average unemployment rate of 6.45%, well above both the state and federal unemployment rates for November 2016, the most recent data available for local, state and federal labor statistics. As the FERC's staff assessment noted, the project will benefit the local and state economies and the "operation of the projects would result in long-term tax benefits for the counties crossed."

In determining the long term effects of the ACP it is important to note that the FERC staff's assessment concluded that "no long-term impacts on groundwater are anticipated from construction or operation of ACP." This finding by FERC was based on their conclusion, "that surface water and wetland impacts would be effectively minimized or mitigated" if FERC recommendations were implemented. Finally, the DEIS's assessment found that the ACP would not have a negative impact on public safety.

2016-00015

FA1-1 Comment noted.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA1 – U.S. Senators and Representatives (cont'd)

We will continue to follow the FERC process and appreciate your consideration. Please do not hesitate to reach out to any or all of us directly should you have questions.

Sincerely,

Richard Burr
United States Senate

Thom Tillis
United States Senate

Richard Hudson
United States Congress

Robert Pittenger
United States Congress

George Holding
United States Congress

David Rouzer
United States Congress

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA2 – U.S. Geological Survey

eric jacobsen, Lawrenceville, NJ.

Hi,

FA2-1 I am a hydrologist at the U.S. Geological Survey currently reviewing the DEIS for the Atlantic Coast Pipeline (ACP). Atlantic Coast Pipeline LLC and Dominion Transmission Inc have created and utilized spatial data files for the ACP project. A critical part of our review process utilizes spatial data with Geographic Information Systems (GIS) to verify the described activities and to assess other potential impacts. Given the length and scope of the project, obtaining ACP's spatial data of the current pipeline route would allow a more accurate assessment and greatly expedite the review process.

Recreating the proposed pipeline route (over 600 miles) will be both time-consuming and less exact than simply obtaining available spatial data from ACP-LLC or Dominion Transmission Inc. The very short review period greatly increases the need to obtain the spatial data quickly. Common spatial data formats are shapefiles and/or geodatabases. Please contact me at your earliest convenience with the location of this data, or the person to contact. Again, as the review period is very short, we require this data as soon as possible. I greatly appreciate your assistance.

Thank you,

Eric Jacobsen, Hydrologist

U.S. Geological Survey

3450 Princeton Pike, Suite 110

Lawrenceville, NJ 08648

609-771-3939 (office)

267-273-3128 (cell)

FA2-1 The most recent and reliable GIS data of the project are available from Atlantic, not FERC.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service

USDA United States Department of Agriculture | Forest Service | Monongahela National Forest | 200 Sycamore Street, Elkins, WV 26241, 304-636-1800

File Code: 1900; 2700
Date: April 6, 2017

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

Dear Ms. Bose:

Subject: Forest Service's Comments on the Draft Environmental Impact Statement for the Proposed Atlantic Coast Pipeline Project
OEP/DG2E/Gas 4
Atlantic Coast Pipeline, LLC
Docket No. CP15-554-000 and CP15-554-001

The Forest Service submits comments on the Draft Environmental Impact Statement (EIS) for the Atlantic Coast Pipeline Project (ACP Project) proposed by Atlantic Coast Pipeline, LLC (ACP). The proposed ACP Project would affect National Forest System (NFS) lands on the Monongahela National Forest and the George Washington National Forest.

As a cooperating agency, the Forest Service provides comments on the Draft EIS to assist the Federal Energy Regulatory Commission (FERC) with the development of the Final EIS and to assist ACP in identifying information necessary to assess potential effects of the ACP Project on NFS lands. The comments are detailed in the attached table. We appreciate FERC coordinating the EIS and we look forward to continued consultation with ACP regarding the ACP Project.

For questions or additional information, please contact Jennifer Adams, Special Project Coordinator, by phone at (540) 265-5114 or by email at jenniferpadams@fs.fed.us.

Sincerely,

CLYDE THOMPSON
Forest Supervisor

cc: Atlantic Coast Pipeline, LLC

Caring for the Land and Serving People

Printed on Recycled Paper

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

FOREST SERVICE COMMENTS
DRAFT ENVIRONMENTAL IMPACT STATEMENT
ATLANTIC COAST PIPELINE PROJECT

	Page #	Section #	Comment
FA3-1	Access Road Improvement Maps		In Rev 11 b on the east slope of Tower Hill and southwest of Browns Pond, the centerline has been rerouted several thousand feet to the northeast. Confirm if this section been surveyed for TESLR species.
FA3-2	General	General	Engineering will need to review site specific plans and project specifications for any road work, including maintenance, reconstruction, and construction.
FA3-3	General	All sections pertaining to soil or geology	There is a lack in detailed discussion on actual data collected on NFS lands within the DEIS. NFS lands should be discussed separately from other project lands. Please create a paragraph in the introduction describing surveys for data collection or reference them to a cited appendix. Suggested text: An Order 1 Soil Survey was completed for the ACP in the MNF and GWNF. The soil survey activities were conducted to be compliant with the requirements outlined in special use permit #GIBR205003, dated April 22, 2015 for surveys in the MNF, and special use permit #GWP433201T, dated March 31, 2015 for surveys in the GWNF, both of which were issued by the U.S. Forest Service. These two permits were renewed as #MARG205001 dated April 11, 2016 and #GWP433202T dated April 11, 2016, as well as amendment #1 to SUP GWP433202T dated May 20, 2016. The survey resulted in the production of an Order 1 Soil Survey report (COM Plan Attachment G) with delineated soil map units determined through the use of the ACP Soil Mapping Key. A total of 360 test pits were completed during the investigation, including 85 test pits in the MNF and 275 test pits in the GWNF. A total of 511 soil samples were collected in duplicate by horizon in 111 test pits. Forty-one (41) of those test pits, including 190 horizons, were selected for particle size analysis, nutrient analysis, and total and organic carbon contents. Soil test pit logs, transect logs, and laboratory test results for soil samples collected in the field are provided as with the report. The data gathered for the Survey was utilized for environmental impact studies, geohazard studies, and for assessing Best Management Practices (BMPs) for post construction restoration within the pipeline study corridor.
FA3-4	ES-3	Karst Terrain and Steep Slope	The karst section, when referring to steep slopes, should clearly illustrate the difference between working on steeps slopes in general and those steep slopes that are located over karst terrain. In addition, given that steep slopes are a major issue for this pipeline analysis through the mountainous regions (Allegheny Mountains and the Ridge and Valley), a separate section highlighting steep slopes in general and then in detail also needs to be included.
FA3-5	ES-3	Karst Terrain and Steep Slope	Combining the discussions of karst terrain and steep slopes in the same section is confusing. These two major issues should be discussed in separate sections.
FA3-6	ES-3	Project Impacts and Mitigation	Paragraph #4, "sleep slopes" should be "steep slopes."
FA3-7	ES-4	Karst Terrain and Steep Slope	*"Prior to construction, Atlantic would perform electrical resistivity investigation surveys to detect subsurface solution features along all portions of the route with the potential for karst development; these results would be correlated with boring logs to ensure the analysis reflects the field conditions."*

Page 1

	Page #	Section #	Comment
			These data should be collected prior to the project decision and should be used in this effects analysis to determine any effects from the construction and installation of the pipeline. Site specific mitigation and designs should be incorporated into the Construction, Operation, and Maintenance Plan. Electrical resistivity investigation survey data must be provided to the Forest Service prior to construction start and the Forest Service must be consulted prior to such actions on National Forest System Lands.
FA3-8	ES-4	Karst Terrain and Steep Slope	*"Atlantic and DTI developed a Geohazard Analysis Program and is also developing a Best in Class Steep Slope Management Program to address issues of landslide potential and susceptibility."* Atlantic will need to provide details on how they plan to abide by LRMP standards and guidelines. In general, SW07 in the MNF plan specifically limits or prohibits use of wheeled and tracked equipment on slopes over 40%. The document needs to include language and an analysis that reflects how ACP plans to meet LRMP direction. The site specific details and application of the analysis need to be reflected in the various parts of the Construction, Operation, and Maintenance Plan.
FA3-9	ES-5	Karst Terrain and Steep Slope	*"Based on our review of Atlantic's and DTI's proposed construction methods, its implementation of impact avoidance and minimization measures, and our consultations with state agencies and other resource managers, along with our recommendations, we conclude that the potential for ACP and SHP to initiate or be affected by damaging karst conditions would be adequately minimized."* This statement would appear to be premature given the acknowledgement previously in this section of incomplete information presumed necessary to arrive at a conclusion (reference ES-4 and ES-5). • ES-4: *"Because analysis, field surveys, and final measures related to slope hazards have not yet been completed for ACP and SHP, we recommend that Atlantic and DTI file the results of its geotechnical studies and geohazard analysis field reconnaissance, and identify mitigation that would be implemented in slope hazard areas during construction and operation of the projects."* • ES-5: *"On the MNF and GWNF, Atlantic has not provided the information requested by the FS to assess potential project-induced landslide hazards and risk to public safety, resources, and infrastructure and also the effectiveness of proposed mitigation measures for restoration of steep slopes."* The Forest Service cannot concur with this conclusion for National Forest land until all erosion control, steep slope procedures, etc. are available for review and a FS decision on NFS lands has been made.
FA3-10	ES-5	Karst Terrain and Steep Slopes	In the 1st paragraph, "on the MNF and GWNF," is the first use of these entities in the ES. We suggest spelling out both completely with the acronym in parentheses.
FA3-11	ES-5	Public Land and Recreational Impacts	Last paragraph. Timber Removal Plan. Please clarify if this is the same or different than the Timber Extraction Plans referenced later in the paragraph on the following page.
	ES-6	Public Land and Recreational Impacts	2nd paragraph. WBWF and WOF are non-profit organizations, not land-managing agencies.
	ES-6	Public Land and Recreational Impacts	3rd paragraph, "West Virginia and western Virginia" is preferred.

Page 2

FA3-1 Atlantic would be required to complete all outstanding biological surveys prior to construction.

FA3-2 Comment noted.

FA3-3 Comment noted.

FA3-4 Comment noted.

FA3-5 Comment noted.

FA3-6 The Executive Summary has been revised to reflect the recommended change to "steep slopes."

FA3-7 Comment noted. We expect that the FS would continue to work with Atlantic to incorporate design features, mitigation measures, and monitoring procedures to minimize the effects on national forest resources, as described in the COM Plan (see appendix G) and/or the Forest Service Special Use Permit, if issued.

FA3-8 See response to comment FA3-7.

FA3-9 Comment noted.

FA3-10 The acronyms MNF and GWNF are defined in the first occurrence of the acronyms on page ES-3 and again for the main text of the document in section 1.2.2. They are also included in the list of acronyms in the Table of Contents.

FA3-11 The references to the Timber Removal Plan and Timber Extraction Plan, which serve different purposes and would be available at different stages of project development, are accurate.

The Executive Summary has been revised to reflect that agencies and organizations would be consulted regarding the WBWF and WOF.

The Executive Summary has been revised to reflect the recommended change regarding "western Virginia."

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
FA3-12	ES-6&7	Executive Summary	*"…that construction and operation of ACP and SHP **may affect and are likely to adversely affect** five federally listed species (Indiana bat, Northern long-eared bat, Roanoke logperch, running buffalo clover, and Madison Cave isopod), and **would not likely adversely affect or have no effect** on the remaining species identified by the FWS and NOAA Fisheries."* This is inconsistent with the determination made on page 182 in the BA for the clubshell mussel where: *"the proposed ACP and SHP Projects **may affect, and is likely to adversely affect** the clubshell."*
	ES-6&7	Executive Summary	*"…based on these consultations and Atlantic's and DTI's field surveys, and assuming implementation of our recommendations, we determined that construction and operation of ACP and SHP **may affect and are likely to adversely affect** five federally listed species (Indiana bat, Northern long-eared bat, Roanoke logperch, running buffalo clover, and Madison Cave isopod), and **would not likely adversely affect** or have no **effect** on the remaining species identified by the FWS and NOAA Fisheries. In compliance with Section 7, we are submitting this draft EIS as our Biological Assessment and requesting formal consultation with the FWS.* This is inconsistent with the determination made on page 240 in the BA for the small whorled pogonia where: *"the ACP project **may affect…and is likely to adversely affect** the small-whorled pogonia."*
FA3-13	ES-7	Sensitive Species	*Based comments from the FS and inadequate or inconsistent information, we have several recommendations for outstanding information.* This statement acknowledges deficiencies in information needed to conduct an appropriate effects analysis for at least some sensitive species. Given this, the FS has serious reservations about the conclusions of the analyses up to this point because these conclusions have been reached prior to acquiring the necessary information to substantiate what must otherwise be presumed to represent judgements based on incomplete information.
FA3-14	ES-7	Executive Summary	*"…a revised Biological Assessment to avoid and minimize impacts on the population of running buffalo clover and small whorled pogonia in the MNF."* Small whorled pogonia also occurs on the GWNF and may be impacted by the proposed project. The Biological Assessment also needs to address avoidance and minimization of impacts to small whorled pogonia on the GWNF.
FA3-15	ES-9	Executive Summary	There is not a discussion in the Executive Summary on Fisheries or Aquatic Resources under either the Water Resources or Wildlife sections.
FA3-16	ES-10	ES	*"The regrowth of trees in the temporary workspaces would take years and possibly decades…"* Please clarify differences in recovery time for various successional stages. Re-establishment of young trees would take years, and re-establishment of a young reproducing forest would likely take decades. Recovery time for a closed canopy of mature forest trees, and the habitat values that currently exist within such areas, would approach a century or more.
FA3-17	ES-10	ES	*"Vegetation types, such as grassland/herbaceous, barren, and emergent wetlands, would return to preconstruction conditions during operation of ACP facilities."* These habitat types may regain a superficially similar appearance, but without assistance, it is highly unlikely that soil quality, native plant communities, hydrological conditions, etc. would return to preconstruction conditions equivalent in ecological function and value to what was disturbed. With intentional restoration, long term monitoring, and adaptive management, it is possible that those habitats and their ecosystem services can be restored close to what existed before, but even that is not guaranteed. Please revise for clarity.

Page 3

	Page #	Section #	Comment
FA3-18	ES-10	ES	*"[construction] could also impact wildlife…These impacts would be temporary…or short term…lasting no more than a few years until the preconstruction habitat and vegetation type is reestablished."* Impacts to certain species of wildlife in the 4208 acres likely to be permanently impacted will, likewise, likely be long-term and functionally permanent, lasting beyond the existence of the pipeline until mature forest cover is restored to those acres. Please revise for accuracy.
FA3-19	ES-13	Alts Evaluated	Typo – "We also evaluated one route variation and reviewed the over 169 variations…."
FA3-20	ES-14	Major Conclusions	*"Atlantic and DTI would minimize impacts on the natural and human environments during construction and operation of its facilities by implementing the numerous measures described in their respective construction and restoration plans"* This statement seems inconsistent with other statements in the Major Conclusions regarding adverse effects and permanent impacts on the environment. There will be irreversible impacts to the soil and vegetation resources from construction of the ACP pipeline on NFS lands. No matter how ACP plans to implement measures to reduce these impacts, there will still be an unavoidable irreversible dedication of the soil resource as defined by NEPA and the USFS FSH 2550. Topsoil mixing where stumps are removed, topsoil displacement in road construction, road reconstruction and skid roads for timber removal will all negatively impact soil productivity/quality on NF lands. The approximate effect is calculated in acres of soil disturbance to the soil resource of NFS land. The Construction, Operation, and Maintenance Plan is currently not complete, and substantial work remains to develop and refine measures to avoid, minimize, and mitigate impacts to a variety of resources on NFS lands, including steep slopes/sensitive soils; threatened, endangered, and sensitive species; and management indicator species. Until such measures have been established, accepted by the Forest Service, and incorporated into the Construction, Operation, and Maintenance Plan, the Forest Service cannot concur with the conclusion that impacts would be minimized.
FA3-21	1-3	1.0	Thank you for portraying and correctly labelling the Appalachian National Scenic Trail on Figure 1-1 and elsewhere throughout the EIS and supporting documents.
FA3-22	1-7	1.2.2.1	4th paragraph. "…and developed applicable portions of the EIS." Change to "…and contributed to the development of applicable portions of the EIS."
	1-7	1.2.2.1	Last paragraph – *Note:* Atlantic submitted a revised SUP application to the FS dated on June 16, 2016.
	1-8	1.2.2.1	Typos – change NSF to NFS in two locations under heading MNF and GWNF.
	1-8	1.2.2.1	In the top paragraph, "…direction, and the Forest LRMPs." Should be changed to "…direction, the Forest LRMPs, and other applicable laws and regulations.".
FA3-23	1-8	1.2.2.1	2nd paragraph – There is a discrepancy in the DEIS description of a 53.5-foot-wide maintenance corridor (the long-term ROW grant) and ACP's revised SF-299 Application submitted to the USFS dated 6/16/2016. In the SF-299, ACP requests a 75-foot wide permanent right-of-way across the MNF and GWNF. ACP will need to revise the SF-299 to reflect the most current proposed ROW width on NFS lands.
FA3-24	1-9	1.2.2.1	3rd Paragraph - Regarding the discussion of NPS-acquired transfer lands: The National Park Service acquired lands (referred to as trail segments) and transferred management authority of certain trail segments to the Forest Service under authority of the NTSA through a Memorandum of Agreement (MOA). In the MOA, the NPS retained certain responsibilities over the transferred trail segments, including

Page 4

FA3-12 The Executive Summary has been updated to address this comment.

FA3-13 Section 4.7.1 includes a recommendation that prior to construction of the projects Atlantic and DETI should complete all outstanding biological surveys necessary for FERC to complete section 7 consultation with the FWS; and that Atlantic and DETI receive written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) can begin.

FA3-14 The Executive Summary has been updated to address this comment.

FA3-15 The Executive Summary has been revised to address this comment.

FA3-16 The Executive Summary has been updated to address this comment.

FA3-17 The Executive Summary has been updated to address this comment.

FA3-18 The Executive Summary has been updated to address this comment.

FA3-19 The referenced text has been revised.

FA3-20 We note that the referenced text is one of several factors used to determine the major conclusions in the preceding paragraph of the Executive Summary. The referenced text pertains to our conclusions for the entire ACP and SHP, and is based on Atlantic's and DETI's implementation of their respective impact avoidance, minimization, and mitigation measures as well as their adherence to our recommendations to further avoid, minimize, and mitigate these impacts.

FA3-21 Comment noted.

FA3-22 The referenced text sections have been revised.

FA3-23 Comment noted. The final EIS has been revised to reflect that, if ACP is approved, the FS would allow only a 50-foot-wide operational right-of-way on NFS lands.

FA3-24 Section 1.2.2.1 has been revised to reflect the FS' comments regarding the ANST.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
FA3-24 (cont'd)			any future authorization of oil or gas pipeline crossings. The NPS retains only those specific interests in the lands which were expressly reserved in the MOA. Otherwise, the trail segments transferred to the FS are subject exclusively to Forest Service regulations and management authority under the terms of the MOA and are in all respects NFS lands for the duration of the MOA. The ANST is a unit of the National Park system; however, the lands acquired and administered by the Forest Service for the ANST are NFS lands and subject exclusively to Forest Service regulations and management authority. *Note:* The currently proposed ACP route does not involve any NPS transferred trail segments.
FA3-25	1-8	1.2.2.1	5[th] paragraph. Improper misuse of "NFST" – there are 3 uses of NSF and one use of NFS. All should be "NFS."
	1-9	1.2.2.1	2[nd] paragraph. Add the following after "… with the non-profit Appalachian Trail Conservancy (ATC)." "*local ATC-affiliated Trail Clubs, …*". The local ATC affiliated Trail Clubs are full partners with NPS, ATC and the land managing agencies.
	1-9	1.2.2.1	Change from "… ongoing management of the NPS-acquired parcels in this area." to "… ongoing management of some of the NPS-acquired parcels in this area …". There is a mixture of NPS acquired/NPS managed, NPS acquired/FS managed, and FS acquired/FS managed ANST parcels in the area of the ANST near the proposed ACP crossing of the ANST and BRP.
	1-11	1.2.2.5	3[rd] paragraph says the MNF is cooperatively managed by the FS and WVDNR. This is misleading. Although the FS and WVDNR cooperate on the management of wildlife and fisheries, the FS is responsible for overall management of the National Forest.
	1-23, 1-24	1.4	Bottom paragraph and Table 1.4-1. Table 1.4-1 should be revised to show the consultations of the applicant with NPS-APPA (Appalachian Trail Park Office) in addition to the listed consultation with NPS-BLR. No Permit or Clearance is needed from NPS-APPA but consultation with them, as the designated lead federal agency for the entire ANST is important and should be done and documented here.
FA3-26	2-6	2.1.2	Thank you for adding text in each description of types of Aboveground Facilities specific to whether or not they will be located on NFS lands.
FA3-27	2-9	2.1.2.6	Clarification is requested regarding the proposed communication towers (Bath County Power Station and Rocky Mountain MW Site) located on NFS lands. Additional information regarding the scope of the proposed improvements at these existing facilities is needed. Regulations found at Forest Service Handbook (FSH) 2709.11, Chapter 90, sec. 94.1(1) states that "the proponent does not need agency approval to co-locate the proposed use in or on an existing authorized facility when the proposed use is compatible with the communications site management plan and existing communications uses at the site. After securing permission from the facility owner or facility manager, the proponent may immediately locate equipment in or on the facility and proceed with operations." Sec. 90.5 defines "co-location" as, "installation of telecommunications equipment in or on an existing communications facility or other structure." The term "facility" is defined as "a building, equipment shelter, or other structure designed to house communications equipment or a tower, mast, or other structure that supports a communications antenna." Based on the brief description of ACP's proposed communication uses at the two NFS land sites and in Table 2.1.2-6, it appears that ACP is proposing to "construct new microwave antennas" at these sites. Please clarify that ACP intends to co-locate the new antennas in or on existing facilities as defined in the FSH.
FA3-28	2-15	2.2	Clarify if the acres of land disturbed on NFS lands includes new and/or improved access roads.
FA3-29	2-15	2.2	Bottom paragraph. "Following construction, 209.6 acres of new land …". Please clarify the meaning of "new land."
FA3-30	2-18	Table 2.2-2	Please add footnote to clarify that land requirement calculations for operation were based on a 53.5 foot wide right-of-way on NFS lands.
FA3-31	2-25	2.2.5.1	The 3[rd] paragraph states a total of 17 roads would be on FS and 15 will be used permanently. This does not match information on Table 4.8.9-3 on page 4-341 which shows 16 roads and states that one (36-014-AR3) will not be used.
	2-25	2.2.5.1	*"A total of 15 permanent roads would be required for operation of ACP on NFS lands."* Also, please express in terms of the number of miles and total acres of permanent roads impacted.
FA3-32	2-25	2.2.5.1	This section states that Atlantic "would improve unsuitable dirt and gravel roads through widening and/or grading, installing or replacing culverts, or clearing overhanging vegetation of tree limbs." This also needs to include surfacing of roads to ensure that the traveled way is stabilized and sufficient to accommodate construction traffic.

Page 5

	Page #	Section #	Comment
FA3-32 (cont'd)			This section indicates 17 access roads would be used during construction of ACP on National Forest lands. Table 4.8.9-3 lists 16 access roads.
FA3-33	2-27	2.3.1.1 Waterbody Crossings	*ATWS necessary for waterbody crossings would be located a minimum of 50 feet from the waterbody edge, except where adjacent upland consists of actively cultivated or rotated cropland or other disturbed land. The 50 foot setback would be maintained unless site specific approval for a reduced setback is granted by the FERC and other jurisdictional agencies. Additional ATWS setbacks may be required on FS administered lands to comply with riparian setback standards, and would become conditioned as part of the SUP process. As stated above in section 2.3.1.1, we have determined that Atlantic's and DTI's request to locate certain ATWS within 50 feet of waterbodies is acceptable.* The MNF LRMP typically would require a 100 buffer between ATWS and any stream channel. See also our comment on section 4.3.2.3, page 4-114, regarding setback distance for ATWS.
FA3-34	2-29	2.3.1.2	Table 2.3.1-2 seems out of place; please provide an introductory paragraph or other explanatory text.
FA3-35	2-30	2.3.2.2	*"Topsoil would follow such that spoil would be returned to its original horizon."* Please also specify that on NFS lands, topsoil with invasive species present would be isolated and/or treated as per the COM plan so as to prevent spread of invasives to new areas during construction, and to prevent re-establishment after construction.
FA3-36	2-32	2.3.2.2 Clearing and Grading	*"On NFS lands, the FS has indicated it would require segregation of all topsoil, regardless of depth or land use."* Note that the prescribed topsoil segregation is intended to meet direction contained in the MNF LRMP (guideline SW15).
FA3-37	2-33	2.3.2.3	*"…to provide a minimum of 3 feet of cover over the top of the pipe after backfilling."* There are inconsistencies throughout the document regarding the minimum cover depth. On page 2-37, it says 2 ft minimum.
FA3-38	2-34	2.3.2.5 Pipe Stringing, Bending, Welding, and Coating	*"Once the welds are made, a coating crew would coat the area around the weld with additional epoxy or other coating before the pipeline is lowered into the trench. Prior to application, the coating crew would thoroughly clean the bare pipe with a power wire brush or sandblast machine to remove dirt, mill scale, and other debris. The crew would then apply the coating and allow it to dry."* All coating must be pre-applied to pipes prior to being brought on to NFS lands. Where welds need to be made, epoxy coating may be applied on site in the trench area. Epoxy coating being applied in the trench at weld sites is to be applied by hand; no epoxy application shall be sprayed or splattered onto surrounding environment. Any mixing of materials would need to be done in a specialized area where any spill or potential contamination can be contained and not have contact with the soil.
FA3-39	2-34	2.3.2.6	*"Topsoil would not be used as padding."* Ensure this statement is consistent with COM plan, which specifies that some topsoil will be buried to prevent re-infestation by existing invasive plants.
FA3-40	2-34	2.3.2.6 Lowering-In and Backfilling	*"In rocky areas or where the trench contains bedrock, padding material such as sand, approved foam, or other protective materials would be placed in the bottom of the trench to protect the pipeline."* On NFS lands, foam will not be permitted.
FA3-41	2-34	2.3.2.6 Lowering-In and Backfilling	*"Where sufficient padding material is not available on site, or when the native material that was excavated from the trench is rocky or otherwise not suitable for backfill material, the acquisition of backfill from other sources may be necessary."* All off-site sources for backfill to be used on NFS lands must be free from contaminants and invasive species and must pre-approved by FS personnel.
FA3-42	2-34	2.3.2.6	*"Trench breakers (stacked sand bags or polyurethane foam) would then be installed in the trench on slopes at specified intervals to prevent subsurface water movement along the pipeline."*

Page 6

FA3-25 The referenced sections have been revised with the suggested edits.

FA3-26 Comment noted.

FA3-27 Section 2.1.2.6 has been revised to include additional clarification of the communication towers that would be installed on NFS lands.

FA3-28 Section 2.2 has been revised to clarify that the acres of land disturbed during construction includes the construction right-of-way, ATWS, and access roads.

FA3-29 The phrase "new land" is meant to describe the land that would be permanently maintained for operation of the project that had not previously been affected.

FA3-30 The referenced footnoted has been added to table 2.2-2.

FA3-31 The discussion of access roads on NFS land has been revised.

FA3-32 Section 2.2.5.1 has been revised to clarify the types of improvements Atlantic and DETI would implement along proposed access roads.

FA3-33 Comment noted.

FA3-34 The paragraph introducing table 2.3.1-2 is on the page preceding the table.

FA3-35 The referenced text has been added to section 2.3.2.2.

FA3-36 Comment noted.

FA3-37 The final EIS has been revised to correct inconsistencies regarding depth of cover. We note that the commentor's reference to a minimum depth of cover of 2 feet specifically refers to where the pipeline is installed in consolidated rock at waterbody crossings.

FA3-38 The referenced text has been added to section 2.3.2.5.

FA3-39 Comment noted. We acknowledge that section 8.5.12 of the COM Plan states "topsoil will never be used for padding the pipe."

FA3-40 The referenced text has been added to section 2.3.2.6.

FA3-41 The referenced text has been added to section 2.3.2.6.

FA3-42 Comment noted. The FS has stated that the COM Plan continues to be revised with new information as data and analyses become available, and its final version would be incorporated in the Special Use Permit.

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

FA3-42 (cont'd)

Page #	Section #	Comment
	Lowering-In and Backfilling	As a means to meet applicable Forest Plan direction regarding slope stability, the FS will require further direction in the COM plan regarding trench breakers on National Forest land. Foam will not be permitted on National Forest land. Bags of concrete mix may be used no more frequently than every other plug; sand bags or other semi-permeable, FS-approved material shall be used for all other trench plugs. Trench plug spacing in the FERC Upland Erosion Control, Revegetation and Maintenance Plan (May 2013 version) is acceptable to the Forest Service, although closer trench plug spacing will be allowed where ACP determines a need due to slope steepness. On slopes greater than 30 percent, bleeder drains shall be spaced no farther apart than every other trench plug. Closer spacing may be used where ACP determines a need due slope steepness, discharge volume, or other factors. Bleeder drains may be needed on slopes less than 30 percent if subsurface flow or seeps are encountered during trench excavation. The Forest Service representative and ACP's environmental inspector will consult to determine the need for bleeder drains on slopes less than 30 percent. Protect bleeder drain outlets using rip-rap or other FS-approved material. The FS may specify alternate materials in certain locations if necessary for protection of resources. The FS will require post-construction water quality testing at selected bleeder drain outlets. Locations will be selected by the FS based on nearby sensitive resources, and the FS will provide the chemical parameters to be included in the testing.
2-34	2.3.2.5 Lowering-In and Backfilling	As a means to meet applicable Forest Plan direction regarding slope stability, the FS will require further direction in the COM plan regarding handling and storage of excavated material. a. Describe methods for preventing erosion of stockpiled material. The FS will require temporary seeding or other FS-approved technique for any material left exposed for more than seven days. b. Describe methods for preventing saturation of stockpiled material, which could lead to slippage of backfilled material. Techniques may include temporary seeding and mulching, use of tarps, implementing an accelerated backfilling schedule, or other methods proposed by ACP and approved by the FS.
2-34	2.3.2.5 Lowering-In and Backfilling	As a means to meet applicable Forest Plan direction regarding slope stability, the FS will require further direction in the COM plan regarding backfilling of excavated material. 1. Describe techniques for ensuring moisture levels in backfilled material do not present an elevated risk of slippage. a. Topsoil and spoil material shall be replaced only when moisture levels in those reserved materials are at appropriate levels. Appropriate levels shall be determined using Time Domain Reflectometry (TDR) measurements taken at 5 or more locations in each pile between 1 and 2 ft below the pile surface. This requirement applies to all topsoil and subsoil piles that are not exclusively composed of coarse fragments on National Forest land, except as noted otherwise below. i. In jurisdictional wetland areas, ACP is not required to conduct soil moisture testing. The flat topography of the wetlands being crossed by the project is not likely to lead to slope failures. ii. In areas that (1) are not jurisdictional wetlands, and (2) were identified by the Order 1 soil survey as having wet or poorly drained soil, testing is required regardless of the timing of excavation and backfill and regardless of any precipitation that may or may not have occurred between initial excavation and completion of backfilling.

Page 7

Page #	Section #	Comment
		In all other areas, testing is not required if (1) excavation and backfilling occur on the same day, or (2) no precipitation occurs between initial excavation and completion of backfilling. b. All individual moisture values from each pile (not the average of all measurements) must be less than 25 percent volumetric water content for replacement of material into the trench (spoil material) or onto the surface of the trench (topsoil). Twenty-five percent volumetric water content is approximately field capacity (field capacity is the approximate soil moisture resulting from 2 to 3 days of drainage following saturation). c. ACP shall employ qualified and trained inspectors who will be responsible for taking TDR measurements and evaluating whether the results meet allowable soil moisture requirements for backfilling. The number of inspectors will be adjusted (increased or decreased) based on the schedule of activities and the needs of the project. The TDR unit (brand and model) must be agreed to as suitable by the Forest Service. d. ACP's inspector shall keep records of the measured moisture levels for each pile at or just before the time of replacement into or onto the trench. The location (i.e., GPS locations along with the nearest milepost) of each pile shall be noted along with those moisture levels. e. TDR measurements shall be taken during the construction phase of the Project during trench backfilling (both subsoil and topsoil) on National Forest lands. Measurement results shall be provided to the Forest Service weekly, except for weeks when no backfilling occurs on National Forest land. The Forest Service will be notified that no backfilling occurred via ACP's weekly status report, which is filed on the FERC docket. f. If moisture levels are found to be unsuitable for replacement (i.e., they exceed allowable moisture requirements), topsoil or spoil material may be mechanically mixed, or Forest Service-approved materials (e.g. lime, etc.) may be physically mixed in, to allow evaporation to achieve allowable moisture levels.
2-35	2.3.2.5 Lowering-In and Backfilling	*"The soil would be inspected for compaction and scarified, as necessary"* As a means to meet applicable Forest Plan direction, the FS will require further direction in the COM plan regarding remediation of compaction on National Forest land. Employ timber mats or trench spoil to protect underlying soil where possible. Limit the use of heavy equipment on steep slopes to the minimum amount necessary. Use a cone penetrometer to measure compaction on the construction ROW prior to and following completion of construction activities. Post-construction compaction that exceeds pre-construction compaction indicates the need for compaction remediation. On ROW slopes <20% where compaction remediation is needed, use de-compaction techniques such as a ripper, narrow disk, backhoe bucket teeth, chisel plow, or other FS-approved techniques to de-compact travel lanes and any other compacted areas. On ≥20% slopes where compaction remediation is needed and can be accomplished safely and effectively without causing further resource damage, use backhoe bucket teeth, or another safe, FS-approved method, to break up compacted soils.

FA3-43

Page #	Section #	Comment
2-37	2.3.3.1	*"ATWS necessary for waterbody crossings would be located a minimum of 50 feet from the waterbody edge"* On GWNF lands, a minimum of a 100 foot buffer is required for perennial waterbodies and increases with slope. A 50 foot minimum buffer is only allowable for intermittent streams.

Page 8

FA3-43 Comment noted. Section 4.3.2.9 has been revised to reflect this requirement.

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
FA3-44	2-37	2.3.3.1	For Wet Open-cut Construction Method and all other methods discussed in this section, please discuss any FERC time constraints involved with these methods.
FA3-45	2-39	2.3.3.2	Table 2.3.3-1 lists Augusta County VA as location of the HDD for Blue Ridge Parkway/Appalachian National Scenic Trail. Please also add Nelson County VA.
FA3-46	2-39	2.3.3.2	*"...there must be a fault or pathway extending vertically to the surface"* Appalachian geology is complex with more than just faults as conduits. The migration of fluids could also occur horizontally, especially in folded or fractured formations or in proximity to shallow groundwater such as perched aquifers/seeps/springs, etc.
FA3-47	2-40	2.3.3.2	Pits or containment structures – No pits will be authorized on NFS lands, only closed loop systems with containment tanks will be considered.
FA3-48	2-41	2.3.3.3	*"...a minimum of 50 feet from the wetland edge"* As indicated in previous comments, on GWNF lands, a minimum of 100 foot set back is required and increases with slope.
	2-41	2.3.3.3	*"...ATWS within 50 feet of wetlands and the request for expanded workspace within certain wetlands is acceptable."* On GWNF lands, it is not acceptable to include ATWS within the minimum of 100-foot set back.
FA3-49	2-42	2.3.5.5 Steep Slopes	*"During construction, temporary slope and trench breakers consisting of compacted earth, sandbags, or other materials would be installed to reduce runoff velocity and divert water off of the construction right-of-way."* See previous comment on trench breakers for additional direction that must be followed on National Forest land.
FA3-50	2-42	2.3.5.5 Steep Slopes	*"Upon installation of the pipeline, permanent trench breakers and plugs consisting of sandbags, gravel, foam, cement, or cement-filled sacks would be installed over and around the pipeline, and permanent slope breakers generally consisting of compacted earth and rock would be installed across the right-of-way during restoration."* As a means to meet applicable Forest Plan direction regarding slope stability, the FS will require further direction in the COM plan regarding trench breakers on National Forest land. Foam will not be permitted on National Forest land. Bags of concrete mix may be used no more frequently than every other plug; sand bags or other semi permeable, FS approved material shall be used for all other trench plugs. Trench plug spacing in the FERC Upland Erosion Control Revegetation and Maintenance Plan (May 2013 version) is acceptable to the Forest Service, although closer trench plug spacing will be allowed where ACP determines a need due to slope steepness. On slopes greater than 30 percent, bleeder drains shall be spaced no farther apart than every other trench plug. Closer spacing may be used where ACP determines a need due slope steepness, discharge volume, or other factors. Bleeder drains may be needed on slopes less than 30 percent if subsurface flow or seeps are encountered during trench excavation. The Forest Service representative and ACP's environmental inspector will consult to determine the need for bleeder drains on slopes less than 30 percent. Protect bleeder drain outlets using rip-rap or other FS-approved material. The FS may specify alternate materials in certain locations if necessary for protection of resources.

Page 5

	Page #	Section #	Comment
			The FS will require post construction water quality testing at selected bleeder drain outlets. Locations will be selected by the FS based on nearby sensitive resources, and the FS will provide the chemical parameters to be included in the testing.
FA3-51	2-44	2.3.5.8	This section refers to Appendix M for list of road and trail crossings. However, App M is titled Road and Railroad Crossings and Trails are included as a type of road. Please include Trails in the name of Appendix M and change the third column title to Road, Railroad or Trail Type. Also, on page M-3, Change "FS Trail 718" to "FS Trail 718."
FA3-52	2-50	2.5.4 Forest Service Compliance Monitoring	*Conversely, some COM Plan requirements or mitigation projects may have less certain outcomes or may be associated with thresholds such as water temperature.* This statement of recognition, along with other statements that speak about minimizing effects (as opposed to eliminating them), are key considerations for conclusions of analyses that must fully incorporate potential direct, indirect, and cumulative project effects. This comprehensive level of consideration seems to currently be lacking in the documented accounts for the various aquatic resources analyses and conclusions.
FA3-53	2-52	2.5.6	*"...or until wetland ~~revegetation~~ restoration is successful."* Wetlands are not just about revegetation, but form and function of hydrology and soils is critical. Add sentence acknowledging these aspects of successful restoration of a wetland.
FA3-54	3-4	3.2.1	*"These pipelines currently do not have the available capacity to transport the required volumes of natural gas to the delivery points proposed for ACP and SHP, nor do these existing facilities have the necessary infrastructure to transport gas to the required delivery points. Even if additional pipelines were constructed to connect any of these pipeline systems to the supply and delivery areas for ACP, there still is not sufficient capacity on any of the existing pipeline systems to transport 1.44 Bcf/d of natural gas."* Documentation should be provided to support these statements.
FA3-55	3-5	3.2.2.1	*"The environmental 3-5 Alternatives impacts associated with these upgrades and new pipeline construction for the Transco system (a combined total of 640 to 680 miles of new pipeline) would likely be similar to the impacts of ACP and SHP, and we have not identified or received any information that suggests the alternative would provide a significant environmental advantage over ACP and SHP."* Documentation should be provided to support this statement. Miles of line do not necessarily equate to severity of the environmental impact. The nature of the resources to be impacted needs to be considered. The Forest Service has previously requested that such comparative information on impacts be obtained and considered for alternatives to the proposed action.
FA3-56	3-5	3.2.2.1	*"For this reason, and the fact that the existing system does not meet ACP's project purpose, modifications to the existing Transco system are not considered a viable system alternative."* The purpose and need is stated in terms of providing gas to end users. Nothing in the subject section indicates that modification of the Transco system could not meet this need. Therefore, the statement should be deleted, or documentation should be provided to support it.
FA3-57	3-5	3.2.2.2	Statement in reference to the existing Columbia system alternative. *"The environmental impacts associated with construction of these facilities would likely be similar to or greater than those of ACP, and we have not identified or received any information that suggests the alternative would provide a significant environmental advantage over ACP and SHP."*

Page 10

FA3-44 Any required timing restrictions for waterbody crossings are identified in appendix K.

FA3-45 The referenced text has been added to table 2.3.3-1.

FA3-46 Section 2.3.3.2 has been revised to include the description of potential horizontal migration of drilling fluids.

FA3-47 Section 2.3.3.2 has been revised to reflect this requirement.

FA3-48 Comment noted. Section 2.3.3.3 has been revised to reflect this requirement.

FA3-49 Comment noted. See the response to comment FA3-42.

FA3-50 Comment noted. See the response to comment FA3-42.

FA3-51 The referenced edits have been made to appendix M.

FA3-52 Comment noted.

FA3-53 Section 2.5.6 has been revised to change "revegetation" to "restoration."

FA3-54 Comment noted.

FA3-55 Comment noted.

FA3-56 Comment noted.

FA3-57 Comment noted.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
			Documentation should be provided to support this statement. Miles of line do not necessarily equate to severity of the environmental impact. The nature of the resources to be impacted needs to be considered. The Forest Service has previously requested that such comparative information on impacts be obtained and considered for alternatives to the proposed action.
FA3-58	3-5	3.2.2.2	*"For this reason, and the fact that the current system does not meet ACP's purpose and need, modification of the Columbia pipeline system is not considered a viable alternative to ACP and SHP."* The purpose and need is stated in terms of providing gas to end users. Nothing in the subject section indicates that modification of the Columbia system could not meet this need. Therefore, the statement should be deleted, or documentation should be provided to support it.
FA3-59	3-5	3.2.2.3	Statement in reference to the existing East Tennessee Natural Gas system: *"The environmental impacts associated with the system upgrades and new pipeline construction (a minimum of between 550 and 620 miles of new pipeline) would likely be similar to or greater than those of ACP, and we have not identified or received any information that suggests the alternative would provide a significant environmental advantage over ACP and SHP."* Documentation should be provided to support this statement. Miles of line do not necessarily equate to severity of the environmental impact. The nature of the resources to be impacted needs to be considered. The Forest Service has previously requested that such comparative information on impacts be obtained and considered for alternatives to the proposed action.
FA3-60	3-5	3.2.2.3	*"For this reason, and the fact that the current system does not meet ACP's purpose and need, modification of the existing East Tennessee system is not considered a viable alternative to ACP and SHP."* The purpose and need is stated in terms of providing gas to end users. Nothing in the subject section indicates that modification of the East Tennessee system could not meet this need. Therefore, the statement should be deleted, or documentation should be provided to support it.
FA3-61	3-8	3.2.3.2	*"In conclusion, construction and operation of a merged system alternative may hold an environmental advantage when compared to construction and operation of both ACP/SHP and MVP/EEP separately. However, pursuing this alternative would require significant time for the planning and design, result in a significant delay to the delivery of the 3.44 Bcf/d of natural gas to the proposed customers of both ACP and MVP, and would limit the ability to provide additional gas to the projects' customers. When the environmental factors, technical feasibility, and ability to meet the purpose and need of the projects are cumulatively considered, we do not find that the merged system alternative holds a significant advantage over the proposed actions and have eliminated it from further consideration."* This statement is not supported by the information presented. If the merged system is potentially environmentally advantageous, then it is possible that the merged system is preferable to the proposed actions. The technical issues mentioned earlier in this section for the 48-inch pipe do not seem to render that option infeasible, and there is nothing presented in this section that would indicate that the merged system would not meet the purpose and need (the purpose and need section does not address required timing of project completion). A detailed comparison of feasibility and environmental impacts is needed before the MVP Merged Systems Alternative can be eliminated from consideration.

Page 11

	Page #	Section #	Comment
FA3-62	3-10	3.3.1	Regarding the ACP and MVP Collocation Alternative: *"Based on our review of data, aerial photography, and topography, we conclude that there is insufficient space along the majority 5-11 Alternatives of ridgelines in West Virginia to accommodate two parallel 42-inch-diameter pipelines. Therefore, the advantages of collocating the two projects are reduced."* This statement should be supported by specific information that allows some estimation of the extent to which collocation benefits would be reduced.
FA3-63	3-11	3.3.1	Regarding the ACP and MVP Collocation Alternative: *"Additionally, implementation of this alternative would require significant planning and design, which would significantly delay the delivery of gas to Atlantic's customers. When the environmental factors, technical feasibility, and ability to meet the purpose and need of the projects are cumulatively considered, we do not find that the collocation alternative offers a significant advantage and do not recommend its adoption."* This section does not present any information that would allow comparison of environmental impacts or technical feasibility, nor does the section present any information to indicate that the alternative would not meet the purpose and need (the purpose and need section does not address required timing of project completion). Such information should be provided, or the alternative should be carried forward for further consideration.
FA3-64	3-13	3.3.2.1	Regarding the Hastings to Dooms route alternative: *"Finally, the alternative route would cross an additional 2.2 miles of land owned by the GWNF, and it is likely that Atlantic would need to construct a new corridor through the GWNF due to the amount of side slope construction that would be required along the existing transmission corridor."* This statement is not correct. The subject alternative would cross a 2.2-mile segment of the GWNF that would not be crossed by the proposed action, but the crossing by the proposed action would not occur. The net result would be a large decrease in the total mileage across the GWNF.
FA3-65	3-13	3.3.2.1	*"The Hastings to Dooms route alternative is 43.2 miles longer than the corresponding segment of the proposed route and would introduce new routing concerns. Atlantic would likely not be able to optimize collocation with the existing transmission lines in all cases, and some deviations from the transmission line corridors could be significant, further decreasing the benefit of collocation and adding additional mileage to the project. Although in many cases, steep slopes are not in themselves construction or routing constraints, this alternative appears to only increase the number of steep slopes crossed while increasing impacts to developed areas. Based on the factors analyzed above, we find that this route alternative would not provide a significant environmental advantage and do not recommend that it be incorporated as part of the project."* More presentation and comparison of environmental impacts is needed to support this statement. Although longer mileage and more steep slopes are concerning, the section currently does not present any data upon which to base this statement.
FA3-66	3-14	3.3.2.4	*We conclude that the Hasting to Dooms, Dooms to Suffolk, Dooms to Bremo to Farmville, and Pleasant Shade to St Pauls segments, used alone or in any combination, do not confer a significant environmental or technical advantage when compared to the proposed route.*

Page 12

FA3-58 Comment noted.

FA3-59 Comment noted.

FA3-60 Comment noted.

FA3-61 Comment noted.

FA3-62 Comment noted.

FA3-63 Comment noted.

FA3-64 Based on ownership information provided by the GWNF, the proposed route would cross 15.7 miles of GWNF-owned lands, and the Hastings to Dooms Alternative would cross 16.7 miles of GWNF-owned lands. We have updated section 3.3.1 with this information.

FA3-65 Comment noted.

FA3-66 Comment noted.

	Page #	Section #	Comment
			No information on environmental impacts is presented to support the conclusion that multiple cable transmission line routes do not confer an environmental advantage. Therefore, the statement should be deleted, or information on environmental impacts should be provided to support it.
FA3-67	3-19	3.3.4.1	*Routing ACP to the south of the MNF and GWNF would increase the pipeline route by about 45 miles. Generally, as the length of a pipeline route is increased, the amount of environmental impacts on various resources are concurrently increased. However, we acknowledge that a shorter pipeline route could conceptually have significantly greater qualitative impacts to sensitive resources than a longer route, which could make the longer route preferable. In this instance, we have not identified or received any information that suggests the shorter pipeline route through the National Forests has significantly greater impacts to sensitive resources than the alternative, but acknowledge that ground resource surveys have not been conducted. Therefore, as currently analyzed, we do not recommend that an alternative south of the National Forests be incorporated as part of the project.* No analysis of a National Forest Avoidance Alternative has been conducted, and environmental impacts of this alternative have not been considered or compared to the proposed action. Therefore, the Forest Service cannot support the recommendation that the National Forest Avoidance Alternative be dropped from consideration. In our scoping comments, we requested that all alternatives, including a National Forest Avoidance Alternative, be fully addressed in regard to their feasibility and environmental effects. We hereby reiterate that request
FA3-68	3-19	3.3.4.1	*Similar to routing south of the National Forests, we do not find that avoidance of the National Forests would provide a significant environmental advantage when compared to the shorter proposed pipeline route through the National Forests. We also acknowledge that although the route would avoid designated National Forest lands, many of the same forest habitats and waterbodies would be crossed by the alternative, along with similar mountainous terrain. Therefore, we do not recommend that it be incorporated as part of the project.* No analysis of a National Forest Avoidance Alternative has been conducted, and environmental impacts of this alternative have not been considered or compared to the proposed action. Therefore, the Forest Service cannot support the recommendation that the National Forest Avoidance Alternative be dropped from consideration. In our scoping comments, we requested that all alternatives, including a National Forest Avoidance Alternative, be fully addressed in regard to their feasibility and environmental effects. We hereby reiterate that request
FA3-69	3-19	3.3.4.2	*Atlantic adopted the GWNF6 route after the FS stated it would not approve Atlantic's former route through the National Forests. Specifically, the FS issued a letter to Atlantic on January 19, 2016, stating Atlantic's route did not meet the minimum requirements of initial screening criteria found in 36 CFR 251.54(e)(1)(i) and (ii), and that Atlantic must develop and evaluate system and/or route alternatives that avoid the Cheat, Back Allegheny, and Shenandoah Mountains, and Cow Knob salamander habitat. When compared to Atlantic's originally proposed route, which included three HDD crossings that were designed to drill under sensitive species habitats, the GWNF6 route is generally 15 miles south of its former location through the National Forests (see figure 3.3.4-1).* This passage should note that the reasons for rejection of the former route included inconsistencies with Forest Plan direction and emphasis related to threatened species (Cheat Mountain salamander), Regional Forester's Sensitive Species (West Virginia northern flying squirrel and Cow Knob salamander), and red spruce ecosystem restoration. The proposed HDD crossings may have reduced, but would not have eliminated, the impacts to Cow Knob salamander.
FA3-70	3-21	3.3.4.2	*Because Atlantic adopted the GWNF6 route, we have received several comments suggesting Atlantic's former route through the National Forests is preferable to the currently proposed route. While Atlantic's current route is 31.8 miles longer than the former route, and may*

Page 13

	Page #	Section #	Comment
			inherently have more generalized environmental impacts than the former route (i.e., forest clearing, waterbody crossings, karst topography, steep slope construction, private landowners affected, and air emissions, among other factors), the FS' January 19, 2016 letter indicated that the FS could not approve the former route. Therefore, we find that Atlantic's originally proposed route through the National Forests would not meet the project objective (essentially resulting in the no-action alternative), and we do not recommend that it be incorporated as part of the project. This passage should note that the former route was rejected because of impacts to highly sensitive environmental resources, including threatened species, Regional Forester's Sensitive Species, and red spruce ecosystem restoration areas. Because of these impacts, the Forest Service determined that the former route could not be made consistent with the Forest Plans.
FA3-71	3-21, 3-22	3.3.4.3	While the proposed BLR ANST crossing would result in no surface impacts on NFS lands or to the ANST, there would be auditory impacts to ANST recreationalists and other recreation visitors to NFS lands in this area.
FA3-72	3-31	3.3.8.2	The references to Augusta County, West Virginia are incorrect. Please correct to Augusta County, Virginia.
FA3-73	3-31 to 3-33	3.3.8	It should be noted that pipelines are not compatible with designated Wilderness. For a pipeline proposal to include a portion of its route within Wilderness, a specific determination and authorization by the President of the United States is required. Therefore, the regulatory process that would be required to construct an alternative through Wilderness would be a significant factor in the decision.
FA3-74	3-33	3.3.8.2 and 3.3.8.3	The following sentence is incorrectly worded: "…the regulatory process that would be required to construct of the alternative across the ANST was not…"
FA3-75	4-1	4.0 Environmental Analysis	*"The conclusions in the EIS are based on our analysis of the environmental impact and the following assumptions: Atlantic and DTI would comply with all applicable laws and regulations;…"* The analysis must also document compliance with LRMP direction for National Forest land.
FA3-76	4-3	4.1.2.1 Surficial/ Bedrock Geology	*"Surficial geology has not been mapped in detail in the areas crossed by ACP and SHP. National scale mapping depicts unconsolidated surficial deposits near ACP as colluvium derived from the weathering and breakdown of the underlying bedrock, alluvium, and coastal plain sediments and in SHP as colluvium (Soller et al., 2009)."* Some surficial geological features such as alluvium and colluvium were mapped during the Order 1 Soil Survey on NFS lands. This data is provided with the Order 1 Soil Survey data and should be discussed within this section of the EIS.
FA3-77	4-4	4.1.2.2	*"In addition to bedrock removal, blasting of the bedrock could potentially damage nearby pipelines and other structures and could initiate landslides, karst activity, or ground subsidence over underground mines. Blasting of bedrock, particularly karst bedrock, could create fractures in the rock, temporarily affecting local groundwater flow patterns and groundwater yield of nearby wells and springs around the blast site, and affecting their water quality by a temporary increase in turbidity levels shortly after blasting."* Effects to local groundwater flow patterns from blasting in bedrock are likely to be permanent. Identification of existing pipelines, underground mines, karst, and nearby wells should have been previously known from surveys. This description of effects is not specific enough for the activities proposed. Site specific information for the entire ROW is available for National Forest lands, and that discussion should occur in the analysis in the form of a table by mile marker.
FA3-78	4-4	4.1.2.2	*"Areas with shallow bedrock classifications were identified using the National Resources Conservation Service's (NRCS) Soil Survey Geographic Database (SSURGO) (Soil Survey Staff, 2016)."*

Page 14

FA3-67 Comment noted.

FA3-68 Comment noted.

FA3-69 Section 3.3.4.2 has been updated to reflect that the former route was inconsistent with Forest Plan direction.

FA3-70 Section 3.3.4.2 has been updated to reflect that the former route would impact resources and was inconsistent with Forest Plan direction.

FA3-71 Comment noted.

FA3-72 The corrections have been made to section 3.3.8.2.

FA3-73 Comment noted.

FA3-74 The sentences have been modified.

FA3-75 The referenced text has been added to section 4.

FA3-76 Section 4.1.6 has been revised to recognize Order 1 Soil Survey on NFS lands.

FA3-77 Comment noted.

FA3-78 The depth to bedrock information presented by Atlantic was prepared in accordance with FERC Guidance Manual for Environmental Report Preparation. The Order 1 Soil Survey was conducted only on NFS lands and is discussed in section 4.1.6.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

FA3-78 (cont'd)

Page #	Section #	Comment
	Shallow Bedrock and Blasting	*"Based on SSURGO data and the mapped locations of shallow bedrock, blasting may be required along 132.7 miles (25 percent) of ACP and 34.0 miles (41 percent) of SHP. In addition, SSURGO data identifies that lithic (hard) bedrock is present on 73.9 miles (13 percent) of ACP and 22.1 miles (39 percent) of SHP, which may also require blasting or other special construction techniques. SSURGO shallow bedrock data along ACP and SHP is summarized in table 4.1.2-1."* The Order 1 Soil Survey on National Forest land was conducted, in part, to inform areas of the COM Plan (including the blasting plan) at a detailed, site-specific level. The Order 1 Soil Survey is the most site-specific and detailed level soil survey and should be used as it was intended to be, to inform decisions such as the aforementioned. ACP also used seismic refraction testing to determine depth to bedrock. Please include this information in this analysis and provide a separate table for that information. The FS has not yet been provided with these results.

FA3-79

Page #	Section #	Comment
4-13	4.1.2.3 Karst Geology	Please separately identify and analyze impacts to any karst features on National Forest land.

FA3-80

Page #	Section #	Comment
4-17	4.1.2.3 Construction Impacts and Mitigation	Require that the karst specialist(s) has the proper karst education, certification and experience. See Forest Service comments on the COM plan for more details on necessary protection and mitigation measures for any karst encountered on National Forest land.

FA3-81

Page #	Section #	Comment
4-18	4.1.2.3 Construction Impacts and Mitigation	*"... one or more voids totaling 6 inches or more is encountered ..."* Please define what constitutes a 6-inch void. A 6 inch diameter crack is too large to serve as a trigger for cessation of blasting. Use a 1 inch diameter.

FA3-82

Page #	Section #	Comment
4-21	4.1.2.3 Construction Impacts and Mitigation	Certain proposed pipeline construction areas may require a check "Call Before You Dig" with active- inactive oil and gas wells and unknown transmission/gathering lines, www.call811.com.

FA3-83

Page #	Section #	Comment
4-24	4.1.4.2 Slope Stability	*"Ten sites, five on ACP and five on SHP, have been assigned a high potential slope instability hazard. Sixteen sites, eight on ACP and eight on SHP, have been assigned a moderate potential slope instability hazard. Seventeen sites, 14 on ACP and 5 on SHP, have been assigned a low potential slope instability hazard. Twelve sites on ACP were dismissed as having no potential slope instability based on the results of ground or aerial reconnaissance."* The high and medium hazard sites on National Forest land will require site specific "Best in Class" applications and will need to be outlined in the COM Plan. These site specific designs will need to show in an analysis that slope stability can be maintained. Documentation of the effectiveness of stabilization techniques must be provided.

FA3-84

Page #	Section #	Comment
4-25	4.1.4.2 Landslides	*"In West Virginia, 72 percent of the AP+1 mainline route would cross areas with a high incidence of and high susceptibility to landslides"* *"Atlantic has not yet completed the Phase 2 analysis at all evaluation sites."* This information will be critical to inform the site-specific designs on MNF lands as well as the effects analysis of the FEIS. The Forest Service will need to review this data once it becomes available. The results will need to be incorporated into the Best in Class site specific designs.

Page 15

FA3-85

Page #	Section #	Comment
4-26	4.1.4.2	In the Steep Slopes discussion, 40 percent is presented numerous times as a lower threshold to classify steep slopes. Per the GWJ Forest Plan, >35% slope is the break for steep slopes. The analysis presented is not in accordance with Forest Plan standards. Please include additional analysis that identifies those segments (between 35-40% slopes) that were not included.

FA3-86

Page #	Section #	Comment
4-27	4.1.4.2 Steep Slopes	This section should note that a determination of compliance with applicable Forest Plan direction is still outstanding. Standard SW07 in the MNF LRMP states that mechanized equipment should not be used on slopes over 40% unless the ability to maintain slope stability can be demonstrated. Similar direction applies to slopes over 35% on the GWNF. This issue needs to be discussed and resolved.

FA3-87

Page #	Section #	Comment
4-27	4.1.4.2 Steep Slopes	*"using alternative backfill."* Alternative backfill material to be used on National Forest land is subject to prior approval by the Forest Service. Material must be free of contaminants and invasive species.

FA3-88

Page #	Section #	Comment
4-27	4.1.4.2 Steep Slopes	*"chemical stabilization of backfill"* Any chemical product to be used on National Forest land is subject to prior approval by the Forest Service.

FA3-89

Page #	Section #	Comment
4-29	4.1.4.2	*"storms that produce debris flows...is in the order of every 15 to 20 years"* Please add this sentence following the one listed above to provide greater significance description: *"There is a high probability that over the life of the project two or more storm events that produce debris flow may occur."*

FA3-90

Page #	Section #	Comment
4-29	4.1.4.2 Steep Slopes	*"Pipeline installation techniques, including padding and use of rock-free backfill, effectively insulate the pipe from minor earth movements."* According to meeting notes and discussion from a February 17 FS/ACP conference call and Go-To-Meeting, ACP stated that excavated material from the trench would be used to backfill after pipe placement. This from a discussion referring to steep slope site specific design and construction plans for ridgeline pipe placement on the MNF. The FS would like to know what the end point placement of this excavated material will be on National Forest lands. Rock free excavated material is certainly not the norm on steep slopes and ridges located on National Forest land and if the excavated trench material is not used for backfill then it is important know how this material will be stabilized on steep slopes. Please describe in this section where and when the use of rock-free backfill will be used.

FA3-91

Page #	Section #	Comment
4-32	4.1.4.4 Acid Producing Rock and Soils	*"backfill of the trench with acid-producing rock or soil first to a maximum of 12 inches below the surface."* Acid producing material should not be placed in areas where it can be exposed to forms of water (i.e., drainage or subsurface water flow) which could result in acid runoff or drainage.

FA3-92

Page #	Section #	Comment
4-32	4.1.4.4 Acid Producing Rock and Soils	*"applying lime to the topsoil or replacing a minimum of 12 inches of acid-free topsoil."* Natural segregated topsoil should be replaced.

FA3-93

Page #	Section #	Comment
4-34	4.1.6.1 Monongahela National Forest	*"Approximately 3.6 miles of the shallow bedrock is crossed within the MNF and could require blasting per SSURGO data."* The data from the seismic refraction survey should ultimately be used to inform blasting on the MNF, along with the Order 1 Soil Survey data. This data needs to be displayed in the same manner as the Order 1 soil survey information and compared to the depth of the soil pits to ensure accuracy.

FA3-94

Page #	Section #	Comment
4-34	4.1.6.1	Add Appalachian Plateau to second sentence under MNF so it reads: "The project across the MNF is within the Appalachian Plateau and Valley and Ridge Provinces and is underlain by Silurian, Devonian, and Mississippian sedimentary rock (such as sandstone, shale, siltstone, and limestone) and by Quaternary deposits (such as colluvium)."

Page 16

FA3-79 Karst features on NFS lands are addressed in section 4.1.6.

FA3-80 Karst Specialist education, certification, and experience requirements are defined in Atlantic's Karst Mitigation Plan.

FA3-81 We agree with the Karst Mitigation Plan.

FA3-82 Comment noted.

FA3-83 Comment noted.

FA3-84 Comment noted.

FA3-85 Comment noted.

FA3-86 Comment noted.

FA3-87 Section 4.1.6 has been revised to reflect the required FS' approval for alternative backfill material.

FA3-88 Section 4.1.6 has been revised to reflect the required FS' approval for chemical products used to stabilize backfill.

FA3-89 The requested sentence was added to section 4.1.4.2.

FA3-90 See the response to comment CO86-21.

FA3-91 Comment noted.

FA3-92 We assume the commentor is referring to segregation of topsoil that is not acid-producing. The section referenced by the commentor pertains to measures that Atlantic and DETI would implement to minimize or avoid potential impacts from construction activities if acid-producing rocks or soil, or ARD are present. Section 4.2.7.2 includes the topsoil segregation measures that would be implemented on NFS lands.

FA3-93 Comment noted. As discussed in sections 1.0 and 1.2.2.1, the FS participated as a cooperating agency for the preparation of the EIS. The FS' participation included review and preparation of text related to the portion of ACP on NFS lands to ensure the FS could use the EIS to review the project in accordance with applicable regulations (see section 1.2.2.1). Following issuance of the final EIS, the FS would continue to work with Atlantic to incorporate design features, mitigation measures, and monitoring procedures to minimize impacts on national forest resources, as described in the COM Plan (see appendix G) and/or the SUPs, if issued.

FA3-94 See the response to comment FA3-93.

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
FA3-95	4-34	4.1.6.1	Add the following text to the last paragraph at bottom of page 4-34: "Potential natural landslides in the project area include a variety of mass movements such as debris slides, debris flows, rock slides, rockfalls, and slumps. Debris flows (also referred to as mudslides, mudflows, or debris avalanches) are the dominant type of rapid, catastrophic landslide (Wooten et al., 2016; Eaton et al., 2003; Sas and Eaton, 2008; Morgan et al., 1999; USGS, 1996; Jacobson et al., 1993; Clark, 1987; Hack and Goodlett, 1960). The ACP project (pipeline ROW construction and related facilities such as access roads) may result in some project-induced landslides such as cut slope failures and fill slope failures. Fill slope failures are a potential source of debris flows which can extend far downslope from the pipeline corridor ROW or access road (Collins 2008; Wooten et al., 2009; Latham et al. 2009; Wooten et al. 2014; Wooten et al., 2015)."
FA3-96	4-36	4.1.6.1	Add the following paragraphs before the paragraph that begins "Mitigation measures for landslides hazards…" in the middle of page 4-36: "The project-induced landslide hazard of most concern is the potential for project-induced debris flows because debris flows can travel hundreds or thousands of feet downslope and pose a risk to public safety, resources, and infrastructure on NFS lands and non-NFS lands. Three project-induced debris flow hazards are: 1.- During pipeline construction, the temporary spoils (excavated material) stored in the temporary ROW or in the Additional Temporary Work Space (ATWS) would be a short term hazard for slope failures that could result in debris flows 2.- A long term debris flow hazard would be the spoils placed as fill to restore the original ground contour. The restoration fill slopes would have potential to fail down along the ROW corridor as well as at an angle or perpendicular to the ROW corridor. The restoration fill would be placed on cut slopes that in some circumstances may be a potential slip surface for failure of the fill slope and a resulting debris flow. The restored pipeline corridor would contain long fill slopes extending hundreds of feet downslope within the ROW corridor and would have a potential for fill slope failures triggered by rainstorms during the decades of pipeline operation and beyond. Some fill slope failures may result in debris flows with destructive paths down the ROW corridor as well as off the corridor and down hundreds or thousands of feet of NFS lands, and in some cases, to non-NFS lands downslope. 3.- Another long-term debris flow hazard would be the change of the surface and subsurface drainage in the areas of construction and in adjacent natural slopes along the corridor ROW that may create or contribute to a debris flow failure of the natural ground downslope from the ROW corridor. The source area for these three types of slope failures is generally on cross slopes of 40% or steeper. The potential number of project-induced debris flows paths or occurrences would be greater on lands within one-half mile from 40% or steeper cross-slopes on the corridor ROW on NFS lands. Some potential debris flow paths may be longer than one-half mile The values at risk on NFS lands for project-induced debris flows are public safety and infrastructure and the wide range of resource values for which National Forests are managed. The values at risk on non-NFS lands downslope from 40% or steeper cross-slopes on the corridor ROW on NFS lands include public safety, resources, roads, utilities and other infrastructure Natural landslides (including debris flows) are part of the natural disturbance regime on NFS lands and non-NFS lands downslope. The natural landslide hazards (including debris flow hazards) and risks to public safety, resources, and infrastructure on NFS lands and non-NFS lands are inherent in the steep mountainous geologic setting. The ACP pipeline project would add an increment of human-induced landslide hazards and risks to the natural landslide hazards and risks in the area."
FA3-97	4-38	4.1.6.2	Add the following text to the end of the paragraph that ends "… Hack and Goodlett, 1960)." near bottom of page 4-38 "The ACP project (pipeline ROW construction and related facilities such as access roads) may result in some project-induced landslides such as cut slope failures and fill slope failures. Fill slope failures are a potential source of debris flows which can extend far downslope from the pipeline corridor ROW or access road (Collins 2008; Wooten et al. 2009; Latham et al. 2009; Wooten et al. 2014; Wooten et al., 2015)."

Page 17

	Page #	Section #	Comment
FA3-98	4-38	4.1.6.2 GWNF	*"Depth to bedrock may be 5 feet or less over most of the ACP route through the GWNF as determined from SSURGO data."* The Order 1 soil survey and site specific seismic data collected on FS lands should be used by ACP to determine the depth to bedrock and possible blasting needs and not the broader scale and more general soil survey information found in SSURGO. Areas where blasting will be required are important knowledge for the FS to have to determine effects from pipeline construction
FA3-99	4-38	4.1.6.2 GWNF	*"The ridgetops can provide a more stable foundation for the pipeline than side slopes."* Ridgetops may be more stable for the pipe, but potential collateral impacts need to be considered. Depending on the width of the ridges, there will be locations that require excavation to provide a more level working space for equipment. Excavated material will be stockpiled at the edges of the workspace or in an ATWS. Many times these stockpiles will be near the tops of some very steep side slopes. This loose, unconsolidated material could become mobile if wetting and slippage occurs. The FS will require construction narratives on steep slope construction plans to account for the placement and endpoint of all excavated material to minimize unstable slopes and project induced debris flows/landslides
FA3-100	4-40	4.1.6.2	Add the following paragraphs before the paragraph that begins "Mitigation measures for landslides hazards…" in the upper part of page 4-40. "The project-induced landslide hazard of most concern is the potential for project-induced debris flows because debris flows can travel hundreds or thousands of feet downslope and pose a risk to public safety, resources, and infrastructure on NFS lands and non-NFS lands. Three project-induced debris flow hazards are: 1.- During pipeline construction, the temporary spoils (excavated material) stored in the temporary ROW or in the Additional Temporary Work Space (ATWS) would be a short term hazard for slope failures that could result in debris flows 2.- A long term debris flow hazard would be the spoils placed as fill to restore the original ground contour. The restoration fill slopes would have potential to fail down along the ROW corridor as well as at an angle or perpendicular to the ROW corridor. The restoration fill would be placed on cut slopes that in some circumstances may be a potential slip surface for failure of the fill slope and a resulting debris flow. The restored pipeline corridor would contain long fill slopes extending hundreds of feet downslope within the ROW corridor and would have a potential for fill slope failures triggered by rainstorms during the decades of pipeline operation and beyond. Some fill slope failures may result in debris flows with destructive paths down the ROW corridor as well as off the corridor and down hundreds or thousands of feet of NFS lands, and in some cases, to non-NFS lands downslope. 3.- Another long-term debris flow hazard would be the change of the surface and subsurface drainage in the areas of construction and in adjacent natural slopes along the corridor ROW that may create or contribute to a debris flow failure of the natural ground downslope from the ROW corridor. The source area for these three types of slope failures is generally on cross slopes of 40% or steeper. The potential number of project-induced debris flows paths or occurrences would be greater on lands within one-half mile from 40% or steeper cross-slopes on the corridor ROW on NFS lands. Some potential debris flow paths may be longer than one-half mile The values at risk on NFS lands for project induced debris flows are public safety and infrastructure and the wide range of resource values for which National Forests are managed. The values at risk on non-NFS lands downslope from 40% or steeper cross-slopes on the corridor ROW on NFS lands include public safety, resources, roads, utilities and other infrastructure Natural landslides (including debris flows) are part of the natural disturbance regime on NFS lands and non-NFS lands downslope. The natural landslide hazards (including debris flow hazards) and risks to public safety, resources, and infrastructure on NFS lands and non-

Page 18

FA3-95 See the response to comment FA3-93.

FA3-96 See the response to comment FA3-93.

FA3-97 See the response to comment FA3-93.

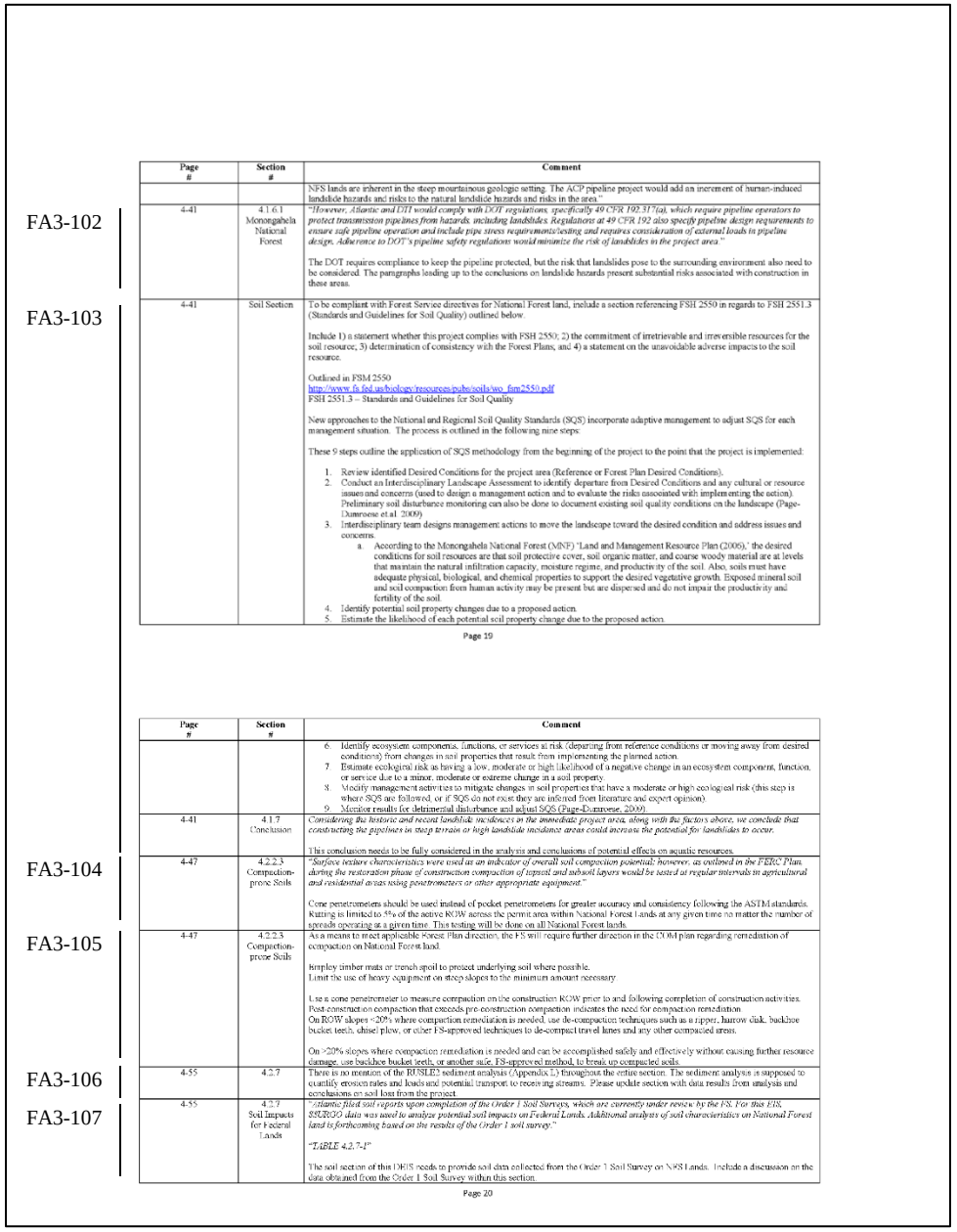
FA3-98 See the response to comment FA3-93.

FA3-99 See the response to comment FA3-93.

FA3-100 See the response to comment FA3-93.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)



Page #	Section #	Comment
		NFS lands are inherent in the steep mountainous geologic setting. The ACP pipeline project would add an increment of human-induced landslide hazards and risks to the natural landslide hazards and risks in the area."
4-41	4.1.6.1 Monongahela National Forest	*"However, Atlantic and DTI would comply with DOT regulations, specifically 49 CFR 192.317(a), which require pipeline operators to protect transmission pipelines from hazards including landslides. Regulators at 49 CFR 192 also specify pipeline design requirements to ensure safe pipeline operation and include pipe stress requirements/testing and requires consideration of external loads in pipeline design. Adherence to DOT's pipeline safety regulations would minimize the risk of landslides in the project area."* The DOT requires compliance to keep the pipeline protected, but the risk that landslides pose to the surrounding environment also need to be considered. The paragraphs leading up to the conclusions on landslide hazards present substantial risks associated with construction in these areas.
4-41	Soil Section	To be compliant with Forest Service directives for National Forest land, include a section referencing FSH 2550 in regards to FSH 2551.3 (Standards and Guidelines for Soil Quality) outlined below. Include 1) a statement whether this project complies with FSH 2550; 2) the commitment of irretrievable and irreversible resources for the soil resource, 3) determination of consistency with the Forest Plans, and 4) a statement on the unavoidable adverse impacts to the soil resource. Outlined in FSM 2550 http://www.fs.fed.us/biology/resources/pubs/soils/wo_fsm2550.pdf FSH 2551.3 – Standards and Guidelines for Soil Quality New approaches to the National and Regional Soil Quality Standards (SQS) incorporate adaptive management to adjust SQS for each management situation. The process is outlined in the following nine steps: These 9 steps outline the application of SQS methodology from the beginning of the project to the point that the project is implemented: 1. Review identified Desired Conditions for the project area (Reference or Forest Plan Desired Conditions). 2. Conduct an Interdisciplinary Landscape Assessment to identify departure from Desired Conditions and any cultural or resource issues and concerns (used to design a management action and to evaluate the risks associated with implementing the action). Preliminary soil disturbance monitoring can also be done to document existing soil quality conditions on the landscape (Page-Dumroese et.al. 2009) 3. Interdisciplinary team designs management actions to move the landscape toward the desired condition and address issues and concerns. a. According to the Monongahela National Forest (MNF) 'Land and Management Resource Plan (2006),' the desired conditions for soil resources are that soil protective cover, soil organic matter, and coarse woody material are at levels that maintain the natural infiltration capacity, moisture regime, and productivity of the soil. Also, soils must have adequate physical, biological, and chemical properties to support the desired vegetative growth. Exposed mineral soil and soil compaction from human activity may be present but are dispersed and do not impair the productivity and fertility of the soil. 4. Identify potential soil property changes due to a proposed action. 5. Estimate the likelihood of each potential soil property change due to the proposed action.

Page 19

Page #	Section #	Comment
		6. Identify ecosystem components, functions, or services at risk (departing from reference conditions or moving away from desired conditions) from changes in soil properties that result from implementing the planned action. 7. Estimate ecological risk as having a low, moderate or high likelihood of a negative change in an ecosystem component, function, or service due to a minor, moderate or extreme change in a soil property. 8. Modify management activities to mitigate changes in soil properties that have a moderate or high ecological risk (this step is where SQS are followed, or if SQS do not exist they are inferred from literature and expert opinion). 9. Monitor results for detrimental disturbance and adjust SQS (Page-Dumroese, 2009).
4-41	4.1.7 Conclusion	*Considering the historic and recent landslide incidences in the immediate project area, along with the factors above, we conclude that constructing the pipelines in steep terrain or high landslide incidence areas could increase the potential for landslides to occur.* This conclusion needs to be fully considered in the analysis and conclusions of potential effects on aquatic resources.
4-47	4.2.2.3 Compaction-prone Soils	*"Surface texture characteristics were used as an indicator of overall soil compaction potential; however, as outlined in the FERC Plan, during the restoration phase of construction compaction of topsoil and subsoil layers would be tested at regular intervals in agricultural and residential areas using penetrometers or other appropriate equipment."* Cone penetrometers should be used instead of pocket penetrometers for greater accuracy and consistency following the ASTM standards. Rutting is limited to 5% of the active ROW across the permit area within National Forest Lands at any given time no matter the number of spreads operating at a given time. This testing will be done on all National Forest lands.
4-47	4.2.2.3 Compaction-prone Soils	As a means to meet applicable Forest Plan direction, the FS will require further direction in the COM plan regarding remediation of compaction on National Forest land. Employ timber mats or trench spoil to protect underlying soil where possible. Limit the use of heavy equipment on steep slopes to the minimum amount necessary. Use a cone penetrometer to measure compaction on the construction ROW prior to and following completion of construction activities. Post-construction compaction that exceeds pre-construction compaction indicates the need for compaction remediation. On ROW slopes <20% where compaction remediation is needed, use de-compaction techniques such as a ripper, harrow disk, backhoe bucket teeth, chisel plow, or other FS-approved techniques to de-compact travel lanes and any other compacted areas. On >20% slopes where compaction remediation is needed and can be accomplished safely and effectively without causing further resource damage, use backhoe bucket teeth, or another safe, FS-approved method, to break up compacted soils.
4-55	4.2.7	There is no mention of the RUSLE2 sediment analysis (Appendix I) throughout the entire section. The sediment analysis is supposed to quantify erosion rates and loads and potential transport to receiving streams. Please update section with data results from analysis and conclusions on soil lost from the project.
4-55	4.2.7 Soil Impacts for Federal Lands	*"Atlantic filed soil reports upon completion of the Order 1 Soil Surveys, which are currently under review by the FS. For this EIS, SSURGO data was used to analyze potential soil impacts on Federal Lands. Additional analysis of soil characteristics on National Forest land is forthcoming based on the results of the Order 1 soil survey."* *"TABLE 4.2.7-1"* The soil section of this DEIS needs to provide soil data collected from the Order 1 Soil Survey on NFS Lands. Include a discussion on the data obtained from the Order 1 Soil Survey within this section.

Page 20

FA3-102 Comment noted.

FA3-103 The referenced text has been incorporated into the final EIS.

FA3-104 Sections 4.6.4 and 4.6.6 include our discussion and conclusions regarding potential impacts from landslides on aquatic resources.

FA3-105 See the response to comment FA3-93.

FA3-106 See the response to comment FA3-42.

FA3-107 Comment noted. Section 4.2.3 describes the rationale for selecting the settings that were applied in conducting FERC's independent RUSLE2 analysis to address a specific commentor's concerns in Bath County, Virginia. RUSLE2 analyses are not required for the entire project area; however the analysis was completed to respond to that commentor's specific comments and does not include a comprehensive analysis of the entire proposed route. The results of this analysis were included in appendix P.

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
			SSURGO data will not be accepted for analysis in the DEIS when referencing NFS Lands. Include sections such as 4.2.1, 4.2.2, 4.2.2.2, 4.2.2.3, 4.2.2.4, 4.2.2.5, 4.2.2.6, 4.2.2.7, 4.2.2.9, 4.2.2.10, 4.2.2.11, 4.2.3, 4.2.4, 4.2.5, 4.2.6 that use Order 1 Soil Survey data for discussion.
FA3-108	4-62	4.2.7.1 Forest Service Soil Standards	*"**All topsoil must be segregated on all areas of NFS land.** Where topsoil segregation is performed on the MNF and GWNF, the O and A horizons would be segregated from the transition soil horizons (E/B/A). O horizon soils are defined as a soil layer containing a high percentage of organic matter. A horizon soils are defined as the dark subsoil below the O horizon. AB/BA horizon soils are defined as light colored subsoils located below the O and A horizons. **Because of the increased need for additional right-of-way width and loss of additional forestland, and the need to remove stumps, which would increase topsoil mixing with subsoil and the increase the potential for erosion, topsoil segregation is generally not conducted in forested areas.**"* Topsoil segregation is required along the entire ROW on NFS lands. But, in the last statement, it is said that topsoil will not be segregated in forested areas. The FS understands that topsoil segregation will be difficult on steep slopes, and there is potential to use an amendment to mitigate this effect. However, the statement that topsoil generally is not segregated in forested areas does not apply to National Forest land. Segregating topsoil in forested areas is required by the MNF LRMP SW15.
FA3-109	4-63	4.2.8 Conclusion	*"Construction related impacts on soils would be temporary and localized to the construction workspace, except where erosion, sedimentation, landslides, and other forms of soil movement affect adjacent areas. Analyses are ongoing to determine whether impacts would be minimized through the use of the construction and restoration plans summarized above and discussed throughout this EIS."* The short paragraph in 4.2.8 is inconsistent with statements made in the Major conclusions on ES-14 where the document indicates temporary and permanent impacts on the environment. The subject paragraph needs to be reworded to include permanent impacts to the soil resource. On NFS lands, the dedication of the soil resource for housing a pipeline will result in an irreversible commitment of resources and degradation of soil quality as defined in FSH 2550. This commitment would exist the life of the pipeline and beyond if no ecological and soil restoration occurs post decommissioning any part of the pipeline. Analysis and conclusions of potential direct, indirect, and cumulative effects to aquatic resources cannot be considered complete and valid until deficiencies in the analysis of soil resources have been corrected and deemed acceptable.
FA3-110	4-67	4.3.1.5	According to VDH-ODW, Zone 1 for well protection is 1,000ft radius and is a priority zone for managing potential sources of contamination. Please discuss regulations that were followed that allow for identification of wells and springs, karst in proximity of 0.25 mile, 500 ft or 150 ft. Ensure procedures used are in accordance with state best management practices. Zone 2 is a 5,280-foot radius (one mile) which represents an estimate of the total recharge zone for the well. Please complete tables with those additional wells and springs that could be affected for both Zones 1 and 2.
FA3-111	4-68	Table 4.3.1-1	This table should include an additional column called "Surface Drainage Direction of Spring from Project" such as up/side/down gradient. This additional information would clearly disclose those locations with higher potential impact than others.
FA3-112	4-80	4.3.1.7	The Groundwater Impacts and Mitigation section is too general and does not describe actual site specific impacts.

Page 21

	Page #	Section #	Comment
FA3-113	4-86	4.3.1.8	Four springs were identified within the GWNF – Please reference where the data is further described and update with January 2017 Wetland and Waterbody Survey Report for the GWNF. Nine seep points were identified. Please also include a summary that characterizes these water sources, such as water quality, water volume, etc. This section should fully describe the existing condition, potential impacts and mitigation measures. Further describe the existing condition/summary information from the field surveys. Explain whether or not these sources meet State standards based on data collected during field survey.
FA3-114	4-92	Access Roads	*Access roads for ACP would cross 479 waterbodies (some waterbodies are crossed more than once), including 2 major, 102 intermediate, and 377 minor waterbodies, and 9 open ponds.* Potential direct, indirect, and cumulative effects to aquatic resources from access roads are not isolated to stream crossings; they can potentially emanate from any and all locations along roads. The various effects of roads need to be considered as part of the documented analysis and conclusions for aquatic resources.
FA3-115	4-94	West Virginia Surface Water Classifications	*ACP and SHP pipeline facilities do not cross Tier 3 streams in West Virginia; however, a proposed access road crosses the upper reaches of Slaty Fork, a Tier 3 stream.* ACP crosses an unnamed tributary of Shock Run (Reach Code – 05050003002200) that is on the MNF but currently it is not identified as a Tier 3 stream. However, there is more than a reasonable chance that this tributary is utilized by a component of the wild brook trout population known to inhabit the Shock Run watershed. If so, this tributary would in fact be a Tier 3 stream by definition even though it is not currently identified as such. Conducting a fish population survey in this tributary could determine the validity of this professional conjecture.
FA3-116	4-100	4.3.2.6	DEIS states impacts on water bodies could result from *"construction activities in stream channels and adjacent banks"*. Impacts to waterbodies are not confined to activities in the immediate vicinity of the waterbody or the immediate time of the construction activity. Impacts may result from construction activities upslope of the stream channels and that may be a considerable distance from the channel. Additionally, depending upon how well and how fast revegetation occurs, impacts could occur at some time well after the construction occurred. Erosion and sedimentation control measures are expected to be implemented, but a significant storm event, either during construction or for an indefinite period afterward until adequate vegetation becomes established, could easily overwhelm these measures. Additionally, the DEIS states that the impacts "would be limited to the period of in-stream construction and would return to normal shortly after stream restoration activities are completed". In reality, fine sediment that has entered the waterbody and settled on the bed can continue to impact the environment of aquatic organisms for a considerable time. Sources of potential effects other than crossings must be considered along with cumulative effects as part of the analysis and conclusions. Some sections in the DEIS seem to do a better job than others in acknowledging this through words. However, there is little confidence that the potential effects which are mentioned somewhere in the DEIS have been adequately considered in drawing analysis conclusions for aquatic resources.
FA3-117	4-111	4.3.2.7 Hydrostatic Testing and Dust Control Procedures	*Water sources for dust control are still being evaluated by Atlantic and DTI.* *Prior to construction, Atlantic and DTI should file with the Secretary, for the review and written approval of the Director of OEP, proposed or potential sources of water used for dust control, anticipated quantities of water to be appropriated from each source, and the measures that would be implemented to ensure water sources and aquatic biota are not adversely affected by the appropriation activity.* DEIS page 4-114 states that, *"No water would be appropriated from sources within the MNF or GWNF, and no hydrostatic test water discharges would occur on NFS lands."* However, it is possible that water withdrawals and discharges off NFS lands may affect aquatic

Page 22

FA3-108 See the response to comment FA3-93.

FA3-109 See the response to comment FA3-93.

FA3-110 The survey requirements for wells, springs, and karst areas were determined by FERC. State agencies may impose more stringent survey or reporting protocols if deemed necessary.

FA3-111 The requested data has been added to table 4.3.1-2.

FA3-112 Comment noted.

FA3-113 Section 4.3.1.8 has been revised.

FA3-114 Comment noted.

FA3-115 Comment noted. Atlantic's conservation measures for this stream are identified in the EIS.

FA3-116 Section 4.3.2.6 has been updated with additional potential impact analysis.

FA3-117 Comment noted.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
			habitats and biota on NFS lands (for example, withdrawal from Big Spring Fork in West Virginia could impact the Elk River where it flows across NFS lands). Therefore, such potential impacts need to be considered and disclosed in the analysis. The FS will coordinate with the appropriate state and federal regulatory agencies to ensure that the effects of off-Forest withdrawals and discharges on Forest aquatic resources are appropriately avoided, minimized, and mitigated.
FA3-118	4-113	4.3.2.8 Extra Workspaces within 50 Feet of Waterbodies	*Atlantic's and DTI's construction and restoration plans, along with the FERC Procedures, specify that extra workspace should not be within 50 feet of waterbody boundaries except where an alternative distance has been justified and deemed acceptable by FERC.* The MNF LRMP typically would require a 100 buffer between ATWS and any stream channel. See also comments for page 2-27 (2.3.3.1 Waterbody Crossings)
FA3-119	4-114	4.3.2.9 Waterbodies on Federal Lands	*To meet the requirement of the Forest Plan for the MNF (FS, 2011), ATWS would be required to be set back a minimum of 100 feet for perennial and intermittent streams with a drainage area of at least 50 acres, a minimum of 50 feet for intermittent streams with a drainage area of less than 50 acres, and a minimum of 25 feet for ephemeral streams.* The Forest Plan for the MNF calls for landings for timber harvest to be located a minimum of 100 feet from perennial, intermittent, and ephemeral streams. Impacts from ATWS are expected to be comparable to those from timber harvest landings, thus the ATWS should also be required to be located a minimum of 100 feet from perennial, intermittent, and ephemeral streams. The DEIS states that the Forest Plan for the MNF states the distance from the ATWS to the streams differs depending upon whether the stream is perennial (100 feet), large intermittent (100 feet), small intermittent 50 feet), or ephemeral (25 feet). These buffers are for the cutting and removing of timber, an activity which is much less intensive and thus not comparable to ATWS activities, thus the buffer for the landings, 100 feet for perennial, intermittent and ephemeral streams, is the appropriate buffer for ATWS. See also comments for page 2-27 (2.3.3.1 Waterbody Crossings)
FA3-120	4-114	4.3.2.9 Waterbodies on Federal Lands	The DEIS states: *"Some extreme and unpredictable impacts from seasonal precipitation events could cause slope instability, flash flooding, and debris flow hazards. These events could lead to additional water resources impacts."* This paragraph is rather general and vague, especially considering that it pertains to extreme and unpredictable impacts. The additional water resources impacts mentioned in the above should be explained in greater detail. Additionally, more information should be given about the seasonal precipitation events which can cause the impacts, for example, what type of event would represent a 1-2 year event, 10-year event, etc. These impacts should be considered and discussed as part of the documented analysis and conclusions for aquatic resources.
FA3-121	4-113	4.3.2.9	This section on waterbody crossings indicates that, *"about 18 crossed by access roads"* on the GWNF. Please specify exactly how many water bodies on the GWNF will be crossed.
FA3-122	4-113	4.3.2.9	In the second paragraph under the table, please replace "FS district" with "Forest." Consultation is occurring with each Forest (the MNF and the GWNF) at the Forest level. Each Forest is composed of multiple Districts, but consultation is not occurring at the District level.
FA3-123	4-113	4.3.2.9	The water quality section does not mention the RUSLE2 sediment analysis (Appendix L). The sediment analysis is supposed to quantify erosion rates/loads and potential transport to receiving streams and watersheds compared to baseline - thus allowing for a meaningful impact analysis on surface water quality. Please update this section with data results from RUSLE2 analysis and conclusions on water quality impacts.
FA3-124	4-116	4.3.3.1	The document indicates that wetland surveys have been conducted along 92 percent of the proposed ACP route and 93 percent of the SHP route and the majority of other areas with proposed infrastructure.

Page 23

	Page #	Section #	Comment
			Wetlands surveys should have been conducted along 100 percent of both routes and all areas of proposed infrastructure. Please explain rationale behind only conducting partial surveys.
FA3-125	4-125	4.3.3.9	The section indicates that: *"less than 0.1 acre… impacted on federal lands."* The Jan 2017 Wetland and Waterbody Survey Report indicates that nine wetlands and nine seep points on the GWNF would be impacted but no acreages are provided. Please update the survey report and this section of the DEIS to indicate acres of each wetland/seep point impacted.
FA3-126	4-125	4.3.3.10	*"…would not significantly impact wetlands."* Please include a discussion on mitigation measures expected. There are over 700 acres of construction impacts to wetlands. Federal regulations require no net loss to wetlands.
FA3-127	4-134	4.4.2	The DEIS says: "The Big Cedar Shale Barren is crossed by workspace and an access road." The maps that have been provided by ACP to the Forest Service do not show any access roads, work areas, etc. that impact the Big Cedar Shale Barren. Please clarify whether or not there may be potential impacts to the Big Cedar Shale Barren that the Forest Service is unaware of.
FA3-128	4-137	4.4.3	*"Trees that are not physiologically adapted to edge conditions would become more vulnerable to windthrow at lower wind speeds than interior forest."* The wording of this sentence is unclear. Better wording might be "the newly exposed trees would not be physiologically adapted to edge conditions, which would make them vulnerable to windthrow." While there is an acknowledgement of a potential to impact trees adjacent to the cleared areas, these potential impacts go much farther than the simple mechanical effect of windthrow. Much of the NFS lands impacted are overmature oak forests on moderate to low site-indexes. These forests are a moderate to high risk for oak decline. It is likely that the added stress of construction on adjacent trees would trigger an oak decline event that would affect more than just the adjacent trees). While this impact may not be quantifiable in terms of acres, the potential impact and scope of this impact (e.g. not just the adjacent tree(s)) should be acknowledged for appropriate disclosure of impacts to comply with NEPA. Please see *Incidence and Impact of Oak Decline in Western Virginia, 1986*, Steven W. Oak, Cindy M Huber, and Raymond M Sheffield, Resource Bulletin SE-123
FA3-129	4-138	4.4.3	*"Impacts are considered short term if, after three growing seasons, the revegetated disturbed areas resemble adjacent undisturbed lands."* Please clarify by which metric resemblance is being measured, e.g., vegetative species composition, soil structure, water quality, wildlife populations, etc. Short term impacts are those which only temporarily impair ecosystem services, and from which the ecosystem can recover and return to previous levels of functionality. Visual appearance alone does not indicate restoration. *"… and in some cases, restore native flora."* See comment above. Any area for which no plans exist for a reasonable effort to restore native flora should be considered to be impacted long-term.

Page 24

FA3-118 Comment noted.

FA3-119 Section 4.3.2.9 has been revised.

FA3-120 Section 4.3.2.9 has been revised.

FA3-121 Section 4.3.2.9 has been revised.

FA3-122 Section 4.3.2.9 has been revised.

FA3-123 See the response to comments FA3-107.

FA3-124 Several landowners have denied survey permission on their lands.

FA3-125 See the responses to comments FA3-7 and FA3-93.

FA3-126 Section 4.3.3 analyses wetland impacts and states that compensatory mitigation would be determined through the section 404 permitting process in compliance with the Clean Water Act.

FA3-127 This section has been updated. ACP does not cross the Big Cedar Shale Barren SBA, but does cross the Big Cedar Shale Barren Conservation Site (see section 4.4.2.2).

FA3-128 The referenced text has been revised.

FA3-129 The referenced text has been revised to include reference to the FERC Plan, which defines successful revegetation.

	Page #	Section #	Comment
FA3-130	4-143	4.4.4	Throughout this document and in Appendix G, section 1.4.2.1 the use of herbicides to treat non-native invasive species is identified. In order to comply with NEPA, the impact of that herbicide use on the human environment must be disclosed before any herbicide may be applied. Herbicide use may be interpreted as a connected action to the construction and maintenance of the pipeline. Thus, the disclosure of the impacts related to herbicide use must be included in this document. A word search for "herbicide," "risk assessment," and "human risk assessment" revealed no such discussion. Please include disclosure of the impacts of herbicide use on humans, plants, and animals. We strongly suggest that Atlantic adhere to herbicides and application rates for which risk assessments have already been completed (http://www.fs.fed.us/foresthealth/pesticide/risk.shtml)
FA3-131	4-145	4.4.6.1	*"As discussed in section 4.4.1, ACP crosses red spruce forests in West Virginia. Red spruce grows in association with hemlock, red and sugar maple, yellow birch, pin cherry, beech, and black cherry, but it may grow in almost pure stands. On the MNF, ACP would construct two new access roads across Management Prescription 4.1 (Spruce and Spruce-Hardwood Ecosystem Management) between AP-1 MPs 71.6 and 72.9 near Gibson Knob. This area contains much of the lands that have the potential natural vegetation capable of supporting red spruce or spruce hardwood communities. Management emphasis in this prescription area is placed on restoration and management of disjunct red spruce and spruce-hardwood communities. This management prescription area was surveyed in 2016 and categorized as Hemlock Forest and Existing FS Roads (see table 4.4.7-1). ACP would affect 0.9 acre of Hemlock Forest within the construction right-of-way and ATWS, and 3.8 acres of FS Roads for a permanent access road. Although Atlantic has minimized impacts on red spruce forests through adopting reroutes on NFS lands, specific measures to restore this community have not been identified."* Revise this passage as follows: As discussed in section 4.4.1, ACP would cross a small area of mixed northern hardwood/red spruce forest on the MNF in West Virginia. In general, red spruce grows in association with hemlock, red and sugar maple, yellow birch, pin cherry, beech, and black cherry, but it may grow in almost pure stands. The subject stand that would be impacted is largely dominated by hardwoods, with scattered red spruce and hemlock present. On the MNF, ACP would construct two new access roads across a small segment of Management Prescription 4.1 (Spruce and Spruce-Hardwood Ecosystem Management) between AP-1 MPs 71.6 and 72.9 near Gibson Knob. Management emphasis in this prescription area is placed on restoration and management of disjunct red spruce and spruce hardwood communities. The section of this management prescription area to be crossed was surveyed in 2016 and categorized as Hemlock Forest and Existing FS Roads (see table 4.4.7-1). ACP would affect 0.9 acre of Hemlock Forest within the construction right-of-way and ATWS, and 3.8 acres of FS Roads for a permanent access road. Although Atlantic has minimized impacts on red spruce forests through adopting reroutes on NFS lands, specific measures to restore this community have not been identified
FA3-132	4-146	4.4.6.2	We are gratified to see that FERC is recommending that ACP "*describes vegetation communities and construction and operation impacts according to the protocols and classification systems requested by the George Washington National Forest (GWNF), and based on vegetation data collected during surveys*". We have been requesting these surveys and disclosure of impacts since first providing our comments on the initial resource reports. Please disclose those impacts in similar format as Table 4.4.6-1. However, instead of Vegetation Community Type, these impacts should be classified by Ecological System Group as defined in the GWNF Forest Plan on page 2-11 and 12. The impact should be further classified by Structural Class within each ESG pursuant to the definitions on page 2-14 of the GWNF Forest Plan.
FA3-133	4-146 & 147	4.4.7	The DEIS says *"We received comments regarding potential impacts of the ACP route crossing five designated Special Biological Areas (SBAs) in the GWNF, including Browns Pond SBA, Rich Hill SBA, Big Cedar Shale Barren SBA, Reubens Draft Shale Barren, and Big Levels Macrosite SBA."* Please clarify if these 5 Special Biological Areas will or will not be affected by the proposed project.
FA3-134	4-147	4.4.7	The DEIS says *"The proposed ACP crosses Browns Pond SBA between AP-1 MPs 96.0 and 97.0 on the GWNF, and permanently impacts 2.2 acres of oak-pine vegetation for construction related to an access road."*

Page 25

	Page #	Section #	Comment
			It is unclear to the Forest Service what the impacts to the road through the Brown's Pond Special Biological Area will be. The DEIS says 2.2 acres of habitat will be impacted. Please describe where this impact will occur and what the impact will be.
FA3-135	4-147	4.4.8	*"Following construction, lands outside of the permanent right-of-way and the ATWS, staging areas, pipe/contractor yards, and temporary access roads would be allowed to revegetate naturally."* These areas may still need erosion control, stabilization, invasive weed control, and restoration seeding to achieve full restoration. Stabilization and restoration plantings will be required on National Forest land, along with invasive weed control where needed.
FA3-136	4-147	4.4.8	*"Short-term impacts on federal lands include areas dominated by grass and shrubs."* It is not clear whether this sentence means short-term impacts will occur primarily in areas that are currently dominated by grass and shrubs, or if domination by grass and shrubs will be the result of the impact. Please clarify.
FA3-137	4-147	4.4.8	*"On areas outside of the permanent right-of-way and ATWS, staging areas, pipe/contractor yards, and temporary access roads, non-native invasive plant species such as those identified below in section 4.4.9 would likely increase."* MNF LRMP Goal VE13 states: "For management actions that have been identified by the Forest as likely to cause a negative effect on RFSS populations, negative effects shall be avoided or minimized to the maximum extent practical while still accomplishing the purpose of the project or action. Unavoidable negative effects shall be mitigated to the extent practical and consistent with the project purpose." MNF LRMP Goal VE19 a) states "Work to prevent new infestations of NNIS, with emphasis on areas where species have a high probability for establishment and spread." As stated in this document in section 4.4.9, "Federal agencies shall not authorize, fund, or carry out actions likely to cause or promote the spread of invasive species ... [unless the benefits outweigh the potential harm] and that all feasible and prudent measures... will be taken to minimize the risk of harm." The 64 rare plant species on the MNF, including both known and undiscovered populations along the project corridor, will not receive benefit from the proposed project; therefore it is important that risk of harm be minimized to the maximum extent possible. Please demonstrate that all areas on the MNF affected by this project will be covered by plans to control NNIS.
FA3-138	4-148	4.4.8	*"The incorporation and development of native flowering plants on the operational right of way for the pipeline would create, where conditions and land management practices are suitable, substantial acreages of pollinator habitat where this type of habitat is either non-existent or was previously degraded."* Please either remove or provide support for the statement that pollinator habitat in some areas is "either non-existent or... degraded." Many native trees and shrubs provide excellent pollinator habitat. Replacing them with native forbs may provide habitat for different pollinators, but it is still a disruption to the current existing ecological community, and not necessarily an improvement to what is already there.
FA3-139	4-149	4.4.8	The DEIS states "*The timber cruise would identify mature and old growth trees. Results of the timber cruises would be used to develop a Timber Extraction Plan, which would identify areas of old growth impacted by construction activities.*" The purpose of timber cruising is not to identify old growth. Old growth must be identified on the GWNF pursuant to the Guidance for Conserving and Restoring Old Growth Forest Communities on National Forests in the Southern Region. We strongly recommend utilizing the current Old Growth Survey protocol for the GWNF and that these surveys be performed simultaneously with the forest stand examination surveys described immediately above. The acres of impact on old growth forest must be disclosed in the EIS for proper effects disclosure and NEPA compliance.

Page 26

FA3-130 As described in Atlantic's COM Plan (appendix G), and the Invasive Plant Species Management Plan (see table 2.3.1-1), Atlantic and DETI will comply with 18 CFR 380.15(f)(3), and will use herbicides which are registered with the EPA, apply herbicides according to specifications of the Federal Insecticide, Fungicide, and Rodenticide Act, and use only certified applicators to apply herbicides. Herbicides will not be used as a treatment unless authorized by the landowner or land managing agency. Atlantic would apply herbicide on NFS lands according to FS requirements, as described in the COM Plan.

FA3-131 See the response to comment FA3-93.

FA3-132 Section 4.4.6.2 has been revised.

FA3-133 The referenced text has been revised.

FA3-134 Section 4.4.7 includes a discussion of the impacts on the Brown's Pond SBA located within the GWNF.

FA3-135 Section 4.4.8 has been revised.

FA3-136 Section 4.4.8 has been revised.

FA3-137 Section 4.4.9 has been revised.

FA3-138 Section 4.4.8 has been revised.

FA3-139 Section 4.4.8 has been revised.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

FA3-140

Page #	Section #	Comment
4-151	4.5.1	The first sentence should specify that the "project area provides suitable habitat for a wide variety of terrestrial wildlife species…", because aquatic wildlife is addressed in a different section. Delete the second sentence, because some species are dependent not so much on vegetation cover types, but on such attributes as rocky substrate, elevation, proximity to water sources, juxtaposition to other habitat types, etc.…
4-152	4.5.1.1	*"Generally, bat species are able to move away from disturbance; however, construction activities can contribute to the loss of roosting and foraging habitat, cause noise and vibration disturbance to hibernating bats, and nighttime lighting can also disturb foraging bats (WVDNR, 2015a)."* **Recommended re-wording**: Generally, adult bat species are able to move away from disturbance; however, construction activities can cause mortality of young bats, cause and/or contribute to the loss of roosting, maternity colony and foraging habitat, cause noise and vibration disturbance to hibernating bats, and nighttime lighting can also disturb foraging bats (WVDNR, 2015a).
4-152	4.5.1.1	The first sentence of the second paragraph is unclear; it seems to imply that the Allegheny wood rat is a parasite of the eastern small-footed bat. Also, habitat degradation will affect any species whose habitat is degraded. Clearer and more accurate wording to address the two species dependent on rocky habitat would be the following: "Species such as the eastern small-footed bat and the Allegheny woodrat are associated with rocky habitats (talus, boulder fields, cliffs), which are restricted to certain geologic formations and are concentrated in certain areas of Virginia and West Virginia. The Allegheny woodrat is greatly affected by habitat fragmentation, and eastern small-footed bat maternity colonies are highly susceptible to disturbance and habitat degradation during the maternity season."
4-152	4.5.1.1	*"Open habitat types are limited in West Virginia and Virginia, and are threatened by conversion to agriculture or other developments. Species that use these habitats include least shrew, southern bog lemming, and meadow jumping mouse (WVDNR, 2015a)."* Please clarify if this refers to open habitat types in general or if you are specifically referring to high elevation open habitat types.
4-152	4.5.1.1	*"Most mammal species are able to move away from disturbance, and many species avoid noise and vibrations; however, mortality from increased use of access roads, and from construction equipment on the right-of-way would be possible."* Adult small mammals, especially mice, shrews, moles, and voles have a harder time moving away from this kind of disturbance given their small size, nocturnal nature, underground roosting and nesting habitat, and small home ranges. The young of all of these species could be destroyed by construction activities, due to their limited ability to move from underground nests. This sentence needs to be changed to reflect this reality. In addition, blasting happens at a rate of speed that doesn't allow for movement of small mammals either above or below ground, and therefore would result in direct injury and death. The effects of blasting are not evaluated here and need to be.
4-153	4.5.1.3	The first sentence is not accurate. Frog and toad habitat varies by species, but as far as water resources, habitat is any still body of water, including ponds, roadside ditches, marshes, and other wetlands. These may occur in the vicinity of floodplains, but many more occur outside of floodplains at varying elevations.
4-160	4.5.3.5	*"If Atlantic identifies additional bald eagle nests or occupied bald or golden eagle winter roosting habitat prior to or during construction, Atlantic and DTI would follow the National Bald Eagle Management Guidelines"* One of the threats to wintering golden eagles is direct disturbance due to construction and blasting activities. The National Bald Eagle Management Guidelines will not address wintering golden eagle habitat or wintering behavior. Please outline specific mitigation measures to avoid direct disturbance to wintering golden eagles in this section, as you have in section 5.3 of the Migratory Bird Plan.
4-160	4.5.3.5	*"The FERC Plan and Procedures (see table 2.3.1-1) require that maintenance of the permanent right-of-way during operations occur outside of the migratory nesting season (April 15-August 1), which Atlantic and DTI have committed to adhere to. Atlantic and DTI currently plan to avoid clearing vegetation during the nesting season, based on the revised construction schedule (see section 2.4). However, Atlantic has indicated that construction during the migratory bird season may be necessary in some areas along ACP.*

FA3-141

FA3-142

FA3-143

FA3-144

FA3-145

FA3-146

FA3-147

Page 27

Page #	Section #	Comment
		Therefore, to ensure impacts on migratory birds would be minimized during construction of ACP, we recommend that: Prior to construction, Atlantic should file with the Secretary, and provide to the FWS for approval, a revised Migratory Bird Plan, and provide to the FS for approval, a revised COM Plan, that identify areas where Atlantic would construct during the migratory bird season, and identify the additional conservation measures developed in coordination with the FWS, and/or FS, and other appropriate agencies, that would be implemented to minimize impacts on nesting migratory birds in areas where construction during the active season cannot be avoided." Waiting until after the Decision is made to identify the areas that ACP would be clearing vegetation during the nesting season does not allow the EIS to fully disclose and analyze the effects of the proposed actions on migratory birds. Nor does this allow for a full development of conservation and mitigation measures to address impacts of the proposed actions on migratory birds. In addition, the seasonal restrictions identified for both migratory birds and bats for tree and other vegetation removal is in direct conflict with several Forest Plan standards to avoid steep slope stability, soil movement, and winter road use concerns, as well as seasonal restrictions on T&E aquatic species and other sensitive species. These conflicting recommendations by FWS and Forest Service regulations need to be addressed and resolved before the FEIS is completed.
4-161	4.5.3.5	*"Based on Atlantic's and DTI's construction schedule, there are nine rookeries within the 0.5-mile disturbance buffer, and one located within the 300-foot vegetation buffer. Three additional rookeries were identified within the 0.5-mile buffer during the review of CCB and NHI data, but were not observed as being active during surveys (see table 5.1.1-1 of the Migratory Bird Plan [see table 2.3.1-1]).* *Atlantic's Migratory Bird Plan does not include commitments to avoid disturbance of rookeries during construction. Therefore, we **recommend that: Prior to construction, Atlantic and DTI should file with the Secretary a revised Migratory Bird Plan that includes appropriate conservation measures developed in coordination with the FWS and the appropriate state/commonwealth agencies for the following active rookeries with disturbance buffers that overlap the ACP workspace: ROOK-ACT-02 (VA), ROOK-01 (WV), WBC 01 (NC), WBC 02 (NC), WBC 04 (NC), WBC 05 (NC), WBC 07 (NC), WBC 12 (NC), and WBC 15 (NC). Atlantic should also coordinate with VDGIF, WVDNR, and NCWRC to verify that no additional conservation measures would be required for the NHI and CCB rookeries, and file with the Secretary copies of agency correspondence related to these discussions."*** Waiting until after the Decision is made to identify appropriate conservation measures for active rookeries, does not allow the EIS to fully disclose and analyze the effects of the proposed actions on migratory birds. Nor does this allow for a full development of conservation and mitigation measures to address impacts of the proposed actions on migratory birds in the Habitat Equivalency Analysis (HEA).
4-162	4.5.5	No scientific evidence is presented to support the claim that wetlands would revert back to pre-construction hydrology, native species, etc. in one to two years. Recovery is likely to take far longer, on the order of decades, particularly in forested wetlands.
4-164	4.5.6	*"Fragmentation and a loss of habitat connectivity could also impact wildlife. The removal of interior forest in order to create the necessary rights-of-way would result in the conversion of forest to herbaceous and/or scrub-shrub vegetation and would remove habitat for interior species. Edge effects could include a change in available habitat for some species due to an increase in light and temperature levels on the forest floor and the subsequent reduction in soil moisture; such changes may result in habitat that would no longer be suitable for species that require these specific habitat conditions, such as salamanders and many types of plants. An alteration of habitat could affect the fitness of some species and increase competition both within and between species, possibly resulting in an overall change to the structure of the forest community"* Edge habitat also provides travel corridors for predators, thus increasing the opportunity and likelihood of predation on species in adjacent patches of habitat. More supporting documentation of effects statements in this section is needed from the scientific literature. Fragmentation is a well-studied issue.

FA3-148

FA3-149

FA3-150

Page 28

FA3-140 The referenced text has been revised.

FA3-141 The referenced text has been revised.

FA3-142 The referenced text has been revised.

FA3-143 The referenced text has been revised.

FA3-144 The referenced text has been revised. Note that this is not the impact analysis section, but is intended to provide a general discussion of the wildlife and habitat found in the ACP and SHP project areas. The impact analyses for wildlife species and habitat are found in sections 4.5.5 through 4.5.8.

FA3-145 The referenced text has been revised.

FA3-146 The referenced text has been revised.

FA3-147 The EIS was prepared in accordance with NEPA, CEQ guidelines, and other applicable requirements. The EIS includes sufficient detail to enable the reader to understand and consider the issues raised by the proposed project, and addresses a reasonable range of alternatives. The EIS is consistent with FERC style, formatting, and policy regarding NEPA evaluation of alternatives and different types of impacts, including cumulative impacts. Duration and significance of impacts are discussed throughout the various EIS resource sections. The EIS is comprehensive and thorough in its identification and evaluation of feasible mitigation measures to reduce those effects whenever possible.

In section 2.4, we recommend that as part of its Implementation Plan (Environmental Condition No. 6) and prior to receiving written authorization from the Director of the OEP to commence construction of any project facilities, Atlantic and DETI should file with the Secretary detailed environmental constraints maps, by county, illustrating the updated avoidance and minimization measures identified by the resource agencies and that Atlantic and DETI have committed to along the ACP and SHP routes. The environmental constraints maps can be provided in the form of alignment sheets as recommended in Environmental Condition Nos. 4 and 5 with a separate environmental constraints band.

FA3-148 Results of the pedestrian surveys and Atlantic's proposed conservation measures were submitted to the WVDNR, VDGIF, and NCWRC in letters dated April 12, 2017. To date, the WVDNR, VDGIF, and NRWRC have not provided concurrence with Atlantic's proposed conservation measures. Therefore, we recommend in section 4.5.3, that prior to construction, Atlantic should file with the Secretary and appropriate federal and state agencies a revised Migratory Bird Plan that incorporates documentation of concurrence the results of consultation with from the WVDNR, VDGIF, and NCWRC, and verify that no additional conservation measures would be required to minimize impacts on active rookeries.

FA3-149 The referenced text has been revised.

FA3-150 The referenced text has been revised.

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

Page #	Section #	Comment
		Use of the words "could" and "possibly" suggest a higher level of uncertainty than is warranted for such well-established impacts of forest fragmentation. Substitute "would" for "could," and delete "possibly."
4-161	4.5.6	FA3-151 Please explain the rationale for using a minimum interior forest patch size of 35 acres for the fragmentation analysis. This number does not appear in the cited reference (Robbins et al. 1989). The minimum isolated forest tract sizes given for detection of various species are not useful for assessing the impacts of fragmentation. Scattered detection points in suboptimal patches do not necessarily signify occupancy or successful breeding, which is what is important to the species. Robbins et al. 1989 considers their next metric up (50% of the maximum acreage; 700 hectares for cerulean warblers) to be the minimum area required for breeding, and Hamel 2000 states that this minimum varies regionally. Thirty-five acres is too small to use as a minimum interior patch size, and more recent research exists for determining a more meaningful figure. FA3-152 The fragmentation analysis needs to include a discussion of impacts on species populations (especially interior species and those with metapopulation dynamics). Please explain the rationale for the definition of edge habitat (300 feet). The definition of edge (part c) is confusing. Please clarify whether it means 300 feet into the interior of the forest starting at the end of the disturbance, or something else.
4-170	4.6.1 Existing Aquatic Resources	*There are cross 1,787 waterbody crossings on ACP (some waterbodies are crossed more than once)…* Consider revising to: "*There are 1,787 waterbody crossings on ACP (some waterbodies are crossed more than once)…*"
4-170	4.6.1 Existing Aquatic Resources	FA3-153 *A number of these crossing locations have the potential to provide habitat for fish, including both warmwater and coldwater fish species. Fish found in the southeastern region of the U.S. make up 62 percent of the fauna in the U.S., and nearly 50 percent of North American fauna (NCWRC, 2005).* Consider adding the sentence inserted below and ensure that the analysis of potential effects for aquatic resources incorporates this relevant information. "*A number of these crossing locations have the potential to provide habitat for fish, including both warmwater and coldwater fish species. Although other proposed crossing sites may be located upstream of known or suspected habitat for fish species, these sites are hydrologically and ecologically connected fish bearing stream networks and therefore influence conditions in downstream fisheries. Fish found in the southeastern region of the U.S. make up 62 percent of the fauna in the U.S., and nearly 50 percent of North American fauna (NCWRC, 2005).*"
4-174	4.6.1.2	FA3-154 "*Appendix K identifies 24 wild brook streams and/or stockable trout streams crossing locations, and the proposed crossing method(s).*"

Page 29

Page #	Section #	Comment
		Appendix K does not specifically identify trout streams. TOYR are listed, but with no indication what the TOYR is for. In addition, according to the trout TOYR in appendix K there are more than 24 wild brook trout and/or stockable trout streams that are being crossed in VA. Table R-3 lists 26 trout streams or potential trout streams being crossed within GWNF alone.
4-176	Brook Trout	FA3-155 *The WVDNR is specifically concerned with the withdrawal of 2.6 million gallons from the Big Spring Fork and considering the existing water quality concerns, and 4-177 Fisheries and Aquatic Resources has recommended further restricting, or utilizing a different water source to support hydrostatic testing. Therefore, we recommend that:* • *Prior to construction, Atlantic should file with the Secretary and the WVDNR an evaluation of the potential impacts of the proposed construction activities at Big Spring Fork. In coordination with the WVDNR, Atlantic should develop the appropriate conservation measures to avoid further degradation of aquatic resource habitat at these locations, for review and written approval by the Director of OEP.* Although the withdrawal point would be located off of National Forest land, the withdrawal could impact aquatic habitat and biota in downstream portions of the Elk River that cross National Forest land. Such impacts need to be considered and disclosed. The Forest Service will work with WV DNR and other regulatory agencies to ensure that these potential impacts are considered and are avoided, minimized, and mitigated to the maximum extent practical.
4-188	4.6.4 Sediment and Turbidity	FA3-156 Discussion on Sediment and Turbidity should include results of Sediment analysis and downstream effects on biota.
4-189	Sediment and Turbidity	FA3-157 *Atlantic would attempt to minimize downstream sedimentation and turbidity, and subsequent impacts on aquatic biota in these waterbodies, by conducting the dry-cut crossings during low-flow periods within the applicable time-of-year work windows for protection of fisheries of special concern, and following the FERC Plan and Procedures (see section 2.3.1-1) relative to construction on the streambanks. However, the potential for erosion and sedimentation from landslides and slope failures on steep slopes over the long term must be recognized (see sections 4.1 and 4.2). Long-term impacts related to slope instability adjacent to streams has the potential to severely impact water quality and stream channel geometry.* Minimize is a relative term which suggests that "attempts to minimize effects" would still likely result in effects. In addition, the statement acknowledges the potential for long-term and possibly severe effects associated with increased risks for slope instability. Potential effects to erosion and stream sedimentation from other proposed actions such as access roads, ATWS, and releases of drilling mud) seem to be dismissed in this discussion or perhaps altogether in the DEIS. All of these potential effects must be considered additive to other current and anticipated future effects as part of the required cumulative effects analysis and resulting conclusions for aquatic resources.
4-189	Loss of Streambank Cover	FA3-158 *… by adhering to Forest Plan standards by locating ATWS at least 100 feet from perennial waterbody banks and 50 feet from intermittent waterbody banks on NFS lands.* See our comments for page 2-37 (2.3.3.1 Waterbody Crossings)
4-191	4.6.4 Dry Crossing Method	FA3-159 "*Atlantic and DTI would also implement the erosion and sedimentation control measures described in the FERC Plan and Procedures (see table 2.3.1-1) to contain materials within the construction work areas and minimize impacts on fisheries due to changes in water quality*"

Page 30

FA3-151 The referenced text has been revised.

FA3-152 The referenced text has been revised.

FA3-153 The referenced text has been revised.

FA3-154 The State/Commonwealth Regulatory Classification column provides the state-specific classification code to indicate whether a waterbody is a trout stream. The state classification codes are described in section 4.6.1. The number of trout stream crossings has been updated where appropriate in the final EIS.

FA3-155 Section 4.6.5 has been updated to include the results of Atlantic's Soil Erosion and Sedimentation Model Report conducted for the portion of ACP on the MNF and GWNF.

FA3-156 The referenced text has been revised.

FA3-157 The referenced text has been revised.

FA3-158 The referenced text has been revised.

FA3-159 Section V of FERC Procedures describes the time window for construction (Section V.B.1), general crossing procedures (Section V.B.3), dry-ditch crossings methods (Section V.B.6), and temporary erosion and sediment control measures (Section V.B.10) that would be implemented during waterbody crossings. In addition, the FERC Plan provides additional information on temporary erosion control measures in upland areas (Section IV.F).

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
			FERC Plan & Procedure documents included in table 2.3.1-1 do not specifically reference minimizing impacts during dry crossing methods, specifically a maximum timeframe for the crossing
FA3-160	4-191	4.6.4 Dry Crossing Method	*"This potential impact would be minimized by screening the intakes of the pumping system, as described in the FERC Plan and Procedures (see table 2.3.1-1)."* FERC Plan & Procedure documents included in table 2.3.1-1 do not specifically describe screening intakes to minimize impacts to aquatic organisms.
FA3-161	4-192	4.6.4 Dry Crossing method	*"Furthermore, operation and routine maintenance of the pipeline rights-of-way would not have a significant impact on fishery resources in ACP or SHP project areas."* This statement is incongruent with the more likely and correct statement on page 4-189 that *"Long-term impacts related to slope instability adjacent to streams has the potential to severely impact water quality and stream channel geometry."*
FA3-162	4-193	4.6.4 Blasting	*"Atlantic has committed to coordinating with the FWS to identify the appropriate rock removal method (blasting or mechanical), which is least impactful to federally listed species on a site specific basis. Results of these discussions would be provided once available."* Section 2.2.4 in the Biological assessment has a more thorough and descriptive discussion on blasting that should be brought in here.
FA3-163	4-194	Water Appropriation and Discharge	*In addition, the FWS has expressed concern with regard to sediment-laden discharge water, or sedimentation from nearby access roads, that could drain into waterbodies occupied by the federally listed or under review species. We have recommended that Atlantic complete an analysis of these potential impacts for all federally protected aquatic species in section 4.7.1.* Potential effects from sediment laden discharge water would also be of concern for aquatic biota other than species that are currently federally listed or under review. It is understood that the discharge of such waters would not occur on NFS lands. However, the impacts of discharge of such waters at locations off NFS lands but within a reasonable zone of potential influence for aquatic habitats and aquatic biota on NFS lands needs to be disclosed, and any potential impacts need to be avoided, minimized, and mitigated.
FA3-164	4-194	4.6.4 Spill Prevention	This section should recognize the potential for periodic leaks during the life of the pipeline (not just leaks or spills during construction) and discuss effects
FA3-165	4-194	4.6.5 Aquatic resources on federal lands	*"Atlantic is completing a sedimentation model to assess the extent of sedimentation that could occur within these priority subwatersheds during construction. This analysis is in development and would be provided when available to further assess potential impacts to aquatic biota on NFS lands"*

Page 31

	Page #	Section #	Comment
			Effects cannot be analyzed without the completed sediment analysis. The sediment analysis was provided late in the public comment period, and needs to be incorporated into the analysis for the FEIS. The conclusions reached by the current analysis represent judgments that are based on incomplete information.
FA3-166	4-195	Monongahela National Forest	*The MNF requested that Atlantic complete aquatic species surveys at waterbodies crossed by proposed ACP on the MNF to document potential RFSS and suitable habitat, including candy darter (Etheostoma osburni), New River shiner (Notropis scabriceps), Appalachia darter (Percina gymnocephala), and Kanawha minnow (Phenacobius teretulus), in addition to the elktoe mussel (Alasmidonta marginata) and green floater mussel (Lasmigona subviridis).* Although there would be some benefit to conducting fish population surveys in the vicinity of proposed waterbody crossings on the MNF, the MNF did not require these surveys to be conducted for project planning purposes if Atlantic and DTI wanted, instead, to presume presence for the specific RFSS that have previously been documented within the watershed context of those streams. This was the approach that Atlantic and DTI adopted. Therefore, the MNF is not requiring fish population surveys for purposes of project planning. Surveys may be required for project monitoring purposes should there be a decision to implement all or parts of this proposal. Surveys for elktoe and green floater mussels were conducted in accordance with the standard West Virginia Mussel Survey Protocol provided by WVDNR.
FA3-167	4-196	4.6.5 Aquatic resources on federal lands	*"Atlantic has committed to eliminate the access road along Laurel Run".* The elimination of access road along Laurel Run is appreciated and appropriate. Appendix K (waterbody crossings) still lists 7 access road crossings of Laurel Run, as does table 4.3.9-3 (DEIS page 4-344), table E-1 in Appendix E (Access roads), shapefile ACP_Rev11b_CIF_without_corridor_20170210, and discussed in detail in Appendix G on page 23 and in table 2.1.1-1. It is confusing and unclear exactly what is proposed. These crossings seem to be included in the counts discussed earlier in this document. Analysis cannot be completed without consistent and accurate information.
FA3-168	*4-199*	*4.7.1*	*"The FWS identified 30 federally listed threatened or endangered species, 2 designated critical habitats, 1 proposed species, 3 proposed critical habitats, and 6 species that are currently under review for federal listing that are known to occur in ACP and SHP project areas. Table 4.7.1-1 lists all potentially affected federally listed, proposed, and under review species, and designated and proposed critical habitat, indicates the state(s) where they may occur, and provides our determination of effect. While Atlantic and DTI conducted surveys for several federally listed species or species under review, survey access was not available in all cases (see table 4.7.1-1). In addition, as noted throughout this section and in our recommendations, Atlantic and DTI have not provided conservation measures to address potential impacts to these species in all cases. FERC and FWS will re-evaluate the determinations provided for these species upon receipt of pending survey results and proposed conservation measures. Therefore, we recommend that: Atlantic and DTI should not begin construction of the proposed facilities until: a. all outstanding biological surveys are completed; b. the FERC staff complete any necessary Section 7 consultation with the FWS; and c. Atlantic and DTI have received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin."*

Page 32

FA3-160 Section V.6.B.2.iii and Section VII.C.1 of the FERC Procedures describe screening intake hoses to minimize the potential for entrainment of fish. More specific guidance on the size of screens has been provided by the FWS as described in section 4.7.1.

FA3-161 Slope instability issues and potential impacts on adjacent waterbodies are discussed under section 4.6.4 Sediment and Turbidity.

FA3-162 Section 2.3.2.4 has been revised to include additional discussion of blasting.

FA3-163 A discussion on the sedimentation and turbidity resulting from access roads has been added to section 4.6.4 Sediment and Turbidity.

FA3-164 In the event of a pipeline leak, natural gas would disperse rapidly in air. As discussed in section 4.12, Atlantic and DETI have affirmed that the project facilities would be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR 192. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures. The DOT specifies material selection and qualification; minimum design requirements; and protection from internal, external, and atmospheric corrosion. In addition, the data, as presented in the EIS, demonstrate that natural gas transmission pipelines continue to be a safe and reliable means of energy transportation.

FA3-165 Section 4.6.5 has been revised.

FA3-166 Section 4.6.5 has been revised.

FA3-167 The final EIS has been revised to reflect that Atlantic has eliminated access road 36-014.AR3 along Laurel Run.

FA3-168 Section 4.7.1 recommends that construction of the projects be conditioned upon the completion of all outstanding biological surveys and the FERC finalizing any necessary section 7 consultation with the FWS. Atlantic and DETI would be required to obtain receipt of written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
			Table 4.7.1-1 lists a number of T&E species in counties with FS land with outstanding survey needs. The text above gives the impression that FERC will be issuing a decision with all of this outstanding T&E work undone and an unfinished Section 7 consultation with the FWS. Note that the FS cannot issue its decision as a cooperating agency without a completed Biological Assessment and Biological Opinion from the FWS.
FA3-169	4-201 & 202	4.7.1	The DEIS says: *"Small whorled pogonia a,b (Isotria medeoloides), b Has the potential to occur within the GWNF."* Small whorled pogonia does occur on the GWNF and there is an occurrence near the proposed project that may be affected by the proposed action. Please revise to indicate this known occurrence.
FA3-170	4-205	4.7.1.2	*"The only county crossed by ACP where the gray bat is known to occur is Bath County, Virginia. The species is not known to occur in counties associated with the proposed SHP. Species occurrence is based on a desktop review using the FWS IPaC website and on consultations with the FWS and VDGIF."* Based on information supplied by VDGIF the only counties in Virginia where the gray bat is found is Washington, Scott, & Lee Counties in far SW Virginia. There are no known documented occurrences in Bath County, Virginia. See: https://www.dgif.virginia.gov/wildlife/info/mammals/gray-bat/
FA3-171	4-208	4.7.1.3	Table 4.7.1-3. The tree clearing restriction for WV is November 16-March 31.
FA3-172	4-208	4.7.3.4	Table 4.7.3-1: This table needs to be expanded to include all surveys along access roads where improvements are planned, and all surveys adjacent to route variations where land not previously surveyed may be affected directly or indirectly by construction activities or edge effects.
FA3-173	4-210	4.7.1.3	"Conservation measures will be further refined upon FWS review of 2016 4-211 *Special Status Species* survey results…". The Forest Service also needs to be consulted, and MNF Forest Plan standards will need to be met. In addition to roost tree direction, the Forest Plan requires retention of all shagbark hickory trees of 5 inches DBH or greater. There may be a small, exceptional area of primary roost trees/shagbark hickories (follow-up survey outstanding) that requires a slight realignment or new mitigation measures to compensate for the taking of these primary roosting trees.
FA3-174	4-211	4.7.1.3	"To minimize impacts on drinking water and bat prey species, ATWS would be located in upland areas at a minimum of 50 feet from the wetland edge…". "….equipment refueling and lubricating would typically occur in upland areas 100 feet or more from the edge of the waterbody and adjacent wetlands to reduce potential impacts on bat drinking water sources." Please explain the rationale behind these distances, and provide citations indicating how they were determined to be safe distances for protection from contamination. Physical barriers should also be used, which should be included in the spill plan and referenced here.
FA3-175	4-212	4.7.1.3	Please provide supporting citations for the statement, "Once presumed to be exceptionally sensitive to disturbance, there are now numerous examples of roosts used by Indiana bat maternity colonies and roosts used by males, as well as documented occurrences of foraging Indiana bats in areas that are subject to airborne sound and near human activities."
FA3-176	4-214	4.7.1.4	"Based on 2019 surveys, there are 16 potential hibernacula within 0.5 mile of the route that could serve as habitat for the Indiana bat located within the ACP project area (see table 4.7.1-6). Northern long-eared bats were captured at one site, and may be present at another site." These areas should be treated as occupied if they are not confirmed.
FA3-177	4-217	4.7.1.4	"…two potential portals were identified during preliminary surveys and are currently being investigated…" Please clarify the extent of investigation. All caves on the Monongahela NF are closed to entry. Coordination with the MNF is required for special entry permission. It is unclear whether portals are being investigated or future entry is being planned, but no portals should be entered without written permission from the MNF.

Page 33

	Page #	Section #	Comment
			"Nine secondary roost trees for northern long-eared bats were identified." Note that the area is being resurveyed. Many primary and possibly a few secondary roost trees will probably be added in a particular area, which would lead to either a slight alignment adjustment in one particular area of primary roost tree concentration or new mitigation measures.
FA3-178	4-232	4.7.1.13 Freshwater Mussels	*"Surveys for federally listed mussels are still needed on approximately 17 waterbodies in Virginia, and 7 waterbodies in North Carolina. No additional mussel surveys are currently proposed in West Virginia. Atlantic plans to complete these surveys by June 2017."* Because many of these determinations are being made 'pending surveys' it should be clearly noted these determination statements are currently unsupported.
FA3-179	4-237	4.7.1.13 Freshwater Mussels	DEIS only mentions access road crossings of Mill Creek in VA, with relation to T&E mussels. However, Appendix K-1 table of waterbody crossings along the Atlantic Coast Project lists 2 crossings of the Cowpasture River by access roads. This river is known to support T&E mussels.
FA3-180	4-238	4.7.1.13 Freshwater Mussels	*"At waterbodies where federally listed or under review mussels may occur and where Atlantic proposes water withdrawals (Nottoway River, Roanoke River, Tar River, Neuse River, and Cape Fear River crossings), intake pumps may entrain or impinge mussel larvae. Water withdrawals may also reduce water flow volumes and velocities, increase sedimentation, alter dissolved oxygen levels, and expose mussels to the air and desiccation."* According to Table 4.3.2-8, water withdrawals are also proposed for the Cowpasture River, known to support T&E mussels.
FA3-181	4-238	4.7.1.13 Freshwater Mussels	*"If Atlantic and DTI document federally listed mussels in the waterbody, avoid using the access road if in-stream activities cannot be avoided."* This sentence is not clear. Crossing a waterbody with an access road necessitates in-stream activity, unless there is an existing bridge.
FA3-182	4-238	4.7.1.13 Freshwater Mussels	The DEIS states a determination of *may affect, but is not likely to adversely affect* for the clubshell, Dwarf wedgemussel, James spinymussel, and tar river spinymussel, but the BA (page 182) has a different determination for the clubshell. There is inconsistency between the documents.
FA3-183	4-238	4.7.1.13 Freshwater Mussels	*"ACP **may affect** the dwarf wedgemussel, James spinymussel, and Tar River spinymussel, but ACP **is not likely to adversely affect** these species. FERC and FWS will re-evaluate this determination upon receipt of pending survey results and proposed conservation measures."* There is no rationale for this determination, and since these determinations are being made 'pending surveys' it should be clearly noted these determination statements are currently unsupported.
FA3-184	4-239	4.7.1.13 Freshwater Mussels	*Impacts to mussels located downstream of waterbody crossing activities or access roads include temporary increases in sedimentation and turbidity, and degraded quality.* Effects cannot be analyzed without completed surveys, or assumed presence. Sediment analysis has not been incorporated which would inform on downstream effects.
FA3-185	4-239	National Forest Systems Lands	*No waterbodies were identified within the survey corridor in the MNF that could provide suitable habitat for the clubshell mussel; therefore, no impacts on this species on the MNF are anticipated.* It is unclear why this section contains this statement that is specific to only clubshell mussel.
FA3-186	4-239	4.7.1.14	The effective date for the Final ruling on the rusty patched bumble bee (*Bombus affinis*) is now March 21, 2017; this species until then is considered Proposed Endangered https://www.fws.gov/mnwest/endangered/insects/rpbb/ This section needs to be updated to include the Final Ruling as published by the FWS. It currently contains dated listing information.

Page 34

FA3-169 Table 4.7.1-1 has been updated to address this comment.

FA3-170 Section 4.7.1.2 has been updated to address this comment.

FA3-171 Table 4.7.1-3 (now table 4.7.1-6) has been updated to correct tree-clearing TOYR in West Virginia.

FA3-172 The referenced table has been removed from the final EIS, and section 4.7.3 has been revised. See also the response to comment FA3-7.

FA3-173 Comment noted regarding need to continue consulting with the FS on Special Status species. Consultations for these species are not complete.

FA3-174 Section 4.7.1.3 has been updated to address concerns regarding refueling equipment, distances to wetlands and waterbodies, and physical barriers.

FA3-175 Section 4.7.1.3 has been updated to include citations for Indiana bat habituation to anthropogenic noise.

FA3-176 Section 4.7.1.4 has been revised to include more recent data.

FA3-177 Section 4.7.1.4 has been revised to include more recent data.

FA3-178 Section 4.7.1.15 states that the FERC and FWS will re-evaluate these determinations upon receipt of pending survey results and proposed conservation measures.

FA3-179 Appendix K indicates that the Cowpasture River is crossed by the right-of-way and survey corridor, but not access roads.

FA3-180 Table 4.3.2.9 relates to water withdrawals. Water withdrawals are not planned for the Cowpasture River; table 4.3.2-9 has been updated accordingly.

FA3-181 The referenced sentence has been revised accordingly.

FA3-182 Table 4.7.1.1 and section 4.7.15.1 indicate a likely to adversely affect determination for clubshell due to erosion and sedimentation associated with the close proximity of the pipeline and access road to a known population in Hacker's Creek (ACP). This is the correct determination.

FA3-183 See the response to comment FA3-178.

FA3-184 Section 4.7.1.15 (previously section 4.7.1.13) has been revised.

FA3-185 Section 4.7.1.15 (previously section 4.7.1.13) has been revised.

FA3-186 The draft EIS was published prior to the effective date of the species' Final Rule; the final EIS reflects the current listing status.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
FA3-187	4-240	4.7.1.14	*"Construction of ACP and SHP has the potential to impact individual rusty-patched bumble bees. Hibernating queens and colonies may be located in ACP and SHP project areas, but the potential is low and discountable. In addition, noise or presence of humans and equipment involved in construction activities may cause foraging rusty-patched bumble bee to divert from the area. The resulting response would be temporary disturbance that would not have a measurable or detectable effect on an individual's survivorship or reproductive capacity. As such, the potential impact would be insignificant and would not result in harassment or an adverse impact."* This section needs to be updated to include the latest information in the Biological Assessment.
FA3-188	4-246	4.7.1.15	"Atlantic would indirectly affect the suitable habitat of federally listed plants adjacent to or in the vicinity of the ACP project area if the sun exposure, hydrology, or soil composition and moisture are changed due to vegetation clearing and contouring." Please add the introduction and spread of invasive species to the list of potential indirect impacts to listed plants.
FA3-189	4-246	4.7.1.15	"Atlantic has the potential to impact about 25 percent of the running buffalo clover in the area during construction." The BA states that approximately 16% of known populations within the vicinity of the projects will be directly affected. Please revise the DEIS or the BA for accuracy and consistency.
FA3-190	4-246	4.7.1.15	"Atlantic is currently exploring avoidance and minimization measures for running buffalo clover, including evaluating avoidance measures where they have documented dense populations of running buffalo clover." Please revise to eliminate the circular reference to "exploring avoidance" by "evaluating avoidance measures."
FA3-191	4-246	4.7.1.15	"three small whorled pogonia populations **that are located occur** downslope" Please revise bolded text for clarity.
FA3-192	4-246	4.7.1.15	"Atlantic is evaluating potential indirect impacts on three small whorled pogonia populations that are located occur downslope of project workspaces." Please also conduct botanical surveys adjacent to any route adjustments where a sufficient surveyed buffer no longer exists and assess potential direct and indirect effects to any TE and RFSS plant species found.
FA3-193	4-246	4.7.1.15	"Atlantic does not expect the population in Seneca State Forest to be directly or indirectly impacted due to its location outside of the construction footprint and its occurrence upslope of construction activities." This statement is not supported by the results of the microclimate analysis referenced below. Please revise this section to reflect the results of the analysis after the requested changes below are incorporated.
FA3-194	4-247	4.7.1.15	"Atlantic is conducting a microclimate analysis of the three small whorled pogonia populations in the MNF and GWNF…" • The microclimate analysis (also referred to herein as the SWP Evaluation report) actually covers all four populations. Please update the text to reflect this. • Please also incorporate the results of the microclimate analysis into the BA and DEIS after addressing the following comments regarding the light analysis, impacts of invasive species, deer browsing, and monitoring: Re: light: There is no quantified change in light regime provided, only a qualitative visual assessment of a modeled simulation. There is no description of any direct measurements taken on-site to ground-truth the model, nor a description of how baseline or "construction conditions" sunlight values were established, nor a quantitative assessment of how proposed mitigation would preserve the existing light

Page 35

Page #	Section #	Comment
		regime. The simulations also do not demonstrate the impact of the one route realignment on light regimes, though it does state later in the document that the realignment is likely to reduce the impact to the population. • Please provide a quantified assessment of expected changes in light regime to each population. • Please re-run the simulation for the population adjacent to the realignment and provide a quantified assessment of the realignment's effect on light regimes. • Please also provide information about how baseline and "construction conditions" light levels were established for the simulation, and any information about how those model values correspond to actual values on site. Regarding invasive species: The microclimate report states that "Atlantic will implement the Invasive Species Plan for the Project, which includes monitoring the right of way for infestation of invasive species that may have been created or exacerbated by its construction activities, and treating such infestations as described in the Invasive Species Plan for the Project." • Please clarify whether the "Invasive Species Plan for the Project" mentioned is the Upland Erosion Control, Revegetation and Maintenance Plan, commonly referred to as simply "the Plan," or Section 11.0 of the COM plan, which is the "Non-Native Invasive Plant Species Management Plan" (but which also references "the Plan," and the Restoration and Rehabilitation Plan (Section 10.0 of the COM plan) regarding post-construction monitoring for invasives). Taken together, the Non-Native Invasive Plant Species Management Plan (COM Plan Section 11), the Restoration and Rehabilitation Plan (COM Plan Section 10), and the Upland Erosion Control, Revegetation, and Maintenance Plan ("the Plan") state the following plans for NNIS monitoring: • post construction monitoring and treatment will continue until the density and cover of non-NNIS species is similar to nearby non-forested, undisturbed lands, and until NNIS and noxious weeds are absent unless they are abundant in adjacent undisturbed areas. (Non-Native Invasive Plant Species Management Plan) • "post-construction and post-disturbance monitoring should be conducted in perpetuity, for the life of the project on USFS lands"; "Qualitative monitoring will be conducted in years 1 to 5" and quantitative monitoring (via random quadrat sampling, in consultation with USFS) would be done in year 3. "Reports, including a summary of corrective actions proposed, will be submitted within three months of identifying these conditions. Areas where control applications for noxious weeds are needed will be reported." (Restoration and Rehabilitation Plan) • "Conduct follow-up inspections of all disturbed areas, as necessary – at a minimum – after the first and second growing seasons." (Upland Erosion Control, Revegetation, and Maintenance Plan) The sum of the guidance provided by these documents is insufficient to effectively monitor and treat the invasive plant species found along the project route. • Appendix J of the COM plan describes each NNIS species and its optimal treatment timeframe and method, with timeframes ranging from early spring to late fall. Please use this to develop a plan to conduct annual NNIS monitoring at appropriate times of the year for each species, and to develop a plan for treating NNIS discoveries in a timely fashion. • Please provide more details re: how often monitoring and reporting will be conducted for the remainder of the life of the project on USFS land, after year 5. • When a sufficiently detailed plan for monitoring and treatment is developed, please add these details to COM plan sections 10 and 11, the SWP evaluation report, the BA, and the DEIS. These important details need to be accessible to the reader in order to follow the logic of the effects determinations. Re: Deer browsing: "Deer browsing may increase… because additional sunlight on the forest floor may increase the understory vegetation."

Page 36

FA3-187 Section 4.7.1.17 has been updated to include the information provided by the commentor.

FA3-188 Section 4.7.1.17 has been revised to include the current percentage of running buffalo clover in the area that may be impacted during construction, which is 15 percent. The EIS is serving as the FERC's BA for ACP and SHP.

FA3-189 This sentence has been revised.

FA3-190 This sentence has been revised.

FA3-191 Section 4.7.1.17 includes a recommended condition that would require Atlantic to expand the survey corridor by 150 feet from the edge of the workspace or access road and conduct additional surveys in the expanded corridor to verify that additional ESA-listed individuals are not present adjacent to the construction workspace or access roads; to account for indirect impacts (e.g., downslope erosion and sedimentation, changes in light regime) on ESA-listed plants; and to develop conservation measures as necessary to avoid and minimize impacts.

FA3-192 Section 4.7.1.17 has been updated to include the information provided by the commentor.

FA3-193 Section 4.7.1.17 (previously section 4.7.1.15) has been revised.

FA3-194 Section 4.7.1.17 has been updated to include the information provided by the commentor.

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
FA3-194 (cont'd)			• Please provide a reference to support this statement. • Mitigation measures are planned for this area with the stated purpose of preventing additional sunlight on the forest floor. If these measures are sufficient, then there should not be an increase in light or understory vegetation as a result. If these measures are not sufficient, then additional mitigation to prevent both increased sunlight and deer browse is called for. Please review the consistency of the analysis as a whole, and revise as appropriate. Re: Monitoring, the microclimate report states, "A qualified botanist would document populations during the growing season the year before construction (2017), during construction, and the year following initial restoration activities near these sites." This is not a sufficient length of follow up time to establish population survival and sustainability. According to research cited in Atlantic's own microclimate analysis, individuals of this species can go dormant for as long as 4 years at a time, and viability of a population can only be assessed with three consecutive years of monitoring or more (USFWS, 2008) • Please increase the monitoring timeframe such that it is sufficient to establish post construction survival of these populations, and describe what that timeframe will be in the Restoration and Rehabilitation Plan, the BA, the DEIS, and the microclimate analysis report.
FA3-195	4-247	4.7.1.15	"A qualified botanist would document populations during the growing season the year before construction (2017), during construction, and the year following initial restoration activities near these sites." This is not a sufficient length of follow up time to establish population survival and sustainability. According to research cited in Atlantic's own microclimate analysis, individuals of this species can go dormant for as long as 4 years at a time, and viability of a population can only be assessed with three consecutive years of monitoring or more (USFWS, 2008) Please increase the monitoring timeframe such that it is sufficient to establish post-construction survival of these populations, and describe what that timeframe will be in the Restoration and Rehabilitation Plan, the BA, the DEIS, and the microclimate analysis report.
FA3-196	4-247	4.7.1.15	"If an access road requires improvements such as vegetation clearing or ground disturbance where there is potentially suitable habitat for a federally listed plant species, Atlantic would conduct surveys prior to construction activities. If Atlantic documents individuals during surveys along access roads, Atlantic would either avoid or transplant these individuals (pending additional coordination and concurrence by the FWS and other agencies as needed). Atlantic's avoidance efforts would consist of fencing off the plants or restricting use of the road near the federally listed plants." Planned improvements to access roads, as shown in the PDF documents "Access_Road_Maps_2017_1_12" parts 1 and 2, will impact areas near known populations of running buffalo clover, and may impact other undiscovered populations of TES species. Please conduct surveys in summer 2017 to document any TE or RFSS species within the total area of impact, plus within a 150 foot buffer beyond the limits of total impact, and develop avoidance and minimization measures for any that are found.
FA3-197	4-249	4.7.1.15	The DEIS says "*Although the occurrence of small whorled pogonia is not within the survey corridor, changes in light regimes, increased deer browsing, and access roads. Per comments filed by the GWNF on September 7, 2016, the GWNF recommends that Atlantic meet with the GWNF, FWS, and Virginia Division of Natural Heritage (VDNH) at the site of the occurrence to discuss potential impacts and mitigation. To address GWNF's recommendations for the occurrence of small whorled pogonia, we recommend above that Atlantic provide the final avoidance and minimization measures for listed plant species to the FWS and appropriate agencies.*" Comment: A field meeting did occur, but only the Forest Service was in attendance, FWS and VDNH were not there.

Page 37

	Page #	Section #	Comment
FA3-198	4-250-251	4.7.3.1	"*86 RFSS in the MNF, and 53 RFSS in the GWNF may be affected by ACP (pending additional review and consultation with the FS. Appendix R describes suitable habitat, presents results of desktop analysis and/or habitat assessments or individual surveys conducted within the ACP project area, provides preliminary effects determination (where available), and describes the conservation measures that Atlantic would implement to avoid or minimize impacts on RFSS. The information provided in appendix R is based upon survey reports and supplemental information received from Atlantic through November 23, 2016 and FS comments on the preliminary draft BE and survey reports, where available. Full species accounts, description of habitat preferences, and a more detailed discussion of the potential impacts and conservation measures for each of the affected species would be provided in the draft BE. The BE will also include the full list of species evaluated, including those that were determined to not be affected.*" Not having a completed Regional Foresters Sensitive Species section in the DEIS prevents effective public comment on the full impacts of the proposed actions on the 139 species determined to be potentially impacted by the proposed actions on Forest Service lands. The Forest Service is required by FSM 2670 to ensure that proposed activities on NFS lands do not cause downward trend in populations that could result in ESA listing. Full disclosure of analysis of the significance of adverse effects on the populations and habitat for RFSS is required.
FA3-199	4-253	4.7.3.4 U.S. Forest Service Managed Species Conclusions	*Based on our review and comments from the FS, the analysis provided in the preliminary draft BE submitted November 22, 2016 is incomplete, and the FS is currently unable to provide a determination of effects for RFSS. Therefore, we recommend that: .* This statement and the list that follows it in the DEIS acknowledge deficiencies in information needed to conduct an appropriate effects analysis for biological resources. Given this, the FS has reservations about the conclusions that have been documented in the DEIS for biological resources.
FA3-200	4-254	4.7.3.4 U.S. Forest Service Managed Species Conclusions	*Prior to the close of the draft EIS comment period, Atlantic should file with the Secretary and FS a revised MIS Report that:* a. *provides a revised analysis of impacts on wild brook trout on the MNF and GWNF, with the pipeline reroutes to avoid Laurel Run and elimination of the proposed access road parallel to Laurel Run. This evaluation should also include the FS-requested sedimentation analysis on all potentially affected waterbodies and the watersheds crossed by ACP on NFS lands;* This statement acknowledges deficiencies in information needed to conduct an appropriate effects analysis for brook trout. Given this, the FS has reservations about the conclusions that have been documented in the DEIS for brook trout.
FA3-201	4-256	4.7.4.1	Table 4.7.4-1's current title, "Federally Listed Endangered, Threatened, or Review Species in West Virginia" implies that it is a full list of TE and Review species in WV, but it is not complete. In the text above, the table is referred to as, "The West Virginia SGCN listed in Table 4.7.4-1 are also federally listed…" and the opening statement of the paragraph mentions, "Species with the potential to occur in or near the ACP and SHP". Perhaps this table represents plants that are WV SGCN because they are Federally listed or under review, and that have the potential to occur in or near the ACP and SHP? Please change either the name of the table, or the description of table in the text, so it is clear what this list represents.
FA3-202	4-260	Table 4.7.4-2 4.7.4	The DEIS does not appear to list the species in Virginia that the state has determined are threatened or endangered at the state level. For example, the eastern tiger salamander is a state listed species that the proposed project has the potential to affect.
FA3-203	4-267	4.7.4.6	"Due to pending survey results, pending conservation measures, and consultations with the appropriate federal and state agencies, in particular with regard to bat species and bat hibernacula, subterranean obligate species, and aquatic species, our determination regarding the overall impacts on state listed and sensitive species is pending. Therefore, we recommend that: Prior to the close of the draft EIS comment period, Atlantic should file with the Secretary an evaluation of the impacts and species-specific conservation measures,

Page 38

FA3-195 Section 4.7.1.17 (previously section 4.7.1.15) has been revised.

FA3-196 See response to comment FA3-191.

FA3-197 Section 4.7.1.17 has been updated to include the information provided by the commentor.

FA3-198 Comment noted. See the responses to comments FA3-7 and FA3-93.

FA3-199 Comment noted. See the responses to comments FA3-7 and FA3-93.

FA3-200 Section 4.7.3.4 has been revised.

FA3-201 For clarification, this table has been removed and the text has been revised to point the reader to section 4.7.1 regarding ESA-listed, proposed, or under review species that have the potential to occur within the ACP or SHP project area in West Virginia.

FA3-202 Refer to appendix S-2 for a list of Virginia threatened and endangered species that have the potential to occur within the ACP project area.

FA3-203 Section 4.7.4 and appendix S have been updated to include additional impact analyses and avoidance and minimization measures developed in coordination with the appropriate federal and state agencies. FS managed species occurring on the MNF and GWNF are discussed in section 4.7.3 and appendix R.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

FA3-203 (cont'd)

Page #	Section #	Comment
		developed in consultation with the appropriate federal and state agencies. [WVDNR, VDGIF and/or VDCR and NCWRC and/or NCDENR] for the species listed in table 3.7.1-4 where Atlantic has identified potential impacts and/or where the appropriate agency has requested additional analysis or conservation measures. Where surveys are still pending, Atlantic should work with the appropriate agencies to identify the conservation measures that would be implemented if the species and/or suitable habitat are identified during preconstruction surveys, or where presence has been assumed." Waiting until the FEIS to provide impacts on state-listed and sensitive species does not allow the Public to be able to comment on the full impacts of the proposed actions. Mitigation measures should also be included in the types of measures Atlantic should develop with the appropriate federal and state agencies. The Forest Service should be included in the list of federal agencies where these species occur on Forest Service lands.
FA3-204	4-371	Table 4.8.1-1	This table needs to be revised to provide acreages by land type on GWNF, MNF and FS total or include a separate table to provide this information.
FA3-205	4-379	4.8.1.1 Pipeline Facilities: Timber Removal	*"We conclude that implementation of the identified mitigation measures, including implementing Atlantic's and DTI's Timber Removal Plan, Open Burning Plan, and Fire Plan, would minimize the impacts of the project on harvested forests on state land to the extent practicable and would not be significant or adverse."* Timber harvesting on steep slopes (40% or greater) would need to be done in a manner that ensures slope stability and complies with MNF LRMP standard SW07 from the time the timber is harvested until pipeline construction begins. Winter logging must meet LRMP SW09 as well as all other erosion control plans and LRMP standards. Options include helicopter logging, use of overland equipment that does not require skid road development, and other non-ground disturbing methods as approved by FS personnel. Sediment and erosion control features are to be employed on these slopes as outlined in the COMP. Short term erosion control measures are to be utilized as directed in the COMP prior to the start of disturbance for the construction of the pipeline replacement. All timber harvest roads are to be fully reclaimed and restored according to MNF LRMP standards (RF07, RF12, RF13, and RF15).
FA3-206	4-307	4.8.5	It would be helpful if, for first paragraph, notes that information about Recreation and Special Interest Area, including Trails, on NFS lands, can be accessed via notice 4.8.9.
FA3-207	4-311	Table 4.8.5-1 Cont.	Add ANST to "BRP" for the "name" of the recreation and special interest area in MP 195.5-188.3
FA3-208	4-315	Table 4.8.5-3 Cont.	In footnote "e" please change "GWNF-owned," to "GWNF-managed." GWNF and FS do not own land, rather the GWNF and FS manage National Forest System lands for the public.
FA3-209	4-319	4.8.5.2	GWNF, third paragraph. Change "…10.5 million people live within counties that are 75 miles from the forest border." Change TO: "…10.5 million people live in counties that are within 75 miles of the forest border."
FA3-210	4-320	4.8.5.2	BRP, bottom of page. Add: "… Shenandoah National Park in Virginia with the Great Smoky Mountains National Park in North Carolina"
FA3-211	4-345	4.8.9.1	Bottom paragraph. Change NSR to NFS. Please clarify: new NFS lands are only 5 percent of all federal lands crossed by the ACP and not the same as the 99 percent. In the 3rd paragraph on page 4-346 it is noted that federal land is only 4% of the project.
FA3-212	4-346	4.8.9.1	In the second paragraph it may be wise to state that no aboveground lines such as contactor yards associated with ACP will occur on NPS lands.

Page 39

Page #	Section #	Comment
FA3-213	4-344	Land Use and Ownership	*In addition to the pipeline facilities, roads to access the pipeline right-of-way during construction and operation would be located NFS lands (see table 4.8.9-3).* It appears that potential effects to aquatic resources from the development and/or use of these roads have not been fully considered in the DEIS.
FA3-214	4-344	Table 4.8.9-3	In general, information on roads proposed for use as access roads, both new and existing, is inconsistent throughout the document. This needs to be addressed. Some examples follow: Access road 36-014.AR3 is not shown in Attachment F. Attachment F shows 06-001-B001.AR7 as being partially on federal land. Please add this to table 4.8.9-3. Also, 06-001-B001.AR7 does not appear to be shown in Appendix E. 06-001-B001.AR5 is missing from table 4.8.9-3. It is partially on federal land according to Appendix E.
FA3-215	4-346	4.8.9.1	Since construction will occur 24 hours/day, then the potential impacts on sights and sounds for both day and night should be disclosed. I included a comment about establishing a decibel limit on the ANST and monitoring the sound, and stopping operations if the decibel is exceeded until a solution is found to mitigate that impact. I think these are legitimate potential impacts to the visitors' recreational pursuits during the construction phase.
FA3-216	4-349	4.8.9.1 Forest Service Land Use and Ownership	*"On NFS lands, timber would be cruised, marked, and appraised to FS standards. Atlantic would pay for the timber land affected by the project and dispose of it per the discretion of the FS. The FS would prepare a Timber Cruise Plan to be followed by Atlantic and a qualified timber cruise contractor under contract to and at the direction of Atlantic. Each crew conducting a timber cruise would be accompanied by at least one FS-certified timber marker. Atlantic and the FS are also currently coordinating the development of a Timber Extraction Plan specific to the MNF and GWNF. As discussed in section 4.8.1.2, the Timber Extraction Plan would discuss the results of a timber cruise."* Timber harvesting on steep slopes (40% or greater) would need to be done in a manner that ensures slope stability and complies with MNF LRMP standard SW07 from the time the timber is harvested until pipeline construction begins. Winter logging must meet MNF LRMP SW09 as well as all other erosion control plans and FS LRMP standards. Options include helicopter logging, use of overland equipment that does not require skid road development, and other non-ground disturbing methods as approved by FS personnel. Sediment and erosion control features are to be employed on these slopes as outlined in the COMP. Short term erosion control measures are to be utilized as directed in the COMP prior to the start of disturbance for the construction of the pipeline replacement. All timber harvest roads are to be fully reclaimed and restored according to MNF LRMP standards (RF07, RF12, RF13, and RF15).
FA3-217	4-357	Effects of Proposed Project-Specific Amendments	*The direct, indirect, and cumulative effects related to MNF Potential Amendment 1 cannot be determined until the COM Plan has been revised and effects analysis completed related to sedimentation, impacts on riparian areas, and other resources.* This statement acknowledges deficiencies in information needed to conduct an appropriate effects analysis for aquatic resources. Given this, the FS has reservations about the conclusions that have been documented in the DEIS for aquatic resources.

Page 40

FA3-204 Section 4.8.9 includes several tables that distinguish the impacts on GWNF, MNF, and NPS lands by land use type.

FA3-205 Refer to section 4.8.9.1, Land Use and Ownership, for a more detailed discussion regarding timber removal on FS lands, the COM Plan, and consistency with the GWNF and MNF LRMPs.

FA3-206 Please note this statement is already included in the referenced paragraph. See last sentence.

FA3-207 Table 4.8.5-1 has been revised to reflect the recommended edit.

FA3-208 Table 4.8.5-1 has been revised to reflect the recommended edit.

FA3-209 Section 4.8.5.2, GWNF, has been revised to reflect the recommended edit.

FA3-210 Section 4.8.5.2, BRP, has been revised to reflect the recommended edit.

FA3-211 Section 4.8.9.1 has been revised to clarify that NFS lands comprise 99 percent of the total federal lands crossed by the projects overall.

FA3-212 Section 4.8.9.1, Land Use and Ownership, has been revised to reflect the recommended edit.

FA3-213 Section 4.6.5 describes the impacts on aquatic resources on NFS lands from construction and operation of the projects. This includes access roads.

FA3-214 Access road information has been updated throughout the final EIS.

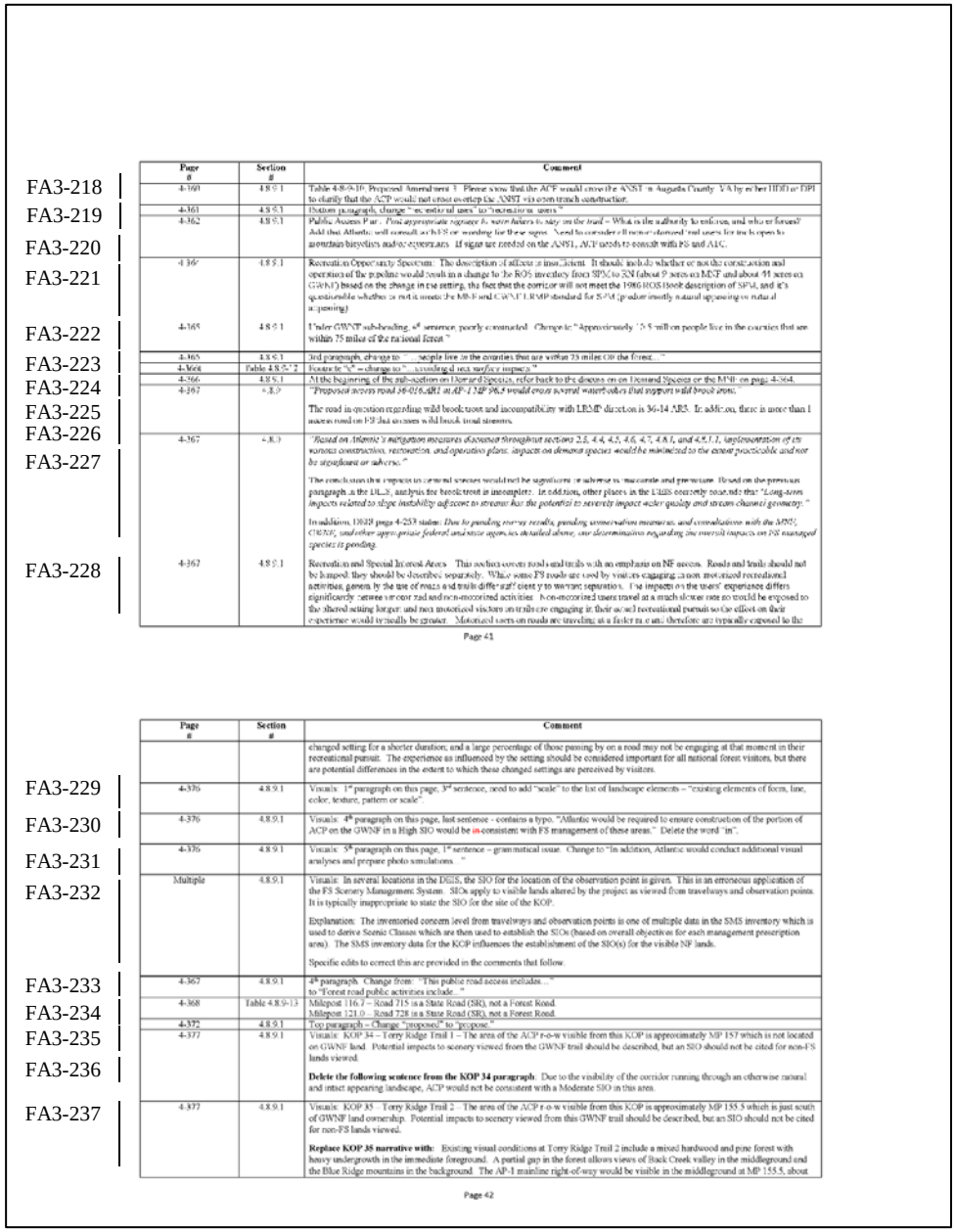
FA3-215 Section 4.8.9.1 (subsection Recreation and Special Interest Areas; George Washington National Forest; Appalachian National Scenic Trail) has been revised.

FA3-216 Section 4.8.9.1, Land Use and Ownership, has been revised.

FA3-217 Comment noted. See also the response to comment FA3-93.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)



Page #	Section #	Comment
4-360	4.8.9.1	Table 4-8-9-10: Proposed Amendment 3. Please show that the ACP would cross the ANST in Augusta County, VA by either HDD or DPI to clarify that the ACP would not cross overtop the ANST via open trench construction.
4-361	4.8.9.1	Bottom paragraph, change "...to motorized users" to "motorized users."
4-362	4.8.9.1	Public Access Plan: *Post appropriate signage to warn hikers to stay on the trail* – What is the authority to enforce, and who or forest? Add that Atlantic will consult with FS or wording for these signs. Need to consider all motor-derived trail users for trails open to mountain bicyclists and/or equestrians. If signs are needed on the ANST, ACP needs to consult with FS and ATC.
4-366	4.8.9.1	Recreation Opportunity Spectrum: The description of affects is insufficient. It should include whether or not the construction and operation of the pipeline would result in a change to the ROS inventory from SPM to SM (about 9 acres on MDF and about 41 acres on GWNF) based on the change in use setting, the fact that the corridor will not meet the 1986 ROS Book description of SPM, and it's questionable whether or not it meets the MB-F and GWNF LRMP standard for SPM (predominantly natural appearing or natural appearing)
4-365	4.8.9.1	Under GWNF sub-heading, 4th sentence, poorly constructed. Change to: "Approximately 7.5 % will on people live in the counties that are within 75 miles of the national forest."
4-365	4.8.9.1	3rd paragraph, change to "...people live in the counties that are within 75 miles OF the forest..."
4-366	Table 4.8.9-12	Footnote "c" – change to "...visualized rock surface impacts."
4-366	4.8.9.1	At the beginning of the sub-section on Demand Species, refer back to the discussion on on Demand Species or the MNF on page 4-364.
4-367	4.8.9	*"Proposed access road 36-016-AR1 at AP-1 MP 96.3 would cross several watercourses that support wild brook trout.* The road in question regarding wild brook trout and incompatibility with LRMP direction is 36-14 AR3. In addition, there is more than 1 access road on FS that crosses wild brook trout streams.
4-367	4.8.9	*"Based on Atlantic's mitigation measures discussed throughout sections 2.2, 4.4, 4.5, 4.6, 4.7, 4.8.1, and 4.8.1.3, implementation of its various construction, restoration, and operation plans, impacts on demand species would be minimized to the extent practicable and not be significant or adverse."* The conclusion that impacts to general species would not be significant or adverse is inaccurate and premature. Based on the previous paragraph, as the DEIS, analysis for brook trout is incomplete. In addition, other places in the DEIS accurately note that *"Long-term impacts related to slope instability adjacent to streams has the potential to severely impact water quality and stream channel geometry."* In addition, DEIS page 4-253 states: *Due to pending survey results, pending conservation measures, and consultations with the MNF, GWNF, and other appropriate federal and state agencies detailed above, our determination regarding the overall impacts on FS managed species is pending.*
4-367	4.8.9.1	Recreation and Special Interest Areas: This section covers roads and trails with an emphasis on NF access. Roads and trails should not be lumped; they should be described separately. While some FS roads are used by visitors engaging in non-motorized recreational activities, generally by the use of roads and trails differentiate clearly to warrant separation. The impacts on the users' experiences differs significantly between motorized and non-motorized activities. Non-motorized users travel at a much slower rate so would be exposed to the altered setting longer and non-motorized visitors on trails are engaging in their actual recreational pursuit so the effect on their experience would typically be greater. Motorized users on roads are traveling at a faster rate, and therefore are typically exposed to the

Page 41

Page #	Section #	Comment
		changed setting for a shorter duration, and a large percentage of those passing by on a road may not be engaging at that moment in their recreational pursuit. The experience as influenced by the setting should be considered important for all national forest visitors, but there are potential differences in the extent to which these changed settings are perceived by visitors.
4-376	4.8.9.1	Visuals: 1st paragraph on this page, 3rd sentence, need to add "scale" to the list of landscape elements – "existing elements of form, line, color, texture, pattern or scale".
4-376	4.8.9.1	Visuals: 4th paragraph on this page, last sentence - contains a typo. "Atlantic would be required to ensure construction of the portion of ACP on the GWNF in a High SIO would be ~~in~~ consistent with FS management of these areas." Delete the word "in".
4-376	4.8.9.1	Visuals: 5th paragraph on this page, 1st sentence – grammatical issue. Change to "In addition, Atlantic would conduct additional visual analyses and prepare photo simulations..."
Multiple	4.8.9.1	Visuals: In several locations in the DEIS, the SIO for the location of the observation point is given. This is an erroneous application of the FS Scenery Management System. SIOs apply to visible lands altered by the project as viewed from travelways and observation points. It is typically inappropriate to state the SIO for the site of the KOP. Explanation: The inventoried concern level from travelways and observation points is one of multiple data in the SMS inventory which is used to derive Scenic Classes which are then used to establish the SIOs (based on overall objectives for each management prescription area). The SMS inventory data for the KOP influences the establishment of the SIO(s) for the visible NF lands. Specific edits to correct this are provided in the comments that follow.
4-367	4.8.9.1	4th paragraph. Change from: "This public road access includes..." to "Forest road public activities include..."
4-368	Table 4.8.9-13	Milepost 116.7 – Road 715 is a State Road (SR), not a Forest Road. Milepost 121.0 – Road 728 is a State Road (SR), not a Forest Road.
4-372	4.8.9.1	Top paragraph – Change "proposed" to "propose."
4-377	4.8.9.1	Visuals: KOP 34 – Torry Ridge Trail 1 – The area of the ACP r-o-w visible from this KOP is approximately MP 157 which is not located on GWNF land. Potential impacts to scenery viewed from the GWNF trail should be described, but an SIO should not be cited for non-FS lands viewed. **Delete the following sentence from the KOP 34 paragraph**: Due to the visibility of the corridor running through an otherwise natural and intact appearing landscape, ACP would not be consistent with a Moderate SIO in this area.
4-377	4.8.9.1	Visuals: KOP 35 – Torry Ridge Trail 2 – The area of the ACP r-o-w visible from this KOP is approximately MP 155.5 which is just south of GWNF land ownership. Potential impacts to scenery viewed from this GWNF trail should be described, but an SIO should not be cited for non-FS lands viewed. **Replace KOP 35 narrative with:** Existing visual conditions at Torry Ridge Trail 2 include a mixed hardwood and pine forest with heavy undergrowth in the immediate foreground. A partial gap in the forest allows views of Back Creek valley in the middleground and the Blue Ridge mountains in the background. The AP-1 mainline right-of-way would be visible in the middleground at MP 155.5, about

Page 42

FA3-218 Section 4.8.9.1 has been revised.

FA3-219 Section 4.8.9.1 has been revised.

FA3-220 Comment noted. See also the response to comment FA3-42.

FA3-221 Section 4.8.9.1 has been revised. See also the response to comment FA3-93.

FA3-222 Section 4.8.9.1 has been revised.

FA3-223 Section 4.8.9.1 has been revised.

FA3-224 Table 4.8.9-9 (previously table 4.8.9-12) has been revised.

FA3-225 Section 4.8.9.1 has been revised.

FA3-226 Section 4.8.9.1 has been revised.

FA3-227 Section 4.8.9.1 has been revised.

FA3-228 Comment noted. See the response to comment FA3-93.

FA3-229 Section 4.8.9.1 has been revised.

FA3-230 Section 4.8.9.1 has been revised.

FA3-231 Section 4.8.9.1 has been revised.

FA3-232 Section 4.8.9.1 has been revised.

FA3-233 Section 4.8.9.1 has been revised.

FA3-234 Section 4.8.9.1 has been revised.

FA3-235 Section 4.8.9.1 has been revised.

FA3-236 Section 4.8.9.1 has been revised.

FA3-237 Section 4.8.9.1 has been revised.

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
			0.5 mile south of where the pipeline crosses GWNF and in the valley. The visual contrast would result in similar impacts to scenery as described for Torry Ridge Trail 1.
FA3-238	4-378	4.8.9.1	Visuals: KOP 38 – Blue Ridge Parkway at Raven's Roost One mile out of the four miles of ACP visible from the KOP is on GWNF (MP 154 to MP 155). This area is within management area 7B1 and has a SIO of Moderate. Reference to there not being a SIO for the NPS KOP should be deleted (per comment above about not specifying SIOs at the KOPs) **Replace paragraph describing KOP 38 with:** Existing landscape character viewed from KOP 38 includes expansive views of dense, mature, mixed oak forest on Torry Ridge which is the prominent feature in the middleground. The valley at the base of Torry Ridge in the near middleground is primarily natural appearing forest but also contains mixed land uses that include roads, residences, and some agricultural patches. The valley viewed from the KOP wraps around the north end of Torry Ridge where it broadens into expansive middleground and background views that include predominantly forested areas with large openings of agricultural and other land uses. From Raven's Roost Overlook, ACP from MPs 152 to 156 would be visible in the middleground at approximately 0.75 mile distance to the northwest. Approximately one mile of this, from MP 154 to 155, is located on the GWNF with a SIO of Moderate. The appearance of the constructed ACP right-of-way located in the valley will borrow from the existing landscape character. In particular the ACP will appear similar to the linear, open corridor for Torry Ridge Road (SR 664). The ACP will be noticeable to casual observers at the KOP, but it will not begin to dominate the characteristic landscape. This meets the Moderate SIO.
FA3-239	4-378	4.8.9.1	Visuals: KOP 39 – BRP at Three Ridges Overlook. Neither the KOP nor the area visible to the southeast is on the GWNF. Move this narrative to the NPS section 4.8.9.2.
FA3-240	4-378	4.8.9.1	Visuals: KOP 40 – Change the sub-header title to Bee Mountain Near Three Ridges Wilderness (*not Overlook*). The FS commented on the ACP EIS that the mountain, including some ability to see the texture of canopies, is visible in the photograph, and we questioned the inability for the simulated pipeline corridor to be visible in the photo. The DEIS did not address our concern about this photo simulation.
FA3-241	4-378	4.8.9.1	Visuals: KOP 64 – Shenandoah Mountain Trail Southern Terminus – the first sentence is poorly constructed; I cannot tell what is intended. Is the existing transmission line visible from this location or not? One photo is provided in the Supplemental Information for SIA, but no simulation was created. Aerial photography was used. That is not sufficient to support a conclusion that views of the pipeline from the trail will be screened by vegetation everywhere except directly at the crossing. Potential impacts to scenery should be described for locations where vegetative screening is thin or lacking and places where there are gaps in the canopy that may afford views to the pipeline corridor.
FA3-242	4-378	4.8.9.1	Visual Resources: In the first sentence, add "scale" to the list of landscape elements – "existing elements of form, line, color, texture, pattern or scale"
FA3-243	4-484	4.13 CUMULATIVE IMPACTS	*Projects and activities included in this analysis are generally those of comparable magnitude or nature of impact as ACP and SHP.*

Page 43

	Page #	Section #	Comment
			This criterion (particularly the requirement for having a magnitude that is comparable to ACP) would seem to permit the omission of effects from past, present, and reasonably foreseeable influences that should be considered for the cumulative effects analysis.
FA3-244	4-485	4.13 CUMULATIVE IMPACTS	*Therefore, this cumulative impact analysis considers current and other reasonably foreseeable projects that may be constructed within the geographic scope for "regions of influence") up through about mid 2019.* Although certain potential effects associated with the proposed project may only be expected to last for the short-term, others would likely persist as chronic or permanent changes to the existing condition. For example, as noted in other comments, effects to forests could persist for a century or more, and sedimentation and slope stability impacts could persist well beyond the in-service date. Restricting the analysis period to mid 2019 seems unrealistically optimistic about the rate of environmental recovery from potential effects associated with proposed activities.
FA3-245	4-485	4.13 CUMULATIVE IMPACTS	*Table 4.13-1 defines the potential geographic scope/region of influence for each resource analyzed in this section.* The geographic scope of influence is identified as the HUC-10 watersheds for numerous resources. While this area is arguably a very appropriate scale for analyzing potential effects to aquatic resources from this proposal, it presents challenges for conducting an adequate analysis of cumulative effects because of its size and the multitude of activities that realistically contribute to cumulative effects.
FA3-246	4-487	4.13 CUMULATIVE IMPACTS	*As described throughout this EIS, ACP and SHP would temporarily and permanently impact the environment.* The paragraph that begins with this statement and the paragraph that follows it severely downplay the level of risk, the magnitude, and the duration of potential consequences associated with the proposed project, particularly for aquatic resources.
FA3-247	4-489	4.13.2 Projects within the Geographic Scope of Analysis	*We identified eight types of projects that would potentially cause a cumulative impact when considered with the proposed projects. These are: ...* Limiting the cumulative effects analysis to only considering projects that fit within the eight project types that are identified following the statement above would seem to be a fatal procedural flaw. Using this approach undermines the legitimacy of conclusions drawn from this cumulative effects analysis.
FA3-248	4-485	4.13	Table 4.13-1 and throughout this section. While a watershed may be the logical/appropriate effects zone for aquatic resources, that logic does not extend to terrestrial wildlife. Recommend you consider overall range size for endemics/local populations and home range size for larger/very mobile species (e.g., those that require large expanses of unfragmented forest)
FA3-249	4-485	4.13.1	The paragraph describing acres of various land resources that have been altered over the centuries is interesting, but would be much more useful for the purposes of determining cumulative effect if all metrics were presented for all states in table form, so that comparisons could be made across and within states. Please provide, by state, the number of acres of wetlands lost, forested lands converted to agriculture, and forested lands lost to urban use.
FA3-250	4-495	4.13.3.1	Add the following text to the end of the paragraph that ends "... and would avoid unstable areas." At top of page 4-495. "Natural landslides (including debris flows) are part of the natural disturbance regime on NFS lands and non-NFS lands downslope. The natural landslide hazards (including debris flow hazards) and risks to public safety, resources, and infrastructure on NFS lands and non-NFS lands are inherent in the steep mountainous geologic setting. The ACP pipeline project would add an increment of human-induced landslide hazards and risks to 1) other human-induced landslide hazards and risks in the area (such as roads, timber harvesting, land development), and 2) the natural landslide hazards and risks in the area."
FA3-251	4-495	4.13.3.2 Soils and Sediments	*"To reduce impacts on soils, and control erosion, Atlantic and DTI would follow the measures outlined in the FERC Plan and Procedures and their construction and restoration plans (see table 2.3.1-1), which include installation of erosion control devices, topsoil, soil decompaction, and revegetation."*

Page 44

FA3-238 Section 4.8.9.1 has been revised.

FA3-239 Section 4.8.9.1 has been revised.

FA3-240 Section 4.8.9.1 has been revised.

FA3-241 Section 4.8.9.1 has been revised.

FA3-242 Section 4.8.9.1 has been revised.

FA3-243 Comment noted. The EIS was prepared in accordance with NEPA, CEQ guidelines, and other applicable requirements. The EIS is consistent with FERC style, formatting, and policy regarding NEPA evaluation of alternatives and different types of impacts, including cumulative impacts.

FA3-244 See response to comment FA3-243.

FA3-245 Comment noted.

FA3-246 See response to comment FA3-243.

FA3-247 See response to comment FA3-243.

FA3-248 Comment noted.

FA3-249 See response to comment FA3-243.

FA3-250 Comment noted. See the response to comment FA3-93.

FA3-251 Comment noted. See the response to comment FA3-93.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
			Revise to read "… which include installation of erosion control devices, topsoil **segregation**, soil decompaction, and revegetation. Specific details are outlined in the COMP."
FA3-252	4-495	4.13.3.2 Soils and Sediments	*"While the combined projects would result in an increase in erosion, given the erosion control BMPs and restoration on federal lands, we conclude that ACP and SHP, when added to other the projects within the geographic scope of influence, would not result in significant cumulative effects on soils."* On NFS lands, the dedication of the soil resource for housing a pipeline will result in an irreversible commitment of resources. Soil quality would be detrimentally impaired within the ROW as defined by FSH2550. This commitment would exist the life of the pipeline and beyond if no ecological and soil restoration occurs after decommissioning any part of the pipeline.
FA3-253	4-495	4.13.3.3 Cumulative Impacts Water Resources	*"Construction and operation of ACP and SHP would result in short-term impacts on water resources (see section 4.3). Direct and indirect impacts, such as increased sediment transport to waterbodies and turbidity, should return to baseline levels over a period of days to weeks following construction and when restoration efforts have been permanently established."* This is incongruent with the more likely and correct statement on page 4-189 that *"Long-term impacts related to slope instability adjacent to streams has the potential to severely impact water quality and stream channel geometry."*
FA3-254	4-495	4.13.3.3 Water Resources	*Construction and operation of ACP and SHP would result in short-term impacts on water resources (see section 4.3). Direct and indirect impacts, such as increased sediment transport to waterbodies and Cumulative Impacts 4-496 turbidity, should return to baseline levels over a period of days or weeks following construction and when restoration efforts have been permanently established.* Although certain potential effects associated with the proposed project may only be expected to last for the short-term, others would likely persist as chronic or permanent changes to the existing condition. Even in the absence of an accepted analysis of potential soil erosion and stream sedimentation that may further reveal persistent impacts, some longer lasting effects are already acknowledged in various sections of the DEIS but ignored here.
FA3-255	4-497	4.13.3.3 Cumulative Impacts Water Resources	*"Section 4.3.1 describes the occurrence of water wells and springs in the vicinity of the projects.* ***We were unable to quantitatively determine the number of these features on a HUC-10 watershed basis.*** *However, it is apparent that ACP and SHP routes would cross near numerous wells and springs, some of which would be within 0.1 mile of ACP and SHP. . . it is generally unlikely that pipeline activities would negatively affect groundwater supplies from wells, although springs may be more subject to disruption"* It is unclear and unsubstantiated how an effects determination can be made if the number and location of wells and springs is unknown.
FA3-256	4-497	Groundwater	*As is the case with ACP and SHP, most other types of other projects listed in table W-1 in appendix W would have a similar, limited ability to significantly affect groundwater resources.* The limited ability of ACP to significantly affect groundwater is stated as fact here although information needed to help substantiate such a claim (soils analysis) has not been produced or accepted at the time of this review.

Page 45

	Page #	Section #	Comment
FA3-257	4-497	Surface Waters	This section contains statements that are based on incomplete analyses (soils, erosion/sediment, and cumulative effects), that are contradictory, and erroneous in concluding that *"the cumulative effect on surface waterbody resources would be temporary and minor."*
FA3-258	4-498	4.13.3.3 Cumulative Impacts Water Resources	*"Therefore, most of the impacts on waterbodies are expected to also be of short duration. Consequently, the cumulative effect on surface waterbody resources would be temporary and minor."* This is incongruent with more likely and correct statement on page 4-189 that *"Long-term impacts related to slope instability adjacent to streams has the potential to severely impact water quality and stream channel geometry."*
FA3-259	4-499	4.13.3.4	*"We are not able to discern specific impacts on forested vegetation or any other vegetation category for all the other projects contributing cumulative impacts on vegetation."* This statement is not consistent with the analysis that precedes it. Page 4-487 states that ACP will cross 63 HUC-10 watersheds and gives both acres and percent of the watersheds that will be affected by ACP and SHP? Page 4-487 also clearly states, "…projected impacts on forested vegetation and habitat… due to the number of total acres cleared, fragmentation of interior forests, and time required to recover this vegetation/habitat type, would be a significant impact." And "In terms of other projects that were recently constructed, or may be constructed in the near future, we also considered permanent impacts on specific environmental resources (i.e., removal of forest)." The entirety of section 4.13.2 is devoted to describing specific projects within the geographic scope of analysis that contribute to cumulative impacts, and Table 4.13.2-1 gives numbers of acres of temporary and permanent forested land impacts for all FERC related projects in that area. Please update this analysis, based on details available in preceding pages and the supporting documents that contributed to those sections.
FA3-260	4-499	4.13.3.4	*"Based on NLCD from the EP, there are about 4,554,892 acre of upland forest in the shared HUC-10 watershed within the geographic scope of influence."* The ACP and SHP pipelines cross 73 HUC-10 watersheds. Please clarify this apparent reference to a singular HUC-10 watershed. Also, given that this section is describing cumulative impacts, it is not sufficient to compare the impact today to what exists today. Please present the acreage of forested lands that exist now as a percentage of what used to exist prior to agricultural and urban clearing, and the acreage of what will be removed by ACP as a percentage of the forested land that remains. *"While the vegetation impacts of these projects and ACP and SHP would not be inconsequential, the overall impact of these projects would be considered minor to moderate."* The above statement is in direct contradiction to the statement earlier in the document (p. 4-487) that says "… *projected impacts on forested vegetation and habitat… due to the number of total acres cleared, fragmentation of interior forests, and time required to recover this vegetation/habitat type, would be a significant impact.*" *"The potential for habitat fragmentation resulting from ACP and SHP would be further reduced because the majority of the disturbed areas would be allowed to return to pre-existing condition."*

Page 46

FA3-252 Comment noted.

FA3-253 Comment noted.

FA3-254 See response to comment FA3-243.

FA3-255 See response to comment FA3-243.

FA3-256 Comment noted.

FA3-257 See response to comment FA3-243.

FA3-258 Comment noted.

FA3-259 See response to comments FA3-243 and FA3-93.

FA3-260 See response to comments FA3-243 and FA3-93.

	Page #	Section #	Comment
			• If the project is permitted, habitat fragmentation would be certain rather than potential. • Some of the disturbed areas would be re-vegetated, to some degree. Only already disturbed land would be "allowed to return to pre-existing condition" because wherever mature forest is being cleared, it is highly unlikely that ecosystem services of the same quality will be restored in our lifetimes. • The fact that some areas will be revegetated does not reduce the likelihood of fragmentation at all, because it is a linear fragmentation. There will still be a 600+ mile unbroken line of cleared land if this pipeline is installed. Please revise for clarity and accuracy.
FA3-261	4-499	Wetlands	*Given the relatively small total of wetland acres affected by the combination of ACP and SHP, as well as the other projects listed in table W-1 in appendix W, we conclude that cumulative impacts on wetlands within the HUC-10 watersheds, when considered with the projects identified in this analysis, would not be significant.* This conclusion seems to relate mostly to a comparative assessment of the proportionate share of potential ACP contributions to cumulative wetland impacts rather than appropriately addressing potential consequences to wetlands from cumulative effects of past, present, and reasonably foreseeable future actions.
FA3-262	4-500	4.13.3.4	*"Cumulative impacts on vegetation…are expected to be minor to moderate."* Page 4-487 states, "…*projected impacts on forested vegetation and habitat…would be a significant impact.*" Please revise the cumulative effects section for consistency.
FA3-263	4-500	4.13.3.4	*"…the large amount of undisturbed vegetation…"* Please define what is meant by undisturbed. Virtually all forested land in the geographic analysis area has been cut over at least once, and much of it several times, since the arrival of Europeans.
FA3-264	4-500	4.13.3.5	*"However, there are over 8.2 million acres of land area, much of which provides habitat for wildlife…"* and *"In general, wildlife is expected to return to affected areas following construction of ACP and SHP and other projects in the area."* As previously commented, these statements are extremely general and only address common species. There are many local populations that could be affected, which do not extend across the 8.2 million acres, and are quite specific in their habitat requirements (simple vegetative cover type is not a good proxy for many of these species, which require other specific biotic and abiotic habitat features). Cumulative effects/habitat disturbance history is the reason many of these species are now rare. Fragmentation and the species most affected need to be discussed, either here or in the fragmentation analysis, which contains no discussion. Somewhere in this document or the fragmentation analysis, fragmentation needs to be discussed (which species are most affected, how/why are they affected, how much does the proposed fragmentation reduce the interior or intact portions of the forests, etc.). There is a good general discussion on fragmentation in the *Migratory Bird Plan* that could be copied here or referenced, but species are not addressed and there is no analysis.
FA3-265	4-501	4.13.3.5	*"Given the large amount of wildlife habitat that would remain undisturbed within the geographic scope of influence, the measures that Atlantic and DTI would use to minimize impacts associated with vegetation and habitat removal and re-establish the right-of-way, and the requirements for restoration for other projects, we conclude that ACP and SHP, combined with the other identified projects, would not have a significant cumulative impact on wildlife."* Given the incomplete survey information and analysis of impacts of the proposed actions on the most sensitive species in this area (migratory birds, Management Indicator Species), this statement is premature and needs to be substantially verified with currently unfinished sections of this EIS, reports and analysis.

Page 47

	Page #	Section #	Comment
FA3-266	4-501	4.13.3.6 Fisheries and Aquatic Resources	This section identifies various sources and potential consequences of impacts that would likely contribute to cumulative effects and correctly states that, "*Impacts on aquatic resources would be temporary to long term.*" However, the statement that "*ensuing operations of the proposed ACP and SHP would not result in any cumulative impacts unless maintenance activities take place in or near streams at the same time/location as other (non-related) project work*" suggests a misconception of cumulative effects and undermines the credibility of resulting conclusions.
FA3-267	4-502	4.13.3.7	Please include a table of the specific effects that are expected for each species. Simply stating that the projects will affect a certain number of species in each jurisdiction does not give an indication of what species in particular will be affected, or how, or to what degree, and thus makes it impossible to assess the cumulative effects of this project on these species.
FA3-268	4-503	4.13.3.7 Special Status Species	*Consequently, we conclude that projects in the geographic scope of influence in combination with ACP and SHP would have minor cumulative effects to special status species.* Given an acknowledgement of missing information needed to assess potential project-related effects, failure to fully recognize the implications of potential effects that have been identified, and the use of a questionable approach to conduct and interpret potential cumulative effects, this statement currently lacks credibility for aquatic species.
FA3-269	4-504	4.13.3.7	*"The species discussed in section 4.7 of this EIS could potentially be affected by construction and operation of other projects within the same geographic scope of influence of ACP and SHP. Atlantic, DTI, and all other companies' projects are required by law to coordinate with the FWS, which will take into account regional activity and changing baseline conditions when determining the extent of impacts on a federally listed or proposed species. Non-federal projects are also required to adhere to the ESA, although the FWS has a different mechanism for evaluation and minimizing impacts. Protection of threatened, endangered, and other special status species is part of the various state permitting processes or resource reviews. As such, cumulative impacts on such species would be specifically considered and reduced or eliminated through conservation and mitigation measures identified during those relevant processes and consultations. Consequently, we conclude that projects in the geographic scope of influence in combination with ACP and SHP would have minor cumulative effects to special status species."* Given the incomplete survey information and analysis of impacts of the proposed actions on these species (including Regional Forester's Sensitive Species, locally rare species), this statement is premature and needs to be substantially verified with currently unfinished sections of this EIS, reports and analysis.
FA3-270	4-513	4.13.3.14	*"With exception of the WB XPress Project and MVP, no FERC jurisdictional projects evaluated for the cumulative impacts analysis are within NFS lands. It is anticipated that any adverse impacts on sensitive resources within the MNF and GWNF (and the Jefferson National Forest, which is proposed to be crossed by the MVP) resulting from any other types of projects considered in our analysis would be regulated through project design, BMPs, and NFS permitting. Therefore, we conclude that the cumulative impacts associated with ACP and SHP, when combined with other known or reasonably foreseeable projects in the geographic scope of influence, would not be cumulatively significant."* This statement is premature and not accurate for a number of reasons. This EIS has incomplete survey information and analysis of impacts of the proposed actions on sensitive species, as well as visuals and cultural resources. Preliminary determinations of "may adversely affect" for a number of federally listed species puts into question the above statement of "not cumulatively significant" for this project alone. No information is presented from the other ongoing gas pipeline projects overseen by FERC to substantiate the statement that any adverse effects/impacts on sensitive resources would be adequately mitigated, to come to a "not cumulatively significant" conclusion. There is no justification given in this section for this statement other than 1) how many acres the pipelines would affect, 2) whether or not the MNF and GWNF would need to amend their LRMPs or not, 3) that there are only two other FERC-jurisdictional projects evaluated in

Page 48

FA3-261 Comment noted.

FA3-262 Comment noted.

FA3-263 Comment noted. See the response to comment FA3-93.

FA3-264 See response to comments FA3-243 and FA3-93.

FA3-265 Comment noted.

FA3-266 Comment noted.

FA3-267 Comment noted. See the response to comment FA3-93.

FA3-268 See response to comment FA3-243.

FA3-269 See response to comment FA3-243.

FA3-270 Comment noted. See the response to comment FA3-93.

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

	Page #	Section #	Comment
			NFS lands, and that 4) any other projects' effects would be mitigated by various means. There is no information about effects to vegetation, water, air quality, soils, wildlife, recreation, scenery, timber, or other resources for either of these two forests. Please justify the conclusion that impacts to these Forests would not be cumulatively significant by summarizing the impacts expected to each of these resources within each of these Forests in relation to the Forests' resources as a whole, including TES species, and deriving the cumulative impact per Forest as a summation of the individual impacts.
FA3-271	4-513	4.13.3.14	The DEIS states "*To address proposed impacts on the GWNF, the LRMP would be amended to make provisions for ACP*". Changing the LRMP to accommodate a project is not the same thing as addressing proposed impacts, as this statement implies. This statement should be changed to better reflect what it is intended to mean; that the ACP project cannot be made consistent with the GWNF LRMP and the LRMP will therefore be changed to accommodate the project.
FA3-272	5-3	5.1.2 Soils	There is no mention of soil carbon and the effects to soil carbon from soil disturbance within the soil section of this document. There needs to be a section incorporating data from the Order 1 Soil Survey on soil carbon. The U.S. Department of Agriculture adopted a National Forest System land management planning rule in 2012, commonly referred to as "the 2012 planning rule." This rule will guide the development, amendment, and revision of land management plans for all units of the National Forest System (https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5362536.pdf). Based on the 2012 Planning Rule, FS project planning will include the identification and evaluation of information relevant to understanding ecological conditions and trends and to forming a baseline assessment of carbon stocks. Plans will include components to maintain or restore ecological integrity so that ecosystems can resist change, are resilient under changing conditions, and are able to recover from disturbance. From this planning rule, the FS is working towards establishing ways to incorporate carbon mitigation from large-scale soil disturbing projects. Based on the 2012 planning rule, the FS required ACP to include soil carbon within soil testing parameters obtained from the Order 1 Soil Survey. The soil carbon data obtained from sampling will be used to estimate soil carbon loss due to soil disturbance activities associated with the ACP pipeline construction. The carbon lost due to pipeline construction will be mitigated post construction.
FA3-273	5-12	5.1.6 Aquatic Resources	*The FS requested that Atlantic complete aquatic species surveys at waterbody crossings on the MNF to document potential RFSS and suitable habitat.* See comment for page 4-195. Although the MNF did not require these surveys to be conducted for project planning purposes, it is recommended that an aquatic resource monitoring plan be developed and implemented if any proposed project activities that may be approved. Details of the aquatic resource monitoring plan should be jointly developed by the various interested parties to ensure monitoring design and information is germane to the monitoring issues and protocols are appropriate and acceptable.
FA3-274	5-15	5.1.7 Special Status Species	*Due to inconsistencies between survey reports, incomplete incorporation of FS revisions and comments to reports, incorrect terrestrial and aquatic community classification data, incomplete quantification of habitat impacts (i.e., old growth, karst features), incomplete sedimentation analysis of watersheds, pending survey information (e.g., access roads), and lack of species-specific conservation measures, the FS is currently unable to provide determination of effects for the majority of RFSS. Therefore, we have recommended that Atlantic file a revised BE, MIS Report, and GWNF Locally Rare Species Report that addresses these issues.*

Page 49

	Page #	Section #	Comment
			This statement summarizes many of the short comings associated with the various analyses related to aquatic resources and elucidates the rationale for reservations concerning concluding statements within the DEIS about potential project impacts.
FA3-275	5-18	5.1.8	Conclusion for Visual Resources – 2nd paragraph on page, sentence 5 (about half way through the paragraph), change the wording of the sentence to: The Visual Impact Assessment analyzes the impacts to scenery viewed from identified key observation points on the MNF and GWNF to determine whether the project will meet SIOs established in the FLRMP.
FA3-276	5-18	5.1.8	PROCESS QUESTION: FERC recommends ACP provide documentation that the MNF, GWNF and ATC concur with the conclusions and determinations of the effects to scenery. When and how do we address that with ACP?
FA3-277	5-19	5.1.8	I do not agree with the concluding statement that overall impacts on land use, recreation, special interest areas, and visual resources will be adequately minimized since SIOs will not be met for views from several KOPs.
FA3-278	5-25 & 26	5.1.14	Cumulative Impacts: This section states that 8 kinds of projects were considered with regards to cumulative impacts, but no cumulative impacts analysis is provided. With regards to scenery, while the landscape has been altered throughout history (as stated in the DEIS), FS ownership and management has restored the natural appearing landscape character. The proposed pipeline is a step back with regards to scenery. Long term special use sites and permanent rights-of-way such as for pipelines, electric transmission lines, communication sites and cell phone towers continue to be constructed on the national forest with cumulative impacts to scenery that should be documented.
FA3-279	B-30	App. 1, Page 30 of 174	This topo route map does not show the names of the proposed access roads. This topo route map includes the road up Laurel Run, shown elsewhere as 36-014.AR5. ACP agreed to not utilize or this could
	B-49	App. 1, Page 49 of 174	USFS ownership data is depicted inaccurately. It shows a rectangular private "inholding" east of the pipeline route between MP 154 and 155 which the "NATIONAL FOREST OWNERSHIP (USA)" GIS data layer clearly shows is now NFS lands.
FA3-280	F-6	2.0 Purpose	"*A more detailed description of seed mixes by region is presented in Appendix B.*" The USFS developed NFS land-specific guidance for developing seed mixes that are specific to elevation, soil pH, precipitation, etc. This document needs to be referenced here and also attached. This document was filed with the FERC on December 16, 2016 (Docket # CP15-554-000, CP15-554-001).
	F-7	2.0 Purpose	"*These meetings and consultations provided information about the appropriate seeding rates and percentages of each type of seed within a specific seed mix, as well as the location each seed mix is to be used considering the various soil types, elevations, temperatures, and other growing conditions along the right of way.*" On NFS lands, FS-approved seed mixes and seeding guides will be used. This seed mix should be provided within this document and cited as an appendix or in some formal manner.
	F-8	5.1 Erosion Control	"*Slope Breakers – Temporary and permanent slope breakers will be installed, where required, to slow runoff velocity and direct water off the rights-of-way. Temporary slope breakers, such as hay bales (weed free), silt fence, or earthen berms, will be installed prior to the start of construction activities. Permanent slope breakers will be installed during final grading.*"

Page 50

FA3-271 Section 4.13.3.14 has been revised.

FA3-272 See the response to comment FA3-93.

FA3-273 This referenced text has been revised.

FA3-274 Comment noted.

FA3-275 The referenced text in section 5.1.8 has been revised.

FA3-276 The FS would continue to work with Atlantic to develop mitigation and restoration measures and monitoring procedures to minimize the impacts on NFS resources.

FA3-277 Comment noted.

FA3-278 The commentor refers to text in the Conclusions and Recommendations section of the draft EIS; the full cumulative impacts analysis is provided in section 4.13.

FA3-279 The project facility maps in appendix B have been revised.

FA3-280 Comments noted.

FA3-280 (cont'd)

Page #	Section #	Comment
		Spacing between temporary and permanent slope breakers will be defined by the slope and soil type and referenced in the COMP. Temporary Sediment Barriers will be maintained and cleaned frequently so as to function in a manner that is effective at providing protection during a storm event (high precipitation rates and in a short duration.) Silt fence shall not be used at locations of concentrated overland flow, whether the flow is natural or constructed. Compost filter socks or other controls designed to filter or chemically remove sediment from water shall be used in those locations, subject to FS approval. Silt fence may be used as perimeter control where concentrated flow does not exist, as well as where prescribed as a barrier to keep threatened, endangered, and sensitive (TES) species out of the work area, or spoil materials or sediments out of TES habitat. Where temporary slope breakers are deemed necessary during construction, as determined by consultation between ACP's environmental inspector and the FS representative, install berms or other appropriate diversion structures on the ROW to intercept and divert water from the ROW. Install 12-inch diameter or larger compost filter socks at the outlet of the berms to control sediment transport. In areas where excessive run-on (i.e., onto the ROW or access roads) is expected or occurs, diversion channels or berms may be installed on the upslope side of the ROW. Run-on diversions or berms shall disperse the water into a well vegetated area such that it does not result in concentrated discharge or rill erosion at or downslope of the outlet. One or more 12-inch or larger diameter compost filter socks shall be installed at each outlet to aid in reducing energy and removing sediment suspended in the discharged water. No hay bales to be used on NFS land, only weed free straw.
F-8	5.1 Erosion Control	*"Temporary Sediment Barriers – Temporary sediment barriers, such as silt fences, staked hay or straw bales (weed free), or a combination of barriers, will be installed at the base of slopes adjacent to road, wetland, and waterbody crossings, and in other areas where required to prevent the transport of sediment off the construction rights-of-way."* No hay bales should be used on NFS land, only weed free straw.
F-9	5.1 Erosion Control	*"Permanent Trench Breakers – Sacks of subsoil or sand, polyurethane foam, or bentonite clay bags installed around the pipe will remain in the trench to prevent subsurface channeling of water along the trench."* Describe trench breaker/plug materials and construction. Foam will not be permitted on National Forest land. Bags of concrete mix may be used no more frequently than every other plug; sand bags or other semi-permeable, FS-approved material shall be used for all other trench plugs. Describe trench breaker/plug spacing. FERC spacing specifications are acceptable to the FS, although closer spacing may be employed where ACP determines a need due to slope steepness.
F-9	5.1 Erosion Control	*"Mulch – Straw (weed free), hay (weed free), erosion-control fabric, or other equivalent material will be placed on the rights-of-way, where required, to protect the soil surface from water and wind erosion and to optimize the soil moisture regime necessary for successful revegetation, especially on dry, sandy sites."* The use of hay is prohibited on NFS lands.

Page 51

Page #	Section #	Comment
		Erosion-control fabric shall not be used on NFS lands due to wildlife concerns. ACP shall use FS-approved soil conditioners, hydromulch, soil binders, etc. that will be non-harmful to wildlife and the environment.
F-9	5.1 Erosion Control	*"Where appropriate for local resource priorities, the role of the EI may be filled by agricultural or horticultural monitors."* Dominion EI's along with FS representatives will inspect on NFS lands.
F-9	5.2 Soil Restoration	*"Successful revegetation is dependent on appropriate soil conditions and can be influenced by several factors, including soil texture, drainage class, salinity, and acidity. Soil characteristics along the pipeline routes and access roads and at contractor yards and aboveground facility sites are identified in Resource Report 7."* On NFS lands, the Order 1 Soil Survey will provide the nutrient requirements for successful revegetation along the ROW. The Order 1 Soil Survey will also advise the need for liming based on soil pH. There should be inclusion of data from the Order 1 Soil Survey and discussion of data results within this document.
F-9	5.3 Soil Compaction	*"Atlantic and DTI will minimize impacts by implementing the mitigation measures for compaction and rutting as described in the Plan and Procedures."* The Order 1 Soil Survey provides data on soil characteristics that would identify areas along the ROW that are compaction-prone. This information should be provided within this document addressing NFS Lands and used to discuss compaction potential on NFS Lands. According to MNF LRMP SW06, rutting resulting from management activity shall be confined to less than 5% of an activity area. This LRMP needs to be stated when mention of rutting occurs within this document. The analysis needs to determine if this standard can be met on NFS lands.
F-9	5.3 Soil Compaction	*"Atlantic and DTI will test for soil compaction."* Compaction testing is required on MNF lands in accordance with MNF LRMP SW03. All compacted areas must be decompacted. Employ timber mats or trench spoil to protect underlying soil where possible. Limit the use of heavy equipment on steep slopes to the minimum amount necessary. Use a cone penetrometer to measure compaction on the construction ROW prior to and following completion of construction activities. Post construction compaction that exceeds pre-construction compaction indicates the need for compaction remediation. On ROW slopes <20% where compaction remediation is needed, use de-compaction techniques such as a ripper, harrow disk, backhoe bucket teeth, chisel plow, or other FS approved techniques to de-compact travel lanes and any other compacted areas. On ≥20% slopes where compaction remediation is needed and can be accomplished safely and effectively without causing further resource damage, use backhoe bucket teeth, or another safe, FS-approved method, to break up compacted soils.

Page 52

FA3-280 (cont'd)

Page #	Section #	Comment
7-10	5.4 Topsoil Segregation, Replacement, and Soil Contamination	*"Topsoil segregation will generally not occur in forested areas."* Topsoil segregation will occur in forested areas on NFS lands in accordance with MNF LRMP SW15. At a minimum, the FS will require segregation over the trench area for the top 6 inches of material, or all actual topsoil as identified by the FS, whichever is deeper, throughout all areas of National Forest land. The FS will require temporary seeding or other FS-approved technique for any material left exposed for more than seven days. Describe methods for preventing saturation of stockpiled material, which could lead to slippage of backfilled material. Techniques may include temporary seeding and mulching, use of tarps, implementing an accelerated backfilling schedule, or other methods proposed by ACP and approved by the FS.
7-11	5.6 Steep Slopes	*"Areas with steep slopes along the pipeline routes may make the establishment of vegetation more difficult due to the increased potential for stormwater runoff and erosion by water."* ACP must comply with MNF SW06 which states that rutting shall be confined to less than 5 percent of an activity area and also must meet the intent of the LRMP SW07, which is to maintain stabilization on slopes greater than 40%. There are effective erosion control measures that can be implemented on steep slopes to aid in revegetation. The use of soil stabilizers or conditioners in conjunction with hydroseed can be an effective complementary measure for erosion control on steep slopes.
7-11	5.6 Steep Slope Areas	*"Table 5.6-1 in Appendix A quantifies by county the major soil drainage and slope classes crossed by the Projects. Soil drainage classes were used to determine some of the grass seed types utilized in specific mixes (see Section 5.7.5)."* On NFS lands, the Order 1 Soil Survey data should be incorporated into a table to display drainage classes and to be used to aid in revegetation discussions. The FS provided guidance for developing seed mixes that should also be cited here along with data from the Order 1 Soil Survey. The seed mix guidance was filed with the FERC on December 16, 2016 (Docket # CP15-554-000, CP15-554-001)
7-12	5.6 Steep Slope Areas	*"Also as discussed in Resource Report 6, Atlantic and DTI will implement the Slip Avoidance, Identification, Prevention, and Remediation – Policy and Procedure, and are conducting geotechnical studies along the proposed pipeline routes in Pennsylvania, West Virginia, and western Virginia in steep terrain areas to assess the potential for landslides and landslips to occur during construction and operation of the Projects."* The data collected from geotechnical studies should be incorporated into the EIS.
7-12	5.6 Steep Slope Areas	*"The following lists some of the special design and construction mitigation measures that will be implemented during construction in steep slope areas:* • *targeted management and diversion of surface water around landslide sites, including the use of ditches, berms, slope breakers, and/or grading;* • *mitigation of surface erosion by armoring or otherwise stabilizing surface soils using riprap, coir mats, hydroseeding, mulching, and/or tracking;* • *targeted management of water sources along the trench, including the use of trench breakers and/or added drainage piping in the trench;*

Page 53

Page #	Section #	Comment
		• *targeted mitigation of seeps, springs, or other subsurface water encountered along the rights-of-way using subsurface drains or other special drainage measures;* • *engineering of the backfill around or within steep slope areas to dry the backfill, add compaction, improve backfill soil strength, and reduce saturation;* • *installation of targeted structures to stabilize backfill using engineered fill, retaining walls, rock-crete placements, key trenches, and/or shear trenches; and* • *reduction in surcharge on steep slope areas by reducing excess or saturated backfill."* Describe trench breaker/plug materials and construction. Foam will not be permitted on National Forest land. Bags of concrete mix may be used no more frequently than every other plug; sand bags or other semi-permeable, FS-approved material shall be used for all other trench plugs. Describe trench breaker/plug spacing. FERC spacing specifications are acceptable to the FS, although closer spacing may be employed where ACP determines a need due to slope steepness. On slopes greater than 30 percent, bleeder drains shall be spaced no farther apart than every other trench plug. Closer spacing may be used where ACP determines a need due slope steepness, discharge volume, or other factors. Bleeder drains may be needed on slopes less than 30 percent if subsurface flow or seeps are encountered during trench excavation. The Forest Service representative and ACP's environmental inspector will consult to determine the need for bleeder drains on slopes less than 30 percent. Protect bleeder drain outlets using rip-rap or other FS-approved material. The FS may specify alternate materials in certain locations if necessary for protection of resources. The FS will require post-construction water quality testing at selected bleeder drain outlets. Locations will be selected by the FS based on nearby sensitive resources, and the FS will provide the chemical parameters to be included in the testing.
7-12	5.6 Steep Slope Areas	*"...engineering of the backfill around or within steep slope areas to dry the backfill, add compaction, improve backfill soil strength, and reduce saturation;..."* The USFS understands the need for compaction of backfill material for stability purposes. However, the depth of backfill compaction and level of backfill compaction have not been discussed or agreed upon by ACP and USFS. On NFS Lands, no intentional compaction of near-surface soils used for revegetation will take place.
7-12	5.7 Site Preparation and Seeding	*"In the event that these timeframes cannot be met or construction or restoration activities are interrupted for an extended period, mulch will be spread prior to seeding. In these cases, all slopes within 100 feet of wetlands or waterbodies will be mulched at a rate of 3 tons per acre."* MNF LRMP standard SW03 states that disturbed soils dedicated to growing vegetation shall be rehabilitated as soon as possible, but generally within 2 weeks after project completion.

Page 54

FA3-280 (cont'd)

Page #	Section #	Comment
		The USFS recommends mulch 1-3 tons/acre (1-3" depth) with an appropriate amount if nitrogen fertilization depending on the site characterizations and the Order 1 Soil Survey data.
F-13	5.7.1 Seedbed Preparation	*"Unless otherwise specified by land managing agencies or landowners, the seedbed will be prepared in disturbed areas to a depth of 3 to 4 inches using appropriate equipment (e.g., cultipacker roller) to provide a seedbed that is firm, yet rough. Atlantic and DTI will imprint exposed soils with a sheepsfoot, landfill compactor, tractor with studded tires, or land imprinter equipment. Soil imprinting, or tracking, leaves divots on the ground surface that trap moisture and seeds, creating catchments for native plant material to be spread across the seeded area (West Virginia Department of Environmental Protection, 2012). In addition, a seedbed with a rough surface is conducive to the capturing or lodging of seed when broadcasted or hydroseeded, and can reduce runoff and erosion potential. The rough seedbed surface will also retain soil moisture for seedling germination and promote faster establishment of vegetation."* A cultipacker roller shall not be used on NFS Lands. This equipment will likely create un-needed compaction that will limit the revegetation potential, and sites ultimately may have to be decompacted and reseeded. Equipment and methods used to restore the ROW post-construction will require Forest Service approval. Restoration should include promoting infiltration, controlling erosion and maintaining stability, and creating a surface conducive to successful seed establishment.
F-13	5.7.1 Seedbed Preparation	*"In compacted areas, additional measures such as chisel plowing or disking may be necessary to improve water infiltration and soil aeration necessary to prepare an adequate seedbed. When hydroseeding, Atlantic and DTI will scarify the soil surface prior to seeding to anchor the seed to the soil surface and encourage germination."* Include a section pertaining to seedbed preparation specifically on NFS lands. Compaction testing is required on MNF lands in accordance with MNF LRMP SW03. All compacted areas must be decompacted. Address the prevention of compaction during construction, and remediation of compaction after construction. Employ timber mats or trench spoil to protect underlying soil where possible. Limit the use of heavy equipment on steep slopes to the minimum amount necessary. Use a cone penetrometer to measure compaction on the construction ROW prior to and following completion of construction activities. Post-construction compaction that exceeds pre-construction compaction indicates the need for compaction remediation. On ROW slopes <20% where compaction remediation is needed, use de-compaction techniques such as a ripper, harrow disk, backhoe bucket teeth, chisel plow, or other FS-approved techniques to de-compact travel lanes and any other compacted areas. On >20% slopes where compaction remediation is needed and can be accomplished safely and effectively without causing further resource damage, use backhoe bucket teeth, or another safe, FS approved method, to break up compacted soils.
F-13	5.7.2 Seeding	*"On all other lands, Atlantic and DTI will perform seeding of permanent vegetation during the Fall of the year construction is completed, within the recommended seeding dates, and within six working days of final grading, weather and soil conditions permitting."* Include a NFS Land-specific seeding section within this section. The NFS lands have their own seed mix guidance document which will be used to develop seed mixes for NFS lands. This needs to be acknowledged within this section.

Page 55

Page #	Section #	Comment
		Three years of site monitoring will be required to ensure that germination and establishment have occurred in accordance with the WV DEP Erosion and Sediment Control regulations requiring 70% vegetative cover to provide sufficient vegetation to control erosion and sedimentation.
F-14	5.7.3 Seeding Revegetation Units along the Pipeline Route	*"After consultations with Federal, State/Commonwealth, local resource and land managing agencies, and subject matter experts and in order to ensure optimum seed germination and growth, the areas crossed by the Projects were divided into four Revegetation Units (RU)."* On NFS Lands, seeding shall be based on the NFS seeding document filed with the FERC on December 16, 2016 (Docket # CP15-554-000, CP15-554-001) and fertilizing and liming shall be based on Order 1 Soil Survey data. This information needs to be incorporated into a NFS Lands specific section where Order 1 data is described and discussed.
F-14	5.7.3.1 Steep to Very Steep Slope	*"Although the Steep to Very Steep Slope RU includes areas with greater than 15 percent slope located anywhere along the Projects, most of these areas are located within the mountainous areas of the western Piedmont Physiographic RU and the Mountain Physiographic RU (see Figure 5.7.3-1). To a much lesser extent, the Steep to Very Steep Slope RU may also be found in smaller, site-specific areas along the pipeline rights-of-way where the steepness of the local terrain increases the erosion potential. These areas in this RU require appropriate seed mix prescriptions, erosion control measures, and BMPs that are able to quickly stabilize the disturbed areas to minimize erosion and sedimentation."* There needs to be a separate section discussing slope percentages, elevation, etc. on NFS land. Within this section there needs to be specific detail from Order 1 soil survey data along with discussion of the NFS Lands seeding document filed with the FERC on December 16, 2016 (Docket # CP15-554-000, CP15-554-001).
F-18	5.7.3.2 Mountain Physiographic Region	*"The proposed Mountain Physiographic Region Seed Mix P-MPDW01 (Tables 5.7.5-1 and 5.7.5-2) was designed to be compatible with the Mountain Physiographic Region RU in areas with slopes of 15 percent or less. The mix is based on selected native grass and forb species suitable for the restoration of excessively to moderately well-drained mountainous areas in West Virginia."* The USFS has provided specific guidance for seed mix development on NFS Lands. This document, along with results from the Order 1 Soil Survey, will provide the appropriate detail for seeding in NFS Lands.
F-18 to F-26		"5.7.5.2 Mountain Physiographic Region Seed Mixes" On NFS Lands, Order 1 Soil Survey data needs to be used when addressing any soil physical, chemical, or characteristic properties. This section displays seed mixes based on steep slopes, drainage class, etc. on NFS Lands the USFS is requiring that ACP use the Order 1 Soil Survey in conjunction with the USFS seeding document to accurately choose the appropriate seed mix, fertilizer and lime rate based on the parameters listed in this section.
F-27	5.7.6 Seeding Methods	*"In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by an EI. Broadcast or hydroseeding at double the recommended seeding rates may be used in lieu of drilling (see Appendix B for recommendations)."* On NFS Lands, where there are steep slopes and rocky soils, hydroseeding and a soil conditioner will need to be used to accomplish successful seeding on steep slopes.
F-27	5.7.6 Seeding Methods	*"Hydroseeding is the preferred method of seed dispersal on steep slopes greater than 60 percent, where site conditions require seed adherence to the disturbed soil. Prior to hydroseeding, Atlantic and DTI will scarify the seedbed to facilitate lodging and germination of seed. Tackifiers will be applied where necessary so that seed adheres to soil. Polymer binders, if selected, will be used in accordance with manufacturer's specifications to ensure proper compatibility with fertilizers and to avoid foaming that might otherwise result from*

Page 56

FA3-280 (cont'd)

Page #	Section #	Comment
		excessive agitation. All chemical components will be mixed and administered in accordance with manufacturer and applicable agency guidelines." All hydroseed mix components will need to be approved by USFS prior to application. Chemicals that are not biodegradable or not environmentally safe and could lead to contamination shall not be used on NFS Lands.
7-14	5.7.3.2 Mountain Physiographic Region	*"The ACP Project area extends across the Mountain Physiographic Region RU in West Virginia and western Virginia (see Figure 5.7.3-1). In West Virginia, the RU encompasses the Western Allegheny Plateau, Central Appalachians, and Ridge and Valley ecoregions.* *The soils in the Mountain Region RU generally consist of shallow soils with a loamy surface and subsoil texture. Steep slopes with shallow, stony, droughty soils are common throughout the area, and many mountainous soils have been severely eroded due to steepness. In less steep areas, the soils are deep and stable (less erodible)."* Data from the Order 1 needs to be incorporated into a NFS Lands-specific section within this section. These results will provide a more accurate representation of soil texture, moisture, and depth.
7-27	5.8.1 Lime and Fertilizer Application	*"In upland areas without specific fertilization requirements, Atlantic and DTI will:* • *apply 150 pounds per acre of 10-20-20 (or similar) fertilizer;* • *apply phosphorus or potassium during the same installation, if required;* • *avoid fertilizer drift through restricted application times that exclude periods of high winds or heavy rains; and* • *store and mix all fertilizers in upland areas and away from karst features, where contamination of wetlands, waterbodies, or karst features will be avoided."* Liming and fertilization rates on NFS Lands will be based on Order 1 Soil Survey data. Include a NFS Land-specific section addressing Order 1 data and discussing appropriate rates based on these results
7-28 7-29	5.8.2 Mulching 5.8.2 Mulching	*"Mulch materials will be anchored to the soil with stakes or liquid mulch tackifiers. No tackifiers will be used within 100 feet of wetlands and waterbodies or within 300 feet of karst features."* Mulch materials used on NFS lands must be pre-approved by the FS prior to application. The use of material that may result in contamination is prohibited on NFS Lands. On steep slopes, the use of soil conditioners or binders are necessary. ACP will provide to the FS the material composition of all mulch to be used on NFS lands. *"Straw or hay that has been certified as weed-free will be used to preserve the soil base in areas where native salvaged material is not available."* The use of hay shall not be permitted on NFS Lands.
7-31	5.10 Wetland Restoration	*"Seeding of wetlands is not anticipated as wetlands are expected to naturally revegetate."* Seeding of wetlands will occur on NFS lands. A list of recommended species for wetland seeding on NFS lands is located in the USFS seed mix document.
7-31 to 7-32	5.13 Upland Forest	Timber harvesting on steep slopes (40% or greater) would need to be done in a manner that ensures slope stability and complies with MNF LRMP standard SW07 from the time the timber is harvested until pipeline construction begins. Winter logging must meet MNF LRMP standard SW09 as well as all other erosion control plans and LRMP standards.

Page 57

Page #	Section #	Comment
		Options include helicopter logging, use of overland equipment that does not require skid road development, and other non-ground disturbing methods as approved by FS personnel. Sediment and erosion control features are to be employed on these slopes as outlined in the COMP. Short term erosion control measures are to be utilized as directed in the COMP prior to the start of disturbance for the construction of the pipeline. All timber harvest roads are to be fully reclaimed and restored according to MNF LRMP standards (RF07, RF12, RF13, and RF15).
7-33	8.1 Monitoring	*"Atlantic and DTI will inspect disturbed areas after the first and second growing seasons to determine the success of revegetation"* On NFS lands, Atlantic and DTI will inspect and monitor disturbed areas after restoration for 3 years after construction. At this time the success of revegetation will be determined.
7-34	9.1 Environmental Inspectors	*"EIs will have the authority to stop activities that violate environmental conditions of Federal or State/Commonwealth environmental permits and landowner agreements and to order appropriate corrective action."* On NFS lands, the Forest Service representative will promptly notify the EI of any situation that requires corrective action. Upon receipt of such notification, whether oral or written, the EI shall immediately stop work in the affected area until the situation has been corrected to the satisfaction of the Forest Service representative.
7-35	9.2 Documentation	*"In accordance with the Plan, Atlantic and DTI will maintain post-construction records of activities performed and will submit quarterly activity reports to the FERC."* For NFS land, the USFS is requiring that Atlantic submit weekly reports that can be reviewed by USFS personnel.
7-47	List of Attachments	*"Summary of Seed Mixes by County for the Atlantic Coast Pipeline and Supply Header Project* Seed mixes should not be dependent on county. A County line is an arbitrary boundary not based on climatic changes. This mix should be based on soil characteristics and on NFS lands, this mix should be based on Order 1 Soil Survey data in conjunction with the FS seed mix guidance document.
7-48	2.1.1	***"Harrison, Lewis, Randolph, and Upshur Counties"*** The seed mixes listed in this document are not the seed mixes that will be applied on FS lands. The USFS has provided a guidance document for the development of seed mixes that are tailored to the unique environments the pipeline could cross on NFS lands. ACP will be required to use mixes that conform to this guidance on NFS lands.
7-48 7-49	Table 2.1.1-1 Table 2.1.1-3	*"Birdsfoot Trefoil"* This species is not included in the USFS seed mix guidance document and will not be allowed on NFS lands. *"Fertilizer and Lime Application"* Fertilizer and lime application rates on NFS Lands will be based on the Order 1 soil survey data. ACP will be required to provide the calculations used to determine the fertilizer and liming application rates.
7-49	3.1.1 Planting Recommendations	*"For unprepared seedbeds or seeding outside the optimum timeframes:"* To prepare for the possibility of winter construction, the Forest Service considers it prudent to develop contingency plans and erosion control procedures that do not depend upon immediate reseeding and revegetation. ACP should note that when construction is halted due

Page 58

FA3-280 (cont'd)

Page #	Section #	Comment
		to weather or dangerous operating conditions during the winter, seeding at normal or increased rates alone will not meet Forest Service requirements for stabilization. Therefore: -To the maximum extent practicable, ACP shall complete construction in areas identified as susceptible to slope instability or erosion (e.g., steep slopes) at a time in the construction cycle that maximizes the available growing season length for revegetation, while complying with other timing commitments related to TES species. ACP shall address this aspect of construction sequencing in the COM plan for National Forest land. Soil conditioner applications shall be permitted year round for pipeline restoration. West Virginia Department of Environmental Protection vegetative ground cover requirements (70 percent cover) shall be met in spring even if hydroseeding and soil conditioner applications are made during late fall or winter. If ground cover requirements are not met because the seed sowed during the dormant season became nonviable, additional seeding and soil amendments shall be applied. Reseeding and soil amendment application shall be required at the start of the spring. The timing for reseeding and other amendments shall be in accordance with manufacturer's recommendations for both the seed mix and the application for soil conditioners. ACP will coordinate with the Forest Service by March 15th to determine if reseeding or other amendments are necessary in areas that were seeded during late fall or winter and are on the schedule for early inspection in the spring. Temporary erosion control for work stoppages during the winter shall be required where soil disturbance has occurred but pipeline construction or reclamation has not been completed. Temporary erosion control shall require treatment of soil materials and the soil surface to reduce the potential for soil movement, as well as installation of erosion control treatments to further ensure sediment transport is controlled. Rough surfacing shall be used to increase the potential for water infiltration and reduce the potential for sheet erosion. Soil protection shall be provided to rough surfaced areas to enhance temporary erosion control during the dormant season. Protection will be in the form of soil conditioners (e.g., polyacrylamides, polysaccharides, etc.) or weed-free mulch or similar soil cover determined to be suitable by the Forest Service. Weed-free mulch or similar soil cover may be used as a substitute for, or augmentation to, soil conditioners. These forms of soil protection may be applied with or without seed application. The soil conditioners that are used shall be identified by ACP and be suitable for the soil chemical conditions. The Forest Service must approve the selected conditioner(s) prior to application. Different soil conditioners may be needed at different locations along the pipeline route because soil chemistry varies along the route. The expected life of the soil conditioner shall be a consideration in the selection; if the expected effective life of the soil conditioner is less than the time until work resumes, additional applications of the soil conditioner shall be required. For mulches, at a minimum, the type of mulch and application method shall be capable of preventing erosion by raindrop impact and overland flow. The type, application rate, and application method must be approved by the Forest Service prior to application.

Page 59

Page #	Section #	Comment
		Tackifiers that are used for retention of mulch on the site must be approved by the Forest Service. Use of asphalt emulsion tackifiers shall not be permitted on National Forest land. Additional sediment control treatments, such as barriers, shall be used in addition to other winter-work stoppage temporary erosion controls in case the other erosion controls (e.g., soil conditioner, mulch, etc.) are not fully effective.
J-50	Table 2.1.2-1	*"This table has a list of species proposed for replanting in Pocahontas County* Crown vetch will not be allowed on NFS Lands. ACP will utilize the USFS seed mix document.
J-50	Table 2.1.2-2	*"This table discusses recommended lime and fertilizer rates"* On NFS lands, ACP will be required to use the results of the Order 1 Soil Survey to inform lime and fertilizer rates. This table states that lime will be incorporated via disking. Include a NFS land-specific section that explains how disking will occur on steep slopes and forested areas on NFS lands.
J-51	Chemical mulchers, soil binders, and tackifiers recommendation	*"Determine mulch type and appropriate rate"* On NFS Lands, ACP will be required to provide the chemical composition of any material proposed for use on NFS lands prior to application for USFS approval. The USFS will require the use of microbially active soil amendments.
Summary of Seed mixes by County	Attachment A	As previously stated, on all NFS lands, the USFS guidance document will be used to develop seed mixes.
Appendix F	Appendix A. Major Soil Drainage and Slope Classes Crossed by the Projects	For areas on NFS Lands, the results from the Order 1 Soil Survey should be included in this table.
G-15	Table 2.1.1-1	The access road along Laurel Run is still being listed as a permanent access road on National Forest, although DEIS page 4-195 states that "*Atlantic has committed to eliminate the access road along Laurel Run*".
G-23	2.1.1.4	*New Access Road 36-014.AR5 would follow an un-numbered jeep trail for 1.2 miles on the GWNF between Highway 614 (Muddy Run Road) and the pipeline right-of-way near MP 94.1. The jeep trail, which runs along Laurel Run and crosses the creek several times, would require substantial new construction…"* DEIS page 4-195 states that "*Atlantic has committed to eliminate the access road along Laurel Run*". However, this road is still found in table 4.8.9-3 (DEIS page 4-8-4), table E-1 in Appendix E (Access roads), Appendix K (waterbody crossings), shapefile ACP_Rev11b_CIF without centerline 20170210, and discussed in detail in Appendix G on page 23 and in table 2.1.1-1. It is confusing and unclear exactly what is proposed.

FA3-281 (bracketed in the margin beside the G-15 and G-23 rows)

Page 60

FA3-281 Comments noted. See the response to comment FA3-42.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA3 – U.S. Department of Agriculture – Forest Service (cont'd)

FA3-281 (cont'd)

Page #	Section #	Comment
G-78	7.3	Correct the document throughout to reflect the full name of the document: United States Department of Agriculture (USDA), Forest Service, Guidelines for Road Maintenance Levels. This document is a guideline only for maintenance standards. All traffic control and signage on NFS roads is subject to the Manual on Uniform Traffic Control Devices (MUTCD), and any FHWA approved state supplement (state supplement takes precedence).
G-80	7.5	Road closures should be coordinated well in advance to allow implementation of formal temporary road closure orders.
G-79	7.4	"Road maintenance will conform to the USDA Forest Service Guidelines of Road Maintenance Levels, add: any forest specific road maintenance standards or specifications, as well as any standard contained in the LRMPs of the MNF or the GWNF. Note: The GWJ routinely provides forest specific road maintenance specifications as an attachment to permits. Any widening or reconstruction, including culvert replacement or gravel resurfacing, should be performed in accordance applicable sections of FP-03, **Standard Specifications For Construction Of Roads And Bridges On Federal Highway Projects.**
G-86	8.3.3	"3 new roads are proposed to be constructed on NFS lands". Section 2.1.1.4 and Table 4.8.9-3 indicates that 4 new roads are proposed. Page 2-23 indicates 5. Please clarify.
G-105	8.6	Access road maintenance through the construction sequence may include grading, insert: culvert and ditch cleaning, and the addition of gravel or stone when necessary.
FA3-282 H2-7	App H2	Figure 1 Plan View shows a non-existent strip of private land between the dark green NFS land containing the orange ANST and the purple NPS land containing the BRP. Also, "National Forest Service" in the legend is incorrect.
FA3-283 K-1	Appendix K-1	UNT to ~~Warwick Run (~~Townsend Draft)--According to the USGS quads it is Townsend Draft. Please update for each listed incorrectly, MP 85-85.4
FA3-284 L-1	Appendix L	Appendix L does not reflect the same amount of wetlands reported in the Jan 2017 wetlands survey report for the GWJNF. There were nine wetlands and nine seep points documented. Please update table to reflect most current surveys.
FA3-285 P-1	Appendix P	The RUSLE2 equation is used to evaluate potential erosion rates at specific sites – specific sites that are important to the USFS are receiving streams and watersheds for impact analysis on water quality and sensitive aquatic biota. Please include an analysis. Please include comparisons of scenarios by load, such that % increases in sediment yield are accurately described.
P-1	Appendix P	Summary of RUSLE2 Computer Model Inputs and Outputs for Selected Soil Map Units in Bath County, VA. Please clarify why only two soil map units in Bath County were chosen and why the full sediment analysis is not complete. The critical data outputs should be loads and % increase over baseline for receiving waterbodies and watersheds, not just map unit calculations.
FA3-286 Appendix R	Appendix R	Many of the species determinations in these tables are still "pending" because of incomplete surveys or analysis. Effects determinations cannot be evaluated until these are complete.
FA3-287 R-2, R-24	Table R-2	Migrant Loggerhead Shrike is listed as a 3 on the OAR ranking, but it is documented in the Migratory Bird Plan, Appendix E, Table 3.1.4-1 on the GWNF in Augusta county by the plant survey crew. Please change the OAR ranking to 5 and evaluate effects of proposed actions on this species in the Biological Evaluation.
FA3-288 R-1, R-41	Attachment R-1	West Virginia Northern Flying Squirrel: During an on-site meeting with FS, Dominion, and ERM staff on November 4, 2016, a slight realignment of a proposed access road off of Forest Service road 1026 was agreed upon to minimize direct impacts on spruce trees, was flagged on the ground (including workspace area) by Dominion staff, and was GPS located by ERM. It was also agreed upon to relocate spruce saplings in the path of impact as well as some off of adjacent private property that will also otherwise be destroyed. This proposed reroute has only been depicted as an estimated (dashed) arc on a map (file "Access_Road_Maps_2017_01_12_Part01", sheet 8) with the

Page 61

Page #	Section #	Comment
		original route still shown below it. These maps are not yet incorporated in the official files that are available for FS review. We need to see the actual access road realignment, the shapefile to overlay with our habitat layers, and the final conservation measures in the official files and in order to make a call on determination of effect. Also, during the same on-site meeting, the FS was assured that no road improvements were needed on this road, but road widening and other improvements are now being proposed. We need details of how the work is to be done and shapefiles showing the exact areas of the work in order to overlay with habitat layers. This issue needs to be addressed again to determine any effect on spruce habitat before a determination of effect can be made for the WVNFS.
FA3-289 R-2	Attachment R	Allegheny Woodrat: An on-site meeting was held on November 4, 2016 with FS, Dominion, and ERM staff because of FS concerns over road improvements near Allegheny woodrat habitat. During the meeting, we were assure by Dominion staff that no road improvements were needed, which alleviated our concerns. Mitigation measures were also decided upon for normal operations. Now, road widening and other improvements are being proposed for this access road (Forest Service road 1026), which invalidates our concerns. We have been sent maps ("Access_Road_Maps_2017_01_12_Part01"), which are not in the official files, but we need shapefiles showing the exact areas of impact to overlay with our habitat layers before we can make a determination of effects. Also before we can make a determination, we need the details of the road work clarified, which may require another onsite visit with those proposing the road improvements and the conservation measures finalized in the official files.
FA3-290 R-2	Attachment R	All bat species: Before determinations of effects can be made, outstanding surveys need to be completed and avoidance, mitigation, and conservation measures need to be finalized.
FA3-291 R-2	Attachment R	All remaining MNF RFSS and MIS species: We are still unable to provide determinations of effects without a finalized DE and MIS report, completed analyses, and finalized conservation measures.
FA3-292 R-6	Amphibians	*Pending MNF review of sedimentation analysis and conservation measures.* The inconclusive nature of this Determination of Effects is indicative of the incomplete status of the analysis of potential effects on aquatic resources including eastern hellbender. This condition further elucidates the rationale for reservations concerning concluding statements within the DEIS about potential project impacts.
FA3-293 R-6	Fish	*Pending MNF review of sedimentation analysis and conservation measures.* The inconclusive nature of this Determination of Effects is indicative of the incomplete status of the analysis of potential effects on aquatic resources including candy darter, New River shiner, Appalachian darter, and Kanawha minnow. This condition further elucidates the rationale for reservations concerning concluding statements within the DEIS about potential project impacts.
FA3-294 R-7	Bivalves	*Pending MNF review of sedimentation analysis and conservation measures.* The inconclusive nature of this Determination of Effects is indicative of the incomplete status of the analysis of potential effects on aquatic resources including elktoe and green floater. This condition further elucidates the rationale for reservations concerning concluding statements within the DEIS about potential project impacts.
FA3-295 R-10	Insects (Dragonflies)	*Pending MNF review of sedimentation analysis and conservation measures.* The inconclusive nature of this Determination of Effects is indicative of the incomplete status of the analysis of potential effects on aquatic resources including rapids clubtail dragonfly, green-faced clubtail dragonfly, and brook snaketail dragonfly. This condition further elucidates the rationale for reservations concerning concluding statements within the DEIS about potential project impacts.
FA3-296 R-40	Table R-3	"Potential Impacts from ACP Construction and/or Operation" and "Conservation Measures and Conclusion" for wild brook trout appear to be exclusive to proposed activities within and immediately adjacent to brook trout streams while being dismissive of other proposed actions that have the potential to be equally or more damaging to brook trout ecosystems. This narrative seems to expose an over-simplification of potential effects to brook trout ecosystems from actions being proposed in the DEIS.

Page 62

FA3-282 This figure was provided by Atlantic. Figure 3.3.4-2 in the EIS accurately depicts land ownership boundaries.

FA3-283 Comment noted.

FA3-284 The EIS has been updated with information that has been filed with the FERC. We acknowledge that information filed with the FS may be more current than that filed with FERC.

FA3-285 See the response to comment FA3-106.

FA3-286 Comments noted. Appendix R has been revised.

FA3-287 Comments noted. Appendix R has been revised.

FA3-288 Comments noted. Appendix R has been revised.

FA3-289 Comments noted. Appendix R has been revised.

FA3-290 Comments noted. Appendix R has been revised.

FA3-291 Comments noted. Appendix R has been revised.

FA3-292 Comments noted. Appendix R has been revised.

FA3-293 Comments noted. Appendix R has been revised.

FA3-294 Comments noted. Appendix R has been revised.

FA3-295 Comments noted. Appendix R has been revised.

FA3-296 Comments noted. Appendix R has been revised.

FA3-297

Page #	Section #	Comment
1-7	1.1.2 Proposed Actions	*"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."* There are some inconsistencies with the approximate miles on MNF lands. In this document it states 5.5, in Volume I it states 5.1 miles on MNF lands. Please address and correct throughout all documents for consistency.
1-7	1.1.2	Proposed Action: This section should include a description of the proposed action. Since this appendix addresses scenery and the appearance of the project, it would be appropriate to provide a brief description here that includes the proposal for a 42" pipe, 125' wide construction right of way, 53.5' wide permanent right of way that will be converted from forest to herbaceous groundcover on the national forests.
7-10	1.2.1	SMS Distance Zones Add the following sentence to the description of foreground zone: Details are important and individual forms are dominant. Add the following sentence to the end of the description of middleground zone: At this distance, people distinguish individual tree forms, large boulders, and small openings in the canopy. Form, color and texture remain dominant and pattern is important. Add the following to the end of the last sentence for the description of background zone: … and landform, ridgelines and horizontal lines are the dominant visual characteristics.
11-15	2.0	SIA Methods: I recommend that the bullets describe the intent of each step in addition to the action, as follows: • Identify potentially visible areas based on terrain only by preparing "seen area" analysis and establish Key Observation Points (KOPs); • Conduct field surveys to determine extent to which existing natural and human-made features either do or do not block views from the KOPs to the ACP project; • Prepare simulation or other form of visual analysis to determine whether post-ACP visual condition will meet Scenic Integrity Objectives (SIOs); • Prepare SIA report, summarizing visual conditions and impacts
1-5 & Supplemental Information filed January 10, 2017, p. 1	1.1.1	Seen Area Analysis and KOPs: More detail is needed regarding how the analysis was conducted in such a way that ACP derived which mileposts on the centerline generated the portion of the "seen area" that covers individual KOPs (example the "seen area" is approximately MP 152-154). Was the "seen area" (viewshed) generated as a continuous line or were points created? If points, describe the distance intervals. If viewshed analysis was run from each KOP to determine the ACP mileposts that are potentially visible, insert that part of the process.
1-7 & Supplemental Information filed January 10, 2017, pp. 1-2	1.1.2	Proposed Action: This section should include a description of the proposed action. Since this appendix addresses scenery and the appearance of the project, it would be appropriate to provide a brief description here that includes the proposal for a 42" pipe, 125' wide construction right of way, 53.5' wide permanent right of way that will be converted from forest to herbaceous groundcover on the national forests.

Page 63

Page #	Section #	Comment
1-9 to 1-11 & Supplemental Information filed January 10, 2017, pp. 2-5	1.2 to 1.2.2	The Scenery Management System – This section describes only the distance zone piece of the SMS inventory. It should also include a brief summary of the concern levels and scenic attractiveness. Add the following information about the SMS: Concern Levels are a measure of the degree of public importance placed on landscapes viewed from travelways and use areas. Concern levels are divided into three categories: 1, 2, and 3, with 1 being the highest level of concern for valued landscape scenery and 3 being the lowest. Protocols for assigning concern levels to travelways and use areas are provided in the SMS Handbook. Scenic Attractiveness is the primary indicator of the intrinsic scenic beauty of a landscape and of the positive responses it evokes in people. It helps determine landscapes that are important for scenic beauty based on commonly held perceptions of the beauty of landform, vegetation pattern, composition, surface water characteristics, land use patterns, and cultural features. The combination of these valued landscape elements are used in determining the measure of Scenic Attractiveness. Scenic Attractiveness classifications in the SMS inventory include Class A – Distinctive, Class B – Typical, and Class C – Indistinctive
7-10 And Supplemental Information filed January 10, 2017, p. 5	1.2.1	SMS Distance Zones Add the following sentence to the description of foreground zone: Details are important and individual forms are dominant. Add the following sentence to the end of the description of middleground zone: At this distance, people distinguish individual tree forms, large boulders, and small openings in the canopy. Form, color and texture remain dominant and pattern is important. Add the following to the end of the last sentence for the description of background zone: … and landform, ridgelines and horizontal lines are the dominant visual characteristics.
7-15 and Supplemental Information filed January 10, 2017, p. 11	2.0	VIA Methods: I recommend that the bullets describe the intent of each step in addition to the action, as follows: • Identify potentially visible areas based on terrain only by preparing "seen area" analysis, and establish Key Observation Points (KOPs); • Conduct field surveys to determine extent to which existing natural and human-made features either do or do not block views from the KOPs to the ACP project; • Prepare simulation or other form of visual analysis to determine whether post-ACP visual condition will meet Scenic Integrity Objectives (SIOs); Prepare VIA report, summarizing visual conditions and impacts
7-15 & Supplemental Information filed January 10, 2017, p. 11-12	2.1	VIA PROCESS - The process undertaken by ACP in consultation with the FS to identify viewpoints may not have found the "worst scenario" locations (on federal and private lands within five miles) where viewers might see the pipeline for a long distance or see multiple sections of the pipeline from one location. The "seen area" analysis did not include identifying where the **viewsheds** for multiple points along the pipeline **overlap at single locations – a "times seen" analysis**. If these locations with views to multiple sections of the pipeline include higher elevation roads, trails, or communities, there may be a view to multiple "notched" mountaintops and striped a desloped stretching out for miles. The VIA process needs to determine if and where these types of viewpoints exist. Please provide this information so that FERC and the FS can include this information should be included in the DEIS.
7-21-23 &	3.3.2	E1 – Visual Simulations

Page 64

FA3-297 Comments noted.

FA3-297
(cont'd)

Page #	Section #	Comment
Supplemental Information filed January 10, 2017, p. 22		It is essential that the FS (and the public) fully understands and trusts the accuracy of the methods used to prepare the photo simulations for assessing the impacts to scenery. • Please provide additional details about how the terrain model is matched to the photograph using known surveyed locations within the field of view, and identify the source and sites of these known survey locations. • Please provide the contour interval, and/or other unit of measure, for the "detailed topographic mapping," and include the locations where LIDAR data was available and used to generate photo simulations. ○ An example of where this level of data is important is the photo simulation for KOP 40 ANST Bee Mountain. The vegetation depicted in the photo doesn't appear dense enough to completely screen from view the corridor located in a situation considered to be one of the most visible and toughest in which to incorporate a new feature without it beginning to dominate the landscape character– middleground view on a steep slope facing toward the viewer. For the view from the ANST on Bee Mountain toward Piney Mountain, did ACP use detailed topographic mapping that reveals the terrain does not slope toward the viewer on the AT as seems to be indicated by USGS topo at 20' contour intervals? This reviewer is skeptical that the pipeline corridor would not be visible in the photographic simulation for this KOP given the distance, aspect, and vegetative screening. • Please describe how the color for the post-construction herbaceous groundcover in the corridor was determined for the photos. Explain whether the color varies by location (same of different color for valley vs. side or top of mountain). The photo simulations are somewhat disappointing overall. Some photos are too dark and the major landform in the image is backlit. Examples are Torry Ridge Trail 1 and BRP Three Ridges. Lacking quality lighting in the photos eliminates our ability to see existing landscape elements of color, texture and pattern, without which we cannot assess the degree of contrast introduced by the proposed project.
T-23 & Supplemental Information filed January 10, 2017, Info p. 23	3.2	USFS Full Visual Simulations (Proposed Action): Simulations for the GWNF and the BRP are included together in this section. Section 4.1.3, later in the chapter, includes both units in its sub-section heading, and I recommend that this section be named in a similar fashion as follows: Full Visual Simulations for the GWNF and BRP (Proposed Action)
T-23 & Supplemental Information filed January 10, 2017, p. 23	3.2.1	KOP 34: Torry Ridge Trail 1 – the text states that the permanent right-of-way is outlined in yellow. However, the photos for Torry Ridge Trail 1 in the DEIS do not include the yellow line on the permanent r-o-w photo; the line is included on the contingency plan photo. VIA Supplemental Info – KOP 34: The yellow outline of the r-o-w does not appear in any of the photos. The dark quality of the photograph used for this simulation is not sufficient. To assess the contrasts of texture, color, form, line and pattern introduced by the proposed action, we must have a good quality photograph for the existing condition.
T-39 & Supplemental Information filed January 10, 2017, p. 39, A-13	3.2.6 3.2.6 in the Supp Info	KOP 64 Shenandoah Mountain South Terminus: The single photograph taken to represent potential views for the Shenandoah Mountain Trail is insufficient for the FS to verify that vegetation screens all views to the pipeline corridor except at the crossing only. Aerial photography was used by ACP to make this determination; however a view can be obtained from beneath the canopy layer if certain conditions exist, such as a rock outcrop.

Page 65

Page #	Section #	Comment
T-85 to T-87 & Supplemental Information filed January 10, 2017, p. 39, 43-44	3.3.2 3.2.5 in the Supp Info	KOP 40 Bee Mountain Photos: Some of the texture on the mountain is visible in the photographs. It seems that the proposed powerline corridor would be noticeable in the photo simulation. The FS agrees that the proposed project will not be visible from this KOP during leaf-off, but additional information is needed about why it is not visible in the leaf-off simulation
T-50 & Supplemental Information filed January 10, 2017, p. 103	4.1.1	Description of Table 4-1 – In the first sentence delete the phrase "both at the KOP itself and generally". Add a sentence that states: "All of the KOPs listed in Table 4-1 have a Concern Level of 1, meaning the users are considered to have a high regard for scenery and they value the natural appearing landscape character."
T-50 & Supplemental Information filed January 10, 2017, p. 104	Table 4-1	Table 4-1: Delete "in GWNF" from the title. The KOPs and viewsheds include a mix of GWNF, BRP, and private locations. As explained in the comment to Section 4.8.9.1 (separate FS comments document), include only the column for "In Viewshed" SIOs; delete the column for "At KOP" SIOs. Existing footnote #2 should be deleted since there will not be a column for the SIO at the KOP. Existing footnote #3 will become footnote #2. It should state "Lands viewed from KOP are not part of the GWNF and therefore are not assigned a SIO." Existing footnote #4 will become footnote #3. The In Viewshed SIO needs to be changed to NA and the footnote text will be the same as footnote #2. Add a footnote (#4) to the KOP 65. The In Viewshed SIO needs to be changed to NA and the footnote text will be the same as footnote #2.
T-51 and Supplemental Information filed January 10, 2017, p. 104	Table 4-2	SIO for GWNF MP 122.4 to 122.7. Based on the MA prescription and the Scenic Classes inventory, the FS determined that the SIO for this area is Moderate, not High.
Supplemental Information filed January 10, 2017, p. 103	4.1.1	The FS determined that the SIO on the GWNF from MP 122.4 to 122.7 is Moderate SIO (not High). Therefore 14.2 miles of the proposed pipeline on the GWNF would go through SIO of Moderate, and 0.1 mile would go through SIO of High.
T-51 & Supplemental Information filed January 10, 2017, p. 103	4.1.3.1 in App T 4.1.2.1 in Supp Info	Discussion: Third paragraph – I do not agree with the first sentence that the viewing distance is a factor in the project not dominating the landscape character. The distances between the KOPs and the visible project area are in the middleground, some of them less than one mile. In the middleground, many elements of form, line, color, texture and pattern are visible. Using SMS terminology, I recommend the following change to this sentence: The ACP post-construction project would be noticeable to casual observers at most of the modeled KOPs. The degree of contrast introduced by the project will vary by KOP depending on the distance viewed, the extensiveness of the view and the scale of the right-of-

Page 66

FA3-297 (cont'd)

Page #	Section #	Comment
		way within that view, the angle of view, the aspect of view, and the terrain upon which the pipeline is located. For some KOPs that view a small area at a relatively close distance to the project area, the pipeline corridor would begin to dominate the characteristic landscape. For KOPs that have a relatively expansive view at a greater distance and with other alterations visible on the landscape, the project is not likely to dominate the characteristic landscape.
T-52 & Supplemental Information filed January 10, 2017, p. 104	4.1.3.1 in App T; 4.1.2.1 in Supp. Info.	Discussion: Regarding Raven's Roost KOP, a portion of the pipeline corridor viewed in the valley is on the GWNF. The pipeline right-of-way mimics the road corridor at the base of Torry Ridge, but will be wider. It will be more highly visible than the road as it sweeps to the north through a forested area where there are no other openings in the immediate vicinity. The length of the pipeline that would be visible is substantial. The contrast in color and line will attract the viewer's eye. An explanation for why the northwest portion of the pipeline closest to the KOP is less visible in the photo simulation than the northern portion that is further away.
T-52 & Supplemental Information filed January 10, 2017, p. 105	4.1.3.1 in App T; 4.1.2.1 in Supp Info	Discussion: Regarding the BRP Three Ridges Overlook – Neither the KOP nor the lands viewed from it are on the GWNF. However, given the descriptions provided in this paragraph, I would disagree with the statement that the pipeline "would not dominate the viewshed"
T-52 & Supplemental Information filed January 10, 2017, p. 104-105	4.1.3.1 in App T; 4.1.2.1 in Supp Info	Discussion: Regarding the Shenandoah Mountain Trail – In the sentence, "The viewing area for these changes would be relatively small, limited to the area immediately near each intersection of the corridor ..." The single photograph provided is not sufficient for the FS to verify that vegetation screens all views from the Shenandoah Mountain Trail. Additional photographs are needed
T-32 to T-34 Supplemental Information filed January 10, 2017, p. 32-34	Photos	KOP 34 Raven's Roost. I have to question the accuracy of the simulation for the 75' wide corridor. From this superior vantage (view angled down), it is unlikely that the corridor running across the bottom of Torry Ridge would be so screened by the vegetation along the edge of the r-o-w. The scale of houses visible in the valley indicate that the width of the corridor throughout this simulation is under-stated. Additional explanation is needed.
T-53 & Supplemental Information filed January 10, 2017, p. 105	4.1.3.2 in App T; 4.1.2.2 in Supp Info	Summary: Regarding views of the ACP corridor from Raven's Roost, a portion of the pipeline corridor viewed in the valley is on the GWNF. In the near middleground there are only a few alterations, not "many", as stated. I need to question the accuracy of the visibility of the corridor at the base of Torry Ridge and extending around the north. See other comments pertaining to the photos. The text in this section may need to be modified based on the outcome of resolving questions related to the photo simulation.
T-53 & Supplemental Information filed January 10, 2017, p. 106	4.1.3.2 in App T; 4.1.2.2 in Supp Info	Summary: Regarding views from ANST on Bee Mountain (KOP 40), the lands visible from this KOP are not GWNF lands and therefore do not have an assigned SIO. Delete the phrase "be consistent with SIO designation from this location."

Page 67

Page #	Section #	Comment
T-53 & Supplemental Information filed January 10, 2017, p. 106	4.1.3.2 in App T; 4.1.2.2 in Supp Info	Summary: Paragraph describing impacts to High SIO – The FS has determined that the 0.3 mile area of the GWNF between MPs 122.4 and 122.7 is assigned a Moderate SIO, not High. The only GWNF land with High SIO crossed by the ACP is the 0.1 mile of HDD under the ANST at MP 158 to 158.1
T-53 & Supplemental Information filed January 10, 2017, p. 106	4.1.3.2 in App T; 4.1.3.2 in Supp Info	Summary: Paragraph describing the Moderate SIO erroneously refers to it as a Medium SIO.
Supplemental Information filed January 10, 2017, p. 51-52 text and pp. 53-56 photos	3.4.1	ANST KOP 02 Humpback Rocks, KOP 03 Battery Cliffs, KOP 04 Laurel Springs – Per the description of the "seen area" being between MPs 152 and 154, none of the visible area is on the GWNF. However, it is unlikely that the views from three different points share the identical potential "seen area". Please verify the accuracy. Also, the description for ANST KOP 03 does not explain why the corridor in the middleground is "minimally perceptible" and "indistinguishable". The open corridor would typically be evident at that distance. An intervening feature, aspect of the viewed area to the viewer, the existing landscape character, or some other explanation needs to be provided for why the corridor is not more visible in the simulation at that relatively short viewing distance.
Supplemental Information filed January 10, 2017, p. 52	3.4.5	ANST KOP 06: Little Raven's Roost – The assessment should explain why the contrasts to existing landscape that would be apparent to the viewer will not dominate the view.
Supplemental Information filed January 10, 2017, p. 71 text and pp. 77-84 photos	3.4.7	ANST KOP 08a Three Ridges Overlook North, and ANST KOP 08b Three Ridges Overlook South – Per the description of the "seen area" being on Priney Mountain south of the HDD, the visible area of the pipeline viewed from these two KOPs is not on the GWNF. Since the format is following the SMS system for these KOPs, the description of the view should describe the contrasts of color, line and texture introduced by the pipeline crossing over the top of a natural appearing mountain covered in forest with no other obvious openings. The pipeline in this location provides potentially the biggest impact to scenery viewed from the ANST and BRP based on the photo simulations prepared by ACP, and should be described as such.
Supplemental Information filed January 10, 2017, p. 71	3.4.8	ANST KOP 08b Three Ridges Overlook South – The distance between the KOP and the proposed pipeline corridor needs to be provided.
Supplemental Information filed January 10, 2017, p. 106	4.1.3.1	Feathering Vegetation Clearing on the R-O-W – in the last sentence, change the word "present" to "visible" ...
Supplemental Information filed January 10, 2017, p. 107	4.1.3.2	Replanting the Right-of-Way: 1st paragraph, last sentence is incomplete. In the 2nd paragraph, the word "mange" should be "manage"

Page 68

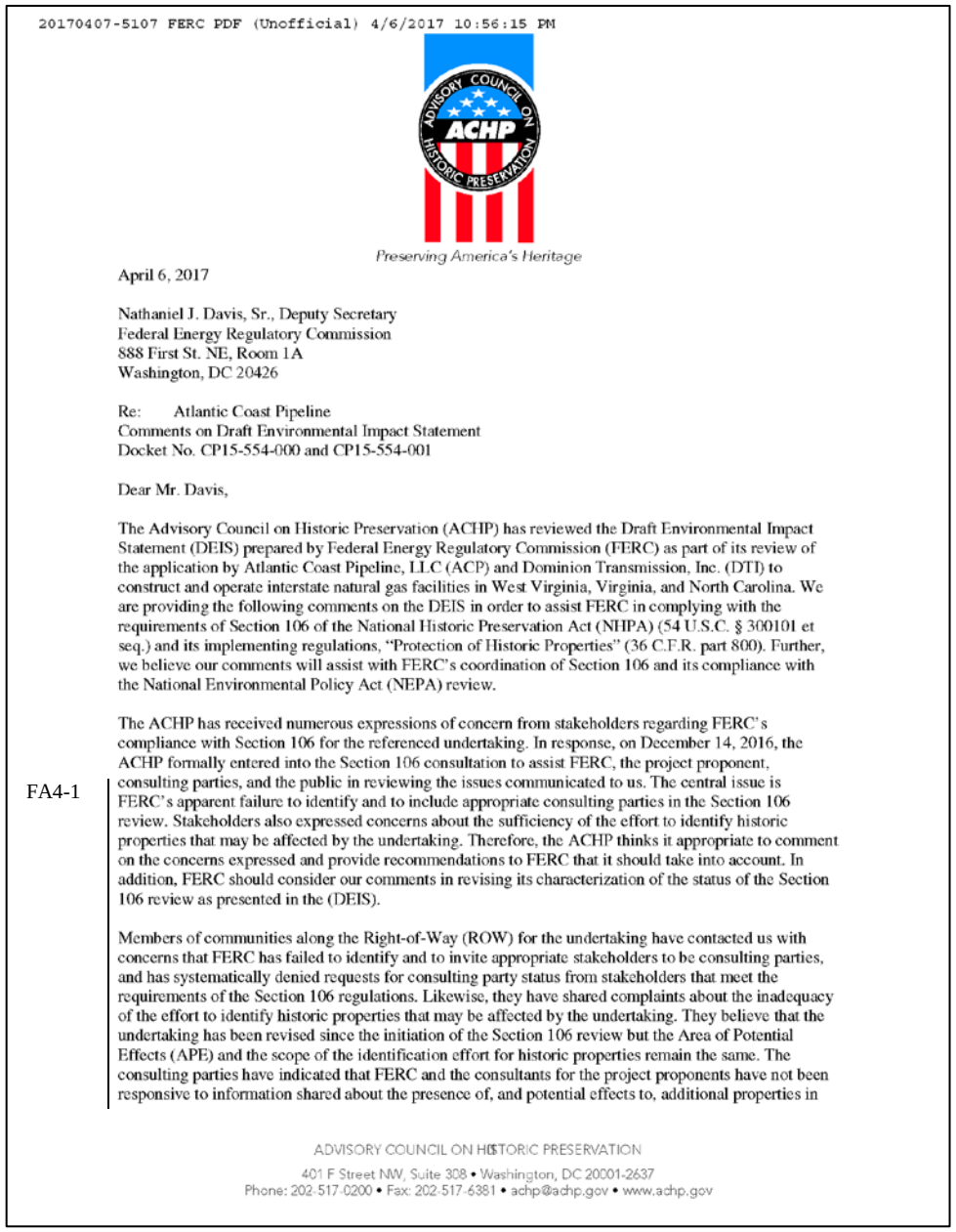
FA3-297 (cont'd)

Page #	Section #	Comment
Supplemental Information filed January 10, 2017, p. 109	4.2.3	Mitigation of Visual Impacts on the GWNF should be the MNF.
Supplemental Information filed January 10, 2017, p. 110	4.4.2	Visual Impacts of ACP on the ANST – The 2nd paragraph states that views from KOPs ANST 02, 03 and 04 are generally imperceptible and in the background distance zone. That is erroneous. All of the ANST KOPs are in the middleground distance zone, and question was raised in comments above as to why the pipeline was not more evident from KOP 02 in the photo simulation.
Supplemental Information filed January 10, 2017, p. 110	4.4.2	Visual Impacts of ACP on the ANST regarding KOP 06 – The statement that the pipeline will not dominate the view is arguable. There are other openings in the forest canopy further out in the valley, but the pipeline corridor cuts through natural appearing forest on the north end of the view, and information is needed about why the corridor isn't more visible in the western portion of the view which is closer to the KOP.
Supplemental Information filed January 10, 2017, p. 110-112	4.4.2	Throughout this section, the description of KOPs being in High SIOs is atypical of how the Forest Service assesses proposed actions. When the proposed action does not occur in the same management area or SIO as the KOP, it is more appropriate to use the phrasing that the KOPs are located on a Concern Level 1 National Scenic Trail.

Page 69

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA4 – Advisory Council on Historic Preservation



20170407-5107 FERC PDF (Unofficial) 4/6/2017 10:56:15 PM

Preserving America's Heritage

April 6, 2017

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First St. NE, Room 1A
Washington, DC 20426

Re: Atlantic Coast Pipeline
Comments on Draft Environmental Impact Statement
Docket No. CP15-554-000 and CP15-554-001

Dear Mr. Davis,

The Advisory Council on Historic Preservation (ACHP) has reviewed the Draft Environmental Impact Statement (DEIS) prepared by Federal Energy Regulatory Commission (FERC) as part of its review of the application by Atlantic Coast Pipeline, LLC (ACP) and Dominion Transmission, Inc. (DTI) to construct and operate interstate natural gas facilities in West Virginia, Virginia, and North Carolina. We are providing the following comments on the DEIS in order to assist FERC in complying with the requirements of Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 300101 et seq.) and its implementing regulations, "Protection of Historic Properties" (36 C.F.R. part 800). Further, we believe our comments will assist with FERC's coordination of Section 106 and its compliance with the National Environmental Policy Act (NEPA) review.

FA4-1

The ACHP has received numerous expressions of concern from stakeholders regarding FERC's compliance with Section 106 for the referenced undertaking. In response, on December 14, 2016, the ACHP formally entered into the Section 106 consultation to assist FERC, the project proponent, consulting parties, and the public in reviewing the issues communicated to us. The central issue is FERC's apparent failure to identify and to include appropriate consulting parties in the Section 106 review. Stakeholders also expressed concerns about the sufficiency of the effort to identify historic properties that may be affected by the undertaking. Therefore, the ACHP thinks it appropriate to comment on the concerns expressed and provide recommendations to FERC that it should take into account. In addition, FERC should consider our comments in revising its characterization of the status of the Section 106 review as presented in the (DEIS).

Members of communities along the Right-of-Way (ROW) for the undertaking have contacted us with concerns that FERC has failed to identify and to invite appropriate stakeholders to be consulting parties, and has systematically denied requests for consulting party status from stakeholders that meet the requirements of the Section 106 regulations. Likewise, they have shared complaints about the inadequacy of the effort to identify historic properties that may be affected by the undertaking. They believe that the undertaking has been revised since the initiation of the Section 106 review but the Area of Potential Effects (APE) and the scope of the identification effort for historic properties remain the same. The consulting parties have indicated that FERC and the consultants for the project proponents have not been responsive to information shared about the presence of, and potential effects to, additional properties in

ADVISORY COUNCIL ON HISTORIC PRESERVATION
401 F Street NW, Suite 308 • Washington, DC 20001-2637
Phone: 202-517-0200 • Fax: 202-517-6381 • achp@achp.gov • www.achp.gov

FA4-1 After consideration of the requests we received for consulting party status, and the relevant federal regulations, we granted consulting party status to the Nelson County Board of Supervisors. Other parties have the option to work with the SHPOs to view privileged documents after signing a confidentiality agreement.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA4 – Advisory Council on Historic Preservation (cont'd)

FA4-1 (cont'd)

the APE. Such historic properties include potential historic districts, cultural landscapes, and traditional cultural properties that may be eligible for inclusion in the National Register of Historic Places.

It is regrettable that FERC appears to have failed to engage in active and good faith consultation with stakeholders in general, and consulting parties in particular. This includes representatives of the communities affected by the undertaking who are recognized consulting parties in accordance with 36 C.F.R. §800.2(c) and § 800.3(f)). The inclusion of stakeholders in the formal Section 106 review as consulting parties is foundational to the Section 106 review process because it enables local governments, preservation organizations, and other representatives of communities located along the APE to formally participate in the federal decision making process. The information that they may share regarding the presence of historic properties in the APE; the nature of the significance of those properties to the communities; concerns about how the undertaking may affect such properties; and appropriate ways to resolve adverse effects are critical to the Section 106 review.

In FERC letters denying stakeholder requests to be consulting parties in Section 106 and also in Section 4.10.3 of the DEIS, FERC has suggested that the ACHP advises a federal agency may use its existing procedures for coordinating with the public 'to fulfill its consultation requirements.' This statement misrepresents the Section 106 regulations and the ACHP's guidance regarding inclusion of the public in the Section 106 review. The Section 106 regulations state that the federal agency should seek and consider the views of the public which are essential to informed Federal decision making in the Section 106 process (35 C.F.R. § 800.2(d)(1)). The regulations also suggest that a federal agency may use its established procedures for public involvement under NEPA or other program requirements if they provide adequate opportunities for public involvement consistent with 36 C.F.R. § 800.3 through § 800.6. However, this principle does not absolve the federal agency's responsibility to identify and formally recognize appropriate consulting parties to participate throughout the Section 106 review process.

Please note that the Section 106 regulations specify that certain individuals and organizations with a demonstrated interest in the undertaking may participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties (36 C.F.R. § 800.2(c)(5)). Further, the regulations require the agency to consider all written requests of individuals and organizations to participate as consulting parties in consultation with the State Historic Preservation Officer(s) (SHPOs) or Tribal Historic Preservation Officer(s) (THPOs) and any Indian tribe upon whose tribal lands an undertaking occurs or affects historic properties. This process enables the federal agency to determine which parties should be recognized as consulting parties (36 C.F.R. § 800.3(f)(3)).

Consultation is defined in our regulations as a ". . . process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the section 106 process" (36 C.F.R. § 800.16(f)). Section 106 consultation is not accomplished by FERC's procedures for public involvement. As reported to us, the range of stakeholders who have been denied consulting party status includes local governments (who are by-right consulting parties who can't be refused (36 C.F.R § 800.2(c)(3)), statewide and local historical societies and preservation organizations, property owners affected by the undertaking, stakeholders who are formal intervenors in the FERC review, and other stakeholders with concerns about the effects of the undertaking.

As indicated in the DEIS, FERC is currently in the process of completing the identification effort, step 2 of the 4-step Section 106 review process. The ACHP recommends that FERC should immediately revisit the requests by stakeholders to be consulting parties, and as appropriate, formally invite them into the consultation. Further, FERC should provide the consulting parties with information about the scope, status, and results of the identification effort, and acknowledge and address the concerns that have been expressed to date. We are concerned that in light of the views expressed by the stakeholders, the summary

FA4-1 (cont'd)

of the Section 106 review that FERC has characterized in the DEIS is inaccurate. Therefore, we encourage FERC to immediately identify and recognize appropriate consulting parties so as to avoid compromising the adequacy of FERC's Section 106 consultation for this undertaking.

We concur with the comments on the DEIS provided to FERC by the NTHP by letter of April 6, 2017, and by the Virginia State Historic Preservation Officer (SHPO) by a letter of April 5, 2017. The SHPO notes that the project crosses at least three (3) NRHP-listed or -eligible historic districts and five Civil War battlefields in Virginia. Accordingly, FERC should consider the SHPO's comments on the methodology that the proponent should employ in considering the importance of, and relationship between, the historic built environment and the rural or agricultural settings to the significance of the historic districts. The SHPO also recommends that FERC should consider effects to contributing properties and significant observation points within the districts that reflect the historic landscape and how residents and visitors experience that landscape. Finally, the SHPO notes that a similar approach should be taken to battlefields and possibly include concepts of military terrain analysis, such as KOCOA. We would note that many stakeholders have made similar observations and recommendations.

The ACHP looks forward to assisting FERC, the SHPOs, consulting parties, including the applicant, and the public in moving forward in the Section 106 review for this undertaking. Should you have any questions or wish to discuss this matter further, please contact John T. Eddins, PhD at 202-517-0211, or by e-mail at jeddins@achp.gov.

Sincerely,

Charlene Dwin Vaughn, AICP
Assistant Director
Federal Permitting, Licensing, and Assistance Section
Office of Federal Agency Programs

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA5 – U.S. Department of the Interior – Office of Environmental Policy and Compliance

United States Department of the Interior

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

IN REPLY REFER TO:

April 6, 2017

9043.1
ER 17/0733

Mr. Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
Mail Code: DLC, HL-11.2
888 First St., NE
Washington, DC 20426

Subject **Draft Environmental Impact Statement (DEIS) for the Proposed Atlantic Coast Pipeline, Supply Header Project, and Capacity Lease Proposal, FERC No. CP15-554-001, CP15-555-000 and CP15-556-000, various counties in Pennsylvania, West Virginia, Virginia and North Carolina.**

The Department of the Interior has reviewed the DEIS by the Federal Regulatory Commission for the proposed Atlantic Coast Pipeline (ACP) and Supply Header Project (SHP) received on January 4, 2017. This memo is intended to inform readers of potential disturbance of USGS streamgages as well as concern for water quality, public water supply, construction risks to water resources in karst and steep slope conditions, and ecological stream flows.

COMMENT: USGS Streamgaging

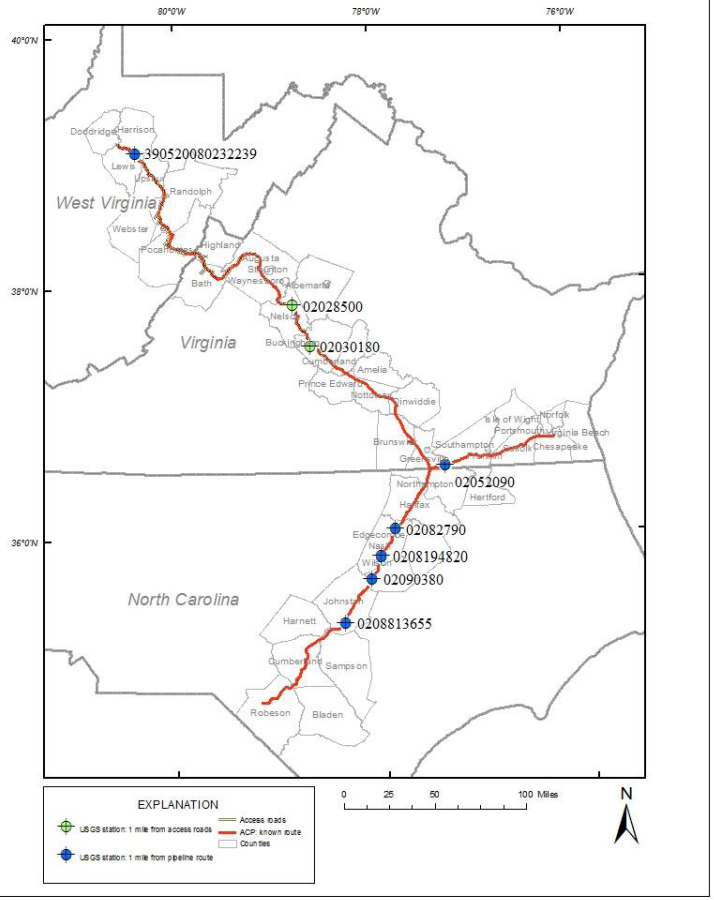
FA5-1 The USGS operates streamgaging and water quality stations along streams throughout the U.S. to collect water quantity and quality data for a variety of purposes. Unimpeded operation of USGS streamgages is essential for our stakeholders. Streamgages have permanent infrastructure and are vulnerable to disruption when significant construction occurs close to these stations. Some streamgages are used intermittently. The table and review figure 1 (below) show information on active USGS streamgages, or sites where there was an active streamgage within the last 10 years, within one mile of the known pipeline route or access roads in Virginia. USGS Water Science Centers in Virginia, West Virginia, and North Carolina should be notified prior to construction near these sites.

USGS Station Number	USGS Station Name	USGS Site Status	Within 1 mile of:	Latitude (DD)	Longitude (DD)	State	County name
02090380	CONTENTNEA CREEK NEAR LUCAMA, NC	Current streamgage	Pipeline	35.691111	-78.109722	NC	Wilson
02028500	ROCKFISH RIVER NEAR GREENFIELD, VA	Current streamgage	Access Road	37.869585	-78.823354	VA	Nelson
02052090	MEHERRIN RIVER NEAR BRYANTS CORNER, VA	Current streamgage	Pipeline	36.57	-77.361389	VA	Southampton County
02030180	AUSTIN CREEK AT RT 607 NEAR BUCKINGHAM, VA	Active within 10 years	Access Road	37.542222	-78.657778	VA	Buckingham County
0208813655	WHITE OAK BR AT SR1144 NR STRICKLAND CROSSROADS,NC	Active within 10 years	Pipeline	35.346111	-78.375222	NC	Johnston County
02082790	SWIFT CREEK NR RED OAK, NC	Active within 10 years	Pipeline	36.074319	-77.869426	NC	Nash County
0208194820	TAR RIVER AT SR1001 AT STRICKLAND CROSSROADS, NC	Active within 10 years	Pipeline	35.865456	-78.009608	NC	Nash County
390520080232239	D10.0HACKERS CR @ HWY 14 BR NR JANE LEW WV	Active within 10 years	Pipeline	39.088983	-80.389256	WV	Lewis County

FA5-1 We recommend that the USGS coordinate with Atlantic and DETI to establish appropriate notification and communication protocols.

FA5-1 (cont'd)

Review Figure 1. Atlantic Coast Pipeline route and USGS stations within one mile of proposed route, or known access roads.



2

COMMENT: Mobilization of mercury into stream water

FA5-2 Mercury is the water-quality contaminant of greatest concern for this project. Mercury bound to streambed sediment and associated colloidal matter can be mobilized when bed materials are disturbed, such as when a trench for pipeline installation is excavated, or where sediment spoils piles are eroded by precipitation. The proposed route of the ACP pipeline crosses the South River upstream of the city of Waynesboro, Virginia. From 1929-50, high levels of mercury waste was discharged from a textile plant, resulting in the downstream sections of the South river to be listed on Virginia's 303(d) list of impaired waters (Eggleston, 2009). Previous studies have shown highly elevated levels of mercury in the groundwater, adjacent flood plain soils, and downstream South River sediments. The current known proposed ACP route (used for this review) is less than 5 miles from the former Waynesboro textile site. A former version of the route shows it about 3 miles from the former textile site. If the pipeline route were altered again to where it crossed the South River downstream of this site, or disturbed contaminated areas, the high potential for mercury release could become a critical environmental issue.

Total mercury should be quantified upstream and downstream of the crossing point as an essential element of the water-quality monitoring conducted before and after installation of the pipeline. All water utilities downstream of the crossing point with water intakes should be informed of the construction activities and concern about mercury levels. Additionally, all local and state agencies responsible for environmental health and recreational or activities that may expose residents to this potential hazard should be informed.

COMMENT: Other Water-Quality Issues resulting from pipeline and access road construction

The ACP and SHP will traverse parts of four states: Pennsylvania, West Virginia, Virginia and North Carolina. In addition to federally mandated surface-water-quality standards, each state has its own set of standards, and defines tiers of water quality based on ambient conditions and intended use. As there is potential for water-quality degradation at and downstream of crossings, pre-and post-construction testing will be conducted, as stated in the

FA5-3 DEIS. The DEIS lists many analytes, but not arsenic. As streams in some areas along the Eastern Seaboard have a high probability of mobilizing arsenic if sediments are disturbed, it is suggested that total arsenic be added to the analyte list. Sampling methods should comply with approved EPA and state/commonwealth sampling, analytical and data quality assurance, and quality control procedures. The samples should be analyzed using EPA-approved methods, and the analysis should be performed by a laboratory certified to conduct the analyses in each state/commonwealth.

FA5-4 If water-quality issues such as increased turbidity (the most likely problem), low dissolved oxygen, or elevated levels of contaminants of concern persist, the appropriate state and local health and environmental agencies should be informed, and monitoring must continue until background conditions are restored.

Two additional water-quality topics discussed in the DEIS need additional consideration:

4.3.1.4. Wellhead and aquifer protections areas (WHPAs)

FA5-2 Comment noted.

FA5-3 Atlantic and DETI would be required to comply with state-specific water quality regulations, including monitoring and sampling requirements.

FA5-4 Comment noted.

FA5-5 These areas should be protected from contamination in order to protect public water supplies, as described by the Safe Drinking Water Act. Four WHPAs would be crossed by the ACP as currently proposed. Changes in local hydrology from clearing, grading, excavation and compaction may be detrimental to these areas and the underlying groundwater. Therefore, serious consideration should be given to rerouting these access roads away from such important recharge areas.

4.3.1.5 Springs.

FA5-6 Accumulating information about and contacting owners of these features are ongoing. At present, 122 springs within 500 feet of the ACP workspace in karst areas and 150 feet in all other areas have been identified. Four more were identified near SHP. This investigative process should be completed before construction is to begin, owners and users of these water supplies should be informed about the pipeline installation, and unnecessary risks to water quality avoided

COMMENT: Public supply surface water intakes.

The USGS developed a database containing information about wells, surface-water intakes, and distribution systems of public supply water systems in the United States (Price and Maupin, 2014). Location information for public supply systems is restricted from distribution to the general public, and exact intake locations are not shown in this review. The USGS public supply database (PSDB) locations were intersected with the National Hydrography dataset, and downstream distances calculated between the ACP known route and surface water intakes.

FA5-7 Towns in the following table, and shown on review figure 2, have intakes within 5 miles downstream of the ACP known route. As a precaution, these towns should be contacted and alerted to the time of construction activities upstream of their intakes.

Town Name	State	County name
Jane Lew	WV	Lewis
Buckhannon	WV	Upshur
Staunton	VA	Augusta
Emporia	VA	Greenville
Portsmouth	VA	Portsmouth
Rocky Mount	NC	Nash/Edgecombe
Wilson	NC	Wilson

COMMENT: Public supply well contributing areas in carbonate aquifers.

FA5-8 Vulnerability to contamination of a public supply well depends on the local hydrogeology and geochemical conditions, plus the location, design, construction, operation, and maintenance of the well (Ebberts and others, 2013). Local hydrologic conditions, construction, and pumping activities are important factors determining the local recharge area for a well. Several USGS studies have modelled the areas contributing recharge to public supply wells (Clark and others, 2008; Crandall and others, 2009; Heywood, 2013; Kauffman and others, 2001; Lindgren and others, 2011). Crandall and others (2009) and Lindgren and others (2011) modelled these areas in carbonate terrains. These studies illustrate that recharge areas to a public supply well area are

FA5-5 Comment noted. Roads used to access the project and cross WHPAs are existing. Therefore, access roads associated with the project through WHPAs would not create new or unique impacts beyond those already experienced.

FA5-6 Comment noted.

FA5-7 Comment noted.

FA5-8 The requested discussion has been added to section 4.3.1.7.

FA5-8 (cont'd) variable in size and shape, and highly dependent on the local hydrogeology, well construction, and pumpage. However, simulations by these studies strongly suggest that any activity at 150 feet in non-carbonate terrain, or 500 feet in carbonate terrain, would be within the well recharge area. Depending on the location of the well and the orientation of the recharge area, significant well recharge could be affected by activities within several thousand feet, or more. The DEIS should fully explain what published research these selected distances (500 feet in carbonate; 150 feet everywhere else) were based upon.

COMMENT: Trench excavation by blasting

About 25% of pipeline route may require blasting. As stated in the DEIS: *"blasting of the bedrock could potentially damage nearby pipelines and other structures and could initiate landslides, karst activity, or ground subsidence over underground mines. Blasting of bedrock, particularly karst bedrock, could create fractures in the rock, temporarily affecting local groundwater flow patterns and groundwater yield of nearby wells and springs around the blast site, and affecting their water quality by a temporary increase in turbidity levels shortly after blasting."*(4.1.2.2)

FA5-9 Blasting should not be conducted in karst areas, unless the risks stated above have been thoroughly evaluated for each such area by the appropriate qualified professionals, and deemed to be minimal. The potential costs to infrastructure, the environment water resources and even human life far outweigh the economic and convenience benefits of routing the pipeline through karst areas where blasting is required.

The blasting plan described (4.1.2.2) is deficient in the following areas:

- *"Pending landowner permission, preconstruction well testing would be conducted to evaluate water quality and yield. In the event that construction has adversely affected the water quality and/or yield of a well, Atlantic and DTI would conduct post-construction testing and provide an alternative water source or a mutually agreeable solution."* Groundwater-quality analysis before and after pipeline construction should be conducted. If water samples from wells within the buffer area cannot be obtained (e.g. of home owner(s) refuse(s), then the water quality in nearby wells should be analyzed before and after construction.

FA5-10

FA5-11

- The possibility of damaging nearby pipelines is mentioned, but there is nothing in this plan to cover preparedness. The plan should state the actions that would be taken if a pipeline carrying natural gas, crude oil or refined petroleum products was compromised, resulting in a spill, fire, explosion or other mishap.

COMMENT: Construction is steep-slope areas

Ground disturbance in steep-slope terrain can cause landslides and other types of land movement. Sudden movement of large amounts of rock, soil and sediment can result in changes to surface water and groundwater hydrology and water quality and is of concern. Substantial consideration has been given to this risk category, but the work is in progress, as stated in the DEIS. Some basic definitions, concepts and rules for dealing with steep slopes have been developed, and some field reconnaissance completed, as stated in the DEIS text:

FA5-9 As discussed in section 4.1.2.2, by conducting blasting in accordance with project-specific Blasting Plan and applicable state and local regulations, impacts on geologic resources and nearby residences and facilities, as well as impacts resulting from geologic hazards, would be avoided or adequately minimized.

FA5-10 Comment noted.

FA5-11 In the unlikely event of a leak, the majority of the methane would escape to the ground surface and dissipate into the atmosphere. As such, impacts from pipeline operation are not anticipated. Future maintenance activities on the pipeline would be conducted in accordance with the FERC Plan and Procedures and applicable state/commonwealth/local permits regarding stormwater and erosion and sediment control. Moreover, Atlantic and DETI would implement an Integrity Management Program, as discussed in section 4.12, to prevent leaks on the system. See also the response to comment FA3-164.

"The decision making and pipeline construction through areas of steep slopes is being investigated as of this version of the DEIS. Some desktop analysis, aerial reconnaissance, and ground reconnaissance have been completed by Geosyntec Consultants, Inc. [Geosyntec], 2016) under the heading "Geohazard Analysis Program. Atlantic and DTI are developing a Best in Class Steep Slope Management Program (BIC Team) to incorporate the results of the Geohazard Analysis Program into the project design and engineering and to address issues of landslide potential and susceptibility.

"Field reconnaissance and workshops are underway with subject matter experts to further identify, assess, and mitigate slope instability hazards. The BIC Team is considering, but has not currently adopted, specific screening criteria for slopes that would be identified for site-specific requirements for construction and restoration.

FA5-12 The criteria stated in the DEIS appear reasonable, but the risk evaluation and planning should be completed and documented in the final EIS before construction begins in steep-slope areas. Similar comments were submitted by FERC.

COMMENT: Streamflow to protect aquatic species

FA5-13 Section 4.6.2.3 ("North Carolina"), pp. 4-182 to 4-238, various sub headings: a number of "Sensitive Aquatic Species Endangered Habitats" might be impacted by the proposed actions. The DEIS states that the companies will monitor six rivers and other potentially impacted waterbodies by measuring water withdrawals based on USGS data. The following is representative of the wording of the six instances: "Atlantic and DTI would monitor water levels during withdrawals for hydrostatic testing and HDDs and **ensure that they do not exceed 25 percent of the waterbody's discharge (as measured at the nearest upstream USGS streamgage)**." We suggest that the authors of the DEIS explicitly state what levels are proposed to be used as baseline discharge volumes (e.g., 25% of what?). If there are any comments, please contact J. Michael Norris (mnorris@usgs.gov).

Sincerely,

Lindy Nelson
Regional Environmental Officer

cc: Mark Bennett, Center Director, USGS Virginia -West Virginia Water Science Center
Eric Strom, Center Director, South Atlantic Water Science Center

FA5-12 Comment noted.

FA5-13 The referenced text has been revised.

References:

Clark, B.R., Landon, M.K., Kauffman, L.J., and Hornberger, G.Z., 2008, Simulations of groundwater flow, transport, age, and particle tracking near York, Nebraska, for a study of transport of anthropogenic and natural contaminants (TANC) to public supply wells: U.S. Geological Survey Scientific Investigations Report 2007-5068, 48 p.

Crandall, C.A., Kauffman, L.J., Katz, B.G., Metz, P.A., McBride, W.S., and Berndt, M.P., 2009, Simulations of groundwater flow and particle tracking analysis in the area contributing recharge to a public-supply well near Tampa, Florida, 2002-05, U.S. Geological Survey Scientific Investigations Report 2008-5231, 53 p.

Eggleston, Jack, 2009, Mercury loads in the South River and simulation of mercury total maximum daily loads (TMDLs) for the South River, South Fork Shenandoah River, and Shenandoah River—Shenandoah Valley, Virginia: U.S. Geological Survey Scientific Investigations Report 2009–5076, 80 p., available online at http://pubs.usgs.gov/sir/2009/5076/

Heywood, C.E., 2013, Simulations of groundwater flow, transport, and age in Albuquerque, New Mexico, for a study of transport of anthropogenic and natural contaminants (TANC) to public-supply wells: U.S. Geological Survey Scientific Investigations Report 2012–5242, 51 p.

Kauffman, L.J., Baehr, A.L., Ayers, M.A., and Stackelburg, P.E., 2001, Effects of land use and travel time on the distribution of nitrate in the Kirkwood-Cohansey aquifer system in southern New Jersey: U.S. Geological Survey Water Resources Investigations Report 01-4117, 49 p.

Lindgren, R.J., Houston, N.A., Musgrove, M., Fahlquist, L.S., and Kauffman, L.J., 2011, Simulations of groundwater flow and particle-tracking analysis in the zone of contribution to a public-supply well in San Antonio, Texas: U.S. Geological Survey Scientific Investigations Report 2011–5149, 93 p.

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

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

APR 0 6 2017

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Atlantic Coast Pipeline and Supply Header Project Draft Environmental Impact Statement; North Carolina, Pennsylvania, Virginia, and West Virginia; December 2016 (FERC Docket No. CP15-554-000, CP15-554-001, CP15-555-000; CEQ#20160325)

Dear Deputy Secretary Davis:

In accordance with the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the EPA has reviewed the Draft Environmental Impact Statement (DEIS) for the Atlantic Coast Pipeline (ACP) and Supply Header Project (SHP) as proposed by Atlantic Coast Pipeline, LLC (Atlantic) and Dominion Transmission, Inc. (Dominion). Atlantic and Dominion request authorization to construct and operate 641.3 miles of natural gas transmission pipeline and associated facilities, three new natural gas-fired compressor stations, and four modified existing compressor stations. The projects would provide about 1.44 billion cubic feet per day of natural gas to electric generation, distribution and end use markets in Virginia and North Carolina. In addition, Atlantic and Piedmont Natural Gas Co., Inc. (Piedmont) request authorization to allow Atlantic to lease capacity on Piedmont's existing pipeline distribution system in North Carolina for use by Atlantic.

EPA appreciates the coordination done by FERC with federal agencies, and efforts made to incorporate suggestions from scoping and during development of the draft EIS. EPA is a cooperating agency for this DEIS and this comment letter jointly reflects the review and comments of EPA Regions 3 and 4. Our staffs have worked closely on this matter and we appreciate that FERC staff have regularly requested additional clarification and assistance.

This letter provides recommendations we believe would strengthen FERC's EIS as it is finalized, in the areas of geology and soils, streams and wetlands, and groundwater and drinking water protection. More detail on these recommendations, and additional suggestions to tighten the analysis in the final EIS are provided in the enclosed technical comments. EPA rates the environmental impacts associated with the preferred alternative as "Environmental Concerns" and the DEIS information as "Insufficient" under its DEIS rating scheme. See, www.epa.gov/nepa/environmental-impact-statement-rating-system-criteria We look forward to discussing our comments with you and answering any questions you may have. EPA recognizes national energy needs and is committed to energy development and distribution while assuring environmental and human health protection.

We stand ready to assist FERC in addressing these and other issues that public comments may raise, in our cooperating agency role. Please contact Jeff Lapp, Associate Director at (215) 814-2717 or lapp.jeffery@epa.gov, or the staff contact for this project Ms. Barbara Okorn at (215) 814-3330 or okorn.barbara@epa.gov.

Sincerely,

John R. Pomponio
Division Director
Environmental Assessment and Innovation Division

Enclosure (1) Technical Comments

2

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA6 – U.S. Environmental Protection Agency (cont'd)

Enclosure–Technical Comments
Atlantic Coast Pipeline and Supply Header Project

1) Geology and Soils

FA6-1 The DEIS indicates that challenging geologic conditions are likely to be encountered during project construction. We recommend that the final EIS provide additional risk and risk mitigation information on this issue. Given that blasting, in combination with steep slopes, sensitive karst topography, and active or abandoned mines and quarries, has the potential to result in adverse impacts, we recommend efforts be made to complete relevant ground reconnaissance surveys prior to release of the final EIS. EPA also recommends evaluating the potential effects of these geologic hazards, including mining-related subsidence, landslides and flash flooding, on pipeline construction and operation.

EPA believes it is especially important to evaluate potential impacts in high risk areas. This would include evaluating locations with high susceptibility to landslides and determining their proximity to streams. To aid in identification and evaluation of karst hazards, we recommend the Virginia Division of Conservation and Recreation's "Karst Assessment Standard Practice" be used by Atlantic and Dominion investigators.

FA6-2 Similarly, we recommend that the final EIS describe the nature and extent of potential blasting impacts on local residents, drinking water wells, springs, wetlands, local hydrology, and other resources of special concern, as appropriate. We also recommend the practicability of monitoring be considered in hydrologically sensitive areas, such as karst terrain, to determine if wells have been affected, given the potential for alterations to flow paths and transmissivity. Practicable geohazard mitigation developed in coordination with the U.S. Forest Service may also warrant consideration in appropriate areas outside of forest lands.

FA6-3 EPA appreciates the special consideration that crossing karst streams and terrain has received in the DEIS. In light of the DEIS, which indicates over 50 percent of karst hazards throughout the 71 miles of karst terrain crossed are identified as "high risk," we recommend the FEIS consider ecological risks to karst systems, and risk mitigation that includes avoidance measures. This would provide an appropriate NEPA "hard look" at issues related to the current DEIS conclusion that karst blasting and other construction activities would result in only temporary, insignificant impacts.

FA6-4 Finally, 152.7 miles of ACP route and 34 miles of SHP route were identified as areas with shallow bedrock based on the Soil Survey Geographic Database data. We recommend, to the extent practicable, that the area be surveyed for heavy metals, radioactive materials, and acid producing rocks with the potential for contamination of nearby water sources. This information could be used to implement best practices and limit potential impacts to groundwater.

1

FA6-1 Comment noted.

FA6-2 Comment noted.

FA6-3 Sections 4.1.2.3 and 4.3.1.7 of the EIS characterize karst conditions in the project area, including sinkholes and springs, respectively. These sections describe the potential impacts that construction and operation of the project could have on these resources, describe the specific construction procedures and mitigation measures that Atlantic and DETI would implement to avoid and minimize impacts, and explain why impacts would not be significant. Sections 3.2, 3.3, and 3.4 discuss system alternatives, route alternatives, and route variations, respectively, including alternatives that would avoid or reduce project siting in karst areas.

FA6-4 Significant levels of heavy metals and radioactive materials have not been identified as a concern along ACP and SHP. Areas containing potentially acid-producing rock have been identified through review of available geologic map and state-specific data sources. During construction, the EIs would be trained to identify acid-producing rocks and acid rock drainage and implement appropriate measures as identified by Atlantic and DETI to minimize or avoid the production of acid rock drainage.

2) Wetlands, Streams and Forests

The EIS reports 79.5 miles of pipeline will pass through wetlands. Construction of the ACP and SHP project would temporarily result in impacts to about 786.2 acres of wetlands (17.7 acres in West Virginia, 1.1 in Pennsylvania, 316.1 in Virginia, and 451.3 in North Carolina). The continued operation of the pipeline would impact about 248.3 acres of wetlands by permanent conversion (3.5 acres in West Virginia, 0.2 in Pennsylvania, 88.5 in Virginia, and 156.1 in North Carolina). The ACP and SHP facilities would cross 1,989 waterbodies (851 perennial, 779 intermittent, 248 ephemeral, 64 canals/diches, and 47 open water ponds/reservoirs). Permanent impacts from fill placed in wetlands totals 9.1 acres along the ACP and 0.5-acre along the SHP. Temporary workspace requested along the ACP route (1,272 acres) may add to this total, and water withdrawals may impact wetland and stream habitat.

FA6-5 EPA recommends that the final EIS complete ongoing wetland and stream surveys, and consider practicable avoidance and mitigation to incorporate into the project design and construction. We would be happy to assist you with this matter. Although wetland impacts in the DEIS are classified by system type, this classification does not provide details regarding the wetland quality or identify unique, difficult-to-mitigate wetland systems such as cypress gum swamps, vernal pools, bog, fen, or groundwater seeps, would be impacted. EPA recommends that specific information regarding high quality and unique wetland types be included, to the extent practicable, in the final EIS, so that appropriate mitigation can be considered.

FA6-6 Some aquatic resources are crossed using the open-cut method. As indicated in the DEIS, each open-cut crossing adversely affects aquatic resources. The Neuse River and Rocky Swamp crossing is of particular concern due and the location at a wide point in the floodplain. As described in the DEIS, using the dry-ditch method results in potential impacts to species and habitat, bank stabilization, and downstream aquatic resources. In addition, the proposed Neuse River crossing location will impact a large amount of bottomland hardwood wetlands, which could be substantially avoided with an alternative crossing location. We recommend the final EIS consider practicable alternative crossing locations for the Neuse River. More generally, the final EIS could be strengthened by describing whether and how the number of water crossings were minimized.

FA6-7 The DEIS acknowledges impacts by the proposed projects to forest resources and quantifies losses for construction and operation. The quantification indicates large impacts to forest resources (6,100 acres of deciduous, coniferous and mixed forest during construction and approximately 3,424 acres during operation). Studies to consider these impacts are ongoing and include a fragmentation study; Construction, Operational and Maintenance Plan; Migratory Bird Plan; Restoration and Rehabilitation Plan; Karst Mitigation Plan; geotechnical studies; and coordination with the U.S. Forest Service and other agencies. We recommend, to the greatest extent possible, inclusion of these studies, rare and endangered species studies, and a summary disclosure of the impacts to, and practicable mitigation for, watersheds, ecosystems, and ecosystem services in the final EIS.

Significant wetland, stream, and forest resources will be impacted by the proposal. An ACP and MVP collocation alternative is presented as a major route alternative in the DEIS. The DEIS concludes that the ACP and MVP collocation alternative offers some environmental advantages, including

FA6-5 Section 4.3.3.3 of the EIS has been updated to include additional information on cypress gum swamp impacts. Impacts on these and other sensitive wetlands would be avoided, minimized, and/or mitigated through the USACE's section 404 and 401 review and permit process.

FA6-6 Due to the results of sensitive species surveys and through agency consultation, we find the crossing of Rocky Swamp acceptable. The Neuse River would be crossed by the cofferdam method. We have recommended that the Neuse River be crossed by an HDD should a hydrofracture study indicate a low potential for an inadvertent release at this crossing.

FA6-7 The final EIS has been updated to include these plans, studies, and agency coordination.

avoidance of the Monongahela National Forest (NF) and George Washington NF, reduced crossings of the Appalachian National Scenic Trail and the Blue Ridge Parkway from two to one, and reduced construction within sensitive karst topography. However, FERC did not recommend the collocation option in light of constructability issues, and insufficient space. We recommend that the option of collocating minor portions of the route be considered as well, given the entire MVP route does not appear to have constructability concerns. We are working with FERC on collocation opportunities at the Neuse River Crossing in North Carolina. Success at this crossing may open other collocation opportunities.

FA6-8

3) Groundwater and Drinking Water Protection

The pipeline's proposed path has the potential to impact public and private drinking water supplies. We recommend the final EIS provide as complete a list as practicable of public and private supply wells and springs within the project area, and describe practicable avoidance and minimization measures to protect groundwater resources, especially in the Lyndhurst Area. We suggest that the final EIS describe efforts to minimize overall drinking water impacts through avoidance of Groundwater Assessment Areas (GAAs) and Wellhead Protection Area (WHPAs), and reducing proximity to WHPAs and wells. Upgraded construction could be required in areas where the final pipeline crosses WHPAs.

FA6-9

We support FERC's recommendation that the applicants complete field surveys for wells and springs within 150 feet of the construction workspace and within 500 feet of the construction workspace in karst terrain. We recommend inclusion of this information in the final EIS. In addition, we support FERC's recommendation that for wells and springs within 500 feet of identified contaminated soil or groundwater sites, Atlantic and Dominion should complete preconstruction and post-construction water quality tests, with landowner permission, and analyze for contaminants of concern from the potential source. We recommend describing the parameters for monitoring in the final EIS. We also recommend describing any communications strategy the applicants may be implementing for purposes of informing private well owners regarding potential impacts on their water supply. The final EIS could also discuss the practicability of pre- and post- construction well testing, where appropriate, in addition to preconstruction and post-construction water quality testing as ACP has proposed.

FA6-10

FA6-11

The DEIS mentions the Spill Prevention, Control and Countermeasure Plan to minimize potential groundwater impacts resulting from a spill during major earth disturbance activities. However, also of concern for contaminating drinking water are aboveground storage tanks (ASTs) containing potentially hazardous materials. During major earth disturbance activities, these ASTs could pose the risk of hazardous waste spills and cause serious threats to both groundwater and surface water drinking water resources. We recommend FERC encourage Atlantic and Dominion, as appropriate, to work with the West Virginia Department of Health and Human Resources and to survey the existing ASTs in Virginia that may be affected by major earth disturbances from the projects, and include this information in the final EIS. In West Virginia, AST information may be readily available from the Department of Environmental Protection and/or the Bureau for Public Health. We recommend ACP and Dominion notify AST owners when major earth disturbances will occur and develop a spill detection and response plan for hazardous materials ASTs.

FA6-12

3

FA6-8 Comment noted.

FA6-9 Comment noted.

FA6-10 Comment noted.

FA6-11 Comment noted.

FA6-12 Comment noted.

Based on the information provided by state agencies, ten surface water intakes are located within three miles of the ACP, and eight source water protection watersheds would be crossed, three of which are in Zones of Critical Concern. Table 4.3.2-4 lists the surface water intake facilities within three miles and water protection areas crossed by the projects. We recommend that the final EIS describe activities that will be implemented to minimize the impact on surface water intakes and source water protection areas. Source Water Protection Plans contain valuable information and should be consulted when considering construction impacts and mitigation. We recommend FERC encourage Atlantic, as appropriate, to establish communication protocols with state agencies and public water utilities regarding construction activities and timelines near the surface water intakes and source water protection areas.

FA6-13

Please consider the following additional specific comments on the DEIS on the topics of water use and water designations:

- Pages 4-107-111: Hydrostatic tests would require 83.7 million gallons of water (see table 4.3.2-9) and 3.4 million gallons of water would be required for dust control. We recommend providing the proposed or potential sources of water used for hydrostatic tests and dust control, anticipated quantities of water to be appropriated from each source, and practicable measures that could be implemented to ensure water sources and aquatic biota are not adversely affected by the appropriation activity.

FA6-14

- In Pennsylvania, the SHP facilities would cross streams with Cold Water Fisheries (CWF) and High Quality (HQ) designations, and streams with trout stocking designations. EPA encourages ACP and Dominion to consider reasonable route deviations to stream sections listed as CWF and HQ. A proposed access road crosses the upper reaches of Slaty Fork, a Tier 3 stream. Upgraded construction may be appropriate for high quality stream area crossings.

FA6-15

- While the number of waterbodies has been reduced, the ACP would still cross 17 waterbodies listed on the National Rivers Inventory (NRI). EPA encourages ACP and Dominion to consider reasonable route deviations to stream sections not listed in the NRI, and upgraded construction for high quality stream area crossings.

FA6-16

4) Cumulative Impacts

EPA recommends that additional analysis of cumulative impacts be provided in the final EIS. The DEIS considers the impacts of other projects in the action area using HUC 10 watersheds crossed by the proposed project. However, the DEIS analysis considers all 73 HUC 10 watersheds in the aggregate, concluding for example that the projects will have 0.1 percent of the surface water impacts to more than 8.2 million acres across 73 HUC 10 watersheds. This analysis could be strengthened by performing a cumulative impact assessment at the individual watershed scale, i.e., by individual HUC. This would also complement the analysis of groundwater at a state scale, and the DEIS conclusions that cumulative effects on groundwater would be less than significant.

FA6-17

In addition, we recommend the final EIS cumulative impact analysis consider two additional categories of impacts -- stream crossings and water withdrawals -- as these will likely have more impact to surface waters than acres disturbed. Other discussed environmental variables that may influence cumulative impacts at a watershed level include miles of impaired streams, occurrence of rare or at-risk

FA6-13 We acknowledge and encourage Atlantic to continue coordination with state and public utilities.

FA6-14 We have recommended in the final EIS that this information be filed with the Secretary, for review and written approval of the Director of OEP.

FA6-15 Comment noted.

FA6-16 Comment noted.

FA6-17 The EIS was prepared in accordance with NEPA, CEQ guidelines, and other applicable requirements. The EIS is consistent with FERC style, formatting, and policy regarding NEPA evaluation of alternatives and different types of impacts, including cumulative impacts. Further, the cumulative impacts section is consistent with the analysis conducted by FERC for other similar projects in the area such as the MVP Project.

FA6-17 (cont'd)

species, and number of National Pollutant Discharge Elimination System outfalls in the HUC. This information would sharpen the disclosure of cumulative impacts and appropriate consideration of mitigation.

Below is an example of a methodology used to assess the cumulative impact of stream crossings. The methodology assessed the number of stream crossings per HUC10 for the ACP and FERC-jurisdictional natural gas pipeline projects (MVP, WB XPress, Rover, Mountaineer XPress, and Leach XPress). The following tables provide a list of the most highly impacted HUCs.

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

	HUC 10	Name	# of stream crossings
1	503020104	Headwaters Middle Island Creek	58
2	208020201	Calfpasture River	51
3	503020102	Fishing Creek	35
4	301020112	Mill Creek-Nottoway River	33
5	208020707	Deep Creek	32

Table 2: HUC 12's with the highest number of cumulative stream crossings

	HUC 12	Name	# of Stream Crossings
1	20802080203	Deep Creek-Southern Branch Elizabeth River	31
2	30102011206	Round Gut-Nottoway River	26
3	20700050703	Inch Branch-Back Creek	19
4	50302010402	Buckeye Creek	19
5	20802020104	Hamilton Branch	15
6	20802070701	Little Creek-Deep Creek	15
7	30102010501	Butterwood Creek	15

This type of assessment, coupled with known attributes of watersheds, would indicate areas of special concern, such as Inch Branch-Back Creek and the Headwaters Middle Island Creek, which are impaired for benthic macroinvertebrates and have high numbers of stream crossings. Some of these headwaters also are critical for downstream Federally-listed endangered freshwater mussels, such as the snuffbox and clubshell. These areas could potentially be avoided through minor route modifications, where practicable.

5

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA7 – U.S. Department of the Interior – National Park Service

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

April 7, 2017

9043.1
ER 16/0733

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

Re: Comments on the Federal Energy Regulatory Commission (FERC) Draft Environmental Impact Statement (DEIS) for the Atlantic Coast Pipeline (ACP) and Supply Header Project; FERC Dockets CP15-554 and CP15-555

The National Park Service (NPS) has reviewed the Federal Energy Regulatory Commission's (FERC)[1] Draft Environmental Impact Statement (DEIS) for the proposed Atlantic Coast Pipeline Project (ACP) and Supply Header Project (SHP) as proposed by Atlantic Coast Pipeline, LLC (Atlantic) and Dominion Transmission, Inc. (DTI). Atlantic and DTI request authorization to construct and operate a total of 641.3 miles of natural gas transmission pipeline and associated facilities, three new natural gas-fired compressor stations, and modify four existing compressor stations. The projects would provide approximately 1.44 billion cubic feet per day of natural gas to electric generation, distribution, and end use markets in Virginia and North Carolina. The NPS previously filed scoping comments on the ACP Project in April 2015.

The NPS has worked with the applicant from the very beginning of the FERC pre-filing process to understand the project details and potential impacts to NPS units and program lands. We greatly appreciate the efforts of the applicant to respond to our requests quickly and efficiently, and their willingness to engage in discussions of potential changes in project details. We believe it has resulted in a better project, and has certainly enhanced our ability to review the proposal. The following are NPS observations on items the Final EIS could address or clarify. Overall, as

[1] The cooperating agencies for the Atlantic Coast Pipeline Project (ACP) and Supply Header Project (SHP) are the U.S.D.A. Forest Service, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service – Great Dismal Swamp National Wildlife Refuge, the West Virginia Department of Environmental Protection and the West Virginia Division of Natural Resources.

we detail below, our main focus is with the effect Forest Service Land and Resource Management Plan amendments may have long-term to the Appalachian National Scenic Trail (ANST, or Trail). We look forward to continued discussion with all stakeholders.

The NPS is not a cooperating agency to the FERC DEIS, and is completing required compliance activities separately for the proposed crossing of the Blue Ridge Parkway. The NPS anticipates all agency processes will meet the FERC schedule, and notes our completion date on the FAST-41 federal dashboard is well ahead of other federal agencies.

The NPS also requests consulting party status under the National Historic Preservation Act (NHPA), as we discuss in more detail below. The NPS offers the following comments on the DEIS.

I. The Appalachian National Scenic Trail

The Appalachian National Scenic Trail (ANST, or Trail) is a 2,190-mile continuous footpath that traverses scenic, wooded, pastoral, wild, and culturally resonant lands of the Appalachian Mountains between Katahdin in Maine and Springer Mountain in Georgia. It was conceived in 1921, built by a consortium of agencies and private citizens, and opened as a continuous trail in 1937.

Congress designated the Appalachian Trail a National Scenic Trail in 1968 as one of two initial components of the National Trails System. The NPS is charged under the National Trails System Act (16 U.S.C. 1241, 1244(a)) with administration of the ANST as a unit of the NPS. The NPS utilizes authorities applicable to both the national park system and national trails system in carrying out its administrative and management responsibilities for the Trail. In addition to recognition of the ANST as a nationally significant recreational resource, the NPS has found the Trail eligible for listing in the National Register of Historic Places (NHRP) and is in the process of evaluating the ANST for formal listing in the NRHP.

The Trail is protected along more than 99% of its course by federal or state ownership of the land or by rights-of-way. This protected corridor is managed under a Cooperative Management System as set forth in the 1981 Comprehensive Plan for the Protection, Management, Development, and Use of the Appalachian National Scenic Trail. This plan is supplemented by Appalachian Trail club local management plans and agreements between the cooperative management partners including the NPS, the U.S. Forest Service, the Appalachian Trail Conservancy (ATC), 14 states, and 31 maintaining clubs. The success of the cooperative

management system in managing and protecting the ANST relies heavily on the assistance of numerous volunteers.

Unit of the National Park Service

FA7-1 A description of this unique cooperative management system for the ANST is included in the introduction on page 1-9 of the DEIS. Recognizing that this partnership system is complex, we note that the statement that, "FS-acquired lands, even those acquired specifically for the protection of the ANST under the authority of the NTSA, are not considered to be a part of the ANST as a unit of the National Park system," is not accurate. The ANST is one of three national trails administered by the NPS that are considered to be units of the National Park System. The 250,000 acres of the ANST's protected corridor (a swath of land averaging about 1,000 feet in width around the 2,190-mile-long Trail treadway) makes it one of the largest units of the National Park System in the eastern United States. This protected corridor is the direct result of the 30-plus-year land acquisition and protection program of the NPS, USDA Forest Service (FS), Appalachian Trail Conservancy (ATC), and a number of states, supported primarily by federal Land and Water Conservation Fund (LWCF) appropriations. The NPS administers the entire ANST and as such considers the entire Trail corridor to be a part of the ANST park unit.

Proposed Crossing of the ANST

FA7-2 As proposed, the pipeline will cross the ANST in Augusta and Nelson County, Virginia. At this location, the Trail footpath is located on U.S. Forest Service lands and the ANST protected corridor spans both the George Washington National Forest (GWNF) and Blue Ridge Parkway. The proposed method of construction uses the horizontal directional drill (HDD) method with the entry/exit points on private land approximately 2,800 feet south of and 1,300 feet north of the ANST footpath. In the event the HDD crossing fails after a second attempt, the use of the direct pipe method is proposed as a contingency for crossing the Trail. The contingency entry/exit points are approximately 1,000 feet south of and 400 feet north of the ANST footpath. Both points are on private land, but the direct pipe exit workspace is on/near the FS boundary.

It is our understanding that these two proposed methods for crossing the ANST (HDD and direct pipe) would not require any motorized access across or on the Trail or any rerouting of hikers during construction. If this is incorrect, please clarify and consult with NPS, ATC and the Old Dominion Appalachian Trail Club to further outline a plan to address hiker safety for any proposed crossing of the ANST. Even though the proposed HDD and contingency entry/exit

FA7-3 points are physically separated from the Trail footpath, the noise associated with either operation

FA7-1 Section 1.2.2.1 has been revised to clarify the management of the ANST.

FA7-2 The commentor's assessment regarding the HDD and direct pipe methods is correct.

FA7-3 FERC encourages the NPS to provide comments directly to Atlantic regarding Atlantic's proposed crossing methods and site-specific crossing plans. Please also note that we have recommended that, prior to construction, Atlantic file with the Secretary a final site-specific crossing plan and alternative direct pipe crossing plan for the ANST and BRP that have been reviewed and approved by the GWNF and NPS.

FA7-3 (cont'd) could attract Trail hikers. NPS would also like to discuss measures to ensure hikers cannot access the job site, risking their, and/or worker safety.

Crossing Methods and Construction Sequence

As noted above, ACP proposes a HDD crossing well under the ANST and the Blue Ridge Parkway, with multiple attempts at constructing the pipeline via the HDD method should the first attempt fail. A direct pipe contingency plan is also proposed and evaluated as a fallback

FA7-4 alternative should HDD construction fail. Another alternative and accompanying analysis would be needed if the HDD and contingency failed. Should this happen, the NPS supports the Forest Service position that no construction would take place on National Forest System (NFS) lands until the HDD or contingency crossing is successful. "Note that the FS would not allow any construction activities to occur on its lands until the HDD or contingency crossing of the BRP [Blue Ridge Parkway] and ANST is completed." DEIS at ES-5. "The FS has informed us that should a SUP be issued for ACP, the authorization would include a provision that states no construction activities would be allowed to commence on NFS lands until the proposed HDD crossing or contingency crossing of the BRP and ANST is successfully completed." DEIS at 2-47.

This course of action, should the evaluated alternatives fail, would provide for examination of a full range of alternatives to complete the crossing of the Blue Ridge Parkway and the ANST in another location than is currently proposed. If construction proceeded ahead of the HDD or contingency construction, the most likely alternative to be proposed would include open trench construction, possible blasting, and/or auger and bore construction in the current pathway. As noted above, additional NEPA analysis would be required by FERC, the cooperating agencies and the Blue Ridge Parkway. The project as currently proposed would be approved under a Categorical Exclusion on the Blue Ridge Parkway; different construction methods might necessitate preparation of an Environmental Assessment by the Parkway and the potential for delay in the project timeline.

Visual Impact Assessment

The NPS has been pleased with the efforts of the applicant to respond to our requests for analysis of visual impacts, in particular the addition of a number of Key Observations Points (KOPs), especially after the major route change and the need to evaluate impacts to additional areas. Overall, the NPS agrees with most of the conclusions in the visual impact assessment. The NPS offers the following comments on the visual impact assessment portion of the DEIS.

FA7-4 Comments noted. We also note that in a letter dated April 4, 2017 (see comment letter FA11), the FS stated that Atlantic has filed adequate documentation for the FS to assess the feasibility of the BRP/ANST HDD and contingency proposals, and the FS would not prohibit concurrent construction at other spreads on NFS lands before the completion of the BRP/ANST crossing.

FA7-5

The DEIS states that Atlantic would avoid effects on the ANST by using the HDD method for construction (DEIS at 4-419: Linear Resources; and DEIS at 4-421: Table 4.10.1-2). While this is true to a large extent, the ACP Project could result in some long-term effects to the Trail setting due to the visibility of the cleared right-of-way on the landscape as viewed from the Trail. Based on our review of the draft EIS and revised Visual Impact Assessment (VIA), it appears that the ACP cleared right-of-way could result in visual impacts at several key vistas on the ANST. These are described in more detail below. Some standard mitigation measures are proposed in the draft EIS such as a Restoration and Rehabilitation Plan, but clearing in intact forested areas will still result in substantial visual impacts from certain vantage points. The NPS requests consideration of additional avoidance, minimization, and mitigation measures to further reduce visual impacts from the three viewpoints on the ANST discussed below to help ensure protection of this nationally significant resource for this and future generations.

The revised VIA at 111-112 states that the ACP corridor would be clearly visible from KOPs ANST 05 (Cedar Cliffs), ANST 06 (Little Ravens Roost), ANST 8a and 8b (Three Ridges Overlook). At Cedar Cliffs and Little Ravens Roost, the right-of-way would be clearly visible and project-related changes in color, line, texture, and other characteristics considered in the SMS would be apparent to the viewer, as indicated in the assessment. While these changes would not dominate the view (also indicated in the assessment), the visual impact here could be more substantial than most of the other ANST KOPs. At both Cedar Cliffs and Little Ravens Roost, but particularly at Little Ravens Roost, project-related changes could draw attention and act as a focal point in the view, along with the mountain ridge and greater valley view (the other two predominant focal points in the view).

U.S. Forest Service Land and Resource Management Plan Amendments

The DEIS is intended to fulfill the National Environmental Policy Act (NEPA) requirements for FERC and for each of the cooperating agencies, and is therefore the Forest Service's EIS for this proposed project. The NPS provides the following comments on the Forest Service's proposed Land and Resource Management Plan (Forest Plan) amendments.

The DEIS states, "the National Forest Management Act of 1976 requires that proposed projects, including third-party proposals subject to permits or rights-of-way, be consistent with the LRMPs of the administrative unit where the project would occur. Because of the continuous linear nature of the pipeline route, it was not possible to be fully consistent with the LRMPs in all locations across federal lands. The FS determined that if the Special Use Permit (SUP) would be approved for the proposed route crossing the MNF and GWNF, the LRMPs would require amendments. On the MNF, the type of amendment would be a "project-specific amendment,"

FA7-5 Section 4.8.9.2 has been revised to state the NPS' request for consideration of additional avoidance, minimization, and mitigation measures to further reduce visual impacts from the three viewpoints on the ANST to help ensure protection of the ANST for future generations.

Section 4.8.9.2 provides a description of each KOP at the ANST, and visual impacts.

which would apply only to the construction and operation of this pipeline. On the GWNF, project-specific amendments would also be required along with a "plan level amendment," which would change land allocations. If the FS determines to issue a SUP to Atlantic for ACP, the GWNF LRMP would be amended to reallocate land to the Management Prescription 5C– Designated Utility Corridors from several existing management prescriptions. These amendments would not change FS requirements for other projects or authorize any other actions." DEIS at ES-5. This passage provides the framework to understanding potential impacts to the ANST.

One proposed amendment on the George Washington National Forest (GWNF) would impact the ANST.

Proposed Amendment 3 states, "the GWNF Forest Plan is amended to allow ACP to cross the ANST in Augusta County, Virginia." DEIS at 4-360, Table 4.8.9-10. This table also lists Standard 4A-025: "Locate new public utilities and rights-of-way in areas of this Rx area where major impacts already exist. Limit linear utilities and rights-of-way to a single crossing of the Rx area per project." As this is not a plan level amendment, the NPS interprets it as a one-time approval for the ACP to cross in this location.

The DEIS also states, "for Proposed Amendment 3, there are no direct effects evidenced by ground disturbance associated with the pipeline crossing the ANST. However, there could be indirect effects associated with the issuance of a special use permit that involves the ANST. These could include impacts from future maintenance needs. There may be additional project-specific amendments needed, depending on pending survey results and additional information requests." DEIS at 4-361.

FA7-6 There are likely no direct effects as long as the HDD or contingency construction methods prove successful. The NPS requests additional information regarding the nature and scope of expected future maintenance needs in the vicinity of the ANST, as well as proposed methods to avoid or mitigate them. The NPS also requests more information on the additional project specific

FA7-7 amendments that might be needed.

The DEIS discusses the Construction, Operation and Maintenance (COM) Plan that the Forest Service is reviewing with the possibility of additional required measures to promote

FA7-8 conformance with the respective Forest Plans. The NPS requests the opportunity to review and comment on the Forest Service-revised COM Plan as it appears it may be a vehicle to address some the NPS concerns about the impacts of the proposed and potential Forest Plan amendments. The NPS is interested in further discussions with the applicant and the Forest

FA7-6 FS response: There are no anticipated maintenance needs that would affect ground disturbance within the ANST corridor on NFS lands since the pipeline would be underground.

FA7-7 FS response: There are no additional project-specific amendments to the LRMP associated with the ANST.

FA7-8 FS response: The comment is noted. The FS intends to engage the NPS as the COM Plan is refined.

FA7-8 (cont'd) Service to explore standards or potential amendments that might reduce the likelihood of adverse impacts to the ANST.

Cumulative Impacts

The DEIS addresses cumulative impacts to the ANST as follows, "The greatest visual impact of ACP and SHP, combined with the other projects listed in table W-1 in appendix W, would be primarily from the conversion of forest land to scrub-shrub or herbaceous vegetation types. Permanent visual impacts would also be present where permanent structures (e.g., compressor stations, houses, buildings, guardrails) would remain. Whereas these permanent visual impacts may be locally noticed, generally they would not be inconsistent with the existing visual character of the area. **However, in selected areas such as views from the ANST to the pipeline right-of-way and at the ANST crossing in the GWNF, the potential for visual impact is elevated** and thus may be mitigated further by the appropriate regulatory agency." DEIS at 4-504 (emphasis added).

The DEIS continues, "Users of the trail may be more sensitive to the impacts associated with the projects given its management as a remote area that is relatively unencumbered by manmade features. However, use of the HDD method (ACP) and bore method (MVP) would not significantly change the foreground views experienced by hikers at the ANST crossings. Following construction, views of the new pipeline corridors would be visible to hikers along the ANST at multiple locations as discussed in the Visual Impacts Analysis conducted for each project. Limiting the permanent right-of-way to 53.5 feet and adhering to the restoration and right-of-way maintenance measures outlined in Atlantic's and DTI's Plan, Procedures, Restoration and Rehabilitation Plan, and COM Plan on federal lands would reduce the impacts associated with the projects." DEIS at 4-504.

The NPS agrees that the potential for cumulative visual impacts from ACP and other projects is elevated for the ANST. This is due to various factors: 1) the geographic scope of influence that could contribute to cumulative visual impacts on the Trail would be larger compared to the scope described in the DEIS given the Trail viewshed; and 2) the timeframe that could result in cumulative impacts on the ANST is longer than the 18 months used in the DEIS for ACP, given

FA7-9 the forest clearing and ongoing maintenance required within the Trail viewshed. As such, and given the national significance of the Trail, and as a distinct unit of the National Park System, the NPS believes treating the ANST as a separate resource when analyzing cumulative impacts is warranted.

FA7-9 See the response to comment FA6-17.

FA7-9 (cont'd) The NPS agrees that many of the restoration and right-of-way maintenance measures would help to reduce impacts. As we detail elsewhere in these comments, we look forward to further discussion with the Forest Service (the "appropriate regulatory agency") and the applicant.

Cultural Resources and Consultation under National Historic Preservation Act Section 106

The NPS has not been consulted under Section 106 on potential effects of this undertaking on the ANST. Given our responsibility as administrator of the ANST, the NPS has a demonstrated interest in undertakings that may impact the Trail. This interest includes undertakings that occur on or near areas of the ANST owned or managed by other agencies such as the Forest Service. Views, vistas, and viewpoints are directly associated with the ANST's significance as a recreational resource, reflecting both its original design intent as a skyline trail and contributing to the visitor experience by providing some of the most satisfying and exhilarating moments of a hike. The setting surrounding the Trail corridor is vital to an ANST segment's ability to convey its historical associations under National Register Criterion A in the areas of Recreation and Conservation.

FA7-10 The NPS formally requests consulting party status under Section 106 of the NHPA on the ACP project. Specifically, we are interested in discussing potential ways to further minimize or mitigate impacts such as utilizing a narrowed or feathered edge right-of-way corridor or other vegetation management approaches that could lessen the visual impacts and loss of natural character on the Trail. We also encourage FERC to invite the NPS to consult on future proposed undertakings that may impact the ANST so the NPS can have early input on avoiding effects to the Trail and its setting or character. The NPS looks forward to continued discussion of required Section 106 compliance.

II. Land and Water Conservation Fund (LWCF) Sites

The Land and Water Conservation Fund (LWCF) State and Local Assistance Program is managed by the NPS. This is a partnership program that provides matching grants to States, and through States to local governments and tribes to plan, acquire, or develop public outdoor recreation areas and facilities. The purpose of the LWCF Act (54 U.S.C. 200305 *et seq.*) was to preserve and develop an outdoor recreation estate with high quality and quantity of outdoor recreation opportunities for public use and enjoyment in perpetuity. This protection extends to the entire park or recreation area benefitting from the grant, not just the footprint of the developed or acquired area. If outdoor recreational needs change the act provides a means to convert property to non-recreational purposes with approval from the Secretary of the Interior (delegated to NPS) as long as certain criteria are met. The Atlantic Coast Pipeline alignment

8

FA7-10 Section 4.10.3 has been revised to accept the NPS' request to be a consulting party for ACP.

crosses over two sites in West Virginia that received LWCF assistance: Seneca State Forest and

FA7-11 Lewis Wetzel Wildlife Management Area. The responsibility for compliance with the provisions of the Act rests with the State. The State in turn consults with the NPS for guidance and to sort out details of the proposal; therefore, NPS concurrence is needed for both Seneca State Forest and the Lewis Wetzel Wildlife Management Area. This is incorrectly stated in the DEIS and the NPS asks that this be revised in the Final EIS (FEIS). DEIS at 1-12.

Seneca State Forest

FA7-12 Based on the information provided in various communications from July 2016, December 2016 (DEIS), and March 2017 for Seneca State Forest, the NPS concurs with the State of West Virginia that the implementation of the project will not result in a permanent loss of recreational use and opportunity at Seneca State Forest. If the license agreement does not convey control or tenure to Dominion, then a conversion is not triggered (see March 2017 communication). Please address LWCF in the license as outlined in the 2008 LWCF State Assistance Program Manual Chapter 8.D.

The materials submitted have demonstrated that despite the change in appearance, public outdoor recreation can still occur within the pipeline alignment. The NPS will continue to work closely with the State of West Virginia to maintain the quality recreational experiences existing currently in Seneca State Forest.

Further, the removal of LWCF protections along the pipeline alignment would establish a non-recreation corridor that bisects the park, potentially opening the possibility for greater threats to outdoor recreational resources and opportunities at Seneca State Forest in the future.

For the Seneca State Forest, the DEIS indicates that a LWCF conversion will be triggered because the project results in permanent changes to recreation, namely the Allegheny Trail and the park viewshed. DEIS at 4-316. However, based on our understanding of the proposal, we do not concur with this finding and suggest revising this text in the Final EIS.

The DEIS indicates that narrowed right-of-way locations will be identified through Seneca State Forest. DEIS at 4-317. Please advise the NPS if those have been identified and where we can find these new alignment widths. It would be beneficial to know what factors help determine if a narrower construction corridor can be used. DEIS at 4-310. The DEIS also mentions that a site-specific relocation plan will be created for the Allegheny Trail. DEIS at 4-317 and DEIS at 5-51. Please provide this plan to NPS headquarters for review.

FA7-11 Section 1.2.2.6 has been revised to clarify the management of the Seneca State Forest and Lewis Wetzel WMA.

FA7-12 Section 4.8.5.1, Seneca State Forest, has been updated to include the NPS' comments regarding conversion. Note that discussions regarding potentially reducing the construction workspace on the Seneca State Forest are still ongoing between Atlantic and the Forest. We have recommended in the final EIS that Atlantic identify these locations prior to construction.

Regarding the Allegheny Trail crossing, refer to the supplemental information filing provided by Atlantic to FERC on March 23, 2017, and appendix J of the final EIS. FERC encourages the NPS to provide comments directly to Atlantic regarding the Allegheny Trail crossing.

Lewis Wetzel Wildlife Management Area

FA7-13 When the DEIS was released for public comment, the document was not clear about the LWCF implications at the Lewis Wetzel Wildlife Management Area (Lewis Wetzel WMA). As with Seneca State Forest, the impacts to recreation are again the focus for LWCF. Once the NPS clearly understands the SHP impacts and the steps that will be taken to maintain the quality of recreation, the NPS can advise the State of West Virginia the options available to move forward while complying with the requirements of the Act. The DEIS provides insufficient information about the following:

- if there are any above-ground infrastructure components proposed for the Supply Header Project (SHP), such as measurement and regulation stations, mainline valves, above ground pipe, compressor stations, etc., that could permanently impact recreation by removing areas from public access through the use of fencing or other access control structures;
- the legal instrument Dominion will use to construct and maintain the SHP; and
- the time frame associated with work through the Lewis Wetzel WMA.

DEIS Page Specific Comments

FA7-14 **DEIS at 4-316:** Please avoid suggesting Seneca State Forest is "administered" by the NPS. We recommend the following text: 'Based on correspondence with the WVDNR, ACP would cross Seneca State Forest lands managed by the West Virginia Department of Forestry. In 1966, West Virginia accepted a federal grant from the Land and Water Conservation Fund (LWCF) to assist with the purchase of a portion of Seneca State Forest. As the recipient of the federal LWCF grant, the State of West Virginia is obligated by contract under the LWCF grant agreement to ensure that the State Forest would remain in public outdoor recreation use in perpetuity unless otherwise approved by the Secretary of the Interior (delegated to the National Park Service); only if he/she finds it to be in accord with an existing Statewide Comprehensive Outdoor Recreation Plans; and as necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location (36 CFR 59) (LWCF, 2008).'

10

FA7-13 Section 4.8.5.1, Lewis Wetzel WMA, has been revised to clarify that no permanent aboveground facilities associated with SHP would be installed on the WMA. Atlantic and DETI would use the authority granted to it by the FERC and other applicable federal, state, and local permits and authorizations, should the project be approved.

As listed in table 2.4-1, construction across the Lewis Wetzel WMA is proposed to occur between April 2018 and the fourth quarter of 2019. However, because construction cannot proceed without FERC and other applicable federal, state, and local permits, this schedule is subject to change.

FERC encourages the NPS to provide comments directly to DETI regarding the Lewis Wetzel WMA crossing.

FA7-14 Section 4.8.5.1, Seneca State Forest, has been revised to reflect the recommended edits.

We appreciate efforts to consider and address NPS concerns regarding the proposed pipeline. Thank you for the opportunity to provide comments. If you have any questions or need additional information, please contact Bert Frost, NPS Acting Deputy Director at bert_frost@nps.gov or (202) 208-3818.

Sincerely,

Lindy Nelson
Regional Environmental Officer

cc: NPS, Mary Krueger and Alexa Veits
SOL, Ann Navaro

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA8 – U.S. Department of Agriculture – Forest Service

USDA United States Department of Agriculture | Forest Service | Monongahela National Forest | 200 Sycamore Street Elkins, WV 26241 304-636-1800

File Code: 1900; 2700
Date: April 18, 2017

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

Dear Ms. Bose:

Subject: Width of the Permanent Right-of-Way and Revised Special Use Permit Application
OEP/DG2E/Gas 4
Atlantic Coast Pipeline, LLC
Docket Nos. CP15-554-001 and -001

The Forest Service clarifies the width of the permanent right-of-way (ROW) for the proposed Atlantic Coast Pipeline Project (ACP Project) and requests a revised application for the special use permit (SUP) from Atlantic Coast Pipeline, LLC (ACP). The proposed ACP Project would affect approximately 20 miles of National Forest System (NFS) lands on the Monongahela National Forest (MNF) and George Washington National Forest (GWNF).

ACP's revised SUP application (SF-299) dated June 16, 2016, reflects a 75-foot-wide ROW on the MNF and GWNF. In an information request issued on June 13, 2016, the Federal Energy Regulatory Commission (FERC) requested that ACP agree to the ROW width allowed by the Mineral Leasing Act (MLA) which specifies that a ROW on federal lands should be no more than 50 feet plus the diameter of the pipe. For the ACP Project, the maximum allowable ROW width would thus be 50 feet plus 42 inches, or 53.5 feet. In ACP's response to FERC filed on July 1, 2016, ACP agreed to comply with the MLA for a permanent ROW easement of no more than 53.5 feet on NFS lands.

In the Draft Environmental Impact Statement (Draft EIS) issued by FERC on December 30, 2016, the description of the ROW width on NFS lands is based on MLA language describing the maximum allowable ROW width of 53.5 feet. Also in the Draft EIS, FERC recommends a 50-foot-wide ROW on non-NFS lands and states a "50-foot-wide permanent right-of-way is sufficient to safely and efficiently operate large diameter natural gas pipelines."

Caring for the Land and Serving People

Printed on Recycled Paper

FA8-1 The Forest Service clarifies that, if the proposed ACP Project is approved, the ROW would be 50-foot-wide on NFS lands, consistent with the width recommended by FERC elsewhere along the proposed route. The Forest Service requests that FERC revise the Final EIS accordingly. ACP must submit to the Forest Service a revised SF-299 reflecting a 50-foot-wide ROW on the MNF and GWNF.

For questions, please contact Jennifer Adams, Special Project Coordinator, at (540) 265-5114 or by email at jenniferpadams@fs.fed.us.

Sincerely,

CLYDE THOMPSON
Forest Supervisor

cc: Atlantic Coast Pipeline, LLC

FA8-1 Comment noted. The final EIS has been revised to reflect Atlantic's commitment to maintain a 50-foot-wide corridor during operation of the AP-1 mainline.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA9 – U.S. Fish and Wildlife Service

United States Department of the Interior

FISH AND WILDLIFE SERVICE
300 Westgate Center Drive
Hadley, MA 01035-9589

APR 0 4 2017

In Reply Refer To:
FWS/R5/WSFR

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Atlantic Coast Pipeline, LLC, Dominion Transmission, Inc., and
Piedmont Natural Gas Company, Inc.
Docket Nos. CP15-554-000, CP15-554-001, CP15-555-000, and CP15-556-000

Dear Mr. Davis:

The U.S. Fish and Wildlife Service's Division of Wildlife and Sport Fish Restoration (WSFR) has reviewed the current Draft Environmental Impact Statement (DEIS) for the Atlantic Coast Pipeline and Supply Header Project (ACP) (Docket Nos. CP15-554-000, CP15-554-001, and CP15-555-000 FERC/EIS-0274D) and offer the following comments.

FA9-1 Section 4.5.2.3 of the DEIS describes that the ACP is proposed to cross approximately 1.3 miles of the James River Wildlife Management Area (JRWMA) owned and managed by Virginia Department of Game and Inland Fisheries (DGIF) in Nelson County, Virginia. Section 4.8.5.2 notes concerns raised by DGIF related to jeopardizing future funding from WSFR as a result of ACP impacts. We recommend that the final EIS more accurately describe the Federal nexus on the JRWMA and associated regulatory requirements including the following:

1. Two parcels within the JRWMA were acquired with Federal funds from the Pittman-Robertson Wildlife Restoration Program (PR Wildlife Restoration Program) (Grants W-50-L-I and W-85-L-3), and revenue from the sale of hunting and fishing licenses (license revenue). Requirements for use and disposal of lands acquired with license revenue and PR Wildlife Restoration Program funds are described in 50 CFR Part 80 Administrative Requirements, Pittman-Robertson Wildlife Restoration and Dingell-Johnson Sport Fish Restoration Acts.

FA9-1 Section 4.8.5.2 has been updated to include information provided by the FWS regarding the James River WMA.

FA9-1 (cont'd)

2. DGIF and WSFR have jointly determined (see attached letters) that, as proposed, the construction and operation of the ACP route will result in interference of the authorized purposes of the PR Wildlife Restoration Program. Such interference, if not remedied, can jeopardize DGIF's eligibility for future grant funding under this program (50 CFR 80.21, 50 CFR 80.135, 50 CFR 80.136). In Fiscal Year 2017, this funding totaled $13,854,774. Remedies include 1) re-routing the ACP to avoid the JRWMA, or 2) replacing the affected property with another property that is at least of equal economic value and has fish, wildlife and public use benefits consistent with the purposes of the original grant.

We recommend that the attached letters further detailing WSFR and DGIF communications on the ACP and potential impacts to the JRWMA be included in the administrative record for the final Environmental Impact Statement.

Thank you for the opportunity to comment on the DEIS. If you have any questions regarding these comments, please contact me at 413-253-8501, or by e-mail at colleen_sculley@fws.gov.

Sincerely,

for Colleen Sculley
Chief, Division of Wildlife
and Sport Fish Restoration

Attachments

COMMONWEALTH of VIRGINIA

Department of Game and Inland Fisheries

Molly J. Ward
Secretary of Natural Resources

Bob Duncan
Executive Director

June 7, 2016

Colleen Sculley
Chief, Division of Wildlife and Sport Fish Restoration
U.S. Fish and Wildlife Service – Region V
300 Westgate Center Drive
Hadley, MA 01035-9589

RE: Atlantic Coast Pipeline
JRWMA crossing
ESSLog# 34825
FERC# CP15-554-000

Dear Ms. Sculley,

This letter is in regard to the Atlantic Coast Pipeline, LLC (Atlantic) proposed crossing of our James River Wildlife Management Area (JRWMA), associated with the development and operation of the proposed Atlantic Coast Pipeline. As we documented in our electronic submittal to your office on February 4 of this year, this WMA was purchased with a combination of Pittman-Robertson (PR) Wildlife Restoration funds and state hunting and fishing license dollars under the following grants from the U.S. Fish and Wildlife Service:

James River WMA: PR Grant W-50-L-1 (578.33 acres)
PR Grant W-85-L-3 (541.63 acres)

As we previously have discussed, Atlantic proposes to permanently install a 42-inch-diameter natural gas transmission pipeline across the James River WMA in Nelson County. Atlantic proposes a 125-foot-wide construction corridor and a 75-foot-wide permanently maintained corridor across the WMA. In addition, the applicant anticipates use and improvement of access roads and equipment laydown areas. Project narratives, Resource Reports, and other documents associated with Atlantic's application to the Federal Energy Regulatory Commission (FERC) are available on the Dominion Resources, Inc. (Dominion) website at www.dom.com/ACPipeline and at FERC's website.

In several communications and meetings with Atlantic, Dominion, and the applicant's consultants, we have recommended that the pipeline corridor be re-routed along the northeast boundary of the WMA, similar to that depicted in the attached map. Location of the pipeline corridor in the southern section of the WMA, where most of our habitat management and recreational activities occur is likely to result in a significant interruption of those activities.

7870 Villa Park Drive, Ste 400, P.O. Box 90778, Henrico, VA 23228-0778
(804) 367-1000 (V/TDD) ***Equal Opportunity Employment, Programs and Facilities***

This attachment to comment letter FA9 has been reviewed by FERC staff and the information incorporated into the EIS as applicable.

Despite our recommendations, the currently proposed route (Rev10a) largely corresponds with previous iterations of the route, expanding somewhat on use of existing roads for construction access, and including newly-proposed improvement and use of an existing road within our waterfowl/shorebird management unit. In this regard, we note that this section of the WMA is managed for wetland habitats and may be more vulnerable to adverse impacts associated with road improvement and high-level use than are other habitats generally found in the WMA. It also appears that the proposed access road now continues past the waterfowl management unit to our boat ramp on the James River. Assuming Atlantic plans to use our boat ramps and/or the associated parking lot during construction and maintenance of the pipeline, we must consider the adverse impacts this will have upon recreational and emergency access to the James River from this boat ramp.

The most recent alignment also depicts the James River HDD exit pit as being located within the James River floodplain, to the east of the CSX railroad, rather than on higher elevations to the west of the railroad where it previously had been located. We note that this new HDD exit pit location is within areas that have been known to flood and that are more sensitive to human activities than the previous HDD exit pit location.

Final construction details and schedules, mitigatory scenarios, and Right-Of-Way agreements are yet to be developed for this project. Nonetheless, we have evaluated the potential impacts to wildlife and habitats, to our constituents' recreational uses of these lands and wildlife resources, and to our management activities on JRWMA, to determine whether this project would temporarily or permanently interfere with the documented purposes of these lands, and of the license funds and federal grants used to purchase them. Rather than develop a subjective narrative of these impacts, we offer the attached spreadsheet as a qualitative assessment of impacts likely to occur on the JRWMA as a result of construction and operation of the Atlantic Coast Pipeline.

We acknowledge that Atlantic and their consultants continue to work cooperatively with us to discuss ways to avoid, minimize, or mitigate for adverse impacts upon wildlife resources, habitats, management activities, and recreational uses of the James River WMA. We further agree that potential exists, through substantial mitigatory actions, for accrual of significant long-term benefits to our Department, to our constituents' recreational uses of the WMA, to our management of the property, and to the Commonwealth's wildlife resources. We have posed numerous questions to Atlantic regarding the pipeline's potential impacts upon the WMA; these and their responses are attached to this letter as supplemental information for your consideration. Despite the cooperation of the applicant and their consultants, however, we must opine that the proposed project would unavoidably interfere, at least temporarily, with the purposes for which the JRWMA was acquired. We also note our understanding that, should a FERC license be issued for this project, the subject right-of-way across our lands could be granted by FERC through eminent domain.

Because of the potential impacts of a concurrent determination by USFWS on our eligibility to receive Pittman-Robertson Wildlife Restoration grant funds, we request your review of the Atlantic Coast Pipeline project proposal, a USFWS determination with regard to our evaluation, and your guidance in resolving this significant issue. Thank you for consideration of this request, and please contact me or David Whitehurst, Director, Bureau of Wildlife Resources, at 804-367-4335 if we can be of further assistance.

Sincerely,

Robert W. Duncan
Executive Director

RWD/RTF
Enclosures

CC: The Honorable Molly J. Ward
Robert Bisha, Dominion
David Whitehurst, VDGIF
Ray Fernald, VDGIF

United States Department of the Interior

FISH AND WILDLIFE SERVICE
300 Westgate Center Drive
Hadley, MA 01035-9589

In Reply Refer To:
FWS/Region5/WSFR

JUN 2 1 2016

Robert W. Duncan, Executive Director
Virginia Department of Game and Inland Fisheries
P.O. Box 90778
Henrico, Virginia 23228

Dear Mr. Duncan:

We are responding to your letter dated June 7, 2016, regarding the proposed Atlantic Coast Pipeline – James River Wildlife Management Area crossing project (ACP project), and supporting documentation provided. As your letter notes, the ACP project is proposed to cross two parcels within the James River Wildlife Management Area (JRWMA) that were acquired with Federal funds from the Pittman-Robertson Wildlife Restoration Program (PR Wildlife Restoration Program) (Grants W-50-L-1 and W-85-L-3), and revenue from the sale of hunting and fishing licenses (license revenue). These grants identify authorized purposes of the acquisition to be habitat protection for wildlife and public outdoor recreation including hunting, fishing, boating, and water recreation. In addition, the Department of Game and Inland Fisheries (DGIF) uses PR Wildlife Restoration Program funds and license revenue for annual operation and maintenance of its wildlife management area system including the JRWMA (Grant W-48-D) and the "Midway" Boat Access Site at the JRWMA (Grant F-107-D).

Your letter and supporting documentation note that the Virginia Department of Game and Inland Fisheries (DGIF) has determined that the ACP project, as proposed, would interfere with the authorized purpose as identified in the original grant documents. Specifically, you have noted that the ACP project would "unavoidably interfere, at least temporarily, with the purposes for which the JRWMA was acquired". You also provided a qualitative assessment of impacts to the JRWMA likely to occur from construction and operation of the ACP project. This assessment indicates that during pipeline construction interference to the public's ability to access portions of the JRWMA for hunting, fishing, wildlife watching, and boating will occur. The assessment also notes high probability of impacts to wildlife populations, wildlife habitat utilization, and undesirable habitat conversion during construction, operation, and maintenance of the pipeline, and that these impacts are "long-term issues of concern". In light of this assessment and supporting documentation provided, we concur that the ACP project would interfere with the authorized grant purposes, and we conclude that such interference would occur both during and post-construction.

Requirements for the acquisition, use and disposal of lands acquired and maintained with PR Wildlife Restoration Program funds and license revenue are codified in Federal regulation at 50 CFR Part 80. Under these regulations, a state fish and wildlife agency must use grant-acquired real property for its authorized purpose. If a state fish and wildlife agency allows a use that interferes with this purpose, the

This attachment to comment letter FA9 has been reviewed by FERC staff and the information incorporated into the EIS as applicable.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA9 – U.S. Fish and Wildlife Service (cont'd)

agency must fully restore the property to its purpose. If such purpose can't be fully restored, it must replace, using non-Federal funds, the real property with replacement property of equal economic value and with fish, wildlife, and public-use benefits consistent with the original purpose. If suitable replacement property is not acquired within 3 years, the state may be declared ineligible to participate in the PR Wildlife Restoration Program (50 CFR 80.135). For your reference, in Fiscal Year 2016, DGIF received $12,399,343 in PR Wildlife Restoration Grant funds.

If a state fish and wildlife agency uses real property acquired with license revenue and PR Wildlife Restoration funds for purposes other than management of fish and wildlife-related resources, then the Director of the Service may declare the State in diversion and ineligible to participate in the PR-Wildlife Restoration Program until such diversion is resolved either by the state fish and wildlife agency regaining "management control" and restoring the property to its original condition, or acquiring adequate replacement property (50 CFR 80.21, 80.22, 80.136).

We appreciate the opportunity to comment on the ACP project and your agency's assessment of its potential impact. Your letter also requested our guidance in resolving this significant issue. As we have communicated with you previously on other projects, our regulations do not contemplate or instruct the Service to provide up-front assistance to state fish and wildlife agencies in allowing activities that interfere with authorized purposes. In the few circumstances that we are aware of where States have lost management control, allowed interfering activities and had to replace property, the process to locate, fund and acquire suitable replacement property has been very labor and time intensive. We strongly advise state fish and wildlife agencies of the importance of maintaining management control of real property acquired with grant funds and/or license revenue, ensuring real property is used for its authorized purpose and not allowing activities that interfere with grant purposes. Taking these steps will help ensure an agency's ongoing eligibility to participate in the PR Wildlife Restoration Program. In the case of the proposed ACP project, these steps could be achieved by a realignment to avoid the JRWMA.

If you have questions or would like to discuss this matter in more detail, please don't hesitate to contact me at 413-253-8501, or by email at colleen_sculley@fws.gov.

Sincerely,

Colleen E Sculley

Colleen Sculley, Chief
Wildlife and Sport Fish Restoration

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA10 – U.S. Fish and Wildlife Service

United States Department of the Interior

FISH AND WILDLIFE SERVICE

West Virginia Field Office
694 Beverly Pike
Elkins, West Virginia 26241

March 30, 2017

Mr. Nathaniel Davis
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Comments on Atlantic Coast and Supply Header Pipeline Project Draft Environmental Impact Statement; Docket Numbers CP15-554-000, CP15-554-001, CP15-555-000

Dear Mr. Davis:

The U.S. Fish and Wildlife Service (Service) appreciates the opportunity to review and comment on the Draft Environmental Impact Statement (DEIS) for Atlantic Coast Pipeline, LLC's (Atlantic) proposed Atlantic Coast Pipeline project. These comments are provided pursuant to the Endangered Species Act (ESA, 87 Stat. 884, as amended; 16 U. S. C. 1531 *et seq.*).

The Service's North Carolina Field Office, Virginia Field Office, and West Virginia Field Office have each reviewed the DEIS and comments from each office are provided in the attached document. For questions, please contact the appropriate field office contact at the following:

John Ellis	Sumalee Hoskin	Liz Stout
U.S. Fish and Wildlife Service	U.S. Fish and Wildlife Service	U.S. Fish and Wildlife Service
Raleigh Field Office	Virginia Field Office	West Virginia Field Office
551 Pylon Drive	6669 Short Lane	694 Beverly Pike
Raleigh, NC 27606	Gloucester, VA 23061	Elkins, WV 26241
919- 856-4520	804-824-2410	304-636-6586
John_Ellis@fws.gov	Sumalee_Hoskin@fws.gov	Elizabeth_Stout@fws.gov

The Service looks forward to continued close coordination with you and the applicant on the proposed Atlantic Coast Pipeline project.

Sincerely,

John E. Schmidt
Field Supervisor

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA10 – U.S. Fish and Wildlife Service (cont'd)

20170414-4001 FERC PDF (Unofficial) 04/14/2017

USFWS Comments on the December DEIS

	Comment Number	Page Number	Paragraph Number	Comment Author	Comment
FA10-1	1	ES-4	1	WVFO	It is noted that Virginia karst protection personnel will be consulted, please clarify if this will be done for all karst crossings no matter the state or if this is just for Virginia? It is preferred that the same coordinator work for all karst areas on the line no matter the state.
FA10-2	2	ES-5	2	VAFO	Explain how you know "the potential for ACP and SHP to initiate or be affected by damaging karst conditions would be adequately minimized" when Little Valley Bath County hasn't be surveyed? Additionally, VA-DCR wasn't consulted about Cochran's Cave at the time this document was written.
FA10-3	3	ES-6	5	WVFO, VAFO	Small whorled pogonia will also be adversely affected by the project, as described in the most recent draft of the BA received on January 27, 2017.
FA10-4	4	ES-6	5	VAFO	We cannot concur at this time that the project is not likely to adversely affect the James spinymussel. Mussel surveys in Cowpasture and Mill Creeks have not been completed and this information is necessary to make a not likely to adversely affect determination. Also, have sediment analyses been completed for Mill Creek? Please provide the status of the habitat assessment or survey for MP 111.4 for Calfpasture River. HDD is not proposed at all of these crossings.
FA10-5	5	ES-7	1	WVFO, VAFO, NCFO	The Service continues to recommend surveys be completed prior to initiating formal consultation. However, if surveys are not completed, the analysis can be completed based on the assumption of species presence. Additional information regarding pipeline construction, access road improvements, location of communication towers, and crossing of smaller streams/tributaries in sensitive watersheds should also be provided.
FA10-6	6	ES-10	1	WVFO, NCFO	Does "long-term to permanent" refer to the permanent ROW only or to both the permanent and temporary impacts from the clearing of forest for construction? Even the "temporary" disturbance in forested areas will be long-term because these forest stands will take decades to return to their former state on the area of the ROW allowed to return to it's former state.
FA10-7	7	ES-10	2	WVFO, VAFO, NCFO	The Service supports the recommendation of a 50ft permanent ROW by FERC.
FA10-8	8	ES-14	Final bullet	WVFO, VAFO	The Service continues to recommend that all requested presence/absence surveys for federally listed species be completed prior to the completion of the ESA consultation process. However, if surveys are not completed, the analysis can be completed based on the assumption of species presence.
FA10-9	9	1-7 and/or 1-10	All	WVFO, NCFO	USFWS WVFO, NCFO should be included.
FA10-10	10	2-19	2	WVFO, VAFO	Please, clarify if the additional spoil generated from a wider trench will result in a 150ft ROW instead of the 125ft construction ROW for these areas.
FA10-11	11	2-29	Table 2.3.1-2	VAFO, NCFO	Table 2.3.1-2 lists the ATWS associated with the HDD of the Little River is within 28ft of a wetland.The Little River in this area contains Tar spinymussel and Dwarf Wedgemussel. Please provide additional information about this ATWS and measures being undertaken to avoid impacting these species. Please verify none of the other ATWS are located adjacent to sensitive waterbodies.
FA10-12	12	2-35	3	NCFO	If the municipal water has additives such as chlorine/chloromine or if ACP adds algicides to test water, it should not be released into surface waters unless it is safe for sensitive species including amphibians and aquatic invertebrates. Often times testing is done on common species that are often less sensitive.
FA10-13	13	2-37	2	VAFO	We recommend a 100ft setback for ATWS from sensitive waterbodies (e.g. with federal listed species or species under evaluation for potential listing)
FA10-14	14	2-39	HDD construction methods	NCFO	If guidewires are being used in navigable waters, will they be subject to Corps or Coast Guard permits?
FA10-15	15	2-39	Table 2.3.3-1	VAFO	Please, double check that this table of HDD crossings is up to date. It appears to be missing Mayo Creek, AP-1, 184.5
FA10-16	16	2-41	3	NCFO	see comment on 2-29
FA10-17	17	2-48	3	NCFO	The Service has requested that third party Environmental Inspectors familiar with rare, threatened, and endangered aquatic species be present when work is occurring in sensitive water bodies.
FA10-18	18	4-13	1	WVFO	"...literature review identified 10 cave entrances within the KRA, but based on topography, none were determined to receive drainage from the 300-foot wide corridor..." Please, provide analysis to support this claim either within the text or within an appendix. Additionally, when surveys are completed on the remaining 17% of areas, the details of those survey efforts should be added to this section.
FA10-19	19	4-14	Multiple	WVFO, VAFO	Does "high risk" mean a feature connects to underground features/waterways? Define high risk as per the explanation in the GeoConcepts (2016) report.
FA10-20	20	4-18	Bullets 3 and 9	WVFO, VAFO	Should also contact Federal resource agencies.
FA10-21	21	4-18	Bullet 9	WVFO, VAFO	Further define "6 inch void"; does this mean 6 inch wide or deep?
FA10-22	22	4-18	Bullet 10	WVFO	Discharge of hydrostatic water should be avoided in karst areas.
FA10-23	23	4-28	2	WVFO	If a slip occurs that impacts or could impact a resource (a stream, wetland, plant, etc.), the appropriate agency(ies) should be notified.
FA10-24	24	4-53	2	NCFO	Additional measures should be utilized in watersheds containing rare, threatened, or endangered species.

1

FA10-1 Comment noted. The appropriate federal and state agency would be consulted.

FA10-2 While some information was still pending at the time of issuance of the draft EIS, the lack of this final information does not deprive the public of a meaningful opportunity to comment on a substantial adverse environmental effect of the projects or a feasible way to mitigate or avoid such effect. The EIS includes sufficient detail to enable the reader to understand and consider the issues raised by the proposed projects and addresses a reasonable range of alternatives. We also require that final surveys be completed and approved, and any additional mitigation measure that may be required because of those studies be implemented.

FA10-3 Section 4.7.1.17 has been updated to reflect our determination that ACP is likely to adversely affect small whorled pogonia due to potential indirect impacts from sedimentation on individuals adjacent to the construction workspace.

FA10-4 In section 4.7.1.15, we recommend that Atlantic assume presence of the James spinymussel in Mill Creek and implement the enhanced conservation measures described in section 4.7.1. Section 4.7.1 recommends a condition that would require the construction of the projects not begin until the completion of all outstanding biological surveys and FERC's completion of section 7 consultation with the FWS. We will re-evaluate our determinations of effect for these species upon receipt on pending survey results and finalized conservation measures.

FA10-5 Comment noted. Section 4.7 has been updated with survey status provided by Atlantic and DETI on May 8, 2017. Section 4.7.1 includes a recommendation that prior to construction of the projects Atlantic and DETI complete all outstanding biological surveys and wait for FERC's completion of section 7 consultation with the FWS. Section 4.7.1 has also been updated with enhanced conservation measures for special status species. Additional information regarding construction, access roads, communication towers, and stream/tributary crossings has been updated throughout section 4.7, and will be updated further pending receipt of more information from Atlantic and DETI.

FA10-6 The referenced text has been revised to clarify that impacts on forested lands from construction and operation would be long-term to permanent.

FA10-7 Comment noted.

FA10-8 Comment noted. Section 4.7 has been updated with survey status provided by Atlantic and DETI on May 8, 2017. Section 4.7.1 includes a recommendation that prior to construction of the projects Atlantic and DETI complete all outstanding biological surveys and wait for FERC's completion of section 7 consultation with the FWS. Section 4.7.1 has also been updated with enhanced conservation measures for special status species.

FA10-9 Section 1.2.2.4 has been revised to include the FWS, West Virginia Field Office, Virginia Field Office, and North Carolina Field Office.

FA10-10 The construction rights-of-way as presented in table 2.2.2-1 for the AP-1 mainline would be 125 feet wide in non-agricultural areas and 150 feet wide

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA10 – U.S. Fish and Wildlife Service (cont'd)

20170414-4001 FERC PDF (Unofficial) 04/14/2017

FA10-25	25	4-83	4	WVFO	Atlantic and DTI should adhere to their mitigation procedures. "Closely adhere" implies they will deviate or not follow through with the plan.
FA10-26	26	4-83	Bullet 4	WVFO	Clarify if "opened conduits developed in karst terrain" refers to conduits already existing or opened due to the project's activities.
FA10-27	27	4-85	Blasting	NCFO, WVFO	In-stream blasting should be done in the dry
FA10-28	28	4-91	1	NCFO	Please, provide a list of the 13 waterbodies that are within proposed contractor yard sites. With only a 5-foot buffer, extensive stormwater and erosion control measures will be needed in all locations. None of these sites should be allowed in sensitive watersheds.
FA10-29	29	4-91	Table 4.3.2-3	NCFO	Please provide information regarding why the Neuse River crossing is to be an open cut versus HDD. This waterbody contains several rare species which the Service has been petitioned to list. If listed before or during construction, there will be a need to reinitiate Section 7 consultation to determine if there are ways to avoid impacting these species. The best way to avoid impacting them would likely be conducting an HDD at this crossing.
FA10-30	30	4-101	1	VAFO	"Atlantic and DTI would locate ATWS at least 50 feet from stream banks.." We recommend a 100-foot setback for ATWS from sensitive waterbodies (e.g. with federal listed species or species under evaluation for potential listing)
FA10-31	31	4-103	Table 4.3.2-7	VAFO	Please, confirm this table is up-to-date. This table does not appear to include all HDD crossing, including Mayo Creek - has an analysis been conducted at this crossing?
FA10-32	32	4-104	Bullet 1	WVFO, VAFO	Define or clarify what "adequately contained" means.
FA10-33	33	4-106	2	NCFO	Delete the second sentence. This would be consistent with what is stated on page 5-10 paragraph 5.
FA10-34	34	4-106	5	NCFO, WVFO	In-stream blasting should be done in the dry
FA10-35	35	4-108	3	WVFO, NCFO	Water being discharged should occur in a location that guarantees it will return to the source waterbody to prevent spread of invasive species.
FA10-36	36	4-108	5	WVFO, NCFO	Water withdrawal and discharge location table would be more helpful if it stated the source body and the body of water nearest to the discharge location.
FA10-37	37	4-108	5	VAFO	In waters with known or potential federally listed or under review species, our standard recommendation is a 1 millimeter screen and intake velocity that does not exceed 0.25 feet per second and that the project will not withdraw more than 10% of instantaneous flow.
FA10-38	38	4-108	6	NCFO	If the municipal water has additives such as chlorine/chloromine or if ACP adds algicides to test water it should not be released into surface waters unless it is safe for sensitive species including amphibians and aquatic invertebrates. Often times testing is done on common species that are often less sensitive.
FA10-39	39	4-110	Table 4.3.2-9	VAFO	This table appears to be out-of-date. See table 2.6-1 in draft BA, dated 1/27/17. An important change is the removal of Cowpasture and Nottoway Rivers, which we fully support. Calfpasture River needs further evaluation due to pending mussel assessment. In the 9/29/2016 Mussel Report, access was restricted and an abbreviated survey is planned in 2016/2017. Calfpasture River is in the historic range of James spinymussel.
FA10-40	40	4-111	2	VAFO, WVFO	Per 1/27/17 draft BA, Atlantic and DTI will not use water from sensitive waterbodies for HDD, hydrostatic testing, dust control water or for restoration and revegetation activities. We fully support this statement.
FA10-41	41	4-112	Table 4.3.2-10	VAFO	This table appears to be out-of-date. See table 2.6-2 in draft BA, dated 1/27/17. We recommend TOYR in sensitive waters with listed species or species under evaluation for potential listing.
FA10-42	42	4-113	2	NCFO	Table 2.3.1-2 mentioned in Section 4.3.2.8 lists an additional workspace as being within 28 ft from a wetland for the Little River crossing. Little River contains Dwarf wedgemussel and Tar Spinymussel. The FERC should provide additional information regarding how close the space will be to the Little River. Furthermore, the FERC should explain how this fits into its effects determination for these two species.
FA10-43	43	4-161	5	NCFO, WVFO, VAFO	The Service is working with ACP to develop a mitigation plan for impacts to migratory birds.
FA10-44	44	4-165	bold section	NCFO	When the fragmentation analysis is completed, please forward it to the USFWS field offices and the State agencies for review.
FA10-45	45	4-171	table 4.6.1-1 NC warmwater	NCFO	Remove Pigfish as it wouldn't be found in the project area.
FA10-46	46	4-175	4	NCFO	The second paragraph mentions 3 additional waterbodies are within property boundaries of a temporary contractor or pipe storage yard three waterbodies would be associated with the installation of cathodic protection ground beds and one would be within boundaries of an above ground facility. Please identify these waterbodies. Also p 4-92 only mentions 1 cathodic ground bed so please make them consistent.
FA10-47	47	4-181	1	VAFO	The most recent Freshwater Mussel Guidelines developed by the Service and VDGIF was last updated on 6/22/2015
FA10-48	48	4-201	Table 4.7.1-1	VAFO	Until recommended presence/absence surveys have been completed, the Service cannot concur with a no effect determination.

2

FA10-10 (cont'd) in agricultural areas, which would be required to accommodate additional spoil generated from the wider trench.

FA10-11 The referenced ATWS would be located approximately 360 feet from the Little River. Atlantic would implement sediment and erosion control measures to reduce potential impacts associated with the use of ATWS for the Little River HDD.

FA10-12 Section 4.7.1 has been updated to include conservation measures related to water sources for hydrostatic testing.

FA10-13 Section 4.7.1 has been updated with conservation measures related to ATWS setbacks.

FA10-14 Permitting requirements related to HDD guidewires would be determined by the USACE. Section 1.4 of the EIS provides a discussion of the major permits, authorizations, and consultations that are applicable for ACP and SHP.

FA10-15 Table 2.3.3-1 has been revised to include Atlantic's currently proposed HDDs.

FA10-16 See the response to FA10-11.

FA10-17 Comment noted. Section 2.5.1 describes the environmental training program that would be implemented by Atlantic and DETI prior to construction.

FA10-18 Analysis was completed by review of 1 meter LiDAR (see revised section 4.1.2.3). In addition, the final EIS text as well as tables 4.1.2-2 and 4.1.2-3 have been updated to reflect current survey progress.

FA10-19 Definition of high risk has been added to table 4.1.2-3.

FA10-20 Bulleted text has been modified to include consultation with appropriate federal agency.

FA10-21 "in depth" has been added to the referenced section in bulleted text.

FA10-22 Comment noted.

FA10-23 Agreed. Section 4.1.4.2 has been revised to address this comment.

FA10-24 Section 4.7.1 has been updated with enhanced conservation measures related to crossings at waterbodies containing special status species.

FA10-25 Section 4.3.1.7 revised to remove the word "closely."

FA10-26 Section 4.3.1.7 revised to clarify open conduits.

FA10-27 Section 4.7.1 has been updated with enhanced conservation measures related blasting. Atlantic has committed to blasting in the dry-ditch crossing area.

FA10-28 The list of waterbodies located within contractor and pipe yards is provided in appendix K. We acknowledge stormwater and erosion control measures would be required, and that Atlantic would be required to comply with state and federal stormwater requirements.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA10 – U.S. Fish and Wildlife Service (cont'd)

FA10-49	49	4-201	Table 4.7.1-1	VAFO	In addition to the comment above, the draft BA, dated 1/27/17 indicates likely to adversely affect for small whorled pogonia. We cannot concur with a not likely to adversely affect on the James spinymussel until recommended presence/absence surveys in the Cowpasture and Calfpasture Rivers and Mill Creek have been completed. These crossings are not HDD.
FA10-50	50	4-201	Table 4.7.1-1	VAFO	Rusty patched bumble bee has been federally listed endangered as of March 21, 2017.
FA10-51	51	4-204	4	WVFO	Will the project follow burning regulations for states? Burning during dry months could be in conflict.
FA10-52	52	4-207	3	WVFO	Indiana bats are known to occur in Wetzel County, West Virginia. They have been positively detected in multiple acoustic surveys in recent years following the original capture of a pregnant female in 2011.
FA10-53	53	4-209	Table 4.7.1-5	VAFO	This table appears to be out-of-date. See table 5.4.2-1 in draft BA, dated 1/27/17. There are known Indiana bat hibernacula within 5 miles of the ACP.
FA10-54	54	4-212	2	WVFO	Please provide citations for the "numerous examples" of Indiana bat roosts near disturbance.
FA10-55	55	4-214	5	WVFO	NLEB were captured at one site and acoustically detected at 3 other sites, not one other site.
FA10-56	56	4-215	2	VAFO	In addition to the two bulleted items listed, the 4(d) rule also prohibits the incidental take that occurs within a hibernaculum. This may include disturbing or disrupting hibernating individuals when they are present as well as the physical or other alteration of the hibernaculum's entrance or environment when bats are not present if the result of the activity will impair essential behavioral patterns, including sheltering.
FA10-57	57	4-218	6	NCFO	The Service recommends that Longleaf Pine be replanted in areas where it is removed.
FA10-58	58	4-233	6	WVFO	Include Hackers Creek in this discussion. A population of clubshell exists in Hackers Creek in Lewis County, West Virginia and access roads for the project are within the vicinity of Hackers Creek.
FA10-59	59	4-235	2	WVFO	The snuffbox is known in McElroy Creek, not clubshell.
FA10-60	60	4-236	4	WVFO	Green floater is known throughout the Greenbrier watershed and may occur in other high quality streams that are not solely the Greenbrier river. Please revise to note watersheds.
FA10-61	61	4-237	5	VAFO	"In addition, the FWS has expressed concern with regard to sediment-laden discharge water, or sedimentation from nearby access roads, that could drain into waterbodies occupied by the mussels. We recommend in section 4.7.1 that Atlantic complete an analysis of these potential impacts for all federally protected aquatic species." Note that this sediment analysis may extend the action area downstream in the waterbody and that mussel habitat assessments/surveys should be conducted in these areas if there are document occurrences of federally listed aquatic species in these waterbodies.
FA10-62	62	4-238	1	WVFO, NCFO, VAFO	"If Atlantic and DTI document federally listed mussels in the waterbody, avoid using the access road if in-stream activities cannot be avoided." Crossing a waterbody with an access road necessitates in-stream activity unless a bridge is already present. Please, revise this sentence.
FA10-63	63	4-247	Multiple	WVFO, VAFO	As written, this section leads the reader to believe that not all surveys have been completed for plants. Please clarify if this is correct. Additionally, small whorled pogonia should be a likely to adversely affect not a not likely to adversely affect.
FA10-64	64	4-293	bullet 1	NCFO	In streams and their tributaries containing threatened and endangered species, no grubbing should occur within 50 ft of the stream from November 15-April 1. These 12 digit HUCs were provided to ACP on December 1, 2016.
FA10-65	65	4-328	table 4.8.5-3	NCFO	Change Fishing River to Fishing Creek
FA10-66	66	4-337&4-328	tables	NCFO	Crossing methods should be consistent.
FA10-67	67	4-342	communication towers	NCFO	Communication towers should utilize bird friendly lighting and avoid using guy wires.
FA10-68	68	4-502	Multiple	WVFO, VAFO, NCFO	Please provide a table summing the species impacted by the project and specific effects to those species from the project in addition to the text provided.
FA10-69	69	5-6	5	NCFO	In areas where variances are needed in regards to typical wetland construction, did FERC verify that no RTE species are present in any adjacent streams.
FA10-70	70	5-6	7	WVFO, NCFO	"While about 160 acres of open vegetation types"…this is confusing. Does this mean that the open is the maintained strip following construction? If so, it will likely be significantly more than 160 acres for the project. Please, double-check what is meant here and have it revised to be more clear.
FA10-71	71	5-7	4	NCFO	In areas where Longleaf Pine is removed, it should be replanted.

FA10-29 We have recommended that the Neuse River be crossed by an HDD should a hydrofracture study indicate a low potential for an inadvertent release at this crossing.

FA10-30 Section 4.7.1 has been updated with conservation measures related to ATWS setbacks.

FA10-31 Table 4.3.2-7 has been updated to indicate that Mayo Creek would also be crossed by the James River HDD. The hydrofracture risk is low.

FA10-32 If an inadvertent return occurs, containment would be determined on a case-by-case basis.

FA10-33 Section 5 provides the conclusions of our analysis in section 4. We will not delete our analysis in section 4.

FA10-34 See response to comment FA10-27.

FA10-35 Discharges would be directed to upland locations and would not reach receiving waters.

FA10-36 The table identifies water sources. Discharges would be directed to upland locations and would not reach receiving waters.

FA10-37 Section 4.7.1 has been updated with conservation measures related to water withdrawals. We recommend in section 4.7.1 that Atlantic and DETI not exceed more than 10 percent instantaneous flow during water withdrawal at ESA waterbodies.

FA10-38 Section 4.7.1 has been updated with conservation measures related to additives in municipal water sources.

FA10-39 The table has been updated to reflect information that was filed after the draft EIS was issued.

FA10-40 That statement filed by Atlantic and DETI is inaccurate. As stated in the section 4.3.2.7 and as presented in appendix K, Atlantic and DETI propose to withdraw water from sensitive waterbodies. As such, we recommend conservation measures in section 4.7.1 to reduce or avoid impacts on sensitive species during water withdrawal in ESA waterbodies.

FA10-41 Comment noted.

FA10-42 Comment noted.

FA10-43 Comment noted.

FA10-44 Section 4.5.3 has been updated with Atlantic's and DETI's Migratory Bird Plan (see table 2.3.1-1) filed with the FERC on May 5, 2017.

FA10-45 Table 4.6.1-1 has been updated to remove pigfish.

FA10-46 Section 4.6.1 and appendix K have been updated to reflect the waterbodies that are located within the vicinity of aboveground facilities. Refer to appendix K for a complete list of waterbodies affected by both pipeline and aboveground facility components.

FA10-47 This citation and reference has been updated throughout the final EIS.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA10 – U.S. Fish and Wildlife Service (cont'd)

FA10-72	72	5-9	4	WVFO, NCFO, VAFO	In line with other agencies, including the USFS, the WVDNR, and the VDGIF, the USFWS is concerned about the forest fragmentation that will result from this project. The increase of edge habitat and elimination of large core forest areas will impact forest interior species and species that utilize forest habitats as a part of their ecology. The effects of this change in habitat will allow new species to move into the area and fill niches. This could: displace T&E species from habitats and create increased stress on them while they try to find new habitat; create increased competition for food and other valuable resources required by the species; and/or provide pathways for invasive species to be introduced that could out-compete T&E species and other sensitive core forest species for critical resources, among other potential effects.
FA10-73	73	5-13	1	WVFO, VAFO	Small whorled pogonia should be added to the list of species that will be likely to be adversely affected by the project.
FA10-74	74	5-26	2	NCFO	The Service strongly agrees that some long term cumulative impacts will occur on wetland and upland forested vegetation and associated wildlife habitats. We would also like to add that depending on maintenance of the corridor and control of ORVs that long term cumulative impacts could occur to the aquatic ecosystem of waterbodies crossed.
FA10-75	75	5-29	4	NCFO	Item 6.c - The Service continues to recommend that third party Environmental Inspectors be utilized in waterbodies with sensitive species.
FA10-76	76	General	n/a	VAFO, WVFO	The Service recognizes, as do many of our natural resource partners, there are likely areas along the pipeline where recommended avoidance and minimization measures (AMMs) for a species or resource may conflict with recommendations for another. To facilitate our understanding of where such conflicts may occur, we recommend the applicant create an environmental constraints map that identifies the AMMs that have been recommended for each pipeline segment. We recommend that the map be organized by county and be provided to all the natural resource agencies for review. Where there are identified conflicts between recommendations, the natural resource agencies will work together to prioritize the AMMs for each County and provide that information to the applicant and permitting agencies.
FA10-77	78	Global		NCFO, WVFO	The latest draft BA from January 27, 2017, includes many changes and thus is inconsistent with the information in the DEIS. Comments were not given in regards to every change that has been made as ACP and FWS are still working through drafts.

FA10-48 Comment noted. In the introduction in section 4.7.1 and throughout the discussion we note that the we will re-evaluate our determination for these species upon receipt on pending survey results and finalized conservation measures.

FA10-49 See response to comment FA10-4.

FA10-50 Table 4.7.1-1 and section 4.7.1.16 have been updated to reflect the rusty patched bumble bee's new status under the ESA.

FA10-51 Sections 4.7.1.1 through 4.7.1.4 have been updated to include a reference to Atlantic's and DETI's Fire Prevention and Suppression Plan and Open Burning Plan (see table 2.3.1-1) that incorporate applicable state burning regulations.

FA10-52 Section 4.7.1.3 has been updated to include this information.

FA10-53 Table 4.7.1-5 has been updated with the known Indiana bat hibernacula located within 5 miles of ACP provided in the January 27, 2017 Applicant-Prepared draft BA.

FA10-54 This sentence has been removed and additional information from cited sources has been included in section 4.7.1.3.

FA10-55 Updated acoustic and mist-net survey data for the Indiana bat are provided in table 4.7.1-4.

FA10-56 Comment noted. As discussed in the updated section 4.7.1.4, we will now proceed under standard consultation for the northern long-eared bat.

FA10-57 Comment noted. Long-leaf pine and wiregrass communities were identified in two potential foraging habitat locations for red-cockaded woodpecker in Cumberland County between AP-1 MPs 156.5 and 156.9; no nesting sites were located within 0.5 mile of these locations. Atlantic does not plan to replace these two areas of long-leaf pine and wiregrass communities.

FA10-58 Section 4.7.1.15 and appendix K have been updated to indicate the presence of clubshell mussels in Hacker's Creek, West Virginia.

FA10-59 Section 4.7.1.15 and appendix K have been updated to indicate the presence of snuffbox mussel (not clubshell mussel) in McElroy Creek.

FA10-60 Section 4.7.1.15 has been updated to note that the green floater mussel is known throughout the Greenbrier watershed.

FA10-61 Section 4.6.4 provides a detailed discussion of the potential impacts on aquatic resources associated with increased sedimentation from the construction and use of access roads, and runoff from the adjacent construction workspace. Section 4.6.4 also describes the mitigation measures that Atlantic and DETI would incorporate to minimize these impacts, including the use of compost filter socks at the edges of the construction workspace and access roads within 300 feet of ESA sensitive waterbodies, implementation of sediment and erosion control measures on access roads identified in the field as having significant erosion potential within 0.25 mile of ESA sensitive waterbodies, and construction in accordance with state

NPDES permits. Atlantic and DETI would also implement the enhanced conservation measures at ESA sensitive waterbodies as described in appendix K. We have recommended that Atlantic and DETI implement these enhanced conservation measures at the waterbodies where ESA-listed, proposed, or under review species were documented during ACP or SHP surveys, and where presence is assumed based on agency data, in addition to perennial tributaries to these designated waterbodies within 1 mile where construction activities are also proposed (see section 4.7.1) to address potential downstream impacts.

FA10-62 As discussed in sections 2.2.5 and 4.6.4, approximately 81 percent of the proposed access roads are existing roads that can accommodate construction traffic without modification or improvement; therefore, the majority of access roads would not require in-stream activity.

FA10-63 Section 4.7 has been updated with survey status provided by Atlantic and DETI on May 8, 2017; surveys for ESA-listed plants are not complete.

FA10-64 Section 4.7.1 includes Atlantic's commitment to avoid grubbing within 50 feet of ESA sensitive waterbodies from November 15-April 1. These waterbodies are indicated in appendix K and include waterbodies where ESA-listed, proposed, or under review species were documented during surveys or where presence is assumed based on agency data. We have also recommended that these measures be applied in perennial tributaries within 1 mile of these designated waterbodies where construction activities are also proposed (see appendix K)

FA10-65 Table 4.8.5-3 has been revised to reflect the commentor's edit.

FA10-66 Comment noted.

FA10-67 Atlantic's and DETI's Migratory Bird Plan (see table 2.3.1-1) and section 4.5.3.5 have been updated to include a discussion of the potential impacts associated with proposed communication towers on migratory birds, and the conservation measures that Atlantic and DETI would implement to mitigate those impacts. Atlantic has committed to not using guy wires for new tower and construction support, and for towers more than 199 feet tall, would use low intensity lighting with minimum number, minimum intensity, and minimum number of flashes per minute allowable by the FAA.

FA10-68 Refer to table 4.7.1-1, appendix R, and appendix S for a list of ESA-listed, proposed, and under review species; FS-managed species; and state-listed and special concern species.

FA10-69 We have reviewed the workspace requests and find them acceptable.

FA10-70 The referenced text has been revised for clarification.

FA10-71 See response to comment FA10-57.

FA10-72 Comment noted. Section 4.5.6 provides an updated forest fragmentation analysis based on data sets recommended by the WVDNR.

FA10-73 See response to comment FA10-3.

FA10-74 Comment noted. As described in section 4.7.1, Atlantic and DETI have committed to implementing measures, such as installation of OHV barriers, to deter OHV access along the pipeline right-of-way and access roads. At key crossing locations, such as ESA sensitive waterbodies, site-specific OHV blocking measures would be developed in consultation with the land-managing agencies and adjacent private landowners, as appropriate.

FA10-75 In non-HDD waterbodies, Atlantic and DETI would remove aquatic species at ESA sensitive waterbodies according to the FWS and state mussel relocation protocols, Atlantic's Virginia Fish Relocation Plan and North Carolina Revised Fish and Other Aquatic Taxa Collection and Relocation Protocol for Instream Construction Activities (see table 2.3.1-1). In addition, as described in section 2.5, Atlantic and DETI would employ EIs and FERC third-party monitors that would be onsite during construction activities and would have stop work authority.

FA10-76 We agree. Section 2.4 has been revised to include a recommended condition that Atlantic and DETI file with the Secretary detailed environmental constraints maps, by county, illustrating the updated avoidance and minimization measures identified by the resource agencies, including TOYR, and that Atlantic and DETI have committed to along the ACP and SHP routes.

FA10-77 Comment noted. Section 4.7.1 has been updated with the information provided in the 1/27/17 Applicant-Prepared draft BA, and additional consultation between the FERC, FWS, and NOAA Fisheries.

FEDERAL AGENCIES/ELECTED OFFICIALS COMMENTS

FA11 – U.S. Department of Agriculture – Forest Service

USDA United States Department of Agriculture | Forest Service | Monongahela National Forest | 200 Sycamore Street, Elkins, WV 26241, 304-636-1800

File Code: 1900; 2700
Date: April 4, 2017

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

Dear Ms. Bose:

Subject: Forest Service's Review of the Primary and Contingency Proposal for Crossing the Appalachian National Scenic Trail and Blue Ridge Parkway
OEP/DG2E/Gas 4
Atlantic Coast Pipeline, LLC
Docket No. CP15-554-000 and CP15-554-001

The Forest Service provides comments on the primary and contingency proposals submitted by Atlantic Coast Pipeline, LLC (ACP) for the crossing of the Appalachian National Scenic Trail (ASNT) and Blue Ridge Parkway (BRP) by the proposed Atlantic Coast Pipeline Project (ACP Project). ACP proposes horizontal directional drilling (HDD) as the primary method and direct pipe installation (DPI) as the contingency method for the ANST-BRP crossing.

The Forest Service has reviewed successive versions of ACP's proposal for HDD and DPI, filed with the Federal Energy Regulatory Commission on May 13, August 1, and August 4, 2016, as well as the HDD design report filed with FERC on January 10, 2017. ACP's filings contain sufficient information to assess the feasibility of the proposals. Based on the Forest Service's review, the HDD would be feasible at the proposed location and the DPI would be a feasible contingency option. The Forest Service has no further questions or requests for information regarding the HDD and DPI methods for the ANST-BRP crossing.

FA11-1 The Forest Service had informed ACP, by letter dated January 19, 2016 and filed with FERC on January 21, 2016, that any special use permit (SUP) issued to ACP may be conditioned to require the successful completion of the HDD prior to constructing any other spreads on National Forest System (NFS) lands, given that detailed proposals had not been submitted as of the date of the January 2016 letter. Because ACP subsequently filed adequate documentation for the Forest Service to assess the feasibility of the primary and contingency proposals, and based on our independent assessment that the proposals are feasible, such a condition in the SUP would no longer be necessary. Thus, the Forest Service would not prohibit concurrent construction at other spreads on NFS lands before the completion of the ANST-BRP crossing.

Caring for the Land and Serving People

Printed on Recycled Paper

FA11-1 Comment noted. Section 2.4 has been revised to remove the condition related to completion of the BRP/ANST HDD or contingency crossing prior to the start of construction on NFS lands.

Thank you for the opportunity to review and comment on ACP Project documents. For questions or additional information, please contact Jennifer Adams, Special Project Coordinator, by phone at (540) 265-5114 or by email at jenniferpadams@fs.fed.us.

Sincerely,

CLYDE THOMPSON
Forest Supervisor

cc: Atlantic Coast Pipeline, LLC

NATIVE AMERICAN TRIBES COMMENTS

NAT1 – Lumbee Tribe of North Carolina

20170222-4001 FERC PDF (Unofficial) 02/22/2017

From: Lora Oxendine-Taylor
To: Anthony Rana
Subject: FERC meeting in Fayetteville, NC
Date: Monday, February 20, 2017 1:41:24 PM

Hello Tony,

NAT1-1 As we met briefly at the FERC meeting in Fayetteville, NC a follow up is required. It was mentioned that the manner which the FERC comment was held was not an actually "Hearing". Might I ask will one follow up after this one. Did not like this new practice in place as it seemed as if a secret process was being achieved. And makes me wonder if comments made will be used to protect what was obvious that the People of North Carolina do not want this

NAT1-2 pipeline in our state. Of course I do not want it entering for an EIS has not been seen as well

NAT1-3 an archeological study with STP (shovel test pits). Crawling on hands is not sufficient enough.

NAT1-4 It is sad that Duke Energy has contaminated water ways with the coal ash spills and now we are being asked to endure a ACPL. Tribes live up and down this territory and I would have to ask if they have been invited to any of the consultation concerns. The Lumbee are Federally Recognized and Congress set this and then denied the fundings, but they did not remove the status as Federal. And they have not been asked to make comment as this pipeline enters right into the Lumbee Aboriginal Territory. The fracking and lines placed were provided in a "eminent domain" takeover as the stories are told. Or should I get into the stories of Fort Brags General not wanting into his territory so he used his government authority and moved the pipeline into Indian lands. I hear money was shared, but the money can not be found for the construction of the train track.

NAT1-5 Yes, I am upset and it seems that all the Section 106 Tribal Preservation Laws have been passed aside. The largest problem of this pipeline is that one spill will harm the Aquifers that we as Indigenous Coastal People know to be the breathing lungs of the Turtle Island. This is not right and if you would share the link to make comment I would greatly appreciate.

Sincerely,

LK

Lora Kay Oxendine-Taylor

"Certain things catch your eye but pursue only those that capture the heart."

Native Author Unknown

NAT1-1 In no public notice issued by the FERC notifying stakeholders of scoping or draft EIS comment meetings and sessions was the meeting referred to as a "hearing." The format of the scoping and draft EIS comment meetings and sessions was consistent with FERC's most recent public outreach efforts.

NAT1-2 A copy of the draft EIS was sent to about 9,800 parties on the environmental mailing list and was available for viewing via the FERC's eLibrary (Accession No. 20161230-4000).

Surveys for archaeological resources are protected by law and not available for public review. Specific agency personnel (e.g., State Historic Preservation Office) are responsible for the review of cultural resources survey reports.

NAT1-3 Comment noted.

NAT1-4 We asked Atlantic to reach out to the Lumbee Tribe and other North Carolina tribes. Sections 4.10.4, 4.10.5, and 4.10.7 have been revised to include discussions of Atlantic's consultations with additional Native American tribes.

NAT1-5 Section 4.3 includes our analysis of impacts on aquifers.

NATIVE AMERICAN TRIBES COMMENTS

NAT2 – Monacan Indian Nation

Teresa R Pollak, Madison Heights, VA.

January 21, 2017

Kimberly D. Bose, Secretary

Federal Energy Regulatory Commission

888 First Street, N.E.

Washington, DC 20426

RE: Atlantic Coast Pipeline, Docket #CP15-554-000 George Washington National Forest and Monongahela National Forest

Dear Ms. Bose,

NAT2-1 This intent of this letter is to inform you and your organization that the council, and the people they represent, of the Monacan Indian Nation stand in strong opposition to the proposed construction of the Atlantic Coast Pipeline through the George Washington National Forest and Monongahela National Forest. Being a concerned party and united by our Nations mission, we do not approve of the Atlantic Coast Pipeline construction route or amendments that would lend to further destruction of our cherished resources and ancestral remains. We firmly reject the proposals being presented and will not tolerate further exploitation of our ancestral lands to accommodate this unnecessary pipeline project.

NAT2-2 To further expand upon the issues that have been presented to our Nation, we have determined that any changes in the current Land and Resource Management Plans (LRMPs) will allow the Atlantic Coast Pipeline to exceed the established Forest Service water and soils standards. The Forest Service water and soils standards were created with conscious intent to preserve the lands for safe, public use and to prevent corporate encroachment that could adversely impact the environment and associative archaeological resources. The standards, as they are currently documented, preserve our undiscovered ancestral remains by preventing the destructive encroachment. To alter or amend the Land and Resource Management Plans (LRMPs) would imply a desire by your organization to erode and destroy our ancestral remains.

We do not approve of the destructive encroachment being presented by the Atlantic Coast Pipeline project nor any proposed amendments to Land and Resource Management Plans (LRMPs) that would accommodate this destruction of the environment and, via proxy, our ancestral remains

NAT2-1 FS response: The opposition to the project is noted.

NAT2-2 FS response: The FS continues to work with Atlantic to incorporate design features, mitigation measures, and monitoring procedures to minimize the effects on national forest resources, as described in the COM Plan, appendix G and/or the FS SUP, if issued. Atlantic has conducted cultural resource surveys of areas that would be impacted by the project. The results of the surveys and disclosure of effects are described in section 4.10.6 of the EIS.

NATIVE AMERICAN TRIBES COMMENTS

NAT2 – Monacan Indian Nation (cont'd)

Monacan Indian Nation Tribal Council

Approved:

CC:

Governor Terry McAuliffe

Senator Mark Warner

Senator Tim Kaine

Congressman Robert Hurt

Congressman Bob Goodlatte

Virginia Senator Thomas A. Garrett

Virginia Senator Creigh Deeds

Virginia Delegate Ben Cline

Virginia Delegate Matt Fariss

Carter Reid, Senior Vice President, Dominion Resources, Inc.

Roger Kirchen, Virginia Department of Historic Resources

NATIVE AMERICAN TRIBES COMMENTS

NAT3 – Coharie Intra-Tribal Council, Inc.

Coharie Intra-Tribal Council, Inc.

7351 North U.S. 421 Hwy.
Clinton, N.C. 28328

Phone (910) 564-4906
(910) 564-6909
Fax (910) 564-2701

March 29, 2017

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

RE: Docket Nos. CP15-554-000, CP15-554-001, CP15-555-000, CP15-556
Comments on the Atlantic Coast Pipeline and Supply Header Project DEIS

Dear Deputy Secretary Davis:

On behalf of the Coharie Tribe, we submit these comments on the Draft Environmental Impact Statement (DEIS) issued by the Federal Energy Regulatory Commission (FERC) for the Atlantic Coast Pipeline (ACP). The Coharie Tribe is recognized by the state of North Carolina and consists of approximately 2,700 members.

These comments address the following key issues:

NAT3-1

- Neither FERC nor Atlantic Coast Pipeline, LLC (Atlantic) and Dominion Transmission, Inc. (DTI) has adequately engaged the Coharie Tribal Government throughout the pre-filing and DEIS preparation process.
- The DEIS does not adequately provide a plan to provide notice to the Coharie Tribal Government in the event of discovery of archeological or burial sites.

Thank you for the opportunity to provide comments on this project.

Sincerely,

Mr. Greg Jacobs, Tribal Administrator
greg_jacobs53@yahoo.com
Coharie Tribe

Coharie Tribe of Sampson & Harnett Counties

NAT3-1 See the response to comment NAT1-4.

NATIVE AMERICAN TRIBES COMMENTS

NAT4 – Haliwa-Saponi Indian Tribe

Haliwa-Saponi Indian Tribe
39021 Hwy 561 · P.O. Box 99
Hollister, North Carolina 27844
Phone: (252) 586-4017 · Fax: (252) 586-3918
Email: info@haliwa-saponi.com

Dr. B. Ogletree Richardson
Chief

Jeff Anstead
Vice-Chief

Tribal Council
Rev. Michael Richardson, Chair
Alfred Richardson, Vice-Chair
Ladonna E. Richardson, Secretary
Charles Richardson, Jr., Treasurer
Rocna Daniel
Earl Evans
Dudley Lynch, Sr.
Norman R. Richardson
LaDonna D. Richardson

Archable D. Lynch, III
Tribal Administrator

April 4, 2017

Mr. Nathaniel Davis, Sr.
Deputy Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 204026

RE: Docket Nos CP15-554-000, CP15-001, CP15-555-000, CP15-556 Comments on the Atlantic Coast Pipeline and Supply Header Project DEIS

Dear Deputy Secretary Davis:

On behalf of the Tribal Council of the Haliwa-Saponi Indian Tribe, please find attached, comments concerning the Draft Environmental Impact Statement (DEIS) issued by the Federal Energy Regulatory Commission (FERC) with regards to the Atlantic Coast Pipeline (ACP).

While the current territory of our Indian tribe encompasses portions of Halifax, Warren, Franklin and Nash counties of North Carolina that thankfully, are not currently included in the proposed path of the project, the project path proposed is expected to transverse some of the areas that our ancestors have lived and resided since first sustained contact with European cultures. Therefore, we have cultural and religious concerns with regard to the current proposed project route.

Additionally, the residual impact of an operational pipeline such as that proposed would potentially pose negative impacts the environmental quality of our current territories. To summarize, our additional attached comments reflect the following concerns with regards to the DEIS:

NAT4-1

-Neither FERC, nor ACP applicants (Atlantic Coast Pipeline, LLC and Dominion Transmission, Inc.) have adequately engaged the tribal government of the Haliwa-Saponi Indian Tribe throughout the pre-filing and DEIS preparation process;

-The DEIS does not adequately provide for the inclusion of the Haliwa-Saponi Indian Tribe as a stakeholder for emergency preparedness purposes;

NAT4-1 See the responses to comments NAT4-3 through NAT4-6, below.

NAT4-1 (cont'd)

-The DEIS does not provide an adequate plan for providing notices to the Haliwa-Saponi Indian Tribe with regards to cultural and archeological resources and inadvertent discovery of ancestors of our Tribe;

-The DEIS raises concerns about the impact to the environment, including, but not limited to water resources on tribal lands.

NAT4-2

By way of this correspondence, the Haliwa-Saponi Indian Tribe is specifically requesting consultation with FERC as a consulting Indian tribe, as well as inclusion as a signatory and consulting party to any potential Memorandum or other programmatic agreement with regards to mitigation of adverse impacts of the ACP. In order to begin the process of initiation of meaningful tribal consultation, please contact our Tribal Administrator, Archie Lynch, at the information below, as he is our designated primary point of contact in regards to consultation on this matter.

Mr. Archie Lynch, Tribal Administrator
Haliwa-Saponi Indian Tribe
PO Box 99
Hollister, NC 27844
(252) 586-4017, extension 222
alynch@haliwa-saponi.com

The content of this letter, and its attachments, have been authorized for submission to you for and on behalf of the tribal government of the Haliwa-Saponi Indian Tribe. Thank you for the opportunity to provide comments on this project. Should you have any additional questions, again, please feel free to contact Archie Lynch at the information above.

Sincerely,

Dr. Brucie Ogletree Richardson
Chief

Rev. Michael Richardson
Tribal Council Chair

Mr. Archie Lynch
Tribal Administrator

cc: The Honorable Roy Cooper, Governor, State of North Carolina
The Honorable G.K. Butterfield, 1st District, United States Congress
The Honorable Richard Burr, NC Senator, United States Senate
The Honorable Thom Tillis, NC Senator, United States Senate

2

NAT4-2 See the response to comment NAT1-4.

NAT4-3

I. Neither FERC nor Dominion has adequately engaged the Haliwa-Saponi Tribal Government throughout the pre-filing and DEIS preparation process.

FERC's stated purpose for its "pre-filing" process is to "encourage early involvement of interested stakeholders, facilitate interagency cooperation, and identify and resolve environmental issues before an application is filed."[1] In 2014, Atlantic and DTI requested to start the pre-filing process for the project and began to develop a public participation plan, contact landowners, and hold open houses.[2] In 2015, FERC sent its "Notice of Intent to Prepare an Environmental Impact Statement" (NOI) to 6,613 parties, held public scoping meeting, and participated in "open houses, interagency meetings, conference calls, and…site visits."[3]

However, neither FERC nor Dominion has engaged the Haliwa-Saponi Tribal Government in a way that acknowledges its status as a tribal government. The tribe was not contacted during any of the pre-filing outreach, did not receive the NOI, and only received a notice of the DEIS.[4]

Additionally, FERC acknowledges that a disproportionate percentage of minority and low-income residents will be affected by the project's siting.[5] ("In North Carolina, minorities comprise 30.5 percent of the total population. The percentage of minorities in the North Carolina census tracts within 1 mile of ACP ranges from 12.5 to 95.5 percent. In 13 of the 42 census tracts, the minority population is meaningfully greater than that of the county in which it is located…. In North Carolina, 17.6 percent of all persons live below the poverty level. Twenty-seven of the 42 census tracts in North Carolina within a 1-mile radius of ACP facilities have a higher percentage of persons living below poverty-level when compared to the state.") However, FERC concludes that "there is no evidence that ACP or SHP would cause a disproportionate share of high and adverse environmental or socioeconomic impacts on any racial, ethnic, or socioeconomic group."[6]

We find this conclusion to be unconvincing considering that the Haliwa-Saponi Tribal Government has not been engaged with at all throughout the pre-filing and DEIS process. At a minimum, we ask that accurate contact information be added to the distribution list for all future communications and solicitations for comment relating to this project:

Mailing Address:
PO Box 99
Hollister, NC 27844

Points of Contact:
Archie Lynch, Tribal Administrator
alynch@haliwa-saponi.com

[1] Draft EIS at ES-2.
[2] *Id.* at 1-12 to -13.
[3] *Id.*
[4] *Id.* at Appendix A, A-7.
[5] *Id.* at 4-412 to -13.
[6] *Id.* at 4-413.

NAT4-3 See the response to comment NAT1-4. Section 4.9.9 includes our updated analysis of impacts on environmental justice communities.

NATIVE AMERICAN TRIBES COMMENTS
NAT4 – Haliwa-Saponi Indian Tribe (cont'd)

II. The DEIS does not adequately include the Haliwa-Saponi Tribal Government as a stakeholder for emergency preparedness purposes.

NAT4-4

The Department of Transportation's minimum standards requires Atlantic to establish an emergency plan "that includes procedures to minimize the hazards in a natural gas pipeline emergency" and directs Atlantic to "establish [] and maintain [] communications with local fire, police, and public officials, and coordinate[e] emergency response."[7] As part of that plan, the DEIS states that Atlantic and DTI will "meet with Local Emergency Planning Committees, which include fire departments, police departments, and public officials" and "work with these committees to communicate the specifics about the pipeline facilities in the area and the need for emergency response including community notification in the event of an incident.[8] The DEIS envisions that this engagement would continue "periodically" and that "Local Emergency Planning Committee personnel would be involved in any operator-simulated emergency exercises and post-exercise critiques, if conducted."[9]

In order to adequately represent affected communities and meet DOT's minimum requirements, the Haliwa-Saponi Tribal Government requests to be included as a stakeholder on the Local Emergency Planning Committee and added to any communications relating to emergency preparedness. As part of this process, we would like to also receive direct information about how to best prepare for a pipeline emergency, whether this information comes from FERC or from Atlantic or DTI as part of their emergency plan.

III. The DEIS does not adequately provide a plan to provide notice to the Haliwa-Saponi Tribal Government in the event of discovery of archeological or burial sites.

NAT4-5

The Haliwa-Saponi Tribal Government requests to receive the same notifications regarding archeological concerns that other tribes have been afforded. The Haliwa-Saponi are located in Halifax County and Warren County, where ten sites have been identified as archeological and historic cultural resources in the ACP's area of potential effects.[10] Similar to the requests of the Catawba Indian Nation, the Haliwa-Saponi Tribal Government would like to be notified if artifacts or remains are encountered during the ground disturbing phase of construction.[11] We also request to be notified immediately in the event of an unanticipated discovery during construction, as the Delaware Nation requested.[12] The Haliwa-Saponi takes Atlantic at its word that it "will continue to consult with tribes who are interested in the projects and ensure they get the information they request" and expects Atlantic to fulfill this commitment by adding Haliwa-Saponi Tribal Government contact information to Atlantic's consultation list and sharing requested information.[13]

[7] *Id.* at 4-475.
[8] *Id.* at 4-478.
[9] *Id.*
[10] *Id.* at 4-428 to -29.
[11] *Id.* at 4-435.
[12] *Id.*
[13] *Id.*

NAT4-4 As described in section 4.12.1 of the EIS, DOT regulations require that Atlantic and DETI establish and maintain a liaison with appropriate fire, police, and public officials and to coordinate mutual assistance and ensure that these services have the equipment and training necessary to respond to any emergencies related to ACP and SHP. Atlantic and DETI would communicate with emergency responders on an annual basis. Atlantic and DETI would also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a natural gas pipeline emergency and report it to appropriate public officials.

NAT4-5 Sections 4.10.4 and 4.10.7 have been revised regarding tribal contact following unanticipated discoveries.

NAT4-5 (cont'd)

Consistent with FERC's directive that Atlantic and the North Carolina State Historic Preservation Office assist stakeholders with obtaining privileged archaeological information, we would also like a copy of the North Carolina Unanticipated Discovery Plan—which is not available in the DEIS—so that we can learn Atlantic's plan for handling unanticipated discoveries during the ground disturbing phase or construction.[14] If remains or archeological discoveries are identified during construction, access to the Unanticipated Discovery Plan would help the Haliwa-Saponi understand Atlantic's procedure to ensure archeological and historic cultural resources are protected and preserved.

IV. The DEIS raises concerns about water quality for bodies of water on tribal land, including the Roanoke River, Fishing Creek, Little Fishing Creek, Tar River, Sapony Creek, Stoney Creek, and Quankey Creek.

Construction and operation of the Atlantic Coast Pipeline ("ACP") could create a number of hazards and impacts to waterways on which the Haliwa-Saponi depend for traditional cultural, spiritual, commercial, subsistence, and aesthetic reasons. The Tribe maintains important spiritual connections to the rivers, creeks and adjacent lands of their ancestral territories, but additionally relies on the fish and other riparian wildlife of these waters for both subsistence and commercial activity. Moreover, members of the Haliwa-Saponi ultimately derive their drinking water from sources or watersheds crossed by the ACP.

NAT4-6

While the Draft Environmental Impact Statement (DEIS) does identify and discuss certain impacts to varying degrees, the Tribe ultimately believes the DEIS does not fully address the possible harms to numerous waterways in Eastern North Carolina. In particular, the Tribe raises special concern about the potential impacts to and insufficient coverage within the DEIS for Roanoke River, Fishing Creek, Little Fishing Creek, Tar River, Sapony Creek, Stoney Creek, and Quankey Creek. The ACP would cross each of these waterbodies (*see* 4-91), along with countless unnamed tributaries which feed directly into their waters (*see* Appendix K-1).

Each of the waterbody-crossing methods that would be employed—Horizontal Directional Drilling (HDD), Dry Crossing, and Open-cut crossings—are associated with various hazards that would impact aquatic stocks in the short term and leave the potential to impair some species on a longer scale. With HDD, inadvertent return flows of drilling mud can cause substantial erosion and sedimentation of the water body. (4-189). Atlantic plans to employ this technique on the Roanoke River, Fishing Creek, and the Tar River (Appendix K-1). The dry-crossing methods risks a number of effects, including higher sedimentation and turbidity downstream, destruction of aquatic habitat cover, introduction of pollutants through spills on the bed, trapping fish and other animals in the water intakes of the pump, and increased erosion downstream (4-190). Atlantic proposes to cross Little Fishing Creek, Sapony Creek, Stoney Creek, and Quankey Creek in this way (Appendix K-1). The third approach, wet, open-cut installation involves digging a trench within the flowing waterbody without diverting the stream, then backfilling the trench and restoring the banks as quickly as possible (4-192). This has been reserved as an alternative for several of the above-mentioned waterways.

[14] *Id.* at 4-434.

NAT4-6 We do not anticipate the impacts would be greater than those discussed in the EIS.

NATIVE AMERICAN TRIBES COMMENTS

NAT4 – Haliwa-Saponi Indian Tribe (cont'd)

NAT4-6 (cont'd)

Finally, Atlantic has proposed to use explosive blasting within 1000 feet of Fishing Creek, and within the stream bed itself of Quankey Creek (Appendix K-1). Additionally, the construction plan would allow Atlantic to conduct blasting adjacent to or in-stream of numerous unnamed tributaries of the Roanoke River (*see* Appendix K-1), which could result in sedimentation and contamination of those waters, negatively impacting water quality and aquatic life.

The Haliwa-Saponi are concerned with the foregoing risks to waters and the life they support. While the DEIS does discuss these risks, the tribe is concerned that there has not been enough attention paid to mitigating these impacts specifically, and how to mitigate them if they are more extensive than documented in the DEIS.

NATIVE AMERICAN TRIBES COMMENTS

NAT5 – Triangle Native American Society

Triangle Native American Society
P.O. Box 26841
Raleigh, NC 27611
April 6, 2017

Mr. Nathaniel Davis, Sr.
Deputy Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington DC 20426

Dear Deputy Secretary Davis:

On behalf of Triangle Native American Society (TNAS), please find comments below concerning the Draft Environmental Impact Statement (DEIS) issued by the Federal Energy Regulatory Commission (FERC) with regards to the Atlantic Coast Pipeline (ACP) in North Carolina.

TNAS North Carolina American Indians have historical and cultural connections to the proposed path of the Atlantic Coast Pipeline project. The proposed project path is expected to transverse the Fall Line of North Carolina and many major rivers and streams, the areas where our ancestors have lived and resided for thousands of years before the first sustained contact with European cultures. Water informs the history of the American Indians of North Carolina at every major juncture and with the land exposes the lost stories of our journeys. Our stories are contained within the artifacts and the environment you encounter building the pipeline, and represent a lost patrimony to Native American people,

NAT5-1 The residual impact of an operational pipeline such as that proposed would potentially pose negative impacts on our Cultural Resources, and on the environmental quality of our tribal homelands. The destruction of our cultural heritage and resources would have grave consequences, and we want to be partners in your efforts to protect those resources.

North Carolina tribes, tribal members and tribal governments, along the pipeline path and downstream from pipeline construction have not received adequate consultation and engagement from FERC, the Atlantic Coast Pipeline and other partners involved in the pre-filing and DEIS preparation process for the pipeline project.

The ACP "Plan for the Unanticipated Discovery of Historic Properties or Human Remains during Construction in North Carolina" is inadequate, and does not properly inform or protect the Cultural Resources of the American Indians along the pipeline project.

NAT5-1 See the responses to comments NAT1-4 and NAT4-5.

NATIVE AMERICAN TRIBES COMMENTS

NAT5 – Triangle Native American Society (cont'd)

NAT5-1 (cont'd) 1 – We request that you fully consult with the North Carolina American Indian tribes affected by the pipeline and include them in any appropriate cultural reports, activities and decisions regarding the pipeline.

NAT5-2 2 - We request the inclusion of an Archaeologist, North Carolina cultural consultant at the construction site during the surveying and staking, and at the clearing and grading activities to identify archaeological and historical resources if they are unearthed during construction.

2 – We request to be notified in the event of the discovery of American Indian archaeological sites during the ground disturbing phase of construction.

NAT5-3 3 - We request your commitment and active involvement in saving and protecting our cultural patrimony and the stories unearthed by the Atlantic Coast Pipeline.

Sincerely,

Danny Bell
Triangle Native American Society
Wake, Johnston, Orange, Chatham Counties
North Carolina

NAT5-2 Currently, archaeological monitors are not required during construction. Atlantic's and DETI's EIs, and our third-party compliance monitors, would receive training in cultural resources recognition prior to construction. In addition, Atlantic and DETI would implement the measures in their Unanticipated Discovery Plans during project activities in the event cultural resources are discovered during construction.

NAT5-3 Comment noted.

NATIVE AMERICAN TRIBES COMMENTS

NAT6 – Lumbee Tribe of North Carolina

HARVEY GODWIN JR.
TRIBAL CHAIRMAN

ORIGINAL

6984 Highway 711 West
Post Office Box 2709
Pembroke, NC 28372
910.521.7861

OFFICE OF THE TRIBAL CHAIRMAN
LUMBEE TRIBE OF NORTH CAROLINA

March 16, 2017

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

RE: Request for Consultation with Federally-Recognized Indian Tribe
Atlantic Coast Pipeline, LLC/Dominion Resources et al.
Docket Nos. CP15-554-000; CP15-555-000; CP15-556-000

Dear Ms. Bose:

NAT6-1 The Lumbee Tribe of North Carolina is bringing its concerns to you about the Commission's failure to consult with us about an action which will potentially adversely impact our people, our economy, and our land. The proposed Atlantic Coast Pipeline ("ACP") will be constructed and operated in Robeson County, North Carolina, home to many of our tribal members.

In its review of the application of the Atlantic Coast Pipeline LLC/Dominion Resources et al. for authorization to construct, own and operate the ACP and related infrastructure, the Commission is required to consult with federally-recognized Indian Tribes. The Lumbee Indians are a federally-recognized tribe through the Act Relating to the Lumbee Indians of North Carolina. Public Law 570, Chapter 375 (June 7, 1956). As such, the Commission is required to consult with the Lumbee, but has failed to do so.

The Commission rule at 18 CFR 2.1c provides the policy rationale for consultation, "high-level meetings to discuss" tribal concerns. Subsection (e) states: "The Commission, in keeping with its trust responsibility, will assure that tribal concerns and interests are considered whenever the Commission's actions or decisions have the potential to adversely affect Indian tribes or Indian trust resources."

The Commission's Policy Statement on Consultation with Indian Tribes in Commission Proceedings provides clear guidance on the necessity for consultation and procedures for doing so. Order No. 635, Docket No. P003-4-000.

NAT6-1 See the response to comment NAT1-4.

NAT6-1 (cont'd)

The Lumbee Tribe of NC therefore requests that representatives from the Commissions, as well as those from the ACP LLC, promptly contact us to set up high-level meetings to discuss the concerns of our tribal members and the impacts of the ACP on their families, property, economy, and the natural environment.

Thank you for your prompt consideration.

Sincerely,

Harvey Godwin, Jr.
Chairman

Mr. Bobby Oxendine
Speaker, Lumbee Tribal Council

cc: Atlantic Coast Pipeline LLC/Dominion Resources et al.

NATIVE AMERICAN TRIBES COMMENTS

NAT7 – Lumbee Tribe of North Carolina

HARVEY GODWIN JR.
Tribal Chairman

6984 Highway 711 West
Post Office Box 2709
Pembroke, NC 28372
910.521.7861

OFFICE OF THE TRIBAL CHAIRMAN
LUMBEE TRIBE OF NORTH CAROLINA

March 29, 2017

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

RE: Docket Nos. CP15-554-000, CP15-554-001, CP15-555-000, CP15-556
Comments on the Atlantic Coast Pipeline and Supply Header Project DEIS

Dear Deputy Secretary Davis:

On behalf of the Lumbee Tribe of North Carolina, we submit these comments on the Draft Environmental Impact Statement (DEIS) issued by the Federal Energy Regulatory Commission (FERC) for the Atlantic Coast Pipeline, LLC (ACP). The Lumbee Tribe of North Carolina (Lumbee) is recognized by the state of North Carolina and consists of more than 55,000 members, who reside primarily in Robeson, Hoke, Cumberland and Scotland counties.

These comments address the following key issues:

- FERC, Atlantic Coast Pipeline, LLC (ACP), nor Dominion Transmission, Inc. (DTI) have adequately engaged the Lumbee throughout the pre-filing and DEIS preparation process.
- The DEIS does not adequately include the Lumbee as a stakeholder for emergency preparedness purposes.
- The DEIS does not adequately provide a plan to provide notice to the Lumbee Tribe of NC in the event of discovery of archeological or burial sites.

Thank you for the opportunity to provide comments on this project.

Sincerely,

Mr. Harvey Godwin, Tribal Chairman
hgodwin@lumbeetribe.com
Lumbee Tribe of North Carolina

Dr. Freda Porter, Tribal Administrator
fporter@lumbeetribe.com
Lumbee Tribe of North Carolina

NAT7-1

I. Neither FERC nor Dominion has adequately engaged the Lumbee Tribal Government throughout the pre-filing and DEIS preparation process.

FERC's stated purpose for its "pre-filing" process is to "encourage early involvement of interested stakeholders, facilitate interagency cooperation, and identify and resolve environmental issues before an application is filed."[1] In 2014, ACP and DTI requested to start the pre-filing process for the project and began to develop a public participation plan, contact landowners, and hold open houses.[2] In 2015, FERC sent its "Notice of Intent to Prepare an Environmental Impact Statement" (NOI) to 6,613 parties, held public scoping meeting, and participated in "open houses, interagency meetings, conference calls, and...site visits."[3]

However, neither FERC nor DTI has engaged the Lumbee Tribal Government in a way that acknowledges its status as a tribal government. The tribe was not contacted during any of the pre-filing outreach, did not receive the NOI, and only received a notice of the DEIS. Further, the DEIS was distributed only to a "Paula" Brooks.[4] This person is not the sitting chair of the tribe and does not even correctly reference the previous Lumbee Tribal Chairman—the correct name is Paul Brooks.

Additionally, FERC acknowledges that a disproportionate percentage of minority and low-income residents will be affected by the project's siting.[5] ("In North Carolina, minorities comprise 30.5 percent of the total population. The percentage of minorities in the North Carolina census tracts within 1 mile of ACP ranges from 12.5 to 95.5 percent. In 13 of the 42 census tracts, the minority population is meaningfully greater than that of the county in which it is located.... In North Carolina, 17.6 percent of all persons live below the poverty level. Twenty-seven of the 42 census tracts in North Carolina within a 1-mile radius of ACP facilities have a higher percentage of persons living below poverty-level when compared to the state.") However, FERC concludes that "there is no evidence that ACP or SHP would cause a disproportionate share of high and adverse environmental or socioeconomic impacts on any racial, ethnic, or socioeconomic group."[6]

We find this conclusion to be unconvincing considering that the Lumbee Tribal Government has not been engaged with throughout the pre-filing and DEIS process. The 1956 Lumbee Act acknowledges the tribe as Federally Recognized, and we are sending a separate letter explaining why that acknowledgment requires tribal consultation with us under NEPA implementing regulations. In the interim, at a minimum, we ask that accurate contact information be added to the distribution list for all future communications and solicitations for comment relating to this project:

Mailing Address:
PO Box 2709
Pembroke, NC 28372

Points of Contact:
Mr. Harvey Godwin, Tribal Chairman

[1] Draft EIS at ES-2.
[2] *Id.* at 1-12 to -13.
[3] *Id.*
[4] *Id.* at Appendix A, A-7.
[5] *Id.* at 4-412 to -13.
[6] *Id.* at 4-413.

NAT7-1 See the response to comment NAT4-3. Section 4.9.9 includes our analysis of impacts on environmental justice communities.

hgodwin@lumbeetribe.com
Lumbee Tribe of North Carolina

Dr. Freda Porter, Tribal Administrator
fporter@lumbeetribe.com
Lumbee Tribe of North Carolina

NAT7-2

II. The DEIS does not adequately include the Lumbee Tribal Government as a stakeholder for emergency preparedness purposes.

The Department of Transportation's (DOT) minimum standards requires ACP and DTI to establish an emergency plan "that includes procedures to minimize the hazards in a natural gas pipeline emergency" and directs the companies to "establish[] and maintain[] communications with local fire, police, and public officials, and coordinat[e] emergency response."[7] As part of that plan, the DEIS states that ACP and DTI will "meet with Local Emergency Planning Committees, which include fire departments, police departments, and public officials" and "work with these committees to communicate the specifics about the pipeline facilities in the area and the need for emergency response including community notification in the event of an incident.[8] The DEIS envisions that this engagement would continue "periodically" and that "Local Emergency Planning Committee personnel would be involved in any operator-simulated emergency exercises and post-exercise critiques, if conducted."[9]

In order to adequately represent affected communities and meet DOT's minimum requirements, the Lumbee Tribal Government requests to be included as a stakeholder on the Local Emergency Planning Committee and added to any communications relating to emergency preparedness. As part of this process, we would also like to receive direct information about how to best prepare for a pipeline emergency, whether this information comes from FERC or from ACP or DTI as part of their emergency plan.

NAT7-3

III. The DEIS does not adequately provide a plan to provide notice to the Lumbee Tribal Government in the event of discovery of archeological or burial sites.

The Lumbee Tribal Government requests to receive the same notifications regarding archeological concerns that other tribes have been afforded. The Lumbee are located in Cumberland, Hoke, Robeson, and Scotland counties, where a total of twenty-seven sites have been identified as archeological and historic cultural resources in the ACP's area of potential effects.[10] Similar to the requests of the Catawba Indian Nation, the Lumbee Tribal Government would like to be notified if artifacts or remains are encountered during the ground disturbing phase of construction.[11] We also request to be notified immediately in the event of an unanticipated discovery during construction, as the Delaware Nation requested.[12] The Lumbee takes ACP at its word that it "will continue to consult with tribes who are interested in the projects and ensure they get the information they request" and expects Atlantic to fulfill this commitment by adding Lumbee Tribal Government contact information to Atlantic's consultation list and sharing requested information.[13]

---

[7] *Id.* at 4-475.
[8] *Id.* at 4-478.
[9] *Id.*
[10] *Id.* at 4-428 to -30.
[11] *Id.* at 4-435.
[12] *Id.*
[13] *Id.*

NAT7-2 See the response to comment NAT4-4.

NAT7-3 See the response to comment NAT1-4.

NAT7-3 (cont'd)

Consistent with FERC's directive that Atlantic and the North Carolina State Historic Preservation Office assist stakeholders with obtaining privileged archaeological information, we would also like a copy of the North Carolina Unanticipated Discovery Plan—which is not available in the DEIS—so that we can learn Atlantic's plan for handling unanticipated discoveries during the ground disturbing phase or construction.[14] If remains or archeological discoveries are identified during construction, access to the Unanticipated Discovery Plan would help the Lumbee understand ACP's procedure to ensure archeological and historic cultural resources are protected and preserved.

[14] *Id.* at 4-434.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA1 – Virginia Department of Conservation and Recreation – Division of Natural Heritage

Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director

Rochelle Altholz
Deputy Director of Administration and Finance

David C. Dowling
Deputy Director of Soil and Water Conservation and Dam Safety

Thomas L. Smith
Deputy Director of Operations

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

January 30, 2017

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

Re: DCR Comments on "Dominion Transmission, Inc., Atlantic Coast Pipeline 2016 Handsom-Gum Powerline and Emporia Powerline Bog Hydrologic Study Plan"

Dear Ms. Bose:

SA1-1

Per a request from Dominion Transmission, Inc. (DTI), the Virginia Department of Conservation and Recreation-Division of Natural Heritage (DCR) has reviewed the proposed Atlantic Coast Pipeline Hydrologic Study Plan for the Handsom-Gum Powerline and Emporia Powerline Bog Conservation Sites 2016 Field Season prepared by VHB and would like to offer the following comments and associated questions:

- DCR recommends avoidance of impacts to documented natural heritage resources associated with the Handsom-Gum Powerline Conservation Site and the Emporia Powerline Bog Conservation Site during field investigations. As necessary, test pits should be filled with an appropriately thick layer of benseal, as well as the excavated soil, in order to avoid hydrological alteration.
- DCR supports the delineation of the full extent of the wetlands and watersheds at both sites within and adjacent to the proposed pipeline right-of-way to accurately estimate a water budget through desktop analysis and field investigations.
- DCR recommends using the same type of monitoring well/piezometer at all the monitoring points to reduce equipment variability in water level readings which can vary as much as 6-12 inches.
    - Do the water level monitors require an aboveground data logger be used in addition to the belowground monitoring equipment to calibrate the data?
- DCR recommends the monitoring be conducted year around for a better understanding of the hydrology of the wetlands at the sites instead of just monitoring in November and December. It is stated in the proposed hydrologic study plan on page 4 "any monitoring wells or piezometers installed for this study will be left onsite for future monitoring events to occur".
- DCR recommends monitoring wells should be placed at different depths to accurately quantify the hydrological characteristics of the wetlands at the two sites.
    - What is the rationale for the proposed depth of the monitoring wells?

600 East Main Street, 24th Floor | Richmond, Virginia 23219 | 804-786-6124

State Parks • Soil and Water Conservation • Outdoor Recreation Planning
Natural Heritage • Dam Safety and Floodplain Management • Land Conservation

SA1-1 Information regarding the planned hydrologic study for the Handsom-Gum and Emporia Powerline Bog Conservation Site has been incorporated into section 4.4.2.2.

SA1-1 (cont'd)

- If a perched water table exists, piezometers may need to be placed above and below the impermeable clay layer.
- Are three monitoring wells adequate?

- If the soils are identified as clay, the readings may be skewed by shrink/swell characteristics impacting the accuracy of the monitoring well readings especially in the summer months.

DCR appreciated the opportunity to comment on the proposed hydrology study. Please note, a follow up conference call to discuss DCR's comments for the hydrology plan was held with DCR, Dominion, ERM and VHB on January 19, 2017.

Sincerely,

S. Rene' Hypes
Project Review Coordinator

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA2 – North Carolina General Assembly, Representative Bobbie Richardson

North Carolina General Assembly
House Of Representatives

REPRESENTATIVE BOBBIE RICHARDSON
7TH DISTRICT

OFFICE: 1217 LEGISLATIVE BUILDING
16 W. JONES STREET
RALEIGH, NC 27601-1096
PHONE: (919) 715-3032
FAX: (919) 754-3334
EMAIL: bobbie.richardson@ncleg.net
DISTRICT: FRANKLIN & NASH COUNTIES

COMMITTEES:

COMMERCE AND JOB DEVELOPMENT, VICE-CHAIR
APPROPRIATIONS
APPROPRIATIONS SUBCOMMITTEE ON AGRICULTURE AND NATURAL & ECONOMIC RESOURCES
EDUCATION K-12
ELECTIONS
JUDICIARY IV

Feb. 8, 2017

Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First St., NE
Washington, DC 20426

Re: Docket #CP15-554

Dear Ms. Bose,

SA2-1 I am asking for a favorable consideration of the Atlantic Coast Pipeline Project during the permitting process with the Federal Energy Regulatory Commission (FERC). I endorse this request because it will mean cleaner energy sources for the area as well as jobs for my constituents. It will mean energy alternatives for businesses so that they might grow and create more jobs. Two metropolitan areas in my district are public power communities that have witnessed a lack of economic growth because potential employers did not favor the high cost of electricity.

I hope FERC will look favorably upon the Atlantic Coast Pipeline Project because of its positive impact on the lives of my constituents.

Sincerely,

Bobbie Richardson

Rep. Bobbie Richardson

SA2-1 Comment noted.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA3 – West Virginia Division of Culture and History

WEST VIRGINIA
Division of Culture and History

The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300
Randall Reid-Smith, Commissioner
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

January 30, 2017

Mr. Nathaniel J. Davis Sr.
Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, D.C. 20426

RE: Atlantic Coast Pipeline and Supply Header Project
FERC Docket Nos.: CP15-554-000, CP15-554-001, and CP15-555-000
FERC/EIS-0274D
FR#: 15-171-MULTI-23 (ACP) and 15-99-MULTI-6 (SHP)

Dear Mr. Davis:

We have reviewed the *Draft Environmental Impact Statement* (DEIS) that the Federal Energy Regulatory Commission (FERC) submitted for the aforementioned project to determine potential effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

SA3-1 It is our opinion the submitted DEIS adequately describes the ongoing consultation efforts between FERC, Atlantic Coast Pipeline, Dominion Transmission, and our office regarding the undertaking's potential to affect cultural and historic resources. We look forward to reviewing additional and/or supplemental reports for the Atlantic Coast Pipeline and Supply Header Project. We will provide additional comments upon receipt of that documentation.

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

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/MKS

SA3-1 Comment noted.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA4 – Virginia Department of Transportation

SA4

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219-2000

Charles A. Kilpatrick, P.E.
Commissioner

March 6, 2017

Nathaniel J. Davis, Sr.
Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Deputy Secretary Davis –

The Virginia Department of Transportation (VDOT) offers these comments in response to the Federal Energy Regulatory Commission's (FERC) January 9, 2017 issuance of the Draft Environmental Impact Statement (DEIS) for the Atlantic Coast Pipeline (ACP) and Supply Header Project (SHP) as proposed by Atlantic Coast Pipeline, LLC (Atlantic) and Dominion Transmission, Inc. (DTI), respectively.

The DEIS indicates that Atlantic and DTI propose to install pipeline infrastructure under existing roads in accordance with any applicable crossing permits and applicable laws and regulations. Affected roadways would either experience temporary closures with traffic detoured or would remain open throughout construction with the pipeline boring beneath the roadway. Additionally, Atlantic and DTI propose to use existing public and private roads to gain access to the pipeline rights of-way and aboveground facilities to the fullest extent possible, and would also construct and use new access roads where access is needed and roads do not currently exist. Where necessary, Atlantic and DTI would improve unsuitable dirt and gravel roads through widening and/or grading, installing or replacing culverts, or clearing overhanging vegetation or tree limbs. Widening would generally involve increasing the width of the road up to 25 feet. After construction, Atlantic and DTI would remove access road improvements and restore improved roads to their preconstruction condition unless the landowner or land-managing agency requests that the improvements be left in place, or the roads would be utilized for continuing operational access to the pipeline right-of-way or aboveground facilities.

SA4-1 VDOT respectfully requests that FERC include in the Final EIS and the Record of Decision the following:

1. a commitment for Atlantic and DTI to document the existing conditions of affected roadways, pavement conditions, and drainage structures in Virginia prior to construction and to provide this documentation to VDOT; and
2. a commitment for Atlantic and DTI to monitor and report conditions throughout construction and for a period of two years following construction completion; and

VirginiaDOT.org
WE KEEP VIRGINIA MOVING

SA4-1 Section 4.9.6 has been revised to acknowledge ongoing communications and commitments between Atlantic and VDOT regarding these comments and conditions.

SA4-1 (cont'd)

3. a clear commitment for Atlantic and DTI to restore roadway features to pre-construction conditions or better.

SA4-2

In addition to the above request VDOT would also ask that FERC consider the following general comments as you execute the project following the conclusion of NEPA.

1. Any work that occurs within VDOT right-of-way or easements or impacts vehicular traffic operations on VDOT highways will be required to comply with the Land Use Permit Regulations (24VAC30-151) and all current VDOT specifications and standards, including the Virginia Work Area Protection Manual.
2. Detailed plans for all work within the right-of-way will need to be submitted and approved by VDOT prior to land use permit issuance.
3. A detailed traffic management plan, encompassing how traffic will be managed or detoured during highway improvements for handling construction traffic and during pipeline installation across highways should be provided as part of the FERC EIS or required to be provided prior or concurrently with detailed plans for work within the highway right-of-way.
4. Any parallel installations of pipeline in highway right-of-way should be located as close to the edge of the right-of-way as possible.
5. Experience in some districts with the movement of heavy loads has shown that construction traffic in the winter may have an inordinate destructive impact compared to such traffic in warmer seasons. Movement of heavy loads or equipment (construction traffic) should occur mostly in the normal construction season. If construction is on-going in the winter, such traffic should be limited as much as practicable during cold weather.
6. Entrances along roadways impacted by pipeline construction should remain open as much as practicable. If closures are necessary, negotiation with the entrance owners and provision of alternate access or other accommodations will have to be provided as part of the project.
7. Crossings of limited access highway right-of-way should be made as close as possible to perpendicular to the right-of-way and will require additional approvals.
8. Crossings of state highways should, when practicable, be made without open-cutting the pavement.

We trust you find these comments informative and ask that you reach out to Mr. Robert Hofrichter at 804-786-0780 should you have questions or need additional clarification.

Sincerely,

Charles A. Kilpatrick, P.E.
Commissioner

cc: Angel Deem, VDOT
Robert Hofrichter, VDOT

SA4-2 See the response to comment SA4-1.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA5 – West Virginia Division of Natural Resources – Wildlife Resources Section

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

Jim Justice
Governor

Stephen S. McDaniel
Director

April 6, 2017

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

Subject: Comments – Atlantic Coast Pipeline and Supply Header Project Draft Environmental Impact Statement
Atlantic Coast Pipeline, LLC and Dominion Transmission, Inc.
Docket CP15-554, CP15-555

Dear Ms. Bose:

The West Virginia Division of Natural Resources, Wildlife Resources Section (WRS) has received the Atlantic Coast Pipeline and Supply Header Project Draft Environmental Impact Statement and appreciates the opportunity to review and provide comments on these two associated projects. We have provided comments relating to wildlife, fisheries and public lands in West Virginia.

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

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA5 – West Virginia Division of Natural Resources – Wildlife Resources Section (cont'd)

DEIS Comments Atlantic Coast Pipeline and Supply Header Project, WVDNR, April 6, 2017

	Comment #	Comment Author	Page # /Section	Paragraph	Comment
SA5-1	1	WVDNR	ES-10	1	Operation of SHP and ACP are proposed to have" long term to permanent effects' to 3424 acres of upland forest. It is not clear if this is based on a 50' or 75 foot ROW or if it includes other above ground disturbance of forested areas (new access roads, etc.). On page 4-150, paragraph 3, there is deemed to be 3800 acres of "permanent impacts". In addition, the direct impacts in the revised forest fragmentation analysis (February 24, 2017 Supplement) only totals 2792 acres. These differences should be explained. Summary information concerning impacts to forested areas should be presented for each state separately.
SA5-2	2	WVDNR	ES-10	2	WVDNR WRS supports the FERC proposed 50 foot permanent ROW
SA5-3	3	WVDNR	ES-10	6	The current migratory bird plan revision does not include HEA analysis for review
SA5-4	4	WVDNR	ES-11	3	Because forest fragmentation will have "significant impacts" to vegetation and wildlife, compensatory mitigation for unavoidable impacts should be provided. The HEA process is a vetted and broadly utilized method for analysis of habitat loss and replacement.
SA5-5	5	WVDNR	1-12	4	In addition to the NPS requirement for replacement of outdoor recreation opportunity, because WVDNR holds title to Seneca State Forest, a license agreement to establish pertinent compensation and mitigation will be necessary with WVDNR. The West Virginia Division of Forestry will be compensated for the timber value on Seneca State Forest.
SA5-6	6	WVDNR	4-18	bullet 10	Hydrostatic test water should not be discharged in karst areas
SA5-7	7	WVDNR	4-28	2	WVDNR WRS should be contacted within 48 hours if a slip or landslide occurs on Lewis Wetzel WMA or Seneca State Forest. WVDNR WRS and WVDEP should be contacted if slips or landslides could impact a stream or wetland.
SA5-8	8	WVDNR	4-85	4	Blasting of stream crossings in WV may require notification of WVDNR WRS fisheries staff per the Office of Land and Streams Stream Activity Application conditions
SA5-9	9	WVDNR	4 150	3	The impacts to forests from fragmentation should be summarized for each State. The inconsistency of the amount of impacted forest as presented in the ES (ES 10) should be resolved.

SA5-1 The referenced text has been revised.

SA5-2 Comment noted.

SA5-3 HEA are a means to determine the amount of compensatory restoration required to provide services that are equivalent to the interim loss of natural resource services following an injury. HEAs are used by the FWS as one of many conservation measures that may be used to mitigate impacts on migratory birds and threatened and endangered species; it is important to note that HEAs are a voluntary measure. Atlantic and DETI will no longer be conducting an HEA with the FWS for ACP or SHP.

SA5-4 Although we agree that compensatory mitigation is one way to offset the impacts resulting from forest loss and fragmentation, there are other measures described in sections 4.4.6 and 4.5.6 that would reduce fragmentation and edge effects. Additional measures would also be applied on NFS lands as discussed in sections 4.4.8 and 4.5.9. Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the WVDNR. The WVDNR would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

SA5-5 Section 1.2.2.6 has been revised to reflect the commentor's statements.

SA5-6 Comment noted.

SA5-7 Comment noted. The referenced section has been revised to include contacting appropriate state agencies.

SA5-8 Comment noted.

SA5-9 The referenced section has been updated with the revised interior forest fragmentation analysis by state.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA5 – West Virginia Division of Natural Resources – Wildlife Resources Section (cont'd)

SA5-10	10	WVDNR	4 165	bullet 1, a., c. and c.	The revised forest fragmentation analysis (February 24, 2017 Supplement) does not seem to include above ground disturbance outside the ROW (new access roads, etc.) and is not consistent with the evaluation of the forested buffer recommendation (c.) and the associated indirect impacts as presented on page 4-166, P2. Rather the ' buffer zone" description in this revision is more consistent with a severed core forest area. A visual representation (maps) would be helpful in evaluating proposed impacts to interior forest. Proposed mitigation for unavoidable impacts to interior forest habitat and associated wildlife species should be provided in the analysis.
SA5-11	11	WVDNR	4-176	4	The candy darter occurs in the Greenbrier River watershed and currently has "under review" status by FWS, are imperiled from hybridization with the variegate darter and should be included in this section
SA5-12	12	WVDNR	4-177	2	Stream reference should be Right Fork Middle Fork River
SA5-13	13	WVDNR	4-177	bullet 1	To date, WVDNR WRS has not had an opportunity to review an evaluation of potential impacts to Big Spring Fork and continue to recommend an alternative to Big Spring Fork as a water source for hydrostatic testing
SA5-14	14	WVDNR	4-204	4	In addition to review by USFWS, burning in WV should follow guidance and regulations established by WVDOF
SA5-15	15	WVDNR	4-233	6	Hackers Creek, Lewis County, WV contains clubshell
SA5-16	16	WVDNR	4-236	4	Green floater should be noted as occurring in the Greenbrier River watershed, not just the Greenbrier River.
SA5-17	17	WVDNR	4-257	bullet 1	a. South Fork Fishing Creek would be crossed by TL-635, not AP-2, and the MP does not seem to correspond with the access road. Further clarification will necessary to complete consultation with WVDNR WRS. b. Additional consultation with WVDNR WRS and discussion of conservation measures to protect green floater mussels will be necessary regarding water withdrawal and blasting.
SA5-18	18	WVDNR	Update to the Migratory Bird Plan, January 27,2017		The Forest Fragmentation Table (Table 4.3-1) has been removed from this version. HFA analysis has still not been provided for review
SA5-19	19	WVDNR	Timber Removal Plan Rev.1		Timber removal from Lewis Wetzel WMA and Seneca State Forest will be part of separate license agreements required by WVDNR through the Office of Land and Streams. Guidance provided in West Virginia Silvicultural Best Management Practices for Controlling Soil Erosion and Sedimentation from Logging Operations are to be followed, as well as conditions outlined in State Code, §19-1B. For instance logs and slash should not be yarded across waterbodies not just perennial streams, as outlined in Section 10.1 General Mitigation Measures.
SA5-20	20	WVDNR	Fire Prevention and Suppression Plan, Updated, Rev. 1	Public Lands	Seneca State Forest - WVDNR holds Title to Seneca State Forest, the West Virginia Division of Forestry and WVDNR State Parks and Forests Section both have administrative responsibilities on State Forests. Supply Header Project will also cross North Bend Rail Trail and Atlantic Coast Pipeline will cross the Greenbrier River Trail
	21	WVDNR	Restoration and Rehabilitation Plan, Appendix B, F-49	1	Susan Davis is an employed by NRCS not WVDNR

SA5-10 The referenced section has been updated with the revised interior forest fragmentation analysis by state.

SA5-11 The referenced section has been revised.

SA5-12 This section has been removed for consistency; refer to appendix S-1 for information on the cheat minnow.

SA5-13 Atlantic has committed to no longer use Big Spring Fork or the unnamed tributaries to Big Spring Fork for water withdrawal, and would adhere to the trout TOYR for any instream activities. The referenced text has been revised accordingly.

SA5-14 Sections 4.7.1.1, 4.7.1.2, 4.7.1.3, and 4.7.1.4 have been revised to include a reference to Atlantic's and DETI's Open Burning Plan, which follows the state and federal regulations, and includes protocols for coordinating with state and federal forests.

SA5-15 Section 4.1.17.1 has been updated to include this information.

SA5-16 Section 4.1.17.1 has been updated to include this information.

SA5-17 Section 4.7.4 and appendix K include a recommendation for DETI to coordinate with the WVDNR to determine whether mussel surveys are needed at the South Fork Fishing Creek permanent access road crossing (TL-635 MP 33.5).

Water withdrawal is no longer proposed at the Greenbrier River. We recommend in section 4.7.1 and appendix K that Atlantic implement the FWS' enhanced conservations measures for ESA sensitive waterbodies, including the Greenbrier River. This would include preparing and submitted a site-specific blasting plan to the FWS and appropriate state agency for review and concurrence 30 days prior to initiating instream activities, as described in section 4.7.1.

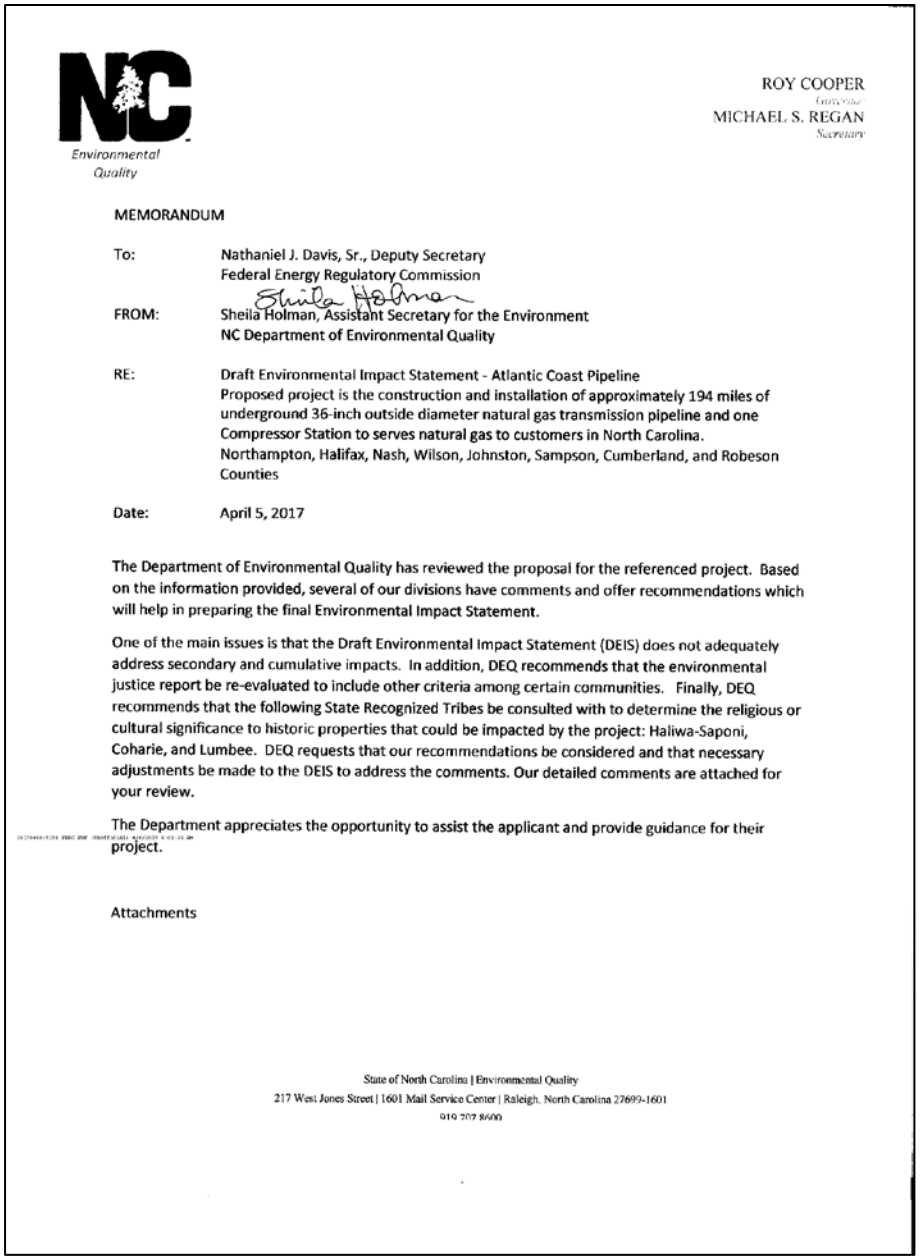
SA5-18 Section 4.5.6 includes a discussion of interior forest fragmentation. The link to the updated version of the Migratory Bird Plan is provided in table 2.3.1-1.

SA5-19 Section 4.8.5.1 has been revised to include the commentor's statements.

SA5-20 The WVDNR's comments related to Atlantic's and DETI's construction plans are noted.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality



ROY COOPER
Governor
MICHAEL S. REGAN
Secretary

Environmental Quality

MEMORANDUM

To: Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission

FROM: Sheila Holman, Assistant Secretary for the Environment
NC Department of Environmental Quality

RE: Draft Environmental Impact Statement - Atlantic Coast Pipeline
Proposed project is the construction and installation of approximately 194 miles of underground 36-inch outside diameter natural gas transmission pipeline and one Compressor Station to serves natural gas to customers in North Carolina.
Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson Counties

Date: April 5, 2017

The Department of Environmental Quality has reviewed the proposal for the referenced project. Based on the information provided, several of our divisions have comments and offer recommendations which will help in preparing the final Environmental Impact Statement.

One of the main issues is that the Draft Environmental Impact Statement (DEIS) does not adequately address secondary and cumulative impacts. In addition, DEQ recommends that the environmental justice report be re-evaluated to include other criteria among certain communities. Finally, DEQ recommends that the following State Recognized Tribes be consulted with to determine the religious or cultural significance to historic properties that could be impacted by the project: Haliwa-Saponi, Coharie, and Lumbee. DEQ requests that our recommendations be considered and that necessary adjustments be made to the DEIS to address the comments. Our detailed comments are attached for your review.

The Department appreciates the opportunity to assist the applicant and provide guidance for their project.

Attachments

State of North Carolina | Environmental Quality
217 West Jones Street | 1601 Mail Service Center | Raleigh, North Carolina 27699-1601
919 707 8600

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

Water Resources
ENVIRONMENTAL QUALITY

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
S. JAY ZIMMERMAN
Director

April 3, 2017

TO: Lyn Hardison, Environmental Assistance Coordinator, NC DEQ

FROM: David Wainwright, DWR SEPA Coordinator

SUBJECT: Atlantic Coast Pipeline Project
Draft Environmental Impact Statement
Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson Counties
NCDEQ #1678

Various Division of Water Resources staff have reviewed the Draft Environmental Impact Statement (DEIS) submitted by the Federal Energy Regulatory Commission (FERC) on behalf of Atlantic Coast Pipeline, LLC and Dominion Transmission, Inc. for the proposed Atlantic Coast Pipeline (ACL) and Supply Header Project (SHP). The project would construct an underground pipeline of nearly 600 miles in length spanning West Virginia, Virginia, and North Carolina. In North Carolina, the project would span approximately 194 miles in Northampton, Halifax, Nash, Wilson, Johnston, Cumberland, and Robeson Counties. Below are comments submitted by DWR staff regarding the proposed project.

Raleigh Regional Office:

SA6-1

- A project that disturbs 1 acre or greater is required to secure an erosion and sedimentation control plan and must comply with construction stormwater permit conditions (NCG010000)
- Footprint of this project bisects several river basins, including River Basins that have Riparian Buffer rules. (Neuse River and Tar-Pamlico River Basin have riparian buffer the apply to intermittent, perennial streams, ponds and lakes).
- Proper management and disposal of drilling fluid will be necessary such that illegal discharges of waste do not occur.
- Discharges of drilling fluids are not deemed permitted (authorized) and can easily cause surface water standard violations. Proper disposal, spill prevention plans, spill prevention response plans and proper notification of spill events (frack-out) to the DWRs Regional Offices should occur if spills are encountered.
- Report spills within 24 hours to the Raleigh Regional Office at (919) 791-4200 (Northampton, Halifax, Nash, Wilson, and Johnston Counties) or the Fayetteville Regional Office (910) 433-3300 (Sampson, Cumberland, and Robeson Counties)

Fayetteville Regional Office:

- If existing water lines will be relocated during construction, plans for the water line relocation must be submitted to the Division of Water Resources, Public water Supply Section, 1634 Mail Service

Nothing Compares

State of North Carolina | Environmental Quality | Water Resources
512 N. Salisbury Street | 1611 Mail Service Center | Raleigh, NC 27699-1611
919.707.9000

SA6-1 The comments related to the NCDEQ, Division of Water Resources permitting requirements are noted.

A list of major environmental permits, approvals, and consultations that are applicable for ACP and SHP is provided in table 1.4-1. As discussed in section 1.4, Atlantic and DETI would be responsible for obtaining all applicable permits and approvals required to construct and operate ACP and SHP, regardless of whether they appear in this table.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

SA6-1 (cont'd)

Center, Raleigh, NC 27699-1634. For more information, contact the Public Water Supply Section at (919)707-9100.

- Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100.

Water Supply Planning Section:

- Per General Statute 143-215.22H, any withdrawals of 100,000 gallons per day or more of water from the surface or groundwaters of the State or who transfers 100,000 gallons per day or more of water from one river basin to another shall register the withdrawal or transfer with the Commission. A person registering a water withdrawal or transfer must provide the maximum daily amount of the water withdrawal or transfer expressed in thousands of gallons per day; the monthly average withdrawal or transfer expressed in thousands of gallons per day; the location of the points of withdrawal and discharge and the capacity of each facility used to make the withdrawal or transfer; and the monthly average discharge expressed in thousands of gallons per day.

  Based on the information provided in the DEIS, it is believed that the 100,000 gallons per day withdrawal may be exceeded during hydrostatic testing and other activities associated with the construction of the pipeline. If this is to be the case, please notify the Division of Water Resources at the appropriate time.

NPDES Complex Permitting Section:

- Per 15A NCAC 02H .0106, flushing and hydrostatic testing water associated with utility distribution systems are deemed permitted unless the discharge results in water quality violations. It is indicated in the DEIS that water quality samples will be taken in conjunction with hydrostatic testing. If water quality violations occur as a result of discharges, please notify the Division so further actions can be discussed.

Basin Planning Branch:

- Section 4.3.2.7, page 4-107, of the Draft Environmental Impact Statement (DEIS) discusses water withdrawals and water storage for hydrostatic testing, dust control and horizontal directional drilling (HDD) construction. The locations for construction of temporary water storage facilities are included on the topographic maps in Appendix B and in Table 4.3.2-8. The DEIS states that withdrawals during low flow conditions would be avoided; however, given the time of year restrictions (TOYR) proposed to avoid fish spawning seasons, construction of river crossings would coincide with typical low flow months, i.e., August to October.

  Pages 4-193 and -194 of the DEIS state the following:

  > "Atlantic and DTI would also apply for the appropriate water appropriation and discharge permits prior to construction. The permits would detail discharge timing, volume, and locations. Atlantic and DTI would ensure water withdrawal would not affect federally listed species by using methods to minimize impingement/entrainment and monitoring water levels; water withdrawals would not exceed 25 percent of the waterbody's discharge (as measured at the nearest upstream USGS gauging station)."

  Page 4-111 of the DEIS states the following:

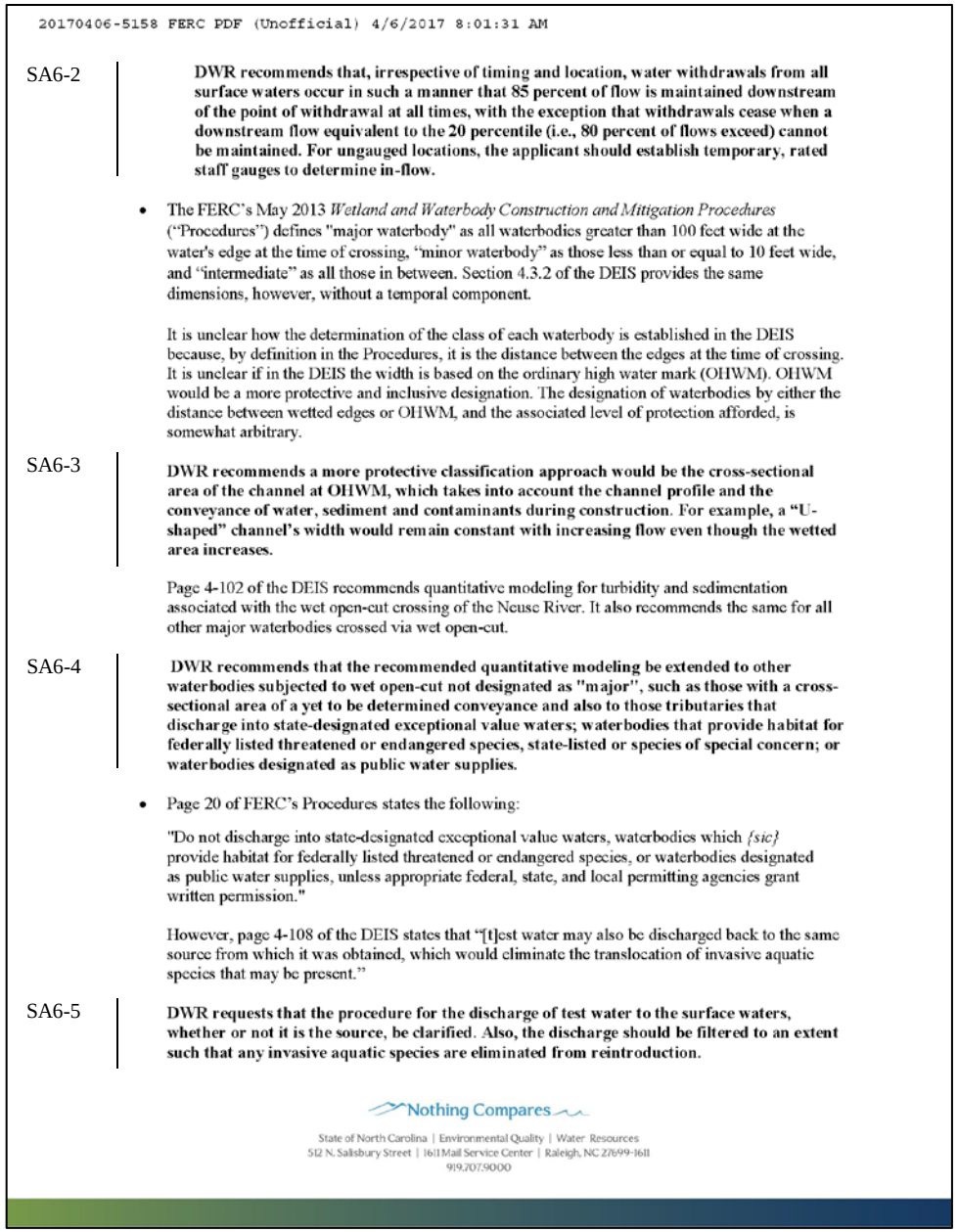
  > "Prior to construction, Atlantic and DTI should file with the Secretary, for the review and written approval of the Director of OEP, proposed or potential sources of water used for dust control, anticipated quantities of water to be appropriated from each source, and the measures that would be implemented to ensure water sources and aquatic biota are not adversely affected by the appropriation activity."

Nothing Compares

State of North Carolina | Environmental Quality | Water Resources
512 N. Salisbury Street | 1611 Mail Service Center | Raleigh, NC 27699-1611
919.707.9000

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)



20170406-5158 FERC PDF (Unofficial) 4/6/2017 8:01:31 AM

SA6-2

DWR recommends that, irrespective of timing and location, water withdrawals from all surface waters occur in such a manner that 85 percent of flow is maintained downstream of the point of withdrawal at all times, with the exception that withdrawals cease when a downstream flow equivalent to the 20 percentile (i.e., 80 percent of flows exceed) cannot be maintained. For ungauged locations, the applicant should establish temporary, rated staff gauges to determine in-flow.

- The FERC's May 2013 *Wetland and Waterbody Construction and Mitigation Procedures* ("Procedures") defines "major waterbody" as all waterbodies greater than 100 feet wide at the water's edge at the time of crossing, "minor waterbody" as those less than or equal to 10 feet wide, and "intermediate" as all those in between. Section 4.3.2 of the DEIS provides the same dimensions, however, without a temporal component.

  It is unclear how the determination of the class of each waterbody is established in the DEIS because, by definition in the Procedures, it is the distance between the edges at the time of crossing. It is unclear if in the DEIS the width is based on the ordinary high water mark (OHWM). OHWM would be a more protective and inclusive designation. The designation of waterbodies by either the distance between wetted edges or OHWM, and the associated level of protection afforded, is somewhat arbitrary.

SA6-3

DWR recommends a more protective classification approach would be the cross-sectional area of the channel at OHWM, which takes into account the channel profile and the conveyance of water, sediment and contaminants during construction. For example, a "U-shaped" channel's width would remain constant with increasing flow even though the wetted area increases.

Page 4-102 of the DEIS recommends quantitative modeling for turbidity and sedimentation associated with the wet open-cut crossing of the Neuse River. It also recommends the same for all other major waterbodies crossed via wet open-cut.

SA6-4

DWR recommends that the recommended quantitative modeling be extended to other waterbodies subjected to wet open-cut not designated as "major", such as those with a cross-sectional area of a yet to be determined conveyance and also to those tributaries that discharge into state-designated exceptional value waters; waterbodies that provide habitat for federally listed threatened or endangered species, state-listed or species of special concern; or waterbodies designated as public water supplies.

- Page 20 of FERC's Procedures states the following:

  "Do not discharge into state-designated exceptional value waters, waterbodies which *{sic}* provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and local permitting agencies grant written permission."

  However, page 4-108 of the DEIS states that "[t]est water may also be discharged back to the same source from which it was obtained, which would eliminate the translocation of invasive aquatic species that may be present."

SA6-5

DWR requests that the procedure for the discharge of test water to the surface waters, whether or not it is the source, be clarified. Also, the discharge should be filtered to an extent such that any invasive aquatic species are eliminated from reintroduction.

Nothing Compares

State of North Carolina | Environmental Quality | Water Resources
512 N. Salisbury Street | 1611 Mail Service Center | Raleigh, NC 27699-1611
919.707.9000

SA6-2 See response to comment SA6-1.

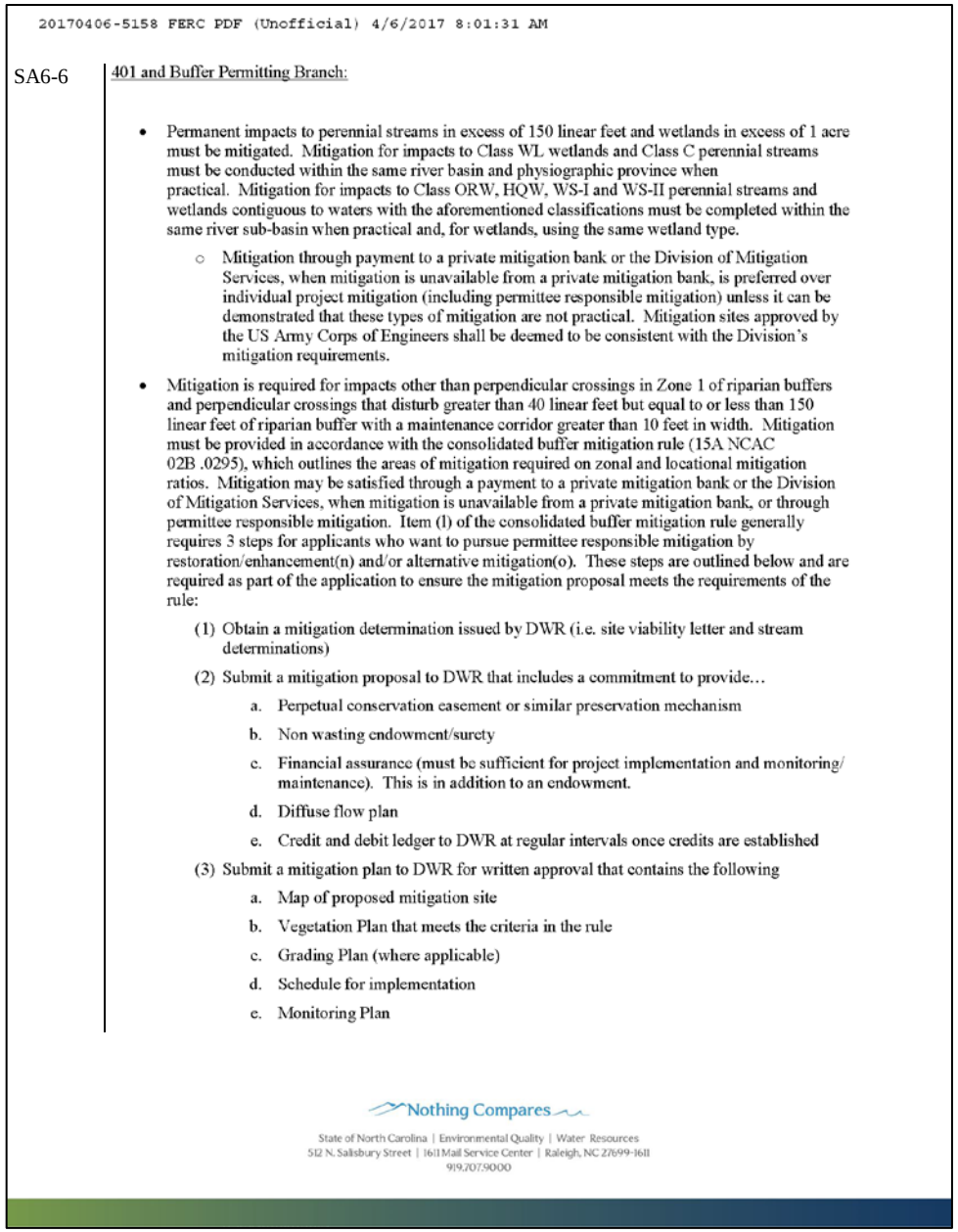
SA6-3 See response to comment SA6-1.

SA6-4 See response to comment SA6-1.

SA6-5 Authorization to discharge back to a receiving water would be determined and authorized through the state permit process; therefore, we cannot clarify this further until the state permit is issued.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)



20170406-5158 FERC PDF (Unofficial) 4/6/2017 8:01:31 AM

SA6-6

401 and Buffer Permitting Branch:

- Permanent impacts to perennial streams in excess of 150 linear feet and wetlands in excess of 1 acre must be mitigated. Mitigation for impacts to Class WL wetlands and Class C perennial streams must be conducted within the same river basin and physiographic province when practical. Mitigation for impacts to Class ORW, HQW, WS-I and WS-II perennial streams and wetlands contiguous to waters with the aforementioned classifications must be completed within the same river sub-basin when practical and, for wetlands, using the same wetland type.
    - Mitigation through payment to a private mitigation bank or the Division of Mitigation Services, when mitigation is unavailable from a private mitigation bank, is preferred over individual project mitigation (including permittee responsible mitigation) unless it can be demonstrated that these types of mitigation are not practical. Mitigation sites approved by the US Army Corps of Engineers shall be deemed to be consistent with the Division's mitigation requirements.
- Mitigation is required for impacts other than perpendicular crossings in Zone 1 of riparian buffers and perpendicular crossings that disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width. Mitigation must be provided in accordance with the consolidated buffer mitigation rule (15A NCAC 02B .0295), which outlines the areas of mitigation required on zonal and locational mitigation ratios. Mitigation may be satisfied through a payment to a private mitigation bank or the Division of Mitigation Services, when mitigation is unavailable from a private mitigation bank, or through permittee responsible mitigation. Item (l) of the consolidated buffer mitigation rule generally requires 3 steps for applicants who want to pursue permittee responsible mitigation by restoration/enhancement(n) and/or alternative mitigation(o). These steps are outlined below and are required as part of the application to ensure the mitigation proposal meets the requirements of the rule:
    (1) Obtain a mitigation determination issued by DWR (i.e. site viability letter and stream determinations)
    (2) Submit a mitigation proposal to DWR that includes a commitment to provide…
        a. Perpetual conservation easement or similar preservation mechanism
        b. Non wasting endowment/surety
        c. Financial assurance (must be sufficient for project implementation and monitoring/ maintenance). This is in addition to an endowment.
        d. Diffuse flow plan
        e. Credit and debit ledger to DWR at regular intervals once credits are established
    (3) Submit a mitigation plan to DWR for written approval that contains the following
        a. Map of proposed mitigation site
        b. Vegetation Plan that meets the criteria in the rule
        c. Grading Plan (where applicable)
        d. Schedule for implementation
        e. Monitoring Plan

Nothing Compares

State of North Carolina | Environmental Quality | Water Resources
512 N. Salisbury Street | 1611 Mail Service Center | Raleigh, NC 27699-1611
919.707.9000

SA6-6 See response to comment SA6-1.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

20170406-5158 FERC PDF (Unofficial) 4/6/2017 8:01:31 AM

SA6-7

- The analysis and information provided only includes direct effects from the proposed project. The analysis, however, does not include any potential indirect or secondary effects of the proposed project. According, to CEQ guidance[1], by definition, cumulative effects must be evaluated along with the direct and indirect effects.

  It is clearly stated in the DEIS the purpose of the project is to "connect growing demand areas in Virginia and North Carolina," and that there are "long-term precedent agreements for 96 percent of the project capacity to six specific customers." Additionally, it is also stated that "the majority of the natural gas consumption will continue increasing due to population growth, industrial consumption, and electric power generation." The *Powering the Future* literature published as part of project awareness states that "The Atlantic Coast Pipeline project…will yield thousands of jobs and billions in economic impact and tax revenue across West Virginia, Virginia and North Carolina" and "The Atlantic Coast Pipeline, with nearly a third of its infrastructure in the state [North Carolina], will spur economic activity and consumer savings." Other information provided to the Department indicate that 75 percent of the available product allocated for electric generation (76 percent of the 1.5 bcf/d) would be provided to Piedmont Natural Gas, Public Service North Carolina, and Duke Energy – all of which operate primarily in North Carolina. All of these statements strongly indicate that considerable growth will be occurring in North Carolina as a direct result of this project. It is believed that the "population growth, industrial consumption, and electric generation" would likely not occur to the expected extent, or not occur nearly as fast, if at all, should this project not be implemented. These effects – the increased industry, housing, and associated infrastructure - would not occur without this project. Therefore, these affects are indirect or secondary affects resulting from the proposed project and, again, by CEQ definition, must be addressed in the environmental analysis on the project.

[1]*Considering Cumulative Effects Under the National Environmental Policy Act*, Council on Environmental Quality, January 1997, page 1.

We appreciate you allowing the Division the opportunity you review and comment on the proposed project. Should you have any questions or need any additional information, please do not hesitate to contact me at David.Wainwright@ncdenr.gov or 919-707-9045.

cc: Danny Smith, DWR, Raleigh Regional Office
John Barr, DWR, Water Supply Planning Branch
Julie Grzyb, DWR, NPDES Complex Permitting Section
Fred Tarver, DWR, Basin Planning Branch
Jennifer Burdette, 401 and Buffer Permitting Branch
Karen Higgins, 401 and Buffer Permitting Branch
Linda Culpepper, DWR, Deputy Director
Jay Zimmerman, DWR, Director

Nothing Compares

State of North Carolina | Environmental Quality | Water Resources
512 N. Salisbury Street | 1611 Mail Service Center | Raleigh, NC 27699-1611
919.707.9000

SA6-7 The EIS was prepared in accordance with NEPA, CEQ guidelines, and other applicable requirements. The EIS is consistent with FERC style, formatting, and policy regarding NEPA evaluation of alternatives and different types of impacts, including cumulative impacts for a linear "corridor-type" project. Indirect effects to the extent known were considered in the cumulative impacts analysis. With regards to additional infrastructure, economic impacts, and population growth, etc., while these could be considered reasonably foreseeable, the timing, location, and extent of these factors is highly speculative. For example, the existing infrastructure may be able to accommodate with little to no modification (and impact on the environment) the new and increased access to energy realized by the project. Further, where these growth areas might occur, and how much additional growth relative to what infrastructure already exists is not known in enough detail to speculate what environmental impacts may result.

As explained in section 4.13, FERC considers in its cumulative impacts analysis projects of comparable magnitude, projects that would occur during the same general timeframe as the proposed project (regardless of size), and projects that affect similar resources within the same defined geographic area of scope. We do not deny that a pipeline project such as the ACP and SHP could have an indirect or secondary impact later in time. However, when and if these additional activities or projects occur, they would be the result of many factors, not just the pipeline project, and would be subject to an environmental review by the federal, state, or local agency permitting their activity when they are identified as needed.

NC Environmental Quality

North Carolina Department of Environmental Quality

Memo

From: Sarah Rice, Title VI and Environmental Justice Coordinator

Date: April 3, 2017

Re: Response to Comments Atlantic Coast Pipeline and Supply Header Project – Draft Environmental Impact Statement – Environmental Justice

---

NCDEQ recognizes the portion, 4.9.9 Environmental Justice, of the DEIS that contains the Environmental Justice Report pertaining to North Carolina.

Minority Communities

SA6-8 It was noted in the DEIS, that in NC, minorities comprise 30.5 percent of the total population and ranged from 12.5 to 95.5 percent within 1 mile of the proposed ACP. Seventeen percent of all persons live below the poverty level in NC along the anticipated ACP track. Twenty-seven of the 42 census tracts within a 1 mile radius of the ACP facilities have a higher percentage of persons living below poverty when compared to the State. NEPA requires the consideration of area composition, consideration of data relevant to public health and industry for cumulative exposure, interrelated cultural, social, occupational historical, or economic factors, public participation, meaningful community representation, and tribal representation. The NEPA process also requires translation of crucial public documents, notices, and hearings for limited English speaking populations. During discussions with Dominion on Friday April 3 2017, is was clear, their consultant used EPA's EJ SCREEN to screen demographics within a one-mile radius of the proposed pipeline. NCDEQ would recommend Dominion to re-evaluate their report and take into consideration age and the potential for older illiterate citizens among certain communities.

Tribal Communities

SA6-9 In the section 4.10.4 Tribal Consultation, federally recognized tribes were consulted regarding their religious or cultural significance to historic properties that could be impacted by ACP and SHP. The ACP is proposed to go through State Recognized Tribal lands. Lumbee territory in Robeson County will be the most affected of the State recognized tribes. The Lumbee community has been identified as a NC Environmental Justice community by the Environmental Protection Agency. Dominion created a report plan for unanticipated discoveries. The Atlantic Coast Pipeline, LLC should include tribal contacts for the Haliwa-Saponi, Coharie, Lumbee, and Greg Richardson (Executive Director) of the Commission of Indian Affairs.

1

SA6-8 We believe the methodology used in our environmental justice assessment, which looked at census tract data for census tracts within 1 mile of the pipeline centerline and all aboveground facilities, is adequate to address NEPA and EO 12898.

SA6-9 Sections 4.10.4, 4.10.5, and 4.10.7 have been updated with additional discussion of the referenced tribes.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

Energy, Mineral & Land Resources
ENVIRONMENTAL QUALITY

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
TRACY DAVIS
Director

March 30, 2017

MEMORANDUM:

TO: Lyn Hardison, Environmental Assistance and SEPA Coordinator

FROM: Toby Vinson, Chief of Program Operations, DEMLR

RE: ACP DEIS Review – DEQ#1678

SA6-10

Division of Energy, Mineral, and Land Resources - As this project will disturb greater than 1 acre of land, the owner/responsible party will be required to meet all aspects of compliance with the NC Sedimentation Pollution Control Act and the associated NPDES NCG 010000 Construction Stormwater Permit and associated Stormwater laws which includes but are not limited to submitting an Erosion and Sedimentation Control Plan and receive approval which will also automatically grant coverage under the NCG 010000 permit. This project will be inspected for compliance with these State Laws, Approvals and Permits until the project is completed and found to be adequately, permanently stabilized by inspection staff of DEMLR. Average processing time for plan review and Approval is 30 days. Plan Review fees include $65 per acre or part of an acre of disturbed area. DEMLR contacts for plan review and inspection are: Fayetteville Regional Office – Tim LaBounty – 910-433-3300 and Raleigh Regional Office – Thad Valentine – 919-791-4200.

Current Status in DEMLR is as follows: Our Fayetteville Regional Office received an Erosion and Sedimentatoin Control Plan (ESCP) submittal on March 10, 2017. ACP representatives are working on resubmitting their Financial Ownership and Responsibility Form (FORF) which we are expecting to receive near term, so the 30-day review clock has not technically started yet. We have performed a preliminary/cursory review with RRO and have identified some ESCP plan/detail/spec. related items that will need to be clarified. RRO and FRO plan to continue this regional team approach throughout the project with the goal of providing uniform response(s) and coordination efforts. Regional Staff will plan is to continue with the standard review once we receive the revised/satisfactory FORF.

State of North Carolina | Environmental Quality | Energy, Mineral and Land Resources
512 N. Salisbury Street | 1612 Mail Service Center | Raleigh, North Carolina 27699-1612
919 707 9200

SA6-10 The comments related to the NCDEQ, Division of Energy, Mineral, and Land Resources permitting requirements are noted. See also the response to comment SA6-1.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

Waste Management
ENVIRONMENTAL QUALITY

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
MICHAEL SCOTT
Director

April 4, 2017

Memorandum to: Lyn Hardison
Environmental Assistance and SEPA Coordinator, DEACS

From: Ellen Lorscheider, Solid Waste Section Chief

Subject: Review Comments on the Draft EIS for Atlantic Coast Pipeline

Staff have completed a review of the draft EIS documents, initially via word search and then more thorough reading of those specific areas. Based on what we've reviewed, and how we normally handle NEPA/SEPA reviews, the Section does not see any waste related adverse effects to the surrounding communities in NC. The document address the proper management of wastes generated from the various aspects of the project, including drilling muds within the documents.

SA6-11 One thing we've not reviewed and do not believe they inquired about in producing the EIS draft is our recorded sites database to determine if recorded illegal dump sites are located within any of the project boundaries. However, they should be able to see those if they did any actual deed research of the properties they intend to cross.

For further inquiries, please contact me at ellen.lorscheider@ncdenr.gov or (919) 707 8245 or alternately contact jason.watkins@ncdenr.gov or (336) 776-9674.

Ec: Michael Scott, NCDEQ Division of Waste Management Director
Jason Watkins, Solid Waste Section Field Operations Branch Supervisor
Ed Mussler, Solid Waste Section Permitting Branch Supervisor

State of North Carolina | Environmental Quality | Waste Management
217 West Jones Street | 1646 Mail Service Center | Raleigh, North Carolina 27699-1646
919 707 8200

SA6-11 Comment noted.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

Waste Management
ENVIRONMENTAL QUALITY

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
MICHAEL SCOTT
Director

March 30, 2017

To: Michael Scott, Director
Division of Waste Management

From: Bill Hunneke, Eastern Region Compliance Supervisor,
Compliance Branch, Hazardous Waste Section

Subject: Hazardous Waste Section Comments on Draft Environmental Impact Statement for the Atlantic Coast Pipeline, LLC Dominion Transmission, Inc. and Atlantic and Piedmont Gas Co., Inc. Counties impacted include: Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson). Project Number: 1678.

The Hazardous Waste Section (HWS) has reviewed the Draft Environmental Impact Statement for the Atlantic Coast Pipeline, LLC Dominion Transmission, Inc. and Atlantic and Piedmont Gas Co., Inc. - purpose of the ACP is to deliver up to 1.5 billion cubic feet per day of natural gas to customers in Virginia and North Carolina.

SA6-12 Any hazardous waste generated from the demolition, construction, operation, maintenance, and/or remediation (e.g. excavated soil) from any proposed project must be managed in accordance with the North Carolina Hazardous Waste Rules. The demolition, construction, operation, maintenance, and remediation activities conducted will most likely generate a solid waste, and a determination must be made whether it is a hazardous waste. If a project site generates more than 220 pounds of hazardous waste in a calendar month, the HWS must be notified, and the site must comply with the small quantity generator requirements. If a project site generates more than 2200 pounds of hazardous waste in a calendar month, the HWS must be notified, and the facility must comply with the large quantity generator requirements.

Should any questions arise, please contact me at 252-364-8977.

Kind regards,

William Hunneke
Eastern Region Compliance Supervisor

State of North Carolina | Environmental Quality | Waste Management
217 West Jones Street | 1646 Mail Service Center | Raleigh, North Carolina 27699-1646
919 707 8200

SA6-12 Comment noted. Atlantic would be responsible for complying with the applicable regulations and acquiring the appropriate permits associated with the removal of hazardous wastes generated by construction and operation of the project.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

20170406-5158 FERC PDF (Unofficial) 4/6/2017 8:01:31 AM

COMMENTS FROM FAYETTEVILLE REGIONAL OFFICE:

PROJECT DEQ 1678

ATLANTIC COAST PIPELINE DRAFT EIS DUE

03-30-2017

SA6-13

DIVISION	INITIALS	NO COMMENT	COMMENTS	DATE REVIEW
AIR QUALITY	GWR		ANY OPEN BURNING ASSOCIATED WITH SUBJECT PROPOSAL MUST BE IN COMPLIANCE WITH 15A NCAC 02D .1900.	03/13/17
DWR WQROS	JTA		401WATER QUALITY CERTIFICATION COMPLIANCE WITH THE T15A 02H .0500. ABANDONMENT OF ANY WELLS IN ACCORDANCE WITH TITLE 15A SUBCHAPTER 2C.0100 PERMIT TO DISCHARGE INTO SURFACE WATERS.	03/24/17
DWR PWS	HLC		IF EXISTING WATER LINES WILL BE RELOCATED DURING CONSTRUCTION, PLANS FOR THE WATER LINE RELOCATION MUST BE SUBMITTED TO THE DIVISION OF WATER RESOURCES/PUBLIC WATER SUPPLY SECTION AT 1634 MAIL SERVICE CENTER, RALEIGH, NC 27699-1634. FOR MORE INFORMATION, CONTACT THE PUBLIC WATER SUPPLY SECTION (919)707-9100.	3/24/2017
DEMLR	LHB		PLANS MUST BE SUBMITTED AND APPROVED 30 DAYS PRIOR TO ANY LAND DISTURBING ACTIVITIES. PLAN REVIEWER FOR ROBESON, CUMBERLAND, SAMPSON – JODI PACE, EI. INSPECTORS AS FOLLOWS: ROBESON AND SAMPSON-NICK MILLS, CUMBERLAND – MELISSA JOYNER AND REBECCA HERSEY	3/15/2017
DWM UST	KEC		I HAVE REVIEWED THE ABOVE-MENTIONED PROJECT AND FROM THE FIGURES PROVIDED, MULTIPLE UST RELEASE INCIDENTS ARE POSSIBLE IN THE PROJECT AREA. DUE TO THE SCALE OF THE FIGURES PROVIDED I CANNOT LOCATE EXACTLY WHERE THE INCIDENTS ARE IN RELATIONSHIP TO THE PROPOSED WORK TO BE CONDUCTED. PLEASE HAVE PETITIONER REFER TO OUR WEBSITE AT HTTP://DEQ.NC.GOV/ABOUT/DIVISIONS/WASTE-MANAGEMENT/WASTE-MANAGEMENT-RULES-DATA/WASTE-MANAGEMENT-GIS-MAPS/RUST-MAP TO VIEW REGIONAL UST INCIDENTS PLOTTED ON GOOGLE EARTH TO REFINE THEIR SEARCH. SPECIFICS CAN BE REQUESTED OF THE APPROPRIATE REGIONAL OFFICE AT THAT TIME.	3/16/17

SA6-13 The comments related permitting requirements from the NCDEQ, Fayetteville and Raleigh Regional Offices are noted. See also the response to comment SA6-1.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: Raleigh
Project Number: 1678-[####] Due Date: 3/30/2017
County: NASH,

After review of this project it has been determined that the DEQ permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
☐	Permit to construct & operate wastewater treatment facilities, non-standard sewer system extensions & sewer systems that do not discharge into state surface waters.	Application 90 days before begins construction or award of construction contracts. On-site inspection may be required. Post-application technical conference usual.	30 days (90 days)
☐	Permit to construct & operate, sewer extensions involving gravity sewers, pump stations and force mains discharging into a sewer collection system	Fast-Track Permitting program consists of the submittal of an application and an engineer's certification that the project meets all applicable State rules and Division Minimum Design Criteria.	30 days (N/A)
☐	NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begins activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90-120 days (N/A)
☐	Water Use Permit	Pre-application technical conference usually necessary.	30 days (N/A)
☐	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a groundwater monitoring well located on property not owned by the applicant, and for a large capacity (>100,000 gallons per day) water supply well.	7 days (15 days)
☐	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
☒	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100 thru 2Q.0300)	Application must be submitted and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113).	90 days
☒	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
☒	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950	Please Note - The Health Hazards Control Unit (HHCU) of the N.C. Department of Health and Human Services, must be notified of plans to demolish a building, including residences for commercial or industrial expansion, even if no asbestos is present in the building.	60 days (90 days)
☒	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed with and approved by applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. A fee of $65 for the first acre or any part of an acre. An express review option is available with additional fees.		20 days (30 days)
☐	Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets.		(30 days)
☐	Sedimentation and erosion control must be addressed in accordance with _____ Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets.		Based on Local Program
☐	Compliance with 15A NCAC 2H .0126 - NPDES Stormwater Program which regulates three types of activities: Industrial, Municipal Separate Storm Sewer System & Construction activities that disturb ≥1 acre.		30-60 days (90 days)
☐	Compliance with 15A NCAC 2H 1000 -State Stormwater Permitting Programs regulate site development and post-construction stormwater runoff control. Areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the state.		45 days (90 days)

DEQ INTERGOVERNMENTAL REVIEW PROJECT Form
January 2017/lbh

Page 1 of 4

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

20170406-5158 FERC PDF (Unofficial) 4/6/2017 8:01:31 AM

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: Raleigh
Project Number: 1678-[####] Due Date: 3/30/2017
County: NASH,

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
☐	Mining Permit	On-site inspection usual. Surety bond filed with DEQ Bond amount varies with type mine and number of acres of affected land. Affected area greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
☐	Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction, and certify construction is according to DEQ approved plans. May also require a permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of $200.00 must accompany the application. An additional processing fee based on a percentage or the total project cost will be required upon completion.	30 days (60 days)
☐	Oil Refining Facilities	N/A	90-120 days (N/A)
☐	Permit to drill exploratory oil or gas well	File surety bond of $5,000 with DEQ running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to DEQ rules and regulations.	10 days N/A
☐	Geophysical Exploration Permit	Application filed with DEQ at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days N/A
☐	State Lakes Construction Permit	Application fee based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property	15-20 days N/A
☐	401 Water Quality Certification	Compliance with the T15A 02H .0500 Certifications are required whenever construction or operation of facilities will result in a discharge into navigable water as described in 33 CFR part 323.	60 days (130 days)
☒	Compliance with Catawba, Goose Creek, Jordan Lake, Randleman, Tar Pamlico or Neuse Riparian Buffer Rules is required. Buffer requirements: http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits/401-riparian-buffer-protection-program		
☐	Nutrient Offset: Loading requirements for nitrogen and phosphorus in the Neuse and Tar-Pamlico River basins, and in the Jordan and Falls Lake watersheds, as part of the nutrient-management strategies in these areas. DWR nutrient offset information: http://deq.nc.gov/about/divisions/water-resources/planning/nonpoint-source-management/nutrient-offset-information		
☐	CAMA Permit for MAJOR development	$250.00 - $475.00 fee must accompany application	75 days (150 days)
☐	CAMA Permit for MINOR development	$100.00 fee must accompany application	22 days (25 days)
☒	Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100.		
☒	Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation.		
☐	Plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the Division of Water Resources/Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq., Plans and specifications should be submitted to 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. All public water supply systems must comply with state and federal drinking water monitoring requirements. For more information, contact the Public Water Supply Section, (919) 707-9100.		30 days
☒	If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Water Resources/Public Water Supply Section at 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. For more information, contact the Public Water Supply Section, (919) 707-9100.		30 days
☐	Plans and specifications for the construction, expansion, or alteration of the _____ water system must be approved through the _____ delegated plan approval authority. Please contact them at _____ for further information.		

DEQ INTERGOVERNMENTAL REVIEW PROJECT Form
January 2017/lbh

Page 2 of 4

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: Raleigh
Project Number: 1678-[####] Due Date: 3/30/2017
County: NASH,

Other Comments (attach additional pages as necessary, being certain to comment authority)

Division	Initials	No comment	Comments	Date Review
DAQ	DDM	☐	The RRO has receive a permit application for the compressor station in North Hampton Co. The apllication is currently on hold.	3/24/17
DWR-WQROS (Aquifer & Surface)	DS &RB	☐	Atlantic Coast Pipeline – Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson Counties. - A project that disturbs 1 acre or greater is required to secure an erosion and sedimentation control plan and must comply with construction stormwater permit conditions (NCG010000) -Footprint of this project bisects several river basins, including River Basin that have Riparian Buffer rules. (Neuse River and Tar-Pamlico River Basin have riparian buffer the apply to intermittent, perennial streams, ponds and lakes). -If wetland, riparian buffers or stream impacts are proposed, this project will need to comply with/secure a 404 permit from the USACE, obtain a 401 Water Quality Certification authorization and a riparian buffer authorization, as appropriate. -Proper management and disposal of drilling fluid will be necessary, such that illegal discharges waste do not occur. -Discharges of drilling fluids are not deemed permitted (authorized) and can easily cause surface water standard violations. Proper disposal, spill prevention plans, spill prevention response plans and proper notification of spill events (frac out) to the DWRs Regional Offices should occur if spills are encountered. -Report spills within 24 hours to the Raleigh Regional Office at (919) 791-4200 (Northampton, Halifax, Nash, Wilson, and Johnston Counties or the Fayetteville Regional Office (910) 433-3300 [Sampson, Cumberland, and Robeson Counties) • Telephone Regional Office within 24 hours of 'first knowledge' (If after hours, Emergency Management) (800)-858-0368) &	3/16/17 3/29/17
DWR-PWS	WAH	☐	See last checked box above.	3/29/17
DEMLR (LQ & SW)	CDA	☐		3/27/17
DWM – UST	MRP	☐	Notification of proper regional office also requested if petroleum-contaminated soil or groundwater is discovered during excavation/drilling activities.	3/29/17
Other Comments		☐		/ /

REGIONAL OFFICES

Questions regarding these permits should be addressed to the Regional Office marked below.

☐ **Asheville Regional Office**
2090 U.S. 70 Highway
Swannanoa, NC 28778-8211
Phone: 828-296-4500
Fax: 828-299-7043

☐ **Fayetteville Regional Office**
225 Green Street, Suite 714,
Fayetteville, NC 28301-5043
Phone: 910-433-3300
Fax: 910-486-0707

☐ **Mooresville Regional Office**
610 East Center Avenue, Suite 301,
Mooresville, NC 28115
Phone: 704-663-1699
Fax: 704-663-6040

☒ **Raleigh Regional Office**
3800 Barrett Drive,
Raleigh, NC 27609
Phone: 919-791-4200
Fax: 919-571-4718

☐ **Washington Regional Office**
943 Washington Square Mall,
Washington, NC 27889
Phone: 252-946-6481
Fax: 252-975-3716

☐ **Wilmington Regional Office**
127 Cardinal Drive Ext.,
Wilmington, NC 28405
Phone: 910-796-7215
Fax: 910-350-2004

DEQ INTERGOVERNMENTAL REVIEW PROJECT Form
January 2017/lbh

Page 3 of 4

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA6 – North Carolina Department of Environmental Quality (cont'd)

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

☐ **Winston-Salem Regional Office**
450 Hanes Mill Road, Suite 300,
Winston-Salem, NC 27105
Phone: 336-776-9800
Fax: 336-776-9797

DEQ INTERGOVERNMENTAL REVIEW PROJECT Form
January 2017/lbh

Page **4** of **4**

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA7 – North Carolina House of Representatives, Representative John D. Szoka

North Carolina General Assembly
House of Representatives
REPRESENTATIVE JOHN D. SZOKA
State Legislative Building
Raleigh, NC 27601-1096

April 4, 2017

Kimberly D. Bose, Secretary
Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Dear Ms. Bose and Mr. Davis, Sr.,

SUBJECT: Comment on Draft Environmental Impact Statement for the Atlantic Coast Pipeline, LLC, Dominion Transmissions, Inc. and Atlantic and Piedmont natural Gas Co., Inc. (Docket Nos. CP15-554-000,-001; CP15-555-000; and CP15-556-000).

FERC made notice on May 3, 2016 of the Fayetteville Major Route Modification (Cumberland County, North Carolina) to the Atlantic Coast Pipeline (ACP). This major route modification was, in my opinion, a very reasonable modification that minimized impacts on private property owners and the environment.

Within the northern end of Cumberland County there is still a segment of the pipeline that travels generally southwest from the vicinity of the Town of Falcon to a connection point with a NCNG existing pipeline to the west of the Town of Wade. The proposed ACP route then travels back to the Progress Energy Carolinas (PEC) 500 kilowatt electric transmission line easement and continues southward. (See attached map.)

SA7-1 Since the Fayetteville Major Route Modification was made I have asked both Duke Energy and Dominion why this interconnection site (point 3 on the map) was maintained at that location. Why was not the whole route for this section of the ACP moved east to the PEC transmission line easement? No one in either company could answer my question. After several telephone conversations and meetings with company officials at the state legislative building in Raleigh, I met Bruce McKay, a senior engineer from Dominion on the ground in the Town of Wade. We drove over a portion of the proposed pipeline site. Afterwards we met at the town hall and I asked him again, why was not the ACP moved over to the PEC transmission line easement and the interconnection point moved? He had no answer.

The decision for this small portion of the ACP seems to be that the interconnection point with the NCNG pipeline (west of Wade at point 3) was made before FERC made the Fayetteville Major Route Modification. Prior to the Fayetteville Major Route Modification, this interconnection point made sense. I have personally visited this site. There are no improvements to the site at this time. As it now stands, I know of no rational justification why the interconnection point cannot be moved to the east to point 2 on the map.

My request of FERC is to reroute the current route of the ACP directly from point 1 to point 4, shown on the accompanying map; the current route runs from point 1 to point 2 to point 3 to point 4. This would

SA7-1 We believe the proposed route is environmentally acceptable and meets the purpose and need of the project.

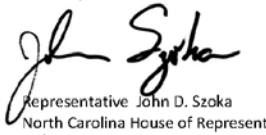
SA7-1 (cont'd)

move the interconnection point with the NCNG existing pipeline currently at point 3 over to point 2 in the vicinity of the existing PEC transmission line easement. My reasons are as follows:

1. Neither Duke Energy nor Dominion can state any reason why the interconnect point with the existing NCNG pipeline is located where it currently is. Neither Duke Energy nor Dominion can state any reason why the interconnect point could not be moved further to the east in the vicinity of the PEC electric transmission line. I believe that the interconnect point is planned at its current location solely because it made sense before the Fayetteville Major Route Modification was made. Now, there is no supporting logic in keeping the interconnect point there as it could easily be moved less than 1.5 miles to the east.
2. Rerouting this small portion of the pipeline prevents the pipeline from boring beneath I-95 twice. The importance of I-95 as a major north-south interstate highway cannot be overstated. Rerouting also prevents this small portion of the pipeline from boring underneath a major rail line twice. This rail line not only carries a high volume of commercial rail traffic but is a major north-south AMTRACK route.
3. The number of homeowners whose property would be impacted would be significantly less than maintaining the current route.
    a. I have personally driven/walked the entire route and there are a surprising number of homes in this mostly rural area. The current route is very close to a substantial number of those homes which causes the homeowners a great deal of concern. Moving the route would significantly minimize the number of impacted homeowners.
    b. Of significant note is that if the current route is maintained, the small Town of Wade will be adversely impacted. The route now runs through a planned housing subdivision within the city limits. If the pipeline remains routed through the planned subdivision the number of houses built will be substantially fewer than what is planned. This will adversely impact property taxes collected by the Town of Wade.
4. The area around the Town of Wade is a mixture of farmland and forest. There is one major creek, under which the pipeline would be bored that is fairly deep; from the lip of the ground that overlooks the creek I estimate about 30 vertical feet. While that is not significant in and of itself, it is significant because of the drainage pattern around the Town of Wade. Because of Hurricane Matthew last year, the topography and the creek itself was changed. I have personally seen hundred year old massive trees that were ripped out of the banks and major portions of the creek banks washed out at the exact point where the ACP must be bored under, or alternatively, go over this creek. I have lived in Cumberland County for twenty-three (23) years and have seen many Hurricanes rip through the area. I am not an expert at routing pipelines nor am I a hydrologist; however, what I saw gives me pause. If the pipeline were rerouted as I suggest, major damage to the pipeline in the future could be avoided.

I believe that this small change to the route is in the best interest of the people in and around the Town of Wade, the safety of the public and the environment. Thank you for your consideration of my request.

Sincerely,

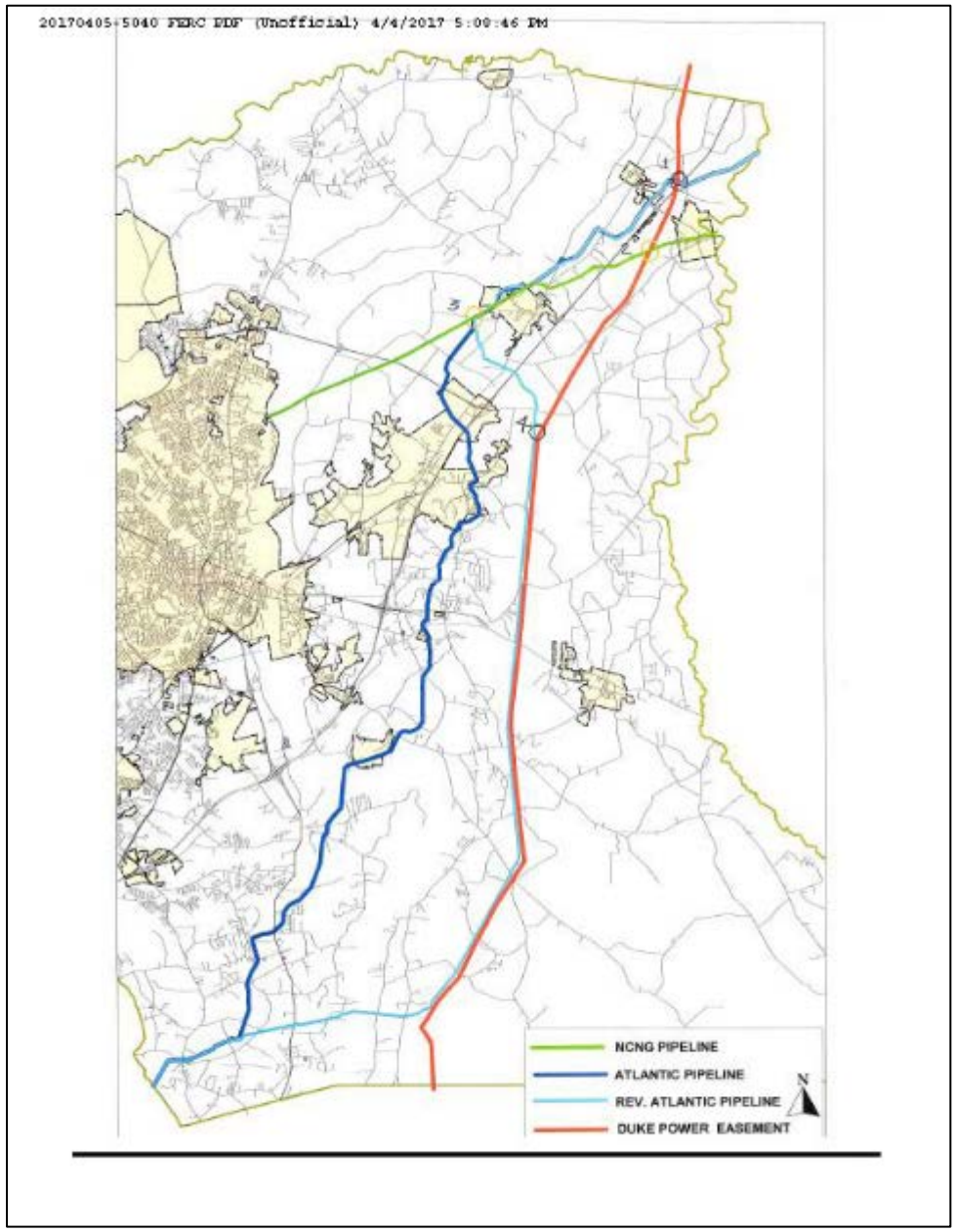


Representative John D. Szoka
North Carolina House of Representatives
45th District, Cumberland County

JDS/bbs

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA7 – North Carolina House of Representatives, Representative John D. Szoka (cont'd)



STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

April 6, 2017

Mr. Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

RE: Federal Energy Regulatory Commission Draft Environmental Impact Statement for the Atlantic Coast Pipeline and Supply Header Project (Docket Nos. CP15-554-000, CP15-554-001, CP15-555-000 and CP15-556-000; FERC/EIS-0274D; OEP/DG2E/Gas Branch 4; DEQ 16-248F).

Dear Deputy Secretary Davis:

The Commonwealth of Virginia has completed its review of the draft environmental impact statement (DEIS) for the portions of the Atlantic Coast Pipeline (ACP) Project in Virginia. The Virginia Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of federal environmental documents prepared pursuant to the National Environmental Policy Act (NEPA) and responding to appropriate federal officials on behalf of the Commonwealth. This letter, including attachments, is the Commonwealth of Virginia's response to the December 30, 2016 public notice, issued by the Federal Energy Regulatory Commission (FERC or Commission) for the ACP DEIS.

The comments from Virginia's agency reviewers primarily focus on recommending measures to mitigate potential environmental impacts. In general, participants in the Commonwealth's review support the recommendations in the DEIS to coordinate with government agencies, adhere to protective construction measures, and mitigate for unavoidable impacts. These statements are discussed in the detailed comments from reviewers in Attachment B.

Coordinated Review

As part of the Commonwealth's review, DEQ requested comments from state agencies, localities and planning district commissions. DEQ notified reviewers of the availability of the DEIS and additional information submitted to the FERC docket by Atlantic Coast Pipeline, LLC (Atlantic or ACP, LLC) on January 10, January 19, January 20, January 27 and February 9, 2017. Reviewers also had an opportunity to review files of the route suitable for use in Geographic Information System software that were provided by Atlantic. The comments that were submitted as part of this review are attached and organized as follows:

- Attachment A: Recommendations for the FEIS, Plans and Procedures
- Attachment B: Detailed comments from reviewers

Attachment A includes more than 100 recommendations that are based on a summation of comments from participating agencies and a locality. This summary highlights priorities derived from submitted comments and is not meant to substitute the totality of the individual comments in Attachment B. The Commonwealth recommends that FERC consider every comment, correction or recommendation detailed in Attachment B that FERC did not already address during the consideration of Attachment A.

Thank you for the opportunity to comment. If you have questions, please do not hesitate to contact me at bettina.sullivan@deq.virginia.gov or (804) 698-4204.

Sincerely,

Bettina Sullivan, Manager
Environmental Impact Review and Long Range
Priorities Program

Enclosures

ec: Kevin Bowman, FERC
Amy Ewing, DGIF
Keith Tignor, VDACS
Robbie Rhur, DCR
Jason Bulluck, DCR
Drew Hammond, VDH
Susan Douglas, VDH
Roger Kirchen, DHR
David Spears, DMME

Greg Evans, DOF
Tony Watkinson, VMRC
Randy Owen, VMRC
Elizabeth Jordan, VDOT
Rusty Harrington, DOAV
Scott Denny, DOAV
Martha Little, VOF
Bruce Sterling, VDEM
Colonel W. Steven Flaherty, VSP
Jennifer Mitchell, DRPT
Roberta Lambert, Highland County
Ashton N. Harrison, Bath County
Timothy Fitzgerald, Augusta County
Stephen A. Carter, Nelson County
Rebecca Carter, Buckingham County
Vivian Seay Giles, Cumberland County
Wade Bartlett, Prince Edward County
Ronald E. Roark, Nottoway County
W. Kevin Massengill, Dinwiddie County
Charlette T. Woolridge, Brunswick County
K. David Whittingham, Greensville County
Michael W. Johnson, Southampton County
Patrick Roberts, City of Suffolk
Tim Howlett, City of Chesapeake
Michael G. Hamp II, City of Waynesboro
Stephen F. Owen, City of Staunton
Russ Pace, City of Franklin
Brian Thrower, City of Emporia
Joseph F. Morrissette, Town of Burkeville
Cindy Morris, Town of Farmville
Philip Vannoorbeeck, Town of Blackstone
Bonnie Riedesel, Central Shenandoah PDC
Chip Boyles, Thomas Jefferson PDC
Mary S. Hickman, Commonwealth Regional
Gail P. Moody, Southside PDC
Ben McFarlane, Hampton Roads PDC

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

ATTACHMENT A: RECOMMENDATIONS FOR THE FINAL ENVIRONMENTAL IMPACT STATEMENT, PLANS AND PROCEDURES

The recommendations within this attachment are organized as follows:

- Part I: Section 5.2 of the Final Environmental Impact Statement
  - New Recommendations for Section 5.2
  - Modifications to Existing Recommendations in Section 5.2
- Part II: Recommendations for Other Sections of the FEIS, Plans and Procedures
  - Route Changes and Variations
    - Conservation Sites
    - Gardner Spring
    - Surface Waters
    - Water Supply
    - Wildlife Resources
    - Karst Features
  - Recommendations for Preconstruction Planning, Surveys and Studies
    - Wetlands and Surface Waters
    - Soil and Slope Stabilization
    - Karst Resources
    - Wildlife Resources
    - Contaminated Soil, Sediment and Groundwater
    - Recreational and Scenic Resources
    - Water Withdrawals
    - Geologic and Mineral Resources and Mines
    - Acid-Producing Rock and Soils
    - Pollution Prevention
    - Aviation
    - Water Supplies and Drinking Water Sources
    - Shapefiles
    - Waste Database Search
    - Plant and Wildlife Surveys and Special Status and State-Sensitive Resources

- Transportation System
- Mitigation Measures for Construction and Maintenance Activities
  - Wetlands and Surface Waters
  - Hydrostatic Testing
  - Stream Crossings
  - Forest Resources
  - Wildlife Resources
  - Government-Funded Best Management Practices
  - Open Burning and Fugitive Dust
  - Aviation
  - Water Supplies
  - Polychlorinated Biphenyl (PCB) Contamination
  - Flood Hazard Area
  - Conservation Sites
  - Transportation System
- Recommendations for Specific Plans
  - Spill Prevention Controls and Countermeasures
  - Migratory Bird Conservation Plan
  - Invasive Plant Species Management Plan
  - Plans for the Management of Waste and Contaminated Soil, Sediment and Groundwater
  - Plan for Discovery of Unanticipated Paleontological Resources
  - Blasting Plan
  - Karst Terrain Assessment Construction, Monitoring and Mitigation Plan
  - Karst Survey Report
  - Traffic and Transportation Management Plan
  - Wetland and Waterbody Construction and Mitigation Procedures
  - Restoration and Rehabilitation Plan
  - Site-Specific Horizontal Directional Drill Plans
  - Timber Removal Plan
  - Contaminated Media Plan
  - Protected Snake Conservation Plan
  - Non-Native Invasive Plant Species Management Plan within the Draft Construction, Operation and Maintenance Plans
- Errors and Clarification Needs in the DEIS

FERC ACP DEIS
DEQ 16-248F
Attachment A
Page 3

Part I: Section 5.2 of the Final Environmental Impact Statement

The Commonwealth of Virginia recommends that the Federal Energy Regulatory Commission (FERC or Commission) include the following recommendations in Section 5.2 of the Final Environmental Impact Statement (FEIS) and that if the Commission approves the construction and operation of the Atlantic Coast Pipeline (ACP) Project, it condition the order on adherence to these recommendations. If FERC does not include these recommendations in Section 5.2, then the Commonwealth recommends that they be incorporated in appropriate sections of the FEIS, plans and procedures as mitigation measures. To the extent practicable, the Commonwealth recommends that the U.S. Forest Service also consider these recommendations to the degree that they relate to decisions under its jurisdiction.

1) New Recommendations for Section 5.2

SA8-1

a) Recommendation: Given the adverse impact to forested cores that has been documented and recognized by FERC as significant in its analysis, the Commonwealth of Virginia recommends that FERC include in Section 5.2 a recommendation that directs the Atlantic Coast Pipeline, LLC (Atlantic or ACP, LLC) to coordinate with Virginia's natural resource agencies and applicable federal agencies on an acceptable mitigation plan to offset and compensate for the significant forestland impacts in Virginia, including direct and indirect loses and fragmentation effects. Failing to account for indirect impacts of the ACP to forests would gravely underestimate the extent to which the project will impact Virginia's forests. For additional evidence to support the recommendation, see comments from the Commonwealth's natural resource agencies in Attachment B.

SA8-2

b) Recommendation: Include a requirement directing ACP, LLC to develop an Acid Soil Mitigation Plan and implement horizontal directional drilling (HDD) to the maximum extent practicable in areas containing acid soils. The Department of Environmental Quality (DEQ) cautions that exposing these soils to the atmosphere through open trenching operations could result in acidic runoff, potentially resulting in environmental impacts. The plan should address how these areas will be managed, the disposition of acid soils, and details regarding proper storage and disposal practices. See the DEQ comments in Attachment B for a list of the milepost locations where acid sulfate soils are present along the ACP route.

SA8-3

In addition to acid sulfate soils, the project includes other areas of special interest such as karst, steep slopes, and slide prone areas. DEQ considers stormwater management and erosion and sediment control (ESC) measures to be critically important to minimizing potential water quality impacts from the ACP Project. Proper stormwater management and ESC design, implementation, and

SA8-1 Section 4.6.5 has been updated with the new interior forest habitat fragmentation analysis based on the current version of the pipeline route. Note that because approximately 80 percent of the access roads proposed for ACP would be existing access roads, the direct interior forest loss provided in section 4.6.5 is less than that provided by the VDEQ in its February 16, 2017 "Impacts of the Proposed Atlantic Coast Pipeline on Virginia's Forests and Mitigation Recommendations," as this analysis appears to have included all access roads.

Interior forest habitat is not generally protected as a sensitive resource in the ACP project area, although there may be specific interior vegetation community types that are protected as described in section 4.4. HEAs are a means to determine the amount of compensatory restoration required to provide services that are equivalent to the interim loss of natural resource services following an injury. HEAs are used by the FWS as one of many conservation measures that may be used to mitigate impacts to migratory birds and threatened and endangered species; it is important to note that HEAs are a voluntary measure. Although we agree that compensatory mitigation is one way to offset the impacts resulting from forest loss and fragmentation, there are other measures described in sections 4.4.6 and 4.5.6 that would reduce fragmentation and edge effects. Additional measures would be applied on NFS lands as discussed in sections 4.4.8 and 4.5.9. Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the VDEQ. The VDEQ would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

SA8-2 Recommendation noted. Section 4.1.4.4 includes a discussion of acid producing rock and soils, including measures that Atlantic would implement to reduce potential impacts. See also the responses to comment SA8-3 and related comment SA8-141 in attachment B of your letter.

SA8-3 Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the appropriate Commonwealth of Virginia agency. The Commonwealth of Virginia would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

SA8-3 (cont'd)

monitoring will be paramount in protecting these resources. The ESC procedures contained in the DEIS are not representative of the full scope of Virginia's requirements for stormwater and ESC. DEQ has required Atlantic to submit site-specific ESC plans to be reviewed and approved prior to land-disturbing activity. These ESC plans will be expected to meet and exceed Virginia's requirements, particularly in areas of special interest. See the DEQ comments in Attachment B.

SA8-4

c) Recommendation: Add a recommendation to direct Atlantic to conduct pre-impact characterizations of proposed stream and wetland crossings to include sufficient evidence that the system will be able to maintain its original functions indefinitely after restoration. DEQ is concerned that the proposed temporary impacts could result in a permanent alteration of the impacted systems post construction. Pre-impact characterizations should include stream surveys and subsurface investigations at temporary stream and wetland impact areas to establish the feasibility of restoring the systems post-construction and hydrologic assessments, including piezometers, to establish pre-impact hydrologic conditions at temporary wetland impact areas. See the DEQ comments in Attachment B.

SA8-5

d) Recommendation: Include a requirement that directs ACP, LLC to develop a comprehensive Water Quality Monitoring Plan that describes how water quality monitoring will be conducted before, during, and up to five years after project construction. The plan should focus on identifying an appropriate number of monitoring locations above and below where open trench crossing or HDD are used in critical areas such as wild/stocked trout streams, endangered/threatened species waters, public water supplies, total maximum daily load (TMDL) watersheds, Tier 3 streams, areas near acidic soils, and streams with high Virginia Stream Condition Index (VSCI) scores. The plan should consider real-time temperature, dissolved oxygen, and turbidity monitoring (such as that done in Virginia by the U.S. Geological Survey), which could allow the public and all agencies involved to access the data real-time. Additionally, the plan should include a collection of macroinvertebrates, fish, and habitat data, using DEQ-approved methods above and below identified crossings during the project, and the collection should be done yearly for 5 years after completion of the project. ACP, LLC should also update other plans detailing post-construction monitoring, restoration, and rehabilitation to include this requirement, as applicable. See the DEQ comments in Attachment B.

SA8-6

e) Recommendation: Add a requirement directing Atlantic to manage water withdrawals for hydrostatic testing so that no more than 10 percent of the instantaneous flow rate from the channel is removed, the intake screen openings do not exceed 1 millimeter, and the screen face intake velocities are not greater than 0.25 feet per second to avoid an adverse effect or impairment. Water

SA8-4 See the response to comment SA8-3.

SA8-5 See the response to comment SA8-3.

SA8-6 We concur that water withdrawal rates should be managed and expect that water use would be addressed through each state water use permit process. See also the response to comment SA8-3.

SA8-6 (cont'd)

withdrawals for hydrostatic testing of water-tight containers, pipeline, and vessels from non-tidal waters are excluded from a permit under Virginia Water Protection Permit Program regulations (9 VAC 25-210-310.A.6) regardless of the volume withdrawn. However, 9 VAC 25-210-310.B allows the State Water Control Board to require a permit if the withdrawal is found to cause an impairment, adversely affect beneficial uses, or violate water quality standards.

SA8-7

f) Recommendation: Add a requirement that prior to construction, Atlantic will conduct dye tracing studies wherever the ACP crosses karst terrain, if prior dye tracing information does not exist or is insufficient for that area. Dye traces within the general project area have shown connections of karst features to springs and wells as far away as 7 miles for areas northwest of the Staunton/Pulaski/North Mountain Fault system (e.g., the Ridge and Valley). Dye trace studies should occur after final route approval but prior to construction. Atlantic should coordinate with the Department of Conservation and Recreation (DCR), DEQ, Department of Mines, Minerals and Energy (DMME) and the U.S. Geological Survey to determine which areas in the Great Valley are appropriate for dye trace studies (e.g. Cochran's Cave area in Augusta County). Dye trace studies will be beneficial to determining the subterranean flow of water entering karst features and notifying potentially impacted stakeholders in the case of a release. Atlantic should add DCR to the list of agencies reviewing and commenting on karst-related issues. See the DCR comments in Attachment B for additional information.

2) Modifications to Existing Recommendations in Section 5.2

SA8-8

a) Recommendation 5: Require Atlantic to provide information on new route realignments or facility relocations, including staging areas, contractor yards, new access roads, and other areas that have not been previously identified in filings to DEQ and other entities responsible for permitting.

SA8-9

b) Recommendation 6(a): Incorporate the recommended mitigation measures in Attachments A and B into the referenced Implementation Plans.

SA8-10

c) Recommendations 8 and 24: Require Atlantic to provide DEQ with updated status reports, plans, and site-specific crossing plans for major waterbody crossings. See the DEQ comments in Attachment B.

SA8-11

d) Recommendation 28: Direct Atlantic to consult with the Virginia Department of Forestry (DOF) regarding recommended mitigation measures and seed mixtures for any forested area that may be adjacent to or near DOF state forest and/or easement properties. See the DOF comments in Attachment B.

SA8-7 Comment noted. Section 4.1.2.3 has been revised to recommend that Atlantic provide the results of a fracture trace/lineament analysis, along with evaluation of existing dye trace study results, prior to construction.

SA8-8 As discussed in section 1.4, Atlantic and DETI would be responsible for obtaining all permits and approvals required to construct and operate ACP and SHP. Further, as would be required in recommended Environmental Condition No. 5, each request for facility project changes would require a statement whether any cultural resources or federally threatened or endangered species would be affected, which would include proof that the necessary state and federal consultations have been completed regarding those resources.

SA8-9 See the response to comment SA8-3.

SA8-10 See the response to comment SA8-3.

SA8-11 See the response to comment SA8-3.

FERC ACP DEIS
DEQ 16-248F
Attachment A
Page 6

Part II: Recommendations for Other Sections of the FEIS, Plans and Procedures

The Commonwealth of Virginia encourages FERC to incorporate the following recommendations into appropriate sections of the FEIS, plans, and procedures. To the extent practicable, the Commonwealth recommends that the U.S. Forest Service also consider these recommendations to the degree that they relate to decisions under its jurisdiction.

1) Route Changes and Variations

SA8-12

a) Conservation Sites

i) Recommendation: Avoid the Cochran's Cave Conservation Site entirely or follow DCR's recommendations in Attachment B for the protection of this very sensitive area.

ii) Recommendation: Avoid the Spruce Creek Tributary Conservation Site and the Emporia Powerline Bog Conservation Site. See the DCR comments in Attachment B.

iii) Recommendation: Avoid all other DCR-designated conservation sites. See DCR comments in Attachment B.

iv) Recommendation: Reroute the pipeline so that it is at least 300 meters from a tiger salamander breeding pond within the Lyndhurst Ponds Conservation Site and follow DCR's recommendations to protect this species. See DCR comments in Attachment B.

b) Gardner Spring

SA8-13

i) Recommendation: Consider the concerns raised by the City of Staunton when evaluating route adjustments in the Gardner Spring recharge area. See the City of Staunton comments in Attachment B.

c) Surface Waters

SA8-14

i) Recommendation: Evaluate recommendations from DEQ on the proposed reroutes and alignment adjustments, including co-location of utilities, that DEQ provided by milepost. See the DEQ comments in Attachment B.

SA8-12 Comments noted. See also the responses to comments SA8-177 and SA8-191.

SA8-13 See the responses to comment letter LA5.

SA8-14 See the responses to comments SA8-124 through SA8-126.

d) Water Supply

SA8-15

i) Recommendation: Consider moving the staging area/construction site away from the sinking portion of Hamilton Branch which may have a direct connection to the municipal water supply for the Town of Deerfield. See the DEQ comments in Attachment B.

e) Wildlife Resources

SA8-16

i) Recommendation: Consider the long-term impacts of forest fragmentation and minimize them to the greatest extent possible by co-locating the pipeline within already-disturbed utility corridors and early successional habitats. See the Department of Game and Inland Fisheries (DGIF) comments in Attachment B.

ii) Recommendation: Modify the pipeline route to avoid impacts upon suitable habitat for timber rattlesnakes, state-listed endangered canebrake rattlesnakes, especially canebrake rattlesnakes in eastern Virginia, and scarlet kingsnakes. See the DGIF comments in Attachment B.

f) Karst Features

SA8-17

i) Recommendation: Avoid impacts to karst features to the maximum extent practicable and monitor resurgent springs in Highland County. See the DCR comments in Attachment B.

2) Recommendations for Preconstruction Planning, Surveys and Studies

a) Wetlands and Surface Waters

SA8-18

i) Recommendation: Include an inventory of the location of private ponds relative to the pipeline and road network. Locate road and pipeline crossings down gradient of private ponds to the maximum extent possible and develop enhanced ESC measures to protect ponds from secondary impacts of construction where route adjustments are not possible. See the DEQ comments in Attachment B.

SA8-19

ii) Recommendation: Provide details regarding the material to be used and installation methods for all temporary culverts and temporary fill in waterbodies and wetlands for permanent and temporary access roads, including methods proposed to stabilize fill material. Include a detailed analysis of all alternatives relative to the use of culverts and temporary fill,

SA8-15 Comment noted. We do not believe the contractor yard would affect Hamilton Branch. See also the response to comment SA8-145.

SA8-16 See section 4.5.6 for an updated discussion of interior forest fragmentation. See also the responses to comments SA8-213 and SA8-207.

SA8-17 Comment noted. See also the response to related comment SA8-171 in attachment B of your letter.

SA8-18 See the response to related comment SA8-111 in attachment B of your letter.

SA8-19 Comment noted. See also the response to related comment SA8-114 in attachment B of your letter.

SA8-19 (cont'd) such as relocations and bridges, to reduce both permanent and temporary waterbody impacts. Discuss and identify the location of fill sources, as obtaining fill may cause additional impacts. See the DEQ comments in Attachment B.

SA8-20 **iii) Recommendation:** Consider HDD, if practicable, at crossings of sensitive waters since the method would not result in impacts to streams and is considered an avoidance measure. See the DEQ comments in Attachment B.

SA8-21 **iv) Recommendation:** Consider DEQ recommendations to protect surface water resources, including increasing the number of temporary access roads where possible and using a more robust method of determining stream type. See the DEQ comments in Attachment B.

SA8-22 **v) Recommendation:** Conduct pre- and post-construction monitoring of benthic assemblages, relative bed stability, and riparian forest cover for segments of the pipeline that cross applicable total maximum daily load (TMDL) watersheds, Class V and VI waters, threatened and endangered species waters, and benthic impairments. See the DEQ comments in Attachment B for location-specific details and additional recommendations for TMDL watersheds, benthic impairments, Class V Stocked Trout Streams, Class VI Wild Trout Streams, Threatened and Endangered Species Waters, and other impairments.

SA8-23 **vi) Recommendation:** Clarify that all stream crossings, including those associated with cathodic protection systems, will adhere to established Wetland and Waterbody Construction and Mitigation Procedures. See the DEQ comments in Attachment B.

SA8-24 **vii) Recommendation:** Provide additional information on how the 10-foot-wide corridor centered over the pipeline within wetlands would be maintained in a herbaceous state due to the potential for impacts to DCR powerline bog conservation sites. Follow DCR's recommendations for maintaining the corridor and manage pipeline and transmission right-of-ways as one unit within the Handsom-Gum Powerline, Emporia Powerline Bog and Branchville Powerline Conservation Sites. See the DCR comments in Attachment B.

b) Soil and Slope Stabilization

SA8-25 **i) Recommendation:** Consider DGIF's comments and follow its recommendations to protect sensitive biological and hydrogeological features as provided to Atlantic in a February 7, 2017 letter, which is attached to the

SA8-20 Comment noted. See also the response to related comment SA8-112 in attachment B of your letter.

SA8-21 Comment noted. See also the response to related comment SA8-113 in attachment B of your letter.

SA8-22 See the response to comment SA8-3. See also the response to related comment SA8-120 in attachment B of your letter.

SA8-23 See the response to related comment SA8-133 in attachment B of your letter.

SA8-24 See the response to comment SA8-3. See also the response to related comment SA8-181 in attachment B of your letter.

SA8-25 See the response to comment SA8-3. See also the response to related comment SA8-218 in attachment B of your letter.

DGIF comments in Attachment B.

c) Karst Resources

SA8-26

i) Recommendation: Follow DCR's recommendations to address the impacts if a failure occurs and there is a discharge to karst waters, potentially resulting in impacts to subsurface habitat, drinking water, and surface streams fed by karst springs. See the DCR comments in Attachment B.

SA8-27

ii) Recommendation: Consider that effects to wells and springs could potentially extend outside of the current 500-foot karst investigation buffer since blasting has the potential to include permanent alteration of groundwater flow patterns and yields of wells and springs. See the DEQ comments in Attachment B.

SA8-28

iii) Recommendation: Ensure the protection of karst structures, the wildlife species they support, and the waters they contain. See the DGIF comments in Attachment B.

d) Wildlife Resources

SA8-29

i) Recommendation: Update preconstruction requirements to include a recommendation for a mussel survey regarding the proposed location for crossing the Cowpasture River, which has been designated a Threatened and Endangered Species Water due to the presence of federally listed endangered James spinymussels. See the DGIF comments in Attachment B. The DGIF comments include the following recommendations:

- Perform a mussel survey and relocation from 100 meters upstream through 400 meters downstream of impact areas in the Cowpasture River. This survey should be performed by a qualified, permitted biologist, preferably no more than six months prior to the start of construction.
- Ensure that all survey and relocation activities adhere to draft guidance for freshwater mussels in Virginia (attached to DGIF's detailed comments in Attachment B).
- Coordinate any relocations with DGIF.
- Coordinate with the U.S. Fish and Wildlife Service (FWS) prior to relocating federally listed species.
- Submit survey results to DGIF. Upon review of the results, DGIF will make final recommendations regarding the protection of listed species known from the area.

SA8-26 See the response to related comment SA8-174 in attachment B of your letter.

SA8-27 See the response to related comment SA8-144 in attachment B of your letter.

SA8-28 Comment noted. See also the response to related comment SA8-214 in attachment B of your letter.

SA8-29 See the response to related comment SA8-196 in attachment B of your letter.

SA8-29 (cont'd)

- Adhere to a time-of-year restriction of May 15 through July 31 on all instream work.
- See DGIF comments in Attachment B for an alternative photographic habitat assessment.

SA8-30

ii) Recommendation: Assess all newly proposed areas of disturbance for their suitability to support any of the listed species known from the area per DGIF's previous comments to FERC and Atlantic, and report the results to DGIF. See the DGIF comments in Attachment B.

SA8-31

iii) Recommendation: Adhere to DGIF's recommendations regarding instream work best management practices (BMPs) and ways to minimize the impacts of linear utility development on wildlife and their habitats as described in the agency's February 7, 2017 letter to Atlantic. See the DGIF comments in Attachment B for a copy of the letter.

SA8-32

iv) Recommendation: Adhere to all of DGIF's time-of-year restrictions that are detailed in the DGIF comments and attachments in Attachment B.

SA8-33

v) Recommendation: Incorporate the following recommendations to protect wildlife resources (see the DGIF comments in Attachment B for additional information):

- Coordinate with the National Oceanic and Atmospheric Administration Fisheries Service regarding the protection of Atlantic sturgeon and consider additional time-of-year restrictions.
- Follow DGIF's guidance on the Roanoke logperch and provide clarifications as requested by DGIF:
  - Follow an instream work time-of-year restriction from March 15 through June 30 of any year in the Nottoway River drainage and at the site of any instream work within 1-mile upstream of these waters.
  - Provide results of the on-site assessment performed in 2016 at UNT Nottoway River 1 Access Road and UNT Nottoway 2.
  - Adhere to the remainder of DGIF's recommendations regarding the Roanoke logperch in its attached comments.
  - Adhere to the Fish Relocation Plan developed cooperatively between FWS, DGIF, and Atlantic.
- Adhere to typical instream work BMPs, including adherence to erosion and sediment controls and the Fish Relocation Plan, to protect the Orangefin madtom.
- Coordinate with DGIF, FWS, and DCR regarding survey and protective recommendations for the Madison Cave isopod.

SA8-30 Section 4.7.1 includes our recommendation that Atlantic complete all outstanding biological surveys prior to beginning construction. Table 4.7.1-1 provides a summary of survey completion for each species.

SA8-31 Comment noted. See also the response to related comment SA8-217 in attachment B of your letter.

SA8-32 See the responses to related comments SA8-196 through SA8-211 in attachment B of your letter.

SA8-33 See the response to related comment SA8-197 through SA8-200 in attachment B of your letter.

SA8-34

- Follow DGIF's recommendations to protect freshwater mussels:
  - Follow DGIF's recommendations made in the February 7, 2017 letter to Atlantic regarding Threatened and Endangered Species Waters as well as associated freshwater mussels.
  - Adhere to recommendations for assessments and surveys related to the presence of mussels at the crossing of the Cowpasture River, James River, Appomattox River, Nottoway River, Sturgeon Creek, Meherrin River and their perennial tributaries.
  - Continue to coordinate with DGIF and FWS regarding the survey of the Jackson River for freshwater mussels.
  - Adhere to previously recommended time-of-year restrictions for instream work to protect mussels known from designated Threatened and Endangered Species Waters and instream work at sites within 1 mile upstream, whether or not listed mussels were found during surveys. Update Appendix K1 to reflect the commitment from Atlantic to adhere to this time-of-year restriction.
  - Coordinate with DGIF and FWS to determine if additional surveys need to occur prior to construction since negative surveys are only valid for two years.
- Follow DGIF's recommendations to protect listed salamanders:
  - Evaluate wetlands proposed to be impacted by pipeline construction, operation, maintenance, and within the documented range of listed salamanders for habitat suitability. Protect wetlands with suitable habitat and an upland buffer of 300 meters around the wetland or pond from project impacts.
  - Assess any wetlands located in Augusta or Nelson counties for suitable eastern tiger salamander habitat that are newly proposed for impacts or were not accessible during 2016, and survey any suitable wetlands following previously provided protocols. Survey wetlands in 2017 that were determined to provide suitable habitat in 2016 but that were not occupied.
  - Conduct additional habitat surveys to confirm lack of presence of ambystomid salamander in wetlands and ponds.
  - Assess any wetlands located in the City of Suffolk for suitable Mabee's salamander habitat that are newly proposed for impacts or were not accessible during 2016, and survey any suitable wetlands following previously provided protocols.
- Follow DGIF's recommendations to protect listed bats:
  - Consider DGIF's comments and follow its recommendations related to acoustic and mist-net surveys of federally- and state-listed bats as conveyed in DGIF's February 7, 2017 letter to Atlantic.

SA8-34 See the responses to related comments SA8-201 through SA8-209 in attachment B of your letter.

SA8-34 (cont'd)

- Avoid impacts upon all previously-known and newly documented hibernacula, roost sites, and roost trees, and adhere to federal guidelines for their protection.
- Coordinate with DGIF regarding any unavoidable impacts located within half a mile of such resources for state-listed bats only.
- Asses any new lands and habitats now within the project scope following previously used protocols.
- Adhere to DGIF's Best Management Practices for Conservation of Little Brown Bats and Tri-colored Bats, and coordinate with DGIF and FWS on potential impacts.

- Follow DGIF's recommendations to protect listed small mammals:
  - Consider comments and follow recommendations on completed habitat assessments and small mammal surveys provided in DGIF's February 7, 2017 letter to Atlantic.
  - Avoid impacts upon areas that have been identified from previous assessments and surveys as suitable habitat for listed small mammals.
  - Continue to coordinate with DGIF regarding small mammals as surveys and assessments continue in 2017, on lands not accessible during 2016, and on lands that are newly within the project scope.
- Follow DGIF's recommendations to protect listed birds:
  - Protect state-listed threatened loggerhead shrikes and adhere to time-of-year restrictions from April 1 through July 31 of any year for ground clearing and tree removal in Highland, Bath, or Augusta counties and within the Rockfish Valley Region of Nelson County.
  - Consider and follow recommendations on surveys for loggerhead shrikes provided in DGIF's February 7, 2017 letter to Atlantic.
  - Update the DEIS to include information about loggerhead shrikes, DGIF's recommendations regarding their protection, survey results, and Atlantic's commitment to adhere to time-of-year restrictions.
  - Assess habitat for state-listed threatened peregrine falcons along the pipeline route for nests or nesting habitat during already planned aerial surveys.
  - Coordinate with DGIF if significant bridge or near-bridge disturbance in eastern Virginia becomes part of the project to protect nesting peregrine falcons on such structures.
  - Continue to coordinate with FWS regarding red-cockaded woodpeckers.
- Follow DGIF's recommendations to protect Bald and Golden eagles:
  - Continue coordination with FWS regarding potential impacts upon bald and golden eagles under the Bald and Golden Eagle Protection Act and adhere to Virginia's Bald eagle management guidelines.

SA8-34 (cont'd)

- Follow DGIF's recommendations to protect listed snakes and other snakes:
  - Implement long-term vegetation management along the pipeline corridor in areas known to support canebrake rattlesnakes that is consistent with conservation measures for the species.
  - Adhere to the Protected Snake Conservation Plan.
- Follow DGIF's recommendations to protect trout streams:
  - Adhere to a time-of-year restriction from October 1 through March 31 of any year in waters known to support brook trout and/or brown trout for waters identified in DGIF's February 7, 2017 letter.
  - Adhere to a time-of-year restriction from March 15 through May 15 of any year in waters known to support rainbow trout for waters identified in DGIF's February 7, 2017 letter.
  - Confirm that Atlantic will adhere to the DGIF time-of-year restrictions and update Appendix K1 to reflect this commitment.
  - Adhere to DGIF recommendations to ensure avoidance or minimization of conflicts with the stocking and angling activities in the stocked streams identified in DGIF's February 7, 2017 letter.
- Follow DGIF's recommendations to protect anadromous fish use areas:
  - Adhere to a time-of-year restriction from February 15 through June 30 of any year for instream work to protect fish migration and spawning in designated Confirmed and Potential Anadromous Fish Use Areas and their tributaries or instream work within 1 mile upstream of these areas as listed in DGIF's February 7, 2017 letter.
  - Clarify Atlantic's commitment to adhere to time-of-year restrictions to protect anadromous fish use areas due to conflicting information in the DEIS and Appendix K1.

e) Contaminated Soil, Sediment and Groundwater

SA8-35

i) Recommendation: Ensure that the Environmental Inspectors (EIs) complete more specific training, use proper field equipment for contamination analyses, and contact the appropriate regulating agency. Update the Contaminated Media Plan with this recommendation. See the DEQ comments in Attachment B.

f) Recreational and Scenic Resources

SA8-36

i) Recommendation: Include coordination with the DCR Division of Planning and Recreational Resources on mitigation of impacts to the Great Eastern Trail, Appalachian National Scenic Trail, James River Heritage Trail, East Coast Greenway and the Beaches to Bluegrass trails. See the DCR

SA8-35 Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the appropriate Commonwealth of Virginia agency. The Commonwealth of Virginia would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond that proposed. Nonetheless, the final EIS has been updated to recommend that Atlantic and DETI consult with the VDEQ regarding the Contaminated Media Plan prior to construction. See also the response to related comment SA8-154 in attachment B of your letter.

SA8-36 See the responses to related comments SA8-166 and SA8-167 in attachment B of your letter. Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the VDCR. The VDCR would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

SA8-36 (cont'd) comments in Attachment B for additional information.

ii) Recommendation: Coordinate with local governments to explore the possibility of creating water access sites at water crossings that correspond with established water trails, and use native plants species to restore areas along the proposed route. See DCR comments in Attachment B.

g) Water Withdrawals

SA8-37 **i) Recommendation:** Identify steps that Atlantic and its contractors will take during the hydrostatic testing to meet the requirements to avoid an adverse effect or impairment as stated in Item 1(e) in Part 1 of these comments under recommendations for Section 5.2. See also DEQ comments in Attachment B.

SA8-38 **ii) Recommendation:** Add a requirement that Atlantic or its contractors notify the DEQ Office of Water Supply (OWS) of the locations and dates of withdrawals for hydrostatic testing at least 60 days prior to the proposed withdrawals for guidance on any restrictions due to low flow or drought conditions. See DEQ comments in Attachment B.

SA8-39 **iii) Recommendation:** Withdraw water for hydrostatic testing during periods of higher streamflow (as compared to the proposed August through October timeframe, which is typically the lowest flow period for all stream channels), and provide an assessment of the river flows where withdrawals are proposed that includes a discussion of how the withdrawals will affect flows, particularly during low flow or drought conditions. See DEQ comments in Attachment B.

SA8-40 **iv) Recommendation:** Assess whether water withdrawals may affect downstream water users, particularly during low flow periods, including but not limited to the water users identified in DEQ's comments in Attachment B.

SA8-41 **v) Recommendation:** Include an acknowledgement that if direct withdrawals from groundwater or surface water sources are needed for hydrostatic testing that exceed 10,000 gallons during any single day, Atlantic must comply with the requirements of 9 VAC 25-200 Virginia Water Withdrawal Registration and Reporting and provide a discussion of what steps Atlantic and its contractors will take during the withdrawals to ensure that these requirements are met. See the DEQ comments in Attachment B.

SA8-42 **vi) Recommendation:** Ensure that all intakes are fitted with a 1 millimeter mesh screen, intake velocities do not exceed 0.25 fps, and no more than 25 percent of stream input is withdrawn to protect resident aquatic species from impingement and entrainment. Continue to coordinate with DGIF and FWS

SA8-37 See the response to related comment SA8-142 in attachment B of your letter.

SA8-38 See the response to related comment SA8-142 in attachment B of your letter.

SA8-39 See the response to related comment SA8-142 in attachment B of your letter.

SA8-40 See the response to related comment SA8-142 in attachment B of your letter.

SA8-41 See the response to related comment SA8-142 in attachment B of your letter.

SA8-42 See the response to related comment SA8-212 in attachment B of your letter.

SA8-42 (cont'd) regarding proposed water use during pipeline construction to ensure avoidance or minimization of impacts upon native systems. See the DGIF comments in Attachment B.

SA8-43 **vii) Recommendation:** Avoid introductions of non-native aquatic invasive species during water withdrawals and develop and use an aquatic invasive species management plan. See the DGIF comments in Attachment B.

SA8-44 **viii) Recommendation:** Coordinate with facilities that have existing groundwater withdrawals regarding construction, pipeline-related water withdrawals, and other activities that may affect them. See a map in the DEQ comments in Attachment B.

h) Geologic and Mineral Resources and Mines

SA8-45 **i) Recommendation:** Consider comments and follow recommendations from the DMME regarding analysis on bedrock and surficial geology. See the DMME comments in Attachment B.

SA8-46 **ii) Recommendation:** Update mineral resources to include sand and gravel sites, abandoned non-fuel mineral resource sites, abandoned mine sites, and abandoned fuel mineral resources. See the DMME comments in Attachment B.

SA8-47 **iii) Recommendation:** Evaluate the potential of subsidence of all mineral resource sites, including but not limited to mining pits and shafts. See the DMME comments in Attachment B.

i) Acid-Producing Rock and Soils

SA8-48 **i) Recommendation:** Evaluate the significant potential for encountering acid-producing minerals such as pyrite in the Andersonville Mining District in Buckingham County. See the DMME comments in Attachment B.

j) Pollution Prevention

SA8-49 **i) Recommendation:** Include additional information on reuse, recycling, and pollution prevention as identified below by the DEQ Office of Pollution Prevention (see comments in Attachment B).

- Consider the development of an effective Environmental Management System (EMS). An effective EMS will ensure that Atlantic is committed to complying with environmental regulations, reducing risk, minimizing

SA8-43 See the response to related comment SA8-212 in attachment B of your letter.

SA8-44 See also the responses to comment SA8-3 and related comment SA8-143 in attachment B of your letter.

SA8-45 See the response to related comment SA8-220 in attachment B of your letter.

SA8-46 See the responses to related comments SA8-221 and SA8-222 in attachment B of your letter.

SA8-47 See the response to related comment SA8-223 in attachment B of your letter.

SA8-48 See the response to related comment SA8-224 in attachment B of your letter.

SA8-49 Supply chain management analysis of the applicant's Environmental Management System as it relates to recycling of materials, etc. is outside the scope of this EIS. See also the response to related comment SA8-164 in attachment B of your letter.

SA8-49 (cont'd)

environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program (VEEP). VEEP provides recognition, annual permit fee discounts, and the possibility for alternative compliance methods.

- Consider reuse and recycling opportunities when evaluating waste handling, including asphalt recycling, mulching of brush and timber, and water reuse opportunities.
- Consider the contractors' commitment to the environment when choosing contractors. Specifications regarding raw materials and construction practices should be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for construction and design, including the use of native species and pollinators when re-establishing vegetation.
- Integrate pollution prevention techniques into maintenance and operation.
- Encourage supply chain partners to implement pollution prevention, sustainability, and environmental management systems.
- Coordinate with the DEQ Office of Pollution Prevention for additional information and technical assistance relating to pollution prevention techniques and EMS.

k) Aviation

SA8-50

i) Recommendation: Coordinate with any private airfield land owner that may be impacted by the proposed project route. See the Virginia Department of Aviation (DOAV) comments in Attachment B for additional information.

l) Water Supplies and Drinking Water Sources

SA8-51

i) Recommendation: Follow recommendations from the Virginia Department of Health (VDH) to protect drinking water sources (groundwater wells, springs, and surface water intakes), conduct a survey of onsite sewage systems and private wells in relation to the pipeline route to determine potential impacts, and coordinate with the VDH Office of Environmental Health Services. See the VDH comments in Attachment B.

ii) Recommendation: Follow DEQ's recommendations for the water well and spring testing program that include but are not limited to notification of DEQ when a groundwater impact has been reported or suspected and submittal to DEQ of a final georeferenced compilation of well and spring sampling results.

SA8-50 Comment noted. See the responses to comment SA8-3 and related comment SA8-228 in attachment B of your letter.

SA8-51 Comment noted. See the responses to comment SA8-3, comment letter LA5, and related comments SA8-239 and SA8-140 in attachment B of your letter.

SA8-51 (cont'd) See the DEQ comments in Attachment B for additional recommendations.

iii) Recommendation: Conduct a detailed analysis of potential impacts to Gardner Spring and its recharge area, develop a mitigation plan, and report on the findings. Consider comments from the City of Staunton in Attachment B when developing the mitigation plan.

iv) Recommendation: Consider DEQ's recommendations in Attachment B as they relate to the use of water supply wells as a depth to water reference in the coastal plain.

m) Shapefiles

SA8-52

i) Recommendation: Provide shapefiles to the DCR Division of Natural Heritage and DGIF as changes occur to the project footprint, including but not limited to, the right-of-way, access roads, and associated infrastructure (including proposed cellular towers). See DCR and DGIF comments in Attachment B.

ii) Recommendation: Submit a shapefile of the Wavyleaf grass location and additional details regarding the population. See DCR comments in Attachment B.

n) Waste Database Search

SA8-53

i) Recommendation: Evaluate the identified waste sites in the DEQ comments in Attachment B that may impact project activity.

o) Plant and Wildlife Surveys and Special Status and State-Sensitive Resources

SA8-54

i) Recommendation: Coordinate with DCR regarding state-sensitive species and submit survey results to DCR for review. See the DCR comments in Attachment B.

SA8-55

ii) Recommendation: Avoid and reduce impacts to rare, threatened and endangered species from water withdrawals and discharge locations through identification of alternatives and implementation of conservation measures. See the DCR comments in Attachment B.

SA8-56

iii) Recommendation: Complete all required and recommended plant and wildlife surveys and biological assessments prior to construction and provide

SA8-52 The most recent and reliable GIS data of the project are available from Atlantic, not FERC.

SA8-53 See the response to related comment SA8-151 in attachment B of your letter.

SA8-54 See the response to related comment SA8-179 in attachment B of your letter.

SA8-55 Section 4.7.1 includes our recommendations for Atlantic and DETI to analyze alternatives and conservation measures for withdrawals from and discharges into ESA sensitive waterbodies. See also the response to related comment SA8-184 in attachment B of your letter.

SA8-56 Section 4.7.1 includes our recommendation that Atlantic complete all outstanding biological surveys and that FERC complete any necessary section 7 consultation with the FWS prior to Atlantic beginning construction.

SA8-56 (cont'd) DCR with copies of all surveys that DCR requested in Attachment B.

SA8-57 **iv) Recommendation:** Reduce the temporary construction right-of-way to 75 feet and the permanent right-of-way to 50 feet in known maternity or roost sites as indicated in the Virginia Bat Survey. See DCR comments in Attachment B.

SA8-58 **v) Recommendation:** Follow DCR's recommendations regarding Table S-2 of the Virginia List and Species of Greatest Conservation Need with Potential to Occur in the Atlantic Coast Pipeline Project area and respond to requests for additional clarification. See the DCR comments in Attachment B.

SA8-59 **vi) Recommendation:** Consider DCR's suggestions regarding the classification of vegetation communities in Appendix Q. See the DCR comments in Attachment B.

SA8-60 **vii) Recommendation:** Incorporate edits to wildlife survey reports and conduct new surveys as suggested by DCR in its comments in Attachment B.

p) Transportation System

SA8-61 **i) Recommendation:** Document the existing conditions of affected roadways, pavement conditions, and drainage structures in Virginia and provide the documentation to the Virginia Department of Transportation (VDOT). See VDOT comments in Attachment B.

3) Mitigation Measures for Construction and Maintenance Activities

a) Wetlands and Surface Waters

SA8-62 **i) Recommendation:** Include temporary wetland impact soil handling requirements as detailed in the DEQ comments in Attachment B. During trench excavation in all wetlands, both saturated or unsaturated, segregate the upper 12 inches of the soil profile as "wetland topsoil" from the underlying subsoil, store the wetland topsoil in a soil stockpile separate from other soil materials, and upon closing the trench, use the wetland topsoil to fill the upper 12-inches of the trench to reconstruct the wetland soil profile. Restore temporarily disturbed wetland areas to pre-existing conditions within 30 days of completing work at each respective temporary impact area, including reestablishing preconstruction elevations and contours with topsoil from the impact area and planting or seeding with appropriate wetland vegetation according to pre-disturbance cover type until the disturbed sites are permanently stabilized.

SA8-57 Atlantic and DETI would only maintain a 50-foot-wide permanent right-of-way along both ACP and SHP. No tree clearing would be conducted within 150 feet of active maternity roost trees at any time, if maternity roosts are identified in 2017 surveys. See also the response to related comment SA8-191 in attachment B of your letter.

SA8-58 See the response to related comment SA8-194 in attachment B of your letter.

SA8-59 See the response to related comment SA8-195 in attachment B of your letter.

SA8-60 Sections 4.6 and 4.7 have been updated to include this information. See also the response to related comment SA8-191 in attachment B of your letter.

SA8-61 See the responses to comment SA4-1 and related comment SA8-244 in attachment B of your letter.

SA8-62 Recommendation noted. See also the response to related comment SA8-110 in attachment B of your letter.

SA8-63 ii) **Recommendation:** Apply precautions identified in Chapter 9 of the Draft Construction, Operations and Maintenance Plan to protect sediment TMDL watersheds, public water supply waters, Class V and VI waters, sensitive fisheries, Threatened and Endangered Species Waters, critical habitat, and waters with benthic impairments both on and off U.S. Forest Service lands. See specific proposed precautions listed in the DEQ comments in Attachment B.

SA8-64 iii) **Recommendation:** Include final wetland mitigation plans for all proposed temporary and permanent tidal wetland impacts in the final EIS for consideration by the Virginia Marine Resources Commission (VMRC). See the VMRC comments in Attachment B.

SA8-65 iv) **Recommendation:** Implement measures identified in the Invasive Plant Species Management Plan to minimize the potential introduction of the invasive comment reed, *Phragmites australis*, for all wetland crossing sites except for site wChr002. See the VMRC comments in Attachment B.

b) Hydrostatic Testing

SA8-66 i) **Recommendation:** Implement BMPs to ensure that hydrostatic tests do not impact natural heritage resources. See DCR comments in Attachment B.

c) Stream Crossings

SA8-67 i) **Recommendation:** Incorporate the following VMRC recommendations, which are standard instream permit conditions, for jurisdictional stream crossings as set forth in the VMRC comments in Attachment B:

- A "frac-out" contingency plan must be provided for any crossings utilizing the directional drill method to address potential frac-outs or related spills associated with any directional drilling activities. In an effort to minimize adverse impacts to threatened and endangered fish and mussel species, instream surveys and species relocations may be required.
- No instream construction shall be conducted during any recommended time-of-year restrictions of any year unless waived by DGIF in writing.
- The instream construction activities shall be accomplished during low flow periods utilizing dam and pump, flume around, or within cofferdams constructed of nonerodible materials in such a manner that no more than half the width of the waterway is obstructed at any point in time. All areas of state-owned bottom and adjacent lands disturbed by this activity shall

SA8-63 Comment noted. See also the response to related comment SA8-135 in attachment B of your letter.

SA8-64 Comment noted. See also the response to related comment SA8-250 in attachment B of your letter.

SA8-65 Comment noted. See also the response to related comment SA8-250 in attachment B of your letter.

SA8-66 See the response to related comment SA8-184 in attachment B of your letter.

SA8-67 See the response to related comment SA8-248 in attachment B of your letter.

SA8-67 (cont'd)

be restored to their original contours and natural conditions within thirty (30) days from the date of completion of the authorized work. All excess materials shall be removed to an upland site and contained in such a manner to prevent its reentry into state waters.

- Erosion and sediment control measures shall be in conformance with the 1992 Third Edition of the *Virginia Erosion and Sediment Control Handbook* and shall be employed throughout construction.
- If it is determined that blasting is necessary at any of the crossings, DGIF shall be notified a minimum of 48 hours in advance of the blasting.
- DCR shall be contacted for any stream crossings where karst landscape features are encountered during installation.
- DGIF shall be contacted for any work in trout waters to avoid conflicts with trout stocking activities.

SA8-68

ii) Recommendation: Include a table citing DGIF's recommendations at each VMRC non-tidal jurisdictional stream crossing and a statement from Atlantic that the applicant intends to follow the recommendations. See the VMRC comments in Attachment B.

SA8-69

iii) Recommendation: Follow recommendations from DEQ provided in Attachment B for specific milepost crossings of the Jackson River, Calfpasture River, South River, James River, Appomattox River, Flat Creek, Nottoway River and tributaries, Meherrin River, Blackwater River, Western Branch Nansemond River, Nansemond River and Southern Branch Elizabeth River.

SA8-70

iv) Recommendation: Take all efforts to minimally contact the benthos (railcar flatbeds, bottomless culverts, etc.), place spoil a minimum of 10 feet away from the water's edge or in areas with sediment barriers, and locate additional temporary workspace at least 100 feet away from the water's edge in sediment TMDL watersheds, public water supply waters, Class V and VI waters, sensitive fisheries, threatened and endangered species waters, critical habitat, and waters with benthic impairments. See the DEQ comments in Attachment B for additional details.

SA8-71

v) Recommendation: Nighttime work on stream crossings should be minimized so that proper inspection, spills, and water quality issues can be resolved promptly. See the DEQ comments in Attachment B.

SA8-68 See the response to related comment SA8-247 in attachment B of your letter.

SA8-69 Comments noted. See the responses to comment SA8-3, and related comment SA8-118 in attachment B of your letter.

SA8-70 See the responses to comment SA8-3, and related comments SA8-128, SA8-129, and SA8-134 in attachment B of your letter.

SA8-71 Comment noted. See also the response to related comment SA8-130 in attachment B of your letter.

d) Forest Resources

SA8-72

i) Recommendation: Incorporate the following recommendations to mitigate the impacts of forest fragmentation on biodiversity provided in the DOF comments in Attachment B:

- Keep right-of-way clearing to the minimum width necessary to prevent interference from trees and other vegetation.
- Establish herbaceous species and shrubs or some low-growing trees that are considered desirable ground cover and valuable wildlife habitat along the right-of-way in the project's vegetation management and revegetation plan.
- Maintain a scrub habitat, dominated by low growing, bushy vegetation and young trees, which is preferable to mowing in forest habitats. It can provide quality habitat for wildlife species that are dependent on early successional habitat (birds, reptiles, and amphibians).

SA8-73

ii) Recommendation: Incorporate the following best management activities to protect forest resources provided in the DOF comments in Attachment B:

- Restore contours to pre-construction conditions and control erosion until re-vegetation stabilizes the disturbed areas.
- Restore vegetation to native species and protect the natural functions of the pre-construction ecosystem.
- Use machinery where feasible that when combined (example: earth mover and cart) weigh less than 10 tons per axle. Research has shown that this will help alleviate compaction to the top 6-8 inches of soil where it can be more easily addressed. Combination vehicles weighing more than 10 tons can create compaction as deep as 3 feet which is very difficult to mitigate.
- Minimize traffic lanes for transporting cleared timber from the site.
- Follow Forestry BMPs for water quality as outlined by DOF's Voluntary BMP Guidelines publication for all harvesting operations.
- Stock pile soil away from trees that are to remain standing. Piling soil at a tree stem can kill the root system of the tree. Soil stockpiles should be covered, as well, to prevent soil erosion and fugitive dust.
- Retain existing groupings and/or clusters of trees and natural vegetation on the sites of the support facilities, where feasible, to provide aesthetic and environmental benefits, as well as reducing future open space maintenance costs.

SA8-72 See the response to related comment SA8-236 in attachment B of your letter.

SA8-73 See the response to related comment SA8-234 in attachment B of your letter.

e) Wildlife Resources

SA8-74

i) Recommendation: Adhere to all of DGIF's time-of-year restrictions that are detailed in the DGIF comments and attachments in Attachment B.

f) Government-Funded Best Management Practices

SA8-75

i) Recommendation: Ensure that any impacted BMPs along the route (see map and the DCR comments in Attachment B) are reinstalled or relocated, and reestablish ground cover vegetation. Examples include livestock fences and stream crossings re-erected, watering systems relocated, cover crops reimbursed to the farmers, and disturbed areas re-vegetated.

SA8-76

ii) Recommendation: For segments of the ACP that cross TMDL Implementation Planning (IP) watersheds, where implementation has already occurred, incorporate a requirement that ACP, LLC replace BMPs such as livestock exclusion and riparian buffers if they need to be destroyed or allocate funds to replace the BMPs nearby (see the DEQ comments in Attachment B for details). This recommendation includes, but may not be limited to, the following IP watersheds:

- One watershed of the Chowan River Watershed (Beaver Pond Creek watershed) IP
- Three watersheds of the Flat, Nibbs, Deep, and West Creeks (Flat Creek, West Creek, and Deep Creek) IP
- Three watersheds of the Middle River Watershed (Upper Middle River, Lower Middle River, and Moffett Creek) IP
- Two watersheds of the Rockfish River Watershed (South Fork Rockfish River and Lower Rockfish River) IP
- Three watersheds of the Slate River and Rock Island Creek TMDL (North River, Lower Slate River, Upper Slate River watershed) IP
- Two watersheds of the South River Watershed and Christians Creek (Christians Creek and Lower South River) IP
- One watershed of the Spring Creek, Briery Creek, Bush River, Little Sandy River and Saylers Creek (Saylers Creek) IP
- One watershed of the Tye River, Hat Creek, Rucker Run and Piney River (Rucker Run) IP
- One watershed of the Willis River Watershed (Willis River) IP

SA8-77

iii) Recommendation: Coordinate with the DCR Division of Planning and Recreational Resources and Nottoway County regarding potential impacts to

SA8-74 See the responses to related comments SA8-197 through SA8-209 in attachment B of your letter.

SA8-75 Atlantic would adhere to the FERC's Plan and Procedures, as well as the measures identified in Atlantic's Restoration and Rehabilitation Plan, during and after construction. During construction, erosion control devices would be required to be maintained and would be inspected by EIs and compliance monitors to promote control of sedimentation. Also, Atlantic would be required to restore all disturbed areas following construction unless otherwise requested by the landowner or land-managing agency. See also the response to related comment SA8-168 in attachment B of your letter.

SA8-76 See the responses to comment SA8-3 and related comment SA8-119 in attachment B of your letter.

SA8-77 See the response to related comment SA8-165 in attachment B of your letter.

SA8-77 (cont'd) Nottoway Lake, which was acquired pursuant to the Land and Water Conservation Fund Act. See DCR comments in Attachment B.

SA8-78 **iv) Recommendation:** Continue to coordinate with DGIF to resolve issues related to the crossing of the James River Wildlife Management Area, a public resource that was purchased with federal grant funds from FWS. If the project interferes even temporarily with the use of the land for the purposes established pursuant to the federal grant, DGIF's current and future funding from these grants may be in jeopardy.

g) Open Burning and Fugitive Dust

SA8-79 **i) Recommendation:** Include requirements that open burning will be allowed only in accordance with 9 VAC 20-81-95 of the Virginia Solid Waste Management Regulations (VSWMR), and localities should be consulted since they may have additional open burning restrictions. See the DEQ comments in Attachment B.

SA8-80 **ii) Recommendation:** Include requirements that construction activities are subject to the Air Pollution Control Regulations regarding open burning (9 VAC 5-130 et seq.) and fugitive dust (9 VAC 5-50-60 et seq.) and that the project would be subject to any applicable existing source regulations related to the cities of Suffolk and Chesapeake, which are part of a volatile organic compound (VOC) and nitrogen oxide (NOx) emissions control area. See the DEQ comments in Attachment B.

h) Aviation

SA8-81 **i) Recommendation:** Submit Form 7460-1 to the Federal Aviation Administration for any portion of the project that is proposed to be constructed within 20,000 linear feet of a public-use or military airport to determine if the project constitutes a hazard to air navigation. See the DOAV comments in Attachment B.

i) Water Supplies

SA8-82 **i) Recommendation:** Implement heightened erosion and sediment control practices for segments of the pipeline that cross public water supplies. See the DEQ comments in Attachment B for specific location information.

SA8-83 **ii) Recommendation:** Closely monitor construction activities in Augusta County where the pipeline's route passes karst areas in proximity to several significant springs and municipal water supply wells, including Gardner Spring

SA8-78 Comment noted. See also the response to related comment SA8-210 in attachment B of your letter.

SA8-79 See the response to related comment SA8-152 in attachment B of your letter.

SA8-80 Section 4.11.1 includes our analysis on air quality and states that Atlantic and DETI would comply with all applicable air quality permitting requirements, as well as any open burning and fugitive dust regulations. See also the response to related comment SA8-162 in attachment B of your letter.

SA8-81 The comments related to FAA permitting requirements are noted. See the responses to comments SA8-3 and SA6-1, and related comment SA8-228 in attachment B of your letter.

SA8-82 Comment noted. See also the response to related comment SA8-122 in attachment B of your letter.

SA8-83 Comment noted. See also the response to related comment SA8-146 in attachment B of your letter.

SA8-83 (cont'd) – City of Staunton, Town of Churchville Wells – Augusta County Service Authority, Lyndhurst Augusta County Service Authority. See the DEQ comments in Attachment B. Consider concerns raised by the City of Staunton in its comments within Attachment B when monitoring construction activities in the Gardner Spring recharge area.

j) Polychlorinated Biphenyl (PCB) Contamination

SA8-84 **i) Recommendation:** Ensure that either hydroseeding and mulch tackifiers are not used within 100 feet of a waterbody classified as having a PCB TMDL, or ensure that the tackifier is tested for PCB content prior to application for segments of the pipeline that cross PCB TMDL regions, including Lewis Creek headwaters in the Shenandoah River PCB TMDL area, middle James River near Buckingham, Meherrin River near Emporia, Nansemond River near Suffolk, and the Elizabeth River in Chesapeake. See the DEQ comments in Attachment B.

k) Flood Hazard Area

SA8-85 **i) Recommendation:** Follow DCR's recommendations regarding potential impacts to special flood hazard areas, and coordinate with the locality if the floodplain will be modified. See the DCR comments in Attachment B.

l) Conservation Sites

SA8-86 **i) Recommendation:** Continue coordination with DCR regarding the Handsom-Gum Powerline, Branchville Powerline, and Emporia Powerline Bog Conservation Sites. See the DCR comments in Attachment B.

m) *Transportation System*

SA8-87 **i) Recommendation:** Monitor and report conditions throughout construction and for a period of two years following construction completion and restore roadway features to preconstruction conditions or better. See the VDOT comments in Attachment B.

4) Recommendations for Specific Plans

a) Spill Prevention Controls and Countermeasures (SPCC)

SA8-88 **i) Recommendation:** Update appropriate plans to include the results of dye tracing investigations performed in karst areas in the event that contaminants enter a karst feature, and incorporate DCR's recommendations for monitoring

SA8-84 See the responses to comment SA8-3 and related comment SA8-123 in attachment B of your letter.

SA8-85 See the responses to comment SA8-3 and related comment SA8-168a in attachment B of your letter.

SA8-86 See the response to related comment SA8-177 in attachment B of your letter.

SA8-87 See the response to related comment SA8-244 and SA4-1 in attachment B of your letter. See the response to comment SA4-1.

SA8-88 See the response to related comment SA8-174 in attachment B of your letter.

SA8-88 (cont'd)

high risk springs and other karst features. See the DCR comments in Attachment B.

SA8-89

ii) Recommendation: Update the SPCC with correct information, including replacing existing contact information with the Virginia Department of Emergency Management 24-hour notification number. As stated in DEQ's comments in Attachment B, provide clarifications that include, but are not limited to, the statutory requirement that notifications of an oil spill are to occur immediately upon learning of the discharge.

b) Migratory Bird Conservation Plan

SA8-90

i) Recommendation: Update the Migratory Bird Conservation Plan to include the recommendations from DGIF (as stated in the comments in Attachment B) that include, but are not limited to, the following:

- Adhere to time-of-year restrictions from March 15 through August 31 of any year for tree removal and ground clearing activities to protect nesting migratory birds.
- Provide DGIF a map for review of the great blue heron colony documented from Suffolk (ROOK-ACT-02) and any other colonies located within a quarter mile of the project areas.
- Follow DGIF's recommendations included in its February 7, 2017 letter to Atlantic, which is included in Attachment B.

c) Invasive Plant Species Management Plan

SA8-91

i) Recommendation: Update the Invasive Plant Species Management Plan with the following mitigation recommendations from state agencies (see the DOF comments in Attachment B for additional information):

- Consider the likely response of invasive species or target species when prescribing activities that result in soil disturbance or increased sunlight.
- During construction and follow-on maintenance activities, take steps to guard against construction vehicles inadvertently bringing into forest interiors invasive and/or non-native plant species from other locations. Weed seed and fungal spores can be transported in the mud or dirt on vehicles. Prior to moving equipment onto and off of an activity area, scrape or brush soil and debris from exterior surfaces, to the extent practical, to minimize the movement of invasive plants, pests, and diseases to non-infested areas. Another option is to wash vehicles before they enter a weed-free area or when they leave an infested area. The

SA8-89 See the responses to related comments SA8-104, SA8-159, and SA8-161 in attachment B of your letter.

SA8-90 Comment noted. See also the response to related comment SA8-211 in attachment B of your letter.

SA8-91 See the responses to related comments SA8-235 and SA8-215 in attachment B of your letter.

SA8-91 (cont'd)

emphasis of the cleaning should be in the wheels, wheel wells, bumpers, and undercarriage of the vehicle where most mud and dirt collects.

- If seeding or planting is necessary to minimize the threat of highly damaging invasive species from spreading, use native seed or non-invasive cover plants for revegetation.

ii) Recommendation: Update the Invasive Plant Species Management Plan with the information and recommendations provided to Atlantic in DGIF's February 7, 2017, which is included in Attachment B.

d) Plans for the Management of Waste and Contaminated Soil, Sediment and Groundwater

SA8-92

i) Recommendation: Include a Waste and Debris Management Plan. The plan should address how all excess material and debris will be managed in accordance with all applicable federal, state, and local laws and regulations. See the DEQ comments in Attachment B.

e) Plan for Discovery of Unanticipated Paleontological Resources

SA8-93

i) Recommendation: Update the Plan for Discovery of Unanticipated Paleontological Resources to consider the potential for encountering Tertiary or Quaternary vertebrate and plant fossils in unconsolidated (non-bedrock) deposits west of the Blue Ridge in Virginia. See the DMME comments in Attachment B.

f) Blasting Plan

SA8-94

i) ***Recommendation:*** Update the blasting plan to reflect notification of DGIF prior to blasting. See the DGIF and VMRC comments in Attachment B.

g) Karst Terrain Assessment Construction, Monitoring and Mitigation Plan

SA8-95

i) Recommendation: Update the plan with DCR's recommendations to address the impacts of mitigation if there were to be an accidental discharge to karst waters and continue to coordinate with interested state agencies. See the DCR comments in Attachment B.

h) Karst Survey Report

SA8-96

i) Recommendation: Conduct karst hydrological delineations of the area in the report in order to identify karst waters at risk if a release or discharge were to occur from activities associated with pipeline construction. See the DCR

SA8-92 See the responses to comment SA8-3 and related comment SA8-153 in attachment B of your letter.

SA8-93 Section 4.1.5 has been revised to include a recommendation that Atlantic and DETI file a Plan for Discovery of Unanticipated Paleontological Resources. See also the response to related comment SA8-227 in attachment B of your letter.

SA8-94 See the responses to related comments SA8-248 and SA8-201 in attachment B of your letter.

SA8-95 See the response to related comment SA8-174 in attachment B of your letter.

SA8-96 Comment noted. See also the response to related comment SA8-175 in attachment B of your letter.

SA8-96 (cont'd)

comments in Attachment B.

ii) Recommendation: Provide technical clarification to the report as requested by DCR. See the DCR comments in Attachment B.

i) Traffic and Transportation Management Plan

SA8-97

i) Recommendation: Incorporate recommendations from VDOT on appropriate requirements, entrances and crossings, pipeline installation, plans, permits and coordination. Consider district-specific comments when updating the plan. See the VDOT comments in Attachment B.

j) Wetland and Waterbody Construction and Mitigation Procedures

SA8-98

i) Recommendation: Ensure that the wetland mitigation plan meets DEQ's regulatory requirement of compensation for permanent conversion impacts to wetlands. See the DEQ comments in Attachment B.

ii) Recommendation: Ensure that project-specific procedures specify how the upstream and downstream dams should be removed in both the open cut and dry ditch methods, and address how dam removal will limit sediment introduction to waterways and limit scour when flow is restored. See the DEQ comments in Attachment B.

k) Restoration and Rehabilitation Plan

SA8-99

i) Recommendation: Update the plan to include monitoring of water quality and riparian habitat. See the DEQ comments in Attachment B.

SA8-100

ii) Recommendation: Consider DCR's recommendations regarding seed mixes (general and specific milepost comments), soil compaction, topsoil stockpiles, maintenance methods, and requests for detailed plans for monitoring of restoration success. See the DCR comments in Attachment B.

SA8-101

iii) Recommendation: Incorporate the West Virginia Department of Forestry's recommended mitigation measures into the plan and apply the measures to Virginia. Follow Virginia DOF measures where appropriate. See the DOF comments in Attachment B.

l) Site-Specific Horizontal Directional Drill Plans

SA8-102

i) Recommendation: Follow DEQ's recommendations for the HDD plan and profile at Reeds Gap that include but are not limited to the development of a

SA8-97 See the responses to comment SA4-1 and related comment SA8-245 in attachment B of your letter.

SA8-98 Comment noted. See also the responses to related comments SA8-117 and SA8-127 in attachment B of your letter.

SA8-99 See the responses to comment SA8-3 and related comment SA8-131 in attachment B of your letter.

SA8-100 Comment noted. See also the response to related comment SA8-192 in attachment B of your letter.

SA8-101 See the responses to comment SA8-3 and related comment SA8-229 in attachment B of your letter.

SA8-102 Comment noted. See also the response to related comment SA8-147 in attachment B of your letter.

SA8-102 (cont'd) contingency plan to protect groundwater resources. See the DEQ comments in Attachment B for specific recommendations.

m) Timber Removal Plan

SA8-103 i) ***Recommendation:*** Add a requirement that all slash, chips, and debris be managed in accordance with all applicable federal, state, and local laws and regulations, and consider the DEQ recommendation regarding training. See the DEQ comments in Attachment B.

n) Contaminated Media Plan

SA8-104 i) ***Recommendation:*** Follow DEQ's recommendations for testing of contaminated media and contamination that is found to be a health or safety hazard. See the DEQ comments in Attachment B.

o) Protected Snake Conservation Plan

SA8-105 i) **Recommendation:** Consider DCR's recommendations regarding the Protected Snake Conservation Plan. See the DCR comments in Attachment B.

p) Non-Native Invasive Plant Species Management Plan within the Draft Construction, Operations and Maintenance Plans

SA8-106 i) **Recommendation:** Follow DCR's suggestions on the Non-Native Invasive Plant Species Management Plan. See the DCR comments in Attachment B.

5) Errors and Clarification Needs in the DEIS

SA8-107 **a) Recommendation:** Include in the FEIS corrected information and requested clarifications as identified by DGIF, DCR, DEQ, and DMME in Attachment B.

SA8-103 The final EIS has been updated to reflect the VDEQ's recommended additions to the Timber Removal Plan. See also the response to related comment SA8-152 in attachment B of your letter.

SA8-104 The Contaminated Media Plan states that training of company and contractor personnel would focus on, among other things, applicable permit conditions. Should contaminated media be encountered, Atlantic would notify the appropriate regulatory agency and would not place material back into the area unless authorized to do so in writing.

Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority, the VDCR would have the opportunity to review Atlantic's proposed plans during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

Section 4.8.7 of the final EIS has been updated to recommend that Atlantic and DETI consult with the VDEQ regarding the Contaminated Media Plan prior to construction.

See also the response to related comment SA8-154 in attachment B of your letter.

SA8-105 See the response to related comment SA8-191 in attachment B of your letter.

SA8-106 See the response to related comment SA8-193 in attachment B of your letter.

SA8-107 Comment noted.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

ATTACHMENT B: DETAILED COMMENTS FROM REVIEWERS

Detailed comments submitted by reviewers are included in this attachment. When applicable, the comments were included in previous sections of this response. As stated previously, the Commonwealth recommends that FERC consider every comment, correction, or recommendation detailed in Attachment B that FERC did not already address during the consideration of Attachment A. To the extent practicable, the Commonwealth recommends that the U.S. Forest Service also consider these recommendations to the degree that they relate to decisions under its jurisdiction.

Impacts of the proposed Atlantic Coast Pipeline

on Virginia's Forests and Mitigation Recommendations

February 16, 2017

Loss of interior forests is specifically addressed in Section 4.5.6 Habitat Fragmentation and Edge Effects, where significant adverse impacts are acknowledged to forested cores in excess of 35 acres in size. The Draft Environmental Impact Statement (DEIS) focuses on the specific potential impacts of fragmentation due to edge effects and references actions that may be carried out to minimize or reduce those edge effects; collocating with existing forest-fragmenting corridors, restrictive timing of disturbances to decrease impact to habitats and planting shrubs along the new forest edge in an attempt to soften/decrease the degree of edge disturbance. While these activities may reduce some local edge effects, they are not presented as mitigation for landscape level fragmentation effects due to loss of interior forest conditions in existing forest cores. Repeated fragmentation of the landscape results in progressively small cores with concomitant diminished values and functions. The FERC recommends the development of a fragmentation analysis for the entirety of the Atlantic Coast Pipeline (ACP) project, pointing to the use of the Virginia Department of Conservation and Recreation's (DCR) Virginia Natural Landscape (VaNLA) for the Virginia portion of the ACP project. See DEIS at page 4-165, a. ii. The Commonwealth's natural resource agencies, including DCR, the Department of Forestry (DOF), and the Department of Game and Inland Fisheries (DGIF), concur with this recommendation, and produced the following analysis of direct and indirect impacts to upland forests as well as *initial* long-term and landscape-level mitigation recommendations to address those impacts to interior forests in the ACP project area.

Background and Need

To the extent that direct and indirect impacts to upland forests from the ACP cannot be avoided, they should be mitigated. Forests are ecologically and economically beneficial to the Commonwealth, and approximately 16,000 acres per year have been lost in the period between 2000 and 2010. This represents an area about equal in size to the city of Charlottesville, Virginia. The current alternative for the Virginia segment of the ACP (Rev 11a, as of December

2016) intersects some of the largest blocks of unfragmented forest in Virginia. This analysis of fragmentation impacts was conducted just prior to the release of Rev 11a, and thus uses Rev10a.

Conserving forest cover and improving forest productivity is critical for maintaining functioning forest ecosystems and the Commonwealth's robust forest industry. Virginia's forests provide a range of important benefits including forest products, recreational opportunities, wildlife habitat, aesthetic values, and protections for air and water quality. Forests contribute the lowest nutrient and sediment loadings to Virginia's waterways of any type of land cover. In addition, forests are the best land cover for intercepting precipitation required for the recharge of groundwater aquifers. Forests also sequester carbon dioxide and produce oxygen. Large scale forest conversion activities, such as those imposed by a pipeline and associated infrastructure, reduce the area and ability of forests to provide these services, via loss of forests in the project footprint and fragmentation of intact forest expanses. For the purposes of this document and the analysis described herein, the project footprint is defined as the limit of direct disturbance during pipeline construction.

Fragmentation

Unfragmented, large patches of forest contribute greater ecological benefits than the same total area of forest distributed among smaller patches. Larger forested patches exhibit increased resource availability to support a greater richness (i.e. number) of plant and animal species populations and of greater genetic diversity than those in smaller patches. In general, biodiversity approximately doubles with every tenfold increase in habitat area. Species populations and natural communities in larger forested cores are more resilient to various landscape-level disturbances (Didham 2010). When forest cover is fragmented, biodiversity and habitat value for forest interior species diminishes. Large patches also insulate species from "edge effects" that adversely affect their ability to survive and reproduce. For example, forest-dwelling migratory songbird populations in large forest blocks experience less brood parasitism, nest-cavity competition, and nest predation than those in fragmented forests with more edge habitat. Fragmentation also impacts the forest's ability to prevent erosion, retain soil, harbor pollinators that are important for agricultural lands, remove carbon from the air and store it

within trees, slow and absorb runoff so groundwater is recharged, absorb solar energy keeping local areas cooler, and provide protection from storm and flood damage. For these reasons, the Commonwealth's natural resource agencies have looked beyond the currently forested areas of the ACP project footprint (i.e. direct forest losses) to measure the indirect impacts of forest fragmentation so that mitigation can also address significant indirect losses and thus the full ACP forest impact.

Identifying Direct and Indirect Impacts

Direct impacts are defined as "those impacts caused by the proposed action that occur at the same time and place" and indirect impacts are "caused or induced by the action but occur later in time or are removed in distance" (DEQ, 2013). Therefore, this analysis assesses not only the footprint of the pipeline route that would be converted from forest to non-forest (direct impact), but also the extent to which the functions and values of the remaining forest are diminished due to fragmentation (indirect impact). Within the forest context:

- *Direct impacts* consist of loss of forest cover within the project footprint, and the associated losses of forest-dwelling species habitat; ecosystem services pertaining to filtration and recharge of groundwater and clean air; economic losses of forest products; and loss of forest area for recreational uses. In our approach, direct impact forest loss was quantified and addressed anywhere that the proposed route intersected a forest patch with more than 10 acres of interior (defined below).
- *Indirect impacts* include significant alteration of the conditions in the forest surrounding the directly impacted area and the separation of previously unified patches of habitat. In our approach, indirect impacts were only assessed where the project footprint would traverse patches of forest habitat containing at least 100 acres of intact, interior forest. Interior is defined as the area of a forest patch minus the 100-meter transition zone around its perimeter within which edge effects diminish forest values. This 100-acre interior forest area criterion is also the basis for the designation of a forest core in the VaNLA, which we used to

quantify impacts to forests (discussed later). Indirect impacts were not assessed in the smaller non-core forest blocks because these areas were assumed to be already fragmented. Accounting for indirect impacts is also the practice of the USFWS when accounting for impacts of pipeline projects on migratory bird habitat to account for fragmentation impacts on the surrounding forest (Gosse 2016).

Failing to account for indirect impacts of the ACP to forests would gravely underestimate the extent to which the project would affect Virginia's forest habitat. Long linear disturbances (e.g. pipelines) have the potential to ribbon through the forested landscape creating extensive and degrading edge effects in what was previously interior forest habitat. The U.S. Environmental Protection Agency's Office of Sustainable Communities released a report, "Our Built and Natural Environments: A Technical Review of the Interactions Among Land Use, Transportation and Environmental Quality"[1] (USEPA 2013), noting that impacts caused by fragmentation extend far into the interior of the remaining forest. The report cites a study of the fragmenting impact of a Massachusetts suburban highway that found that while the road-effect zone tends to be asymmetric and variable, in general it extended more than 328 feet (100 meters) and some effects occurred more than 0.62 miles (1 kilometer) from the road.

Indirect impacts significantly degrade forest ecosystems, as is evidenced in a very large body of peer reviewed research. Haddad et al (2015), synthesized fragmentation experiments spanning multiple habitats and scales, five continents, and 35 years, concluding that habitat fragmentation reduces biodiversity by as much as 75% and impairs key ecosystem functions by decreasing biomass and altering nutrient cycles. Across the experiments surveyed, effects were greatest in the smallest and most isolated fragments, and increased over time.

The Virginia Natural Landscape Assessment (VaNLA)

We calculated impacts of direct and indirect forest loss using the VaNLA (Bulluck et al. 2007), which identifies, classifies, and ranks all existing "ecological cores" (≥100-interior-acre forest patches) and smaller non-core (10-99-interior-acre) habitat fragments in Virginia based on

[1] The impact of the long, linear footprint of roads is analogous to that of pipelines and is therefore relevant to this case.

several key indicators of ecological functions of forests. The VaNLA was designed to facilitate conservation of significant forests that protect biodiversity and provide essential ecosystem services, and has been used by various Virginia state agencies, local governments, federal agencies, Planning District Commissions, universities and conservation non-profit organizations for land and species conservation as well as local and regional planning. Moreover, the VaNLA has received repeated recognition outside the Virginia border as an exemplary landscape level assessment of ecological integrity of forests.

The VaNLA methodology builds on pioneering work done by the Chesapeake Bay Program's Resource Lands Assessment, Maryland's Green Infrastructure Assessment, and the Delmarva Conservation Corridor Initiative, and is accepted by the scientific community. This approach is based upon thousands of scientific studies on the effects of fragmentation on species populations, natural communities and ecosystem function and services (Didham 2010).

In short, the VaNLA consists of a statewide spatial dataset of all remaining intact forest habitat or "ecological cores" with at least 100 acres of interior (Bulluck et al. 2007). These cores are attributed with over 50 variables pertaining to a variety of environmental and natural resource values, and statistically analyzed to assess their ecological value relative to the surrounding landscape based on key variables including core size and isolation; topographic variability; depth of interior; length of interior streams; wetland habitats; rare species habitats; presence of exemplary natural communities; and availability of habitat for Species of Greatest Conservation Need (SGCN), identified in the Virginia State Wildlife Action Plan. This results in an ecological integrity score for each core, ranging from 1-Outstanding to 5-General Significance.

In general, larger, more biologically diverse cores are assigned higher ecological integrity scores. Scores are also higher if the core or habitat fragment is part of a larger complex of natural lands, when it is known to provide significant species habitat, and/or when cores, via extensive inclusion of forested streams and wetlands, contribute to water quality enhancement. *The VaNLA, as a statewide assessment of all remaining forested cores based upon these key indicators of ecological values, is most appropriate and the best available statewide dataset for addressing the impacts of landscape level impacts to forest values in Virginia.*

Methodology to Assess Direct and Indirect Impacts

The following summarizes how we analyzed the VaNLA forested cores intersected by the ACP Rev 10a alignment, access roads, pipeyards/laydown yards, and staging areas were analyzed to calculate acres of direct and indirect impacts to forests.

Direct impact acres were calculated simply as the forested areas of the construction footprint of the pipeline alignment and associated disturbances to forests, using the VaNLA.

Indirect impact acres (i.e. diminished integrity caused by fragmentation) were calculated through an in-depth spatial analysis as discussed in more detail below.

Addressing indirect impacts with the VaNLA

The VaNLA enables the quantification of indirect impacts pertaining to three fragmentation effects: increased edge effects, creation of smaller fragments from once larger forest cores, and reduced size of original forest cores (Didham 2010).

Increased edge effects: Edge effects result from the creation of non-forest within what was previously forest habitat and may decrease the amount of interior. Forest edges have greater exposure to wind and longer and more intense exposure to sunlight, which means that plant and animal species within newly created edges experience hotter and drier conditions to which they may not be adapted. Edges resulting from long linear disturbances facilitate the spread of non-native and invasive species, because the disturbed areas alongside roads or within a transmission right-of-way (ROW) provide long corridors of uninterrupted habitat in which weeds can thrive with little competition from woody plants (EPA 2013). The modified habitat within the forest edge is vulnerable to changes in species composition and structure, as plants and animals that can out-compete interior forest-dependent species gain access through the newly created ROW. New pests and pathogens, invasive plant species and predators are thus introduced to the forest communities, disrupting the ecological function of the forest, at least 100 meters into the adjacent forested area (Graham 2002).

Creation of forest fragments from cores: Transecting intact forest with pipelines, roads, or transmission ROW can result in patches that no longer contain the minimum area of interior

forest habitat to qualify as cores. The VaNLA methodology sets the minimum size for a viable forest core to 100 acres of interior (Bulluck et al. 2007). Similar assessments have used 250 acres as the minimum size criterion (SWCA 2010). New smaller patches behave more like edge habitat and may become population sinks to which species are drawn but within which they cannot reproduce successfully due to predation or lack of critical resources (Robinson and Wilcove 1994).

Reduced size of forest cores: Ensuring that the forest patches remaining on the landscape meet the established minimum size criterion does not avoid fragmentation impacts. Even smaller interior forest patches exhibit decreased resource availability, lower species richness, lower genetic diversity, and thus, less capacity for species populations to adapt to various natural and human-induced changes on the landscape. Thus, when edge effects permeate a landscape, creating relatively smaller forest patches, the compounding negative indirect impacts to forests are exacerbated (Didham 2010, Haddad et al 2015).

Quantifying Indirect Impacts with the VaNLA

We quantified the indirect impacts to forests (i.e., fragmentation effects) via use of the VaNLA to calculate a Core Integrity Impact. The Core Integrity Impact calculation allowed us to translate the three effects of fragmentation - edge effects, creation of non-core forest patches, and resulting cores of reduced size and ecological integrity – to area in acres. The Core Integrity Impact was calculated using both a Fragmentation Factor and Depth Factor, each of which is discussed in more detail below.

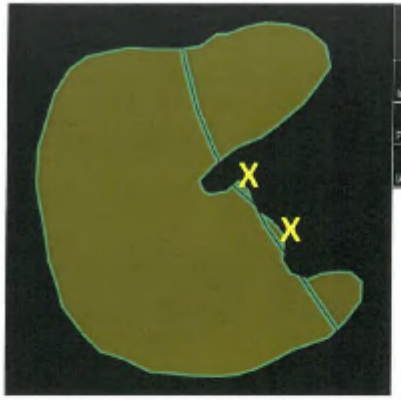
For purposes of illustration and description we use the term "parent core" to refer to a forest core in its current, pre-impact condition. The parent core represents the baseline condition that is permanently degraded by the habitat loss and fragmentation imposed by the ACP. In order to estimate the degree of degradation of the parent core, we used the size and shape statistics of the (pre-impact) parent core to quantify the increase in edge effects and creation of smaller cores and non-core forest fragments. Edge effect is commonly quantified and expressed by the ratio of interior forest area to the perimeter of each core (i.e. IA/P ratio).

These statistics enable calculation of a Fragmentation Factor for every intersected core, which helps to calculate the Core Integrity Impact for each core.

Figure 1 provides a representative example that illustrates the Fragmentation Factor calculation of the overall Core Integrity Impact for a single core. All area calculations were conducted in square meters to retain precision, and later converted to acres. Interior area is the area of the parent core minus the 100 meter transition zone to existing non-forest vegetation cover. In this example, when the parent core is intersected by the pipeline, two smaller cores (upper right and lower right lobes) are created, as well as two-non-core fragments, which are considered lost and no longer meet the criterion for 100 acres of intact interior. The fragmented core interior area is the sum of all the remaining areas meeting the 100-acres of intact interior criterion. The before-impact perimeter is the overall perimeter of the parent core and the after-impact perimeter is the cumulative perimeter all the resulting fragments. The IA/P ratio is calculated by dividing the interior area by the perimeter for each core.

The Fragmentation Factor quantifies the degree to which the proposed pipeline route changes the size and shape of a core, thereby diminishing the ecological integrity of the core. It is calculated by taking the inverse of the relative proportion of change in the IA/P ratio, brought about by the fragmenting pipeline feature. By relying on the change in these size and shape statistics, the Fragmentation Factor measures a relative loss, in area, of the indirect loss of forest values due to edge effects and the creation of smaller cores and non-core fragments. Note that these calculations do not address the footprint of the pipeline itself (i.e. the direct impacts), which is accounted for in the calculation of direct impacts and represents 92 acres in the example.

Figure 1. Calculation of the Fragmentation Factor Variable in the Core Integrity Impact



Fragmentation Factor Statistics	Before (Parent Core)	After (Fragmented Core)
Interior Area > 100 acres (m2)	97,969,748	95,795,989
Perimeter (m)	48,134	64,696
(A/P Ratio	2,035	1,481

Fragmentation Factor

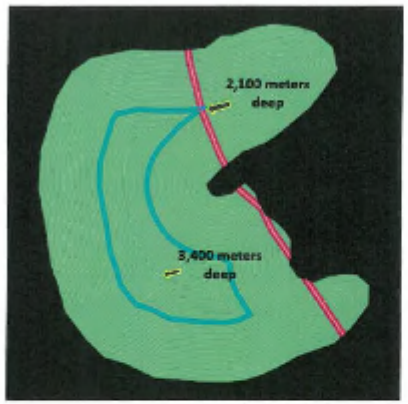
1 – (1,481 / 2,035) = 0.27

The Fragmentation Factor does not address the degree to which a pre-impact core is divided into smaller cores. For example, indirect impacts to a forested core, due to the nature of edge effects, are considered less where a disturbance is located closer to the periphery of the original parent core. In other words, impacts to the outer portions of a core have relatively less detrimental impacts on the original core due to the fact that deeper interior conditions are retained in the resulting parent core. Conversely, impacts to deeper areas of a core have relatively greater indirect impacts to a pre-impact core by leaving a smaller remaining cores. Therefore, a Depth Factor was calculated to address the location of the pipeline within a core and the resulting depth of penetration.

Using 100-meter inward buffers of the outmost pre-impact parent core perimeter, the maximum depth of every core was calculated via measurement to the most central ring. In the representative example provided in Figure 2, the maximum core depth is 3,400 meters. Likewise, the depth of penetration of the pipeline was also measured at the deepest point of penetration; 2,100 meters in the Figure 2 example. The Depth Factor was then calculated as the proportion of overall depth that is penetrated by the pipeline, and thus represents the

depth of interior conditions where edge effects would occur and interior forest conditions would be lost.

Figure 2. Calculation of the Depth Factor Variable in the Core Integrity Impact



Depth Factor

Depth of Penetration / Maximum Depth = 2,100 / 3,400 = 0.62

Note the influence of the location of the pipeline within a core. Impacts to outer depth bands result in a smaller Depth Factor, thereby also decreasing the Core Integrity Impact

After calculating both the Fragmentation Factor and the Depth Factor, we applied these calculations to determine the indirect impact to each forest core, also known as the Core Integrity Impact, using the following equation:

Core Integrity Impact = Parent Core Size (acres) x Fragmentation Factor x Depth Factor =

Applying this formula to the example provided in Figures 1 and 2, the Core Integrity Impact would be calculated in acres as:

25,389 acres x 0.27 x 0.61 = 4,182 acres

The total impacts include both the direct impacts from the construction footprint of the pipeline and the indirect impacts calculated through the Core Integrity Impact formula. As such, the total impacts to the core are provided through the following summation:

Total Impact = Direct Impacts + Core Integrity Impact

Therefore, per the example provided in Figures 1 and 2, the total impact would be calculated in acres as:

92 acres + 4,182 acres = 4,274 acres

Results

Overall, the ACP Rev 10a alignment, access roads, pipeyards/laydown yards, and staging areas intersect 203 features in the VaNLA representing 145 forested cores and 58 non-core habitat fragments (Table 1).

Table 1. Summary of Cores and Non-core fragments impacted by the ACP

VaNLA features intersected	Number intersected
C1 core	6
C2 core	21
C3 core	13
C4 core	39
C5 core	66
Total cores	**145**
Non-core forest	58
Total VaNLA features	**203**

The total impact (i.e. Direct + Indirect) was calculated for each of the 145 cores intersected by the Rev 10a alignment and associated infrastructure footprint of the ACP. Additional direct

impacts were calculated for the 58 non-core forest patches intersected by the pipeline alignment, but these non-core forests were excluded from calculations of indirect impacts because these non-core patches do not meet the ecological core criteria of 100 interior acres. Direct and indirect impacts were also separated based on the ecological integrity scores of the intersected cores; C1-Outstanding and C2-Very High ranked cores were treated separately than cores ranked C3, C4 and C5. Based on the higher ecological value of C1 and C2 cores, we felt this separation to be necessary in order to allow mitigation ratios and mitigation activities to account for the fact that some forest cores would receive disproportionately greater impacts. In other words, mitigation measures for a core of highest ecological integrity should be greater to attempt to sufficiently address the loss in ecological values to that exceptional forest core. Table 2 summarizes the acres of impact anticipated with the ACP Rev 10a alignment and associated supporting infrastructure areas.

Table 2. Summary of Forest Impacts

Summary of Forest Impact (acres)		
	Direct	Indirect
C1 and C2 Cores	1,072	19,945
C3 – C5 Cores	2,099	24,282
Non-Core Forest Blocks	252	n/a
TOTAL	3,423	44,227

Though the pipeline ROW and associated access roads and construction areas have a very narrow footprint (i.e. the direct impact area), the indirect effects extend 100 meters beyond both sides of the project footprint into the surrounding forest (Graham 2002) to impact additional areas of the parent core. The ratio of direct to indirect impacts is a function of: 1)

the length of edge created and the area of core forest converted to non-core forest (fragmentation factor), and 2) the amount of fragmentation of large intact cores (depth factor). The ratio of direct to indirect impacts is large in this specific case because the proposed construction right of way deeply penetrates many large forest cores with high ecological integrity. If the project avoided deeply penetrating large intact forest cores, a commensurately smaller ratio of direct to indirect impacts would result, as indirect impacts would also be less.

Proposed Mitigation Practices

SA8-108 As discussed previously, to the extent that direct and indirect impacts to the Commonwealth's forests may not be avoided, they must be mitigated. The Commonwealth's natural resource agencies, representing a breadth of expertise in the ecological, environmental and economic values of upland forests, suggest three activities to address direct and indirect impacts to forests: afforestation, avoided deforestation, and forest enhancement. We agree with the FERC's recommendation to develop a fragmentation analysis for the entirety of the ACP project area, and we believe that these three activities should be utilized in analyzing and quantifying the scale of mitigation.

In addition, and as discussed in more detail in the sections below, the mitigation plan should include mitigation ratios that are developed for each of the three mitigation activities. A different ratio of mitigation acres to impact acres should be identified for each mitigation activity to ensure that an ACP forest mitigation program results in effective conservation benefits. Also, separate mitigation ratios should be developed to specifically account for the impacts to C1 and C2 cores; C3, C4 and C5 cores; and non-core forest blocks intersected by the pipeline and associated infrastructure. In general, factors to consider in the assignment of ratios should include the time lag between the impact and the restoration of ecosystem services through the mitigation activity, the risk of failure, the difference between what is lost and what is replaced, the ability to offset the full suite of negative impacts occurring at the project site, and the extent to which the respective mitigation activity results in no net loss of forest habitat.

SA8-108 See the response to comment SA8-1.

SA8-108 (cont'd)

The following summarizes each of the three recommended mitigation activities and provides additional detail regarding considerations in the development of mitigation ratios.

Afforestation [Restoration]

This mitigation activity consists of converting open land to forest by planting native trees appropriate for the ecoregion in which the impact being mitigated for occurred. This activity offsets the forest conversion that occurs in the project footprint by creating additional forestland. The planted acres would have to be protected from conversion to any other land use in perpetuity. The USFWS recommends this as the primary mitigation activity for pipeline impacts (Gosse 2016), and habitat restoration is an analogous activity that is accepted for mitigation of wetland impacts. The Virginia Department of Forestry expects that it will be difficult to meet all the mitigation acres needed to compensate for impacts from the ACP through this activity alone, and has therefore recommended that a portion of the mitigation need be achieved through other activities pursuant to the federal Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) guidelines (40 Code of Federal Regulations (CFR) 1508.20). Due to the difficulty in finding suitable acres for this mitigation activity, we recommend that this activity only be applied to direct impacts.

In developing mitigation ratios for this activity, we recommend following the rationale of Virginia's wetland mitigation program whose guiding principal is to achieve "no net loss" of wetlands in Virginia. As such, the total acreage of mitigation activities from afforestation (forest restoration/replacement) should exceed the direct impact acreage. In addition, the ratios must account for the risk of failure inherent within any restoration/afforestation project. The ratios also must account for the time lag, which is significant, between mitigation put on the ground (acreage of planted trees) and a mature forest with its intact ecological functions that is similar to what is lost. Finally, we recommend that the ratios should be larger for those impacted habitats that have the highest pre-impact ecological integrity (i.e., those ranked C1 and C2).

Avoided Deforestation [Preservation]

SA8-108 (cont'd)

This mitigation activity consists of permanently protecting forestland from conversion to other land uses. This activity offsets ROW clearing and fragmentation impacts by ensuring that other nearby forestland that could otherwise be at risk of conversion will be maintained in forestland in perpetuity. As with afforestation acres, this mitigation activity requires that a perpetually protective instrument overlay the mitigation acreage. These protected forest acres remain as forest, although harvesting timber may be allowed as long as the harvested area is allowed to regrow as forest or is replanted. We recommend that this mitigation activity be applied to both direct and indirect impacts associated with pipeline construction and long-term corridor maintenance.

In developing mitigation ratios for this activity, we again recommend following Virginia's wetland mitigation principle of achieving "no net loss." While this activity is analogous to preservation in the wetland mitigation realm, it does not result in no net loss of forest. As such, the ratios for this activity should be greater than those for afforestation to account for the fact that avoided deforestation results in permanent protection from conversion of *already forested* habitats and does not add "new forest" on the landscape. As with the afforestation mitigation activity ratios, the ratios for this activity should be larger for those impacted habitats that have the highest pre-impact ecological integrity.

Finally, because we recommend that avoided deforestation be applied to both direct and indirect impacts, the ratios should reflect the differences between these impacts. The ratios for indirect impacts should be smaller than for direct impacts in recognition of the fact that while indirect impacts result in conversion of habitat from core habitat to edge habitat, the woody structure and some of its ecological function may remain, although in a diminished state.

Forest Habitat Improvement [Enhancement]

This mitigation activity consists of implementing appropriate silvicultural practices that result in the improvement of ecological functions of forests on public and private lands. This mitigation activity offsets fragmentation impacts by increasing the ecological integrity of nearby forests. As such, we recommend that this mitigation activity only be applied to the indirect effects upon core forests. The forest improvement achieved should persist for a "significant period of time"

SA8-108 (cont'd)

or until the lift in ecological value is sustainable with little or no management. This is analogous to wetland enhancement in the wetland mitigation realm. As with afforestation and avoided deforestation mitigation activities, this mitigation activity requires that a perpetually protective instrument overlay the mitigation acreage.

In developing mitigation ratios for this activity, we recommend that the ratios for forest habitat improvement activities should be smaller than those developed for avoided deforestation. The rationale behind this is that the risk of failure with these types of projects is relatively small, they appropriately compensate for forested habitat degradation associated with fragmentation (indirect effects), and there are likely many opportunities to generate habitat lift in this way across the Commonwealth. As with the prior mitigation activities, we recommend that the ratios for this activity should be larger for those impacted habitats that have the highest pre-impact ecological integrity.

References

Bulluck, J. F., J. M. Ciminelli, and J. T. Weber, 2007. Natural Landscape Assessment and Green Infrastructure – Completion and Distribution: Final Report. Natural Heritage Technical Report #07-17. Virginia Department of Conservation and Recreation, Division of Natural Heritage. Richmond, Virginia.

Council for Environmental Quality's National Environmental Policy Act guidelines (40 Code of Federal Regulations (CFR) 1508.20)

DEQ. 2013. DEQ's Office of Environmental Impact Review's Procedure Manual at http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview/StateEnvironmentalImpactReviews/ProcedureManualDefinitions.aspx.

Didham, R. K. 2010. Ecological consequences of habitat fragmentation. In: Encyclopedia of Life Sciences. John Wiley & Sons Ltd, Chichester. http://www.els.net[doi: 10.1002/9780470015902.a0021904]

Graham, K.L. 2002. Human Influences on Forest Wildlife Habitat. In: David N. and John G., eds. 2000. Southern forest resource assessment. Gen Tech. Rep. SRS-53. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 635 p.

Gosse, Jeffrey. USFWS Region Regional Energy Coordinator, Midwes Ecological Services Field Office. Insert Jeff's Title. 7/7/2016. Personal Communication.

Haddad NM, LA Brudvig, J Clobert, KF Davies, A Gonzalez, RD Holt, TE Lovejoy, JO Sexton, MP Austin, CD Collins, WM Cook, EI Damschen, RM Ewers, BL Foster, CN Jenkins, AJ King, WF Laurance, DJ Levey, CR Margules, BA Melbourne, AO Nicholls, JL Orrock, DX Song, JR Townsendet al. 2015. Habitat Fragmentation and its Lasting Impact on Earth's Ecosystems. Science Advances. 20 Mar 2015 : e1500052

Hanson, DA, EM Britney, CJ Earle, TG Stewart. 2013. Adapting Habitat Equivalency Analysis (HEA) to Assess Environmental Loss and Compensatory Restoration Following Severe Forest Fires. . Forest Ecology and Management. 294(2013):166–177

NOAA. 1995. Habitat Equivalency Analysis: An Overview. NOAA Damage Assessment and Restoration Program, Policy and Technical Paper Series, No. 95-1, (Revised 2000)

Robinson, S. K., and D. S. Wilcove. 1994. Forest fragmentation in the temperate zone and its effect on migratory songbirds. *Bird Conservation International* 4:233 – 249.

SWCA Environmental Consultants. 2010. Ruby Pipeline LLC Voluntary Conservation Plan for Migratory Birds Support Document. Prepared for Ruby Pipeline LLC. Available at http://www.blm.gov/nv/st/en/info/nepa/ruby_pipeline_project/record_of_decision.print.html

U.S. Environmental Protection Agency (USEPA). Our Built and Natural Environments: A Technical Review of the Interactions Between Land Use, Transportation, and Environmental Quality (2nd Edition). 2013. EPA 231K13001. Available at https://www.epa.gov/smartgrowth/our-built-and-natural-environments.

U.S. Fish and Wildlife Service (USFWS). 3/8/2016. "Proposed Revisions to the U.S. Fish and Wildlife Service Mitigation Policy". 81 FR 12379. pp. 12379-12403 (25 pages).

DEQ CONSOLIDATED PROGRAM COMMENTS – March 3, 2017

Atlantic Coast Pipeline – DEIS

Virginia Water Protection (VWP) – Wetlands

DEQ recognizes that there will be state and federal permitting requirements related to wetland and stream crossing activities associated with the ACP project which are in addition to the Environmental Impact Statement process. Our comments are based on reviewing current GIS mapping overlain with the proposed ACP alignment submitted as of January, 2017, as well as the map sheets and other material in the DEIS.

Recommendations:

SA8-109 DEQ is concerned that the proposed temporary impacts could result in a permanent alteration of the impacted systems post construction. The final EIS should include a requirement for **Pre-impact characterizations** of proposed stream and wetland crossings which go beyond the normal jurisdictional determination requirements to include sufficient evidence that the system will be able to maintain its original functions indefinitely after restoration. Pre-impact characterizations should include stream surveys, subsurface investigations at temporary stream and wetland impact areas to establish the feasibility of restoring the systems post construction and hydrologic assessments, including piezometers, to establish pre-impact hydrologic conditions at temporary wetland impact areas.

SA8-110 **Section 2.3.3, Wetland Crossings** - During trench excavation in all wetlands, saturated or unsaturated, segregate the upper 12-inches of the soil profile within wetlands as "wetland topsoil" from the underlying subsoil, store the wetland topsoil in a soil stockpile separate from other soil materials, and upon closing the trench, use the wetland topsoil to fill the upper 12-inches of the trench to reconstruct the wetland soil profile. Restore temporarily disturbed wetland areas to pre-existing conditions within 30 days of completing work at each respective temporary impact area, which shall include reestablishing preconstruction elevations and contours with topsoil from the impact area and planting or seeding with appropriate wetland vegetation according to pre-disturbance cover type until disturbed sites are permanently stabilized.

SA8-111 **Section 4.3.2, Surface Water Resources, Page 4-87 –** The final EIS should inventory locations of private ponds relative to pipe and road network similar to other surface water resources. Recommend locating the road and pipe crossings down gradient of private ponds to the maximum extent possible and developing enhanced erosion and sediment control (ESC) measures to protect ponds from secondary impacts of construction where route alignments are not possible.

SA8-112 **4.3.2.6 General Impacts and Mitigation, Page 4-100** - DEIS states "Waterbodies would be crossed using the open cut, flume, dam and pump, HDD, and cofferdam methods, which are described in detail in section 2.3.3.1. The specific construction method proposed for each waterbody crossing is listed in appendix K. Crossing methods for each waterbody were selected based on the topography, soil conditions, subsurface geology, and the width and depth of the waterbody." Since HDD would result in no impacts to streams and is considered an avoidance measure, recommend considering HDD, if practicable, at crossings of sensitive waters, e.g., trout waters, high quality streams, T&E waters, etc.

1

SA8-109 Comment noted.

SA8-110 Comment noted.

SA8-111 Ponds were inventoried and have been included in our analysis in section 4.3.

SA8-112 Comment noted.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

Additional Information or Clarification Needed:

SA8-113 **4.3.2 Existing Surface Water Resources, Page 4-92** – Access roads cross surface waters 490 times, with 455 of these crossings being permanent. Many of the impacts to streams are associated with access roads. Use of temporary access roads where possible is preferable to permanent access roads.

SA8-114 **Section 4.3.2, Surface Water Resources** – The final EIS should provide details regarding materials to be used and installation methods for all temporary culverts and temporary fill in waterbodies and wetlands for permanent and temporary access roads, including methods proposed to stabilize fill material. ACP should include a detailed analysis of all alternatives to the use of culverts and temporary fill, such as relocations and bridges, to reduce both permanent and temporary waterbody impacts.

SA8-115 **Section 4.3.2, Surface Water Resources** – Discuss and identify the location of fill sources needed for permanent and temporary stream crossings, ATWS, yards, etc., as obtaining fill may cause additional project environmental impacts including additional land disturbance, tree removal, stream impact, and wetland impact.

SA8-116 4.**3.2 Surface Water Resources, Page 4-91** - The DEIS states, "Major waterbodies are those that are greater than 100 feet wide, intermediate waterbodies are greater than 10 feet wide but less than or equal to 100 feet wide, and minor waterbodies are those that are less than or equal to 10 feet wide." DEQ notes that many spring-fed perennial stream systems within the mountainous region are often significantly less than 10' at the ordinary high water mark (OHWM). DEQ recommends the final EIS identify stream type using a more robust method than width at OHWM.

SA8-117 **4.3.3.8 Wetland Mitigation, Page 4-125** – The DEIS states that mitigation plans have not been finalized. Please note that DEQ's regulation requires compensation at a 1:1 compensation to impact ratio for permanent conversion impacts to wetlands. DEQ notes that approximately 98% of 219 acres of the reported PFO impacts are conversion impacts, though it is unclear what portion will be permanent.

SA8-118 **Comments for Specific Crossings**

API-1

91.5 This Jackson River crossing will use a dam/pump around and cofferdam. Recommend conducting work during low flow conditions to the maximum extent practicable. Due to a complete blockage of the river during work, ensure strict adherence to all recommended Time of Year Restrictions (TOYR's).

111.4 This Calfpasture River crossing will use a dam/pump around and cofferdam. Recommend conducting work during low flow conditions to the maximum extent practicable.

112.2 This Calfpasture River crossing will use a dam/pump around and flumes. Recommend conducting work during low flow conditions to the maximum extent practicable.

148.6 This South River crossing runs for 385' through an area indicated as PFO wetlands, resulting in 0.5 acre temporary impacts and 0.3 acre permanent conversion impacts. The crossing is also located immediately downstream from the confluence of an unnamed perennial tributary of the

SA8-113 Comment noted.

SA8-114 Comment noted.

SA8-115 Comment noted.

SA8-116 Comment noted.

SA8-117 Comment noted.

SA8-118 Comments noted. See the response to comment SA8-3.

SA8-118 (cont'd)

South River. Recommend evaluating the practicability and potential environmental benefit of crossing the South River further to the east and downstream of the confluence.

184.8 This James River crossing will use HDD. The associated HDD Rig-side Workspace on the east bank of the James River extends east for approximately 200' into a PFO wetland, resulting in approximately 0.8 acre of temporary impacts. Recommend evaluating the practicability of shifting or reconfiguring the geometry of the workspace to reduce temporary impacts to the PFO wetland. Due to clearing and staging activities adjacent to the river, and the potential for an inadvertent release of drilling mud, ensure strict adherence to all recommended Time of Year Restrictions (TOYR's).

220.8 This Appomattox River crossing will use only cofferdams. Recommend conducting work during low flow conditions to the maximum extent practicable. Ensure that the materials and design of the cofferdam are sufficient to withstand unanticipated high flows. Recommend staging the construction of the cofferdams so that no more than 50% of the river is blocked at any time. Ensure strict adherence to all recommended Time of Year Restrictions (TOYR's).

229.2 This Flat Creek crossing occurs at a reach of stream that runs parallel with the pipeline's alignment, resulting in 0.3 acre of temporary impacts to PEM wetlands associated with Flat Creek. Recommend evaluating the practicability of shifting the alignment slightly north to cross Flat Creek on a perpendicular to reduce wetland impacts.

260.7 This Nottoway River crossing will use only cofferdams. Recommend conducting work during low flow conditions to the maximum extent practicable. Ensure that the materials and design of the cofferdam are sufficient to withstand unanticipated high flows. Recommend staging the construction of the cofferdams so that no more than 50% of the river is blocked at any time. Ensure strict adherence to all recommended Time of Year Restrictions (TOYR's).

API-3

12.4 This Meherrin River crossing will use cofferdams and open cuts. Recommend conducting work during low flow conditions to the maximum extent practicable. Ensure that the materials and design of the cofferdam are sufficient to withstand unanticipated high flows. Recommend staging the construction of the cofferdams so that no more than 50% of the river is blocked at any time. Ensure strict adherence to all recommended Time of Year Restrictions (TOYR's).

27-36 The streams crossed within this range all drain into the Nottoway River. Ensure strict adherence to all recommended Time of Year Restrictions (TOYR's) at all jurisdictional crossings within this range.

32.6 This Nottoway River crossing will use HDD. Due to clearing and staging activities adjacent to the river, and the potential for an inadvertent release of drilling mud, ensure strict adherence to all recommended Time of Year Restrictions (TOYR's).

36-43 The streams crossed within this range all drain into the Blackwater River. Ensure strict adherence to all recommended Time of Year Restrictions (TOYR's) at all jurisdictional crossings within this range.

SA8-118 (cont'd)

38.6 This Blackwater River crossing will use HDD. Due to clearing and staging activities adjacent to the river, and the potential for an inadvertent release of drilling mud, ensure strict adherence to all recommended Time of Year Restrictions (TOYR's).

63.6 This Western Branch Nansemond River crossing will use HDD. Due to clearing and staging activities adjacent to the river, and the potential for an inadvertent release of drilling mud, ensure strict adherence to all recommended Time of Year Restrictions (TOYR's).

64.4 This Nansemond River crossing will use HDD. Due to clearing and staging activities adjacent to the river, and the potential for an inadvertent release of drilling mud, ensure strict adherence to all recommended Time of Year Restrictions (TOYR's).

81.8 This Southern Branch Elizabeth River crossing will use HDD. Due to the potential for an inadvertent release of drilling mud, ensure strict adherence to all recommended Time of Year Restrictions (TOYR's).

Water Quality Monitoring and Assessment

TMDL Recommendations:

SA8-119

For segments of the ACP that cross TMDL Implementation Planning (IP) watersheds, where implementation has already occurred, destruction of BMPs such as livestock exclusion and riparian buffers need to be replaced or have funds allocated to replace the BMPs nearby. This would include, but may not be limited to the following IP watersheds:

- One watershed of the "Chowan River Watershed (Beaver Pond Creek watershed) IP", AP-1: MP 255 to 259.7
- Three watersheds of the "Flat, Nibbs, Deep, and West Creeks (Flat Creek, West Creek, and Deep Creek) IP", AP-1: MP 226.9 to 247.4
- Three watersheds of the "Middle River Watershed (Upper Middle River, Lower Middle River, and Moffett Creek) IP", AP-1: MP 118.1 to 136.6
- Two watersheds of the "Rockfish River Watershed (South Fork Rockfish River and Lower Rockfish River) IP", AP-1: MP 158.2 to 167.9
- Three watersheds of the "Slate River and Rock Island Creek TMDL (North River, Lower Slate River, Upper Slate River watershed) IP", AP-1: MP 188.6 to 213.5
- Two watersheds of the "South River Watershed and Christians Creek (Christians Creek and Lower South River) IP", AP-1: MP 137.8 to 158.3
- One watershed of the "Spring Creek, Briery Creek, Bush River, Little Sandy River and Saylers Creek (Saylers Creek) IP", AP-1: MP 222.6 to 227
- One watershed of the "Tye River, Hat Creek, Rucker Run and Piney River (Rucker Run) IP", AP-1: MP 177.4 to 178
- One watershed of the "Willis River Watershed (Willis River) IP", AP-1: MP 202.4 to 213.5

SA8-120

For segments of the ACP that cross applicable TMDL watersheds, Class V and VI waters, threatened and endangered species waters, and benthic impairments the following recommendations apply:

- Pre and post construction monitoring of benthic assemblages, Relative Bed Stability, and riparian forest cover should be monitored. In-stream monitoring may not be necessary if

4

SA8-119 Comment noted. See the response to comment SA8-3.

SA8-120 Comment noted. See the response to comment SA8-3.

SA8-120 (cont'd)

streams are not flowing during crossing. This is similar to what is recommended in recommendation number 44 on page 5-36 of section 5.2 of the DEIS for Laurel Run in the GWNF.

- Monitoring as suggested above could be used to support the language on page 4-97 section 4.3.2.5 where it states that impairments are not anticipated to be exacerbated in the long-term by the construction or operation of the projects and that there may be a short term, minor increase in temperature in the immediate vicinity and downstream of the crossing due to clearing of riparian vegetation, including through permanent right-of-way maintenance, but that it is expected to be minimal.
- On page 4-106 section 4.3.2.6 it states that "The majority of the impairments are related to parameters that are not typically influenced by construction activities or pipeline operations...construction activities would be temporary and short-term in nature and are not anticipated to further any of the listed impairments." This may not be the case for benthic impairments where it could further impact them. Therefore monitoring should be considered.

Applicable TMDL watersheds include:

- The Jackson River Watershed – Total Phosphorus and Total Nitrogen TMDLs, AP-1: MP 84 to 93.7 For segments of the ACP crossing the Jackson River TMDL watershed, please note that high nutrient concentrations have been observed in the Jackson River, and appear to be resulting in significant periphyton growth which may impact the benthic macroinvertebrates present in the river.
- The Lewis Creek Watershed – Sediment, Lead and PAH TMDLs, AP-1: MP 136.6 to 137.8. The TMDL study prescribes a 57.04% reduction in sediment loadings, which will necessitate heightened erosion and sediment control during land disturbing activities in this watershed
- Middle River and Upper South River Watersheds - Sediment, Phosphorus, Mercury TMDLs; Christians Creek watershed, Moffett Creek watershed, Middle River watershed, AP-1: MP 118.1 to 145. The TMDL study prescribes a 25.9% reduction in sediment loadings, which will necessitate during land disturbing activities in this watershed.
- The James River Watershed portion of the Chesapeake Bay TMDL – Sediment, Nitrogen and Phosphorus, AP-1: MP 53 to MP 82.6. For segments of the ACP crossing the Chesapeake Bay TMDL tributaries, heightened erosion and sediment control practices should be implemented.

Benthic impairments crossed by the ACP include:

- Horsepen Creek (VAC-H21R_HOX01A08), AP-1: MP 201.1 to 201.2
- Christians Creek (VAV-B14R_CST02A00), AP-1: MP 142.5 to 145.6
- Back Creek (VAV-B31R_BCK01A00), AP-1: MP 153.6 to 153.7
- Mills Creek (VAV-B31R_MLS01A02, AP-1: MP 152.8 to 152.9

Class V, Stocked Trout Streams crossed by ACP include:

- Mill Creek (VAV-I30R_MIT02A10),AP-1: MP 103 to 103.1
- Folly Mills Creek (VAV-B14R_FMC02A10), AP-1: MP 139.1 to 13.92
- Jackson River (VAV-I01R_JKS02A00), AP-1: MP 91.4 to 91.5

Class VI Wild Trout Streams crossed by ACP include:

SA8-120 (cont'd)

- White Oak Run (VAV-B11R_WTK01A02), AP-1: MP 120.1 to 120.2
- Orebank Creek (VAV-B31R_ORE01A02), AP-1: MP 153.4 to 153.5
- Townsend Draft Tributary (VAV-I02R_XRE01A02), AP-1: MP 85 to 85.1
- Lick Draft (VAV-I02R_XSA01A02), AP-1: MP 85.3 to 85.4
- Back Creek X-Trib (VAV-I02R_XXB02A04), AP-1: MP 88.4 to 88.5
- Laurel Run (VAV-I14R_LAA01A02), AP-1: MP 94 to 94.1
- Ramseys Draft (VAV-I29R_RAM01A00), AP-1: MP 113.4 to 113.5 & 114.4 to 114.5
- Stony Run (VAV-I01R_ZZZ02A10), AP-1: MP 90.8 to 90.9
- Rockfish River South Fork (VAV-H15R_RFS02A10), AP-1: MP 158.9 to 159
- Spruce Creek (VAV-H15R_SPC01A10), AP-1: MP 162.4 to 162.5
- X-tribs to South Fork Back Creek (VAV-B31R_XSB01A10), AP-1: MP 157.2 to 157.3 & 157.5 to 157.6

Threatened and Endangered Species waters, those fostering threatened and endangered species and critical habitat, crossed by the ACP include:

- AP-1: MP 97.8 to 97.9: Cowpasture River (VAV-I14R_CWP02A04)
- AP-1: MP 260.7 to 260.8: Nottoway River (VAC-K16R_NTW01A02)
- AP-1: MP 253.6 to 253.7: Butterwood Creek (VAP-K20R_BTR02A06)
- AP-3: MP 267.4: Waqua Creek (VAP-K17R_WAQ03A16). The crossing is immediately downstream from a Critical Habitat (T & E Species) see table 4.4.2-1 of Volume 1-EIS

SA8-121

For segments of the ACP that cross other impairments, measures should be employed instream and offstream to minimize suspension and mobilization sediment and nutrients. These impairments include:

- Woody Creek which is impaired for E.coli and Dissolved Oxygen, but is fully supporting for Benthic Macroinvertebrates and wildlife use (VAP-J11R_WDY01A00), AP1: MP 240.6.
- Fontaine Creek which is fully supporting for Aquatic life but is impaired for recreation use due to E.coli impairment and is also impaired for fish consumption due to Mercury in Fish Tissue (VAP-K11R_FON04A00), AP1: MP299.6.
- An expanse of streams with numerous crossings between AP3: MP 36.3 to 46.3, a portion of the Nottoway River at AP1: MP 32.6, a portion of the Meherrin at MP 12.4, and a portion of the Blackwater River at MP 38.6. Waters impaired for low dissolved oxygen include a portion of Tarrara Creek crossed at MP 17.8, and the same portion of the Blackwater River impaired for mercury that is crossed at MP 38.6. Lastly, a portion of Eley Swamp, which is impaired for pH that is crossed at MP 57.6.

SA8-122

For segments of the ACP that cross Public Water Supplies (PWS) or associated tributaries warrant heightened erosion and sediment control practices. Applicable PWS include:

- Middle River at AP-1 -MP 130.4, the ACP crossing is 3.39 miles downstream of the City of Staunton's intake
- Lake Prince between, AP-3 MP 61 to 61.1
- One tributary to Speights Run, AP-3 MP 53.3 to 53

SA8-121 Comment noted. We have taken these impairments into consideration even though appendix K may not list these impairments.

SA8-122 Comment noted.

SA8-122 (cont'd)

- Two tributaries to Cahoon Creek, AP3- MP 55.3 to 55.4 and MP 56.1 to 56.2
- The Meherrin River (VAP-K08R_MHN01C00), MP 286.3 and 286.8 and 287. Upstream from the crossing, the Meherrin is impaired for E.coli and pH, and downstream from the crossing is Emporia Lake (Meherrin Reservoir) which is impaired for Mercury in Fish Tissue.
- Two crossings of Western Branch Reservoir. However, a GIS analysis indicated it will likely cross or come in close proximity to a third branch of the Western Branch Reservoir between AP3:MP 62.9 – 63, which is ~ 170 ft wide.

SA8-123

For segments of the ACP that cross PCB TMDL regions, hydroseeding and mulch tackifiers should not be used within 100 feet of the applicable water body or the tackifier should tested/researched for PCB content prior to application. The regions include Lewis Creek headwaters in the Shenandoah River PCB TMDL, the middle James River near Buckingham, the Meherrin River near Emporia, the Nansemond River near Suffolk, and the Elizabeth River in Chesapeake.

Route Alternatives Analysis for the proposed pipeline route *(Revision 11b Centerline)*

This section pertains to the **January 19, 2017 docket** filings of new route adjustments.

SA8-124

- The ACP alignment crosses two channels that are unnamed tributaries of Butterwood Creek (VAP-K20R_ZZZ01A14), AP1: MP 249.5 to 249.7. Suggest re-evaluating the alignment here to reduce the number of crossings from two crossings to one. If the pipeline was moved slightly south then it would reduce from two crossings to one crossing of UNT to Butterwood Creek.

Main ACP (AP-1)

SA8-125

- The alternative route results in a potentially negligible to improved outcome for the following areas:
- MP 52.5 – 152.7: no change in length; moves farther away from Tiger Salamander habitat
- MP 96.7 – 98.1: change from 2.36 miles to 2.01 miles = 0.35 mile reduction
- MP 114.2 – 115.3: change from 1.62 miles to 1.48 miles = 0.14 mile reduction
- MP 125.1 – 125.4: change from 0.03 miles to 0.05 miles = 0.02 mile increase
- MP 157.0 – 157.4: change from 0.42 miles to 0.58 miles = 0.16 mile increase; the longer route avoids significant amounts of forest corridor loss by taking advantage of existing openings
- MP 170.1 – 170.8: change from 0.78 miles to 0.99 miles = 0.21 mile increase; change doesn't appear to affect resources aiding water quality protection
- MP 292.8 – 293.4: no change in length

- The alternative route results in a potentially negative outcome for the following areas:
- MP 153.3 – 154.0: minimal change in length; moved the pipeline route to a river segment that will lose more riparian buffer
- MP 240.4 – 240.8: no significant mileage change; new route crosses over multiple channels instead of one and is also relocated into a small forested wetland (approximately 0.5-1.0 acres may have been drained between 2009 and 2011per historic aerial imagery)

7

SA8-123 Comment noted. See the response to comment SA8-3.

SA8-124 Section 3.4.4 has been added to address the referenced stream crossings, and we recommend in this section that Atlantic incorporate the Butterwood Creek Route Variation into its final route for the ACP.

SA8-125 Comment noted.

Eastern Spur of ACP (AP-3)

SA8-126

- The alternative route results in a potentially negligible to improved outcome for the following areas:
- MP 59.0 – 59.4: change from 0.40 miles to 0.45 miles = 0.05 mile increase; no significant water quality protective resources impacted
- MP 65.0 – 65.4: change from 0.39 miles to 0.40 miles = 0.01 mile increase; moves route out and farther away from wetlands and riparian buffer for an unnamed tributary of the Nansemond River
- MP 68.4 – 71.8: no significant mileage change
- Mileposts 76.0 – 76.7: change from 0.60 miles to 0.67 miles = 0.07 mile increase; minimal change in impact to resources
- The alternative route results in a potentially negative outcome for the following areas: MP 71.35 to 71.6: The proposed new route from AP-3 MP 71.35 to 71.6 puts the ACP closer to East Ditch and will not allow for a vegetated buffer between the construction right of way and a feeder ditch to Lake Drummond. Either a new adjustment should be made, or it should be moved north to allow for at least 35 feet of riparian buffer. East Ditch which drains to Lake Drummond, a Tier III Exception Water, and warrant heightened erosion and sediment control practices.
- The proposed pipeline route (Revision 11b Centerline) crosses the headwaters of the Lewis Creek watershed approximately 1.75 miles upstream of a ten-mile segment (305b ID# VAV-B12R_LEW01A00) impaired for PCBs in fish tissue as well as a benthic and *E. coli* impairments, AP-1 between MP 136.5 and 137.8. While there are no documented PCB sources along the proposed centerline, a minor route adjustment could reroute the pipeline construction outside of this headwater, reducing the risk of additional sediment entering the stream, potentially exacerbating the benthic impairment. Approximate alternative routes proposed in Figure 1 would avoid the impaired watershed entirely.

Figure 1. Alternative routes analyzed by DEQ that would bypass the Lewis Creek Watershed.

8

SA8-126 Comment noted. We believe the current route near the Great Dismal Swamp National Wildlife Refuge is acceptable.

SA8-126 (cont'd)

- The yellow route remains closest to the watershed boundaries and adds 0.8 miles to the pipeline project. The violet route follows a straighter path as it bypasses the Lewis Creek watershed. It adds 0.48 miles to the pipeline.
- The pipeline route crosses the James River between Mileposts 184.6 and 184.8, a segment (impaired for PCBs and Mercury in fish tissue). The route appears direct and near perpendicular to the river, minimizing disturbance to the riparian buffers on either side. No known PCB sources will be disturbed in this crossing.
- The proposed construction route crosses the Meherrin River between Mileposts 286.3 and 286.5, approximately 4.5 miles upstream of a 27-mile segment impaired for PCBs and Mercury in fish tissue, as well as for poor dissolved oxygen. The proposed crossing appears direct and will minimize disturbance. No known PCB sources will be disturbed in the construction of this crossing.
- The pipeline crosses a small tributary at Milepost 63.6 and a major section of the Nansemond River between Mileposts 64.3 and 64.8. The main stem of the river and the tributary are impaired for PCBs in fish tissue, as well as Enterococcus, fecal coliform bacteria, dissolved

9

SA8-126 (cont'd)

oxygen, and aquatic plants. There are no known sources of PCBs that will be affected by the construction of the pipeline across these two water bodies.

- The final mile of the proposed pipeline construction crosses the Elizabeth River between Mileposts 81.8 and 82.0 parallel to the Military Highway drawbridge. The river is impaired for PCBs in fish tissue, as well as presence of dioxin and poor dissolved oxygen. The route appears to avoid documented point sources in this region; however, there is one opportunity to align the pipeline route better with an existing major power line easement. This alternative route will decrease the pipeline by approximately 0.05 miles, and reduce the loss of forested corridor by 1.35 miles. Figure 2 illustrates an alternative route that takes advantage of the existing power line easement that the ACP route already follows in part.

Figure 2. Alternative route analyzed by DEQ for ACP near the Elizabeth River.

10

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

Recommendations:

SA8-127
- **Wetland and Waterbody Construction and Mitigation Procedures** - The "Procedures" do not state how the upstream and downstream dams should be removed in both of the open cut dry ditch methods (dam and pump and flume method). Precautions should be made to show that dam removal will limit sediment introduction to waterways, and to limit scour when flow is restored.

SA8-128
- **Section 2.3.3.1, Page 2-37** - States that waterbodies will be crossed with temporary bridges that include clean rock fill over culverts, timber mats supported by flumes, railcar flatbeds, flexi float apparatuses, or other types of spans. In sediment TMDL watersheds, PWS waters, Class V and VI waters, sensitive fisheries/T&E waters/critical habitat, and benthic impairments all efforts should be made to minimally contact the benthos (e.g., railcar flatbeds, bottomless culverts, etc.)

SA8-129
- **Section 2.3.3.1, Page 2-37** - States that trench spoil from waterbody crossings would be placed on the banks above the high water mark for use during backfilling. In sediment TMDL watersheds, PWS waters, Class V and VI waters, sensitive fisheries/T&E waters/critical habitat, and benthic impairments spoil should be placed a minimum of 10 feet away from the water's edge or in additional extra work areas with sediment barriers to prevent the flow of spoil or silt-laden water into any waterbody. This is based on section 9.4.2.4 of Appendix G (Construction, Operations, and Maintenance Plans), which is established for NFS lands.

SA8-130
- **Section 2.4, Page 2-44** - States "Work would be conducted during daylight hours, except at stream crossings, final tie-in welds, and where the pipe is being installed using the HDD or bore methods..." All efforts should be made to minimize the night time work on stream crossings so that proper inspection and spill/water quality issues can be best observed.

SA8-131
- **Section 2.5.6 "Post-Construction Monitoring", Page 2-51** - Does not have any water quality monitoring recommendations. And in the ***Restoration and Rehabilitation Plan*** [*Rev 4 – 1/10/17*] on page 29 Section 8.1 "Monitoring" says nothing about water quality or riparian habitat which should be considered for monitoring.

SA8-132
- **Section 4.3.2.2, Page 4-89** - States that some of the major waterbody crossing design specifications and crossing locations have changed since the most recent site-specific drawings were submitted, and site-specific construction and restoration measures have not been incorporated into the plans. Accordingly, FERC recommends that Atlantic file with the Secretary for review the updated plans. VADEQ recommends that Atlantic also share those site-specific plans with VADEQ for review and comment.

SA8-133
- **Section 4.3.2.2, Page 4-92** - Discusses the stream crossings by Cathodic Protection Systems and notes that they will likely be done with the flume or dam and pump dry crossing method if flow is present in the ephemeral or intermittent streams. There is no mention of following the "Procedures." These stream crossings should follow the "Procedures"

SA8-134
- **Appendix G – Draft Construction, Operations, and Maintenance Plans – August 2016 (applies to NFS lands)** - Page 20 (G-30) in section 2.1.9 it states "ATWS will be required on both sides of waterbody crossings to stage construction equipment, fabricate the pipeline, and store construction materials. Except as authorized by the FERC and the AO, the ATWS will be located at least 100 feet away from the water's edge at each waterbody on NFS lands." This is also recommended in sediment TMDL watersheds, Class V and VI waters, sensitive fisheries/T&E waters/critical habitat, and benthic impairments that are in and out of NFS lands.

SA8-127 Comment noted.

SA8-128 Comment noted. See the response to comment SA8-3.

SA8-129 Comment noted. See the response to comment SA8-3.

SA8-130 Comment noted.

SA8-131 Comment noted. See the response to comment SA8-3.

SA8-132 Comment noted.

SA8-133 Atlantic and DETI would be required to implement the Procedures for all jurisdictional facilities, including cathodic protection facilities.

SA8-134 We believe 50 feet is an acceptable setback, and increasing setbacks beyond 50 feet may results in soil loss, compaction impacts, and increase stream crossing timeframes.

SA8-135

- **Stream and Wetland Crossing Procedures** - Chapter 9 addresses waterbody crossings in National Forest lands. The same precautions should also be applied to waters in sediment TMDL watersheds, Class V and VI waters, sensitive fisheries/T&E waters/critical habitat, and benthic impairments. Particularly those items listed in section 9.4.2 with emphasis on 9.4.2.3, 9.4.2.5, 9.4.2.8, 9.4.3, 9.4.4 , 9.4.2.8 as these are the most specifically enhanced compared to the "Procedures."

Corrections:

SA8-136

- On page 4-97 section 4.3.2.5 it states that the 303(d) list used was the 2012, the 2014 303(d) list should be used. The DEIS also lists the impairments crossed on this page but missed: Total Phosphorus (VAT-G14L_NWB02A08), Enterococcus (VAT-G13E_NAN03A06; VAT-G13E_WBN01A06), Aquatic Plants (Macrophytes) (VAT-G13E_NAN03A06; VAT-G13E_WBN01A06; VAT-G13E_ZZZ01A00), Dioxin (including 2,3,7,8-TCDD) (VAT-G15E_SBE02A06)

SA8-137

- On page 4-97 in section 4.3.2.5 it discusses public surface water intakes and water protection areas by considering 3 miles up from the intake being the cutoff. In Virginia we use a 5 mile upstream cutoff to designate the Public Water Supply (PWS) Use (9VAC25-260-390 through 9VAC25-260-540).

Table 4.3.2-4 corrections:

SA8-138

- The Rockfish River PWS water is not actually crossed as that PWS intake exists on a small tributary to the Rockfish River and not 3 miles (or 5) downstream of the crossed waters
- The 7 waters crossed by the pipe including Cohoon Creek and Eley Swamp Tributary to Lake Cohoon, and a number of unnamed tributaries are PWS waters draining to the City of Portsmouth PWS intake. Crossings include between: AP-3 MP 55.3 & 55.4, AP-3 MP 56.1 & 56.2, AP-3 MP 56.2 & 56.3, AP-3 MP 56.4 & 56.5, AP-3 MP 56.7 & 56.8, AP-3 MP 57.5 & 57.6, AP-3 MP 57.8 & 58.1 (3 crossings)
- The crossing of the Middle River PWS segment that drains to the City of Staunton's PWS intake should be included with the crossing of Jennings Branch (VAV-B11R_JEN01A00) at AP-1 MP 129.2
- The unnamed tributary (VAT-G14R_ZZZ01A00) that drains to Lake Prince where the City of Norfolk PWS intake is should be included with Lake Prince since it is crossed at AP-3 MP 59.4
- The unnamed tributary (VAT-G14R_ZZZ01A00) that drains to the Western Branch Reservoir where the City of Norfolk PWS intake is should be included with the Western Branch Reservoir since it is crossed between AP-3 MP 62.7 & 62.8
- **Spatial Data -** AP1: 255.3-255.7: Pipeline is intersecting an intermittent stream twice that drains to Butterwood Creek; it is not shown in the waterbody crossing layer.

Water Quality Monitoring Plan

SA8-139

The scope of this plan does not address water quality monitoring comprehensively for the project. **The final or supplemental EIS should include a requirement for a comprehensive Water Quality Monitoring Plan** that describes how water quality monitoring will be conducted before, during project construction and up to five years after construction is completed. The Plan should focus on identifying an appropriate number of monitoring locations above and below where open trench crossing or HDD are

SA8-135 Comment noted.

SA8-136 We acknowledge that the 2014 report is available and have added the listed impairments to the EIS.

SA8-137 Comment noted.

SA8-138 Section 4.3.2.5 has been updated to identify the proximity of the City of Portsmouth intake. We acknowledge that additional waterbodies may flow to public intakes, but note the downstream distance is greater than 3 miles from the pipeline crossing location.

SA8-139 Comment noted. We expect that monitoring would be a part of the appropriate state authorization.

SA8-139 (cont'd) used in critical areas such as wild/stocked trout streams, endangered/threatened species waters, public water supply, TMDL watersheds, Tier 3 streams, areas near acidic soils and streams with high Virginia Stream Condition Index (VSCI) scores. The Plan should consider real-time temperature, dissolved oxygen and turbidity monitoring (such as that done in VA by USGS) which could allow the public and all agencies involved to access the data real-time. Additionally, collection of macroinvertebrates, fish, and habitat data using VDEQ methods above and below identified crossings during the project and yearly for 5 years after completion of the project.

Stormwater - Erosion and Sediment Control (ESC)

SA8-140 DEQ considers stormwater management and ESC measures to be critically important to minimizing potential water quality impacts from the ACP project. The ACP project includes areas of special interest such as karst, steep slopes, slide prone areas and acid sulfate soils. Proper stormwater management and ESC design, implementation and monitoring will be paramount in protecting these resources.

The ESC procedures contained in the DEIS are not representative of the full scope of Virginia's requirements for stormwater and ESC. DEQ has required submission of site specific ESC plans to be reviewed and approved prior to land disturbing activity. These ESC plans will be expected to meet and exceed Virginia's requirements particularly in areas of special interest.

Recommendation:

SA8-141
- The final EIS should include a requirement for an **Acid Soil Mitigation Plan**. DEQ cautions that exposing these soils to the atmosphere through open trenching operations could result in acidic runoff and make revegetation difficult. DEQ recommends HDD to the maximum extent practicable in these areas. The Plan should address how these areas will be managed, the disposition of acid soils and details regarding proper storage and disposal practices.
- **Presence of acid sulfate soils along the Atlantic Coast Pipeline project:**

  Main Line
  Areas with sulfides documented in literature, however the risk is unknown:

  Mileposts 123.7-124.0, 140.5-141.4, 142.0-143.2, 155.5-155.8, 156.5-157.0, 157.2-158.7, 161.0-161.9, 175.0-177.1, 180.8-181.3, 200.8-203.6

  Moderate-high risk: PPA *10-60 Mg CaCO3/1000 Mg*: Mileposts 87.1-87.4, 90.9-92.1, 97.4-98.0, 101.7-102.2, 103.6-105.2, 108.3-110.5, 114.9-115.4, 122.6-122.9

  Lateral

  Areas with sulfides documented in literature, however the risk is unknown:

  Mileposts 13.5-17.6, 18.2-19.5, 28.3-32.2, 64.2-64.8, 81.7-81.9

13

SA8-140 Comment noted. See the response to comment SA8-3.

SA8-141 Recommendation noted. Section 4.1.4.4 includes a discussion of acid producing rock and soils, including measures that Atlantic would implement to reduce potential impacts. See also the response to comment SA8-3.

SA8-141 (cont'd)

Moderate-high risk: *PPA 10-60 Mg CaCO3/1000 Mg*: Mileposts 55.2-55.6, 55.8-56.5, 57.4-58.1, 60.5-61.3, 61.9-62.7

Low-Moderate risk: PPA *<10 Mg CaCO3/1000 Mg and %S <0.5*: Mileposts 34.3-38.1, 38.5-39.3, 65.0-66.5, 69.9-71.5, 72.6-73.5

Water Use for Hydrostatic Testing and Dust Control

Recommendations:

SA8-142

- Water Withdrawals for Hydrostatic Testing of water tight containers, pipelines, and vessels from non-tidal waters are excluded from a permit under VWP regulations (9VAC25-210-310.A.6) regardless of the volume withdrawn. However, 9VAC25-210-310.B allows the Board to require a permit if the withdrawal is found to cause an impairment, adversely affect beneficial uses, or violate water quality standards.
- To avoid an adverse effect or impairment, the withdrawals for hydrostatic testing should be managed so that:
  - No more than 10% of the instantaneous flow rate from the channel is removed;
  - The intake screens shall be designed so that screen openings are not larger than 1 millimeter and;
  - The screen face intake velocities are not greater than 0.25 feet per second.
- Provide a discussion in the EIS of what steps Dominion and its contractors will take during the hydrostatic testing to meet the requirements listed above.
- Recommend that ACP or its contractors notify DEQ-OWS prior (within 60 days) to the withdrawals for hydrostatic testing to make DEQ-OWS aware of when and where withdrawals are to occur and advise the contractors of any restrictions due to low flow or drought conditions in the area.
- EIS states that Dominion would withdraw water for hydrostatic testing generally between August and October. Since this period coincides with the typically lowest flow period for nearly all stream channels, DEQ recommends that Dominion adjust this timing to coincide with higher streamflow periods if possible.
- Provide an assessment in the EIS of the river flows where withdrawals for hydrostatic testing are proposed with a discussion of how the withdrawals will affect flows, particularly during low flow or drought conditions.
- Explain if any water withdrawals may affect downstream water users, particularly during low flow periods. Below is a list of the known withdrawals downstream of the hydrostatic testing withdrawals:
  - Spread 3A 2.8 Back Creek (MP 87.2) Dominion Bath County Facility downstream
  - Spread 5 3.2 Jennings Branch (MP 129.2) Staunton Water withdrawal, Gardner Spring
  - Spread 6 6.5 Appomattox River (MP 220.8) Chesdin Lake is downstream
  - Spread 6 8.5 James River (MP 184.7) DGIF Wildlife Management downstream
  - Spread 11 0.1 Western Branch Reservoir (MP 62.4) Lake Prince and Reservoir

14

SA8-142 Section 4.3.2.7 discusses water use, and states that Atlantic and DETI would comply with each state's withdrawal and discharge permit requirements.

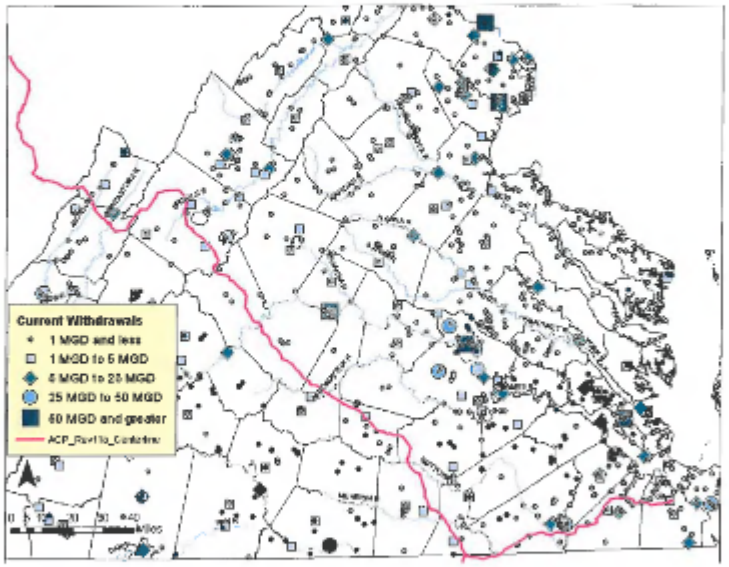
SA8-142 (cont'd)

- If direct withdrawals from groundwater or surface water sources are needed for hydrostatic testing that, during any single day, exceeds 10,000 gallons per day, Dominion must comply with 9 VAC 25-200 Virginia Water Withdrawal Registration and Reporting.
- Provide a discussion of what steps will be taken by Dominion and its contractors during the withdrawals to ensure that these requirements are met.

Water Use in General

SA8-143

- Groundwater and surface water withdrawals in Virginia are depicted in the map below. It is evident the pipeline will be in close proximity to many of these sources. Dominion should communicate with water withdrawers regarding the construction, water withdrawal, and other activity that may impact the facilities.



Environmental Analysis – Geology (section 4.1, pdf 187-190/742):

SA8-144

- Blasting has the potential to include *permanent* alteration of groundwater flow patterns and yields of nearby wells or springs. Temporary effects to wells and springs could potentially extend outside the current 500 ft karst investigation buffer.

15

SA8-143 Comment noted. See also the response to comment SA8-3.

SA8-144 The water use and quality portion of section 4.3.1.7 has been revised to incorporate this and similar comments.

Environmental Analysis – Water Resources (section 4.3 pdf 247-269/ 742):

SA8-145
- Consideration should be given to moving the staging area / construction site (Facility CY GWNF-6 Spr 04-A) further north and away from the sinking portion of Hamilton Branch that is believed to have a direct connection to the municipal water supply for the Town of Deerfield.

SA8-146
- The pipeline's route through Augusta County karst passes in proximity to several significant springs and municipal supply wells including Gardner Spring – City of Staunton, Town of Churchville Wells - ACSA, Lyndhurst – ACSA. ACP should monitor construction activities closely in these areas to minimize any potential impacts.

SA8-147
- Appendix H HDD Plans – H3 Site Specific Horizontal Directional Drill Plans (Vol 2, Appendix H3 pdf 222/ 276): The HDD plan and profile at Reeds Gap illustrates the location and depths of a horizontal directional drilling borehole in highly foliated Catoctin Formation through the crest of the Blue Ridge. Although test drilling in the area indicates the presence of solid rock near the entrance and exit of the borehole, there is potential to drill through transmissive fractures and intercept groundwater moving along strike through separations along foliation, and through joints and fault related fractures. The diameter, depth, and length of the boring is sufficient to potentially intercept groundwater from multiple and distinct fractured rock groundwater flow systems with hydraulic heads in excess of the HDD ingress and egress elevations.

SA8-148
- A contingency plan should be in place to address the potential for the introduction of a significant quantity of groundwater into the HDD borehole in case transmissive fractures are encountered during drilling. The plan should describe how the borehole will be de-watered and where removed groundwater will be routed and discharged for the duration of construction.

SA8-149
- Resource Report 2 – Water Use and Quality (Table 2.1.1-1, pdf 12/ 165): Reported values for range of depth to aquifer and range in well yield for Piedmont and Blue Ridge Crystalline Rock Aquifers are not accurate in this table. There are many aquifers (transmissive fractures) below 300 feet in the Piedmont and Blue Ridge. Well yields of <1gpm to >100gpm are fairly common and frequently well outside the listed range of 15 to 30 gpm. Recommend additional literature search to provide more realistic numbers.

SA8-150 Review of Atlantic Coast Pipeline Water Well and Spring Testing Program:

- The water well and spring testing program should document water well sampling methodology, quality control procedures, and sampling frequency that will be used in Virginia. The plan should include notification of DEQ when a groundwater impact has been reported or suspected.
- A final, georeferenced compilation of well and spring sampling results should be provided to DEQ's Groundwater Characterization Program.
- Please clarify if well yield testing will be performed and if so provide details on procedures.
- Bedrock wells within 200 feet of blasting activities should be monitored for any significant shifts in static water-level and/ or turbidity before and after blasting occurs. Yield and water chemistry should be re-evaluated if sudden changes in water level or turbidity occur that can't be attributed to recent precipitation.

16

SA8-145 Comment noted. We have concluded that the contractor yard would not affect Hamilton Branch.

SA8-146 Comment noted.

SA8-127 Comment noted.

SA8-148 Recommendation noted.

SA8-149 Comments noted.

SA8-150 Comments noted.

SA8-150 (cont'd)

- (ACP Recharge Elevations Map): In order for water supply wells to be used as a meaningful depth to water reference in the coastal plain, groundwater elevations should be restricted to using only shallow wells screened in the uppermost unconfined surficial aquifer. Well Tract # 26-013-A039 appears to show a water level elevation of 89.8 Ft below sea level, indicating that it is likely completed in a confined aquifer that is not in communication with the surficial aquifer.
- Sampling of supply wells in the coastal plain should be constrained to wells open to the uppermost unconfined aquifer. Wells completed in the confined aquifer systems of the coastal plain are extremely unlikely to be impacted by pipeline activities.

Land and Waste

SA8-151

The DEIS indicates that solid and hazardous waste issues were addressed and that a search of Federal and State environmental databases was conducted. DEQ staff with Geographical Information Systems and other tools conducted a 1.0 mile radius search of CERCLA sites, Federal Facilities and RCRA Corrective Action databases in addition to a 0.5 mile radius search of hazardous waste, solid waste, Virginia Remediation Program and petroleum databases for sites along the entire project corridor in Virginia. Staff identified one hundred twenty sites within the search parameters which may impact the project activity.

RCRA Corrective Action Facilities – one within 1.0 mile proximity to the project corridor

- VAD003178126, Royster Co., 100 Pratt Street, Chesapeake, VA 23324

CERCLA Sites – two within 1.0 mile proximity to the project corridor

- VAD002352151, Eppinger & Russell Co. Inc., 4010 Buell Street Money Point, Chesapeake, VA 23324. Not on the NPL.
- VAN000306937, Money Point Creosote Site, 4010 Buell Street, Chesapeake, VA 23324. Not on the NPL.

Hazardous Waste– twenty-three within 0.5 mile proximity to the project corridor

- VAR00511287, Certified Auto Body Collision Repair, 1350 Lee Jackson Highway, Staunton, VA 24402. Small Quantity Generator (SQG)
- VAD017573445, Hershey Chocolate USA, Route 608, Stuarts Draft, VA 24477. SQG
- VAD010031284, Hollister Inc. Plant, Route 608, Stuarts Draft, VA 24477. SQG
- VAD046977187, Nibco Stuarts Draft Div., Route 909 Johnson Street, Stuarts Draft, VA 24477. SQG
- VAR000016147, Target Distribution Center T0560, 345 Mount Vernon Road, Stuarts Draft, VA 24477, SQG
- VAD981108798, Atlantic Pole & Piling – Virginia, 21366 General Thomas Highway, Newsoms, VA 23874. Large Quantity Generator (LQG)
- VAD121829337, Automatic Transmission Exch, 270 Wilroy Road, Suffolk, VA 23434, SQG
- VAR00530444, Lake Gaston Water Treatment, 5416 West Military Highway, Chesapeake, VA 23321. SQG
- VAD175358068, Vanwin Coatings Inc., 2601-A Trade Street, Chesapeake, VA 23323.SQG
- VAR000502476, 7-11 #32868, 2700 Yadkin Road, Chesapeake, VA 23323. SQG

17

SA8-151 Table 4.3.1-3 has been revised with supplemental data provided by Atlantic.

SA8-151 (cont'd)

- VAR000524967, CVS Pharmacy #10013, 2981 South Military Highway, Chesapeake, VA 23323, LQG
- VAD087337820, Astro Pak Corporation, 1624 Steel Street, Chesapeake, VA 23323. LQG
- VAD86294493, Chesapeake Energy Center, 2701 Vepco Street, Chesapeake, VA 23323. SQG
- VAD988192167, Chesapeake LNG Plant, 2700 Vepco Street, Chesapeake, VA 23320. SQG
- VAD988227385, Case Power & Equipment, 4550-A Bainbridge Boulevard, Chesapeake, VA 23327. SQG
- VA0000309138, Virginia Natural Gas, 2500 South Military Highway, Chesapeake, VA 23320. SQG
- VAD988215703, Fast Fare Inc. T/A Crown VA-520, 4317 Bainbridge Boulevard, Portlock, VA 23324. SQG
- VAD000737346, Safety-Kleen Systems Inc., 4545 Bainbridge Boulevard, Chesapeake, VA 23320. LQG/Treatment Storage Disposal Facility (TSDF)
- VAR000524967, CVS Pharmacy #10013, 2981 S. Military Highway, Chesapeake, VA 23323. LQG
- VAD988198511, Amoco #60522-Tanks, 2155 Military Highway, Chesapeake, VA 23320. SQG
- VA0000605493, Chesapeake Fire Station #2, 1205 Freeman Street, Chesapeake, VA 23324. SQG
- VAR000013383, Marine and Industrial Coatings, LLC, 3925 S. Military Highway, Chesapeake, VA 23321. SQG
- VAR000521237, Precon Marine, Inc., 1401 Precon Drive, Suite 102, Chesapeake, VA 23320. SQG

The above information related to hazardous wastes, RCRA/CERCLA sites can be accessed from EPA's websites at https://www3.epa.gov/enviro/, https://rcrainfopreprod.epa.gov/rcrainfoweb/action/main-menu/view and https://www.epa.gov/superfund

Formerly Used Defense Sites (FUDS) – two within 1.0 mile proximity to the project corridor

- St. Julien's Creek Annex, Magazine Road, Chesapeake, VA 23323. NPL.
- Fort Pickett, Darvills Road, Blackstone, VA 23824. Not on NPL.

Solid Waste – eleven within 0.5 mile proximity to the project corridor ()

- SWP 585, Augusta Regional Landfill, 749 Christian Creek Road, Staunton, VA 24401. Active Sanitary Landfill
- SWP 021, Jolivue Landfill, 749 Christian Creek Road, Staunton, VA 24401, Post closure Unit #17. Closed Sanitary Landfill
- SWP 021, Jolivue Landfill, 749 Christian Creek Road, Staunton, VA 24401, Post closure Unit #1. Closed Sanitary Landfill
- SWP 484, SPSA-Boykins Transfer Station, 18449 General Thomas Highway, Boykins, VA 23827. Active Transfer Station
- PBR 596, Military Highway Recycling Center MRF, 5300 West Military Highway, Chesapeake, VA 23321. Active Material Recovery Facility
- SWP440, Dominion - Chesapeake Energy Center, 2701 Vepco Street, Chesapeake, VA 23323. Inactive Industrial Landfill
- SWP481, Dominion - Chesapeake Energy Center, 2701 Vepco Street, Chesapeake, VA 23323. Closed Industrial Landfill - Not Constructed

SA8-151 (cont'd)

- SWP 474, Atlantic Aggregate Recyclers, 2501 South Military Highway, Chesapeake, VA 23324. Closed Inert Landfill
- PBR 619, Select Recycling Waste Services, Inc., 1500 Steel Street, Chesapeake, VA 23323. Active Material Recovery Facility
- PBR 554, Tidewater Green Corporation, 1500 Steel Street, Chesapeake, VA 23323. Clean Closed
- PBR 078, Safety-Kleen Systems Incorporated, 4545 Bainbridge Boulevard, Chesapeake, VA 23323. Clean Closed

Virginia Remediation Program (VRP) – four within 0.5 mile proximity to the project corridor

- VRP00278, GE Tidewater Service Center, 2601 Trade Street, Chesapeake, VA 23323. Industry
- VRP00186, Norfolk Steel, 1500 Steel Street, Chesapeake, VA 23323.
- IndustryVRP00470, Chesapeake Propane Two-Acre Site, 2516 Military Highway, Chesapeake, VA 23320. Land Disposal
- VRP00386, Steuart Investment Company Site (aka Borden Smith Douglas), 1316 Smith Douglas Road, Chesapeake, VA 23320. Industry

Petroleum Releases – within 0.5 mile proximity to the project corridor

Augusta County

- PC#19891789, Michael's Country Store, Star Route 8 Box 101, West Augusta, VA 24485. Release Date: 06/23/1989. Status: Closed.
- PC#19930071, White Way Lunch, 2175 Hankey Mountain Highway, Churchville, VA 24421. Release Date: 07/08/1992. Status: Closed.
- PC#19964813, Sentry Food Mart #29, 313 Springfield Lane, Staunton, VA 24401. Release Date: 02/02/1996. Status: Closed.PC#19985057, Sentry Food Mart #29, 313 Springfield Lane, Staunton, VA 24401. Release Date: 10/29/1997. Status: Closed.
- PC#20056015, Sentry Food Mart #29, 313 Springfield Lane, Staunton, VA 24401. Release Date: 02/25/2005. Status: Closed.
- PC#20066015, Sentry Food Mart #29, 313 Springfield Lane, Staunton, VA 24401. Release Date: 08/10/2005. Status: Closed.
- PC#20076159, Pantry #3713, 313 Springfield Lane, Staunton, VA 24401. Release Date: 06/14/2007. Status: Closed.
- PC#20116067, Pantry #3713, 313 Springfield Lane, Staunton, VA 24401. Release Date: 01/05/2011. Status: Closed.
- PC#20126085, Pantry #3713, 313 Springfield Lane, Staunton, VA 24401. Release Date: 01/24/2012. Status: Closed.
- PC#19964876, Eastover Farm, Route 722, Churchville, VA 24421. Release Date: 06/17/1996. Status: Closed.
- PC#19975086, Deerfield Community Center, Route 600, Deerfield, VA 24432. Release Date: 01/16/1997. Status: Closed.
- PC#20006133, Deerfield Grocery, Box 209, Deerfield, VA 24432. Release Date: 03.27/2000. Status: Closed.

SA8-151 (cont'd)

- PC#20016149, Zastowny Farm, Guthrie Road, Staunton, VA 24401. Release Date: 03/22/2001. Status: Closed.
- PC#20046088, Darrell Via Residence, 330 Wayne Avenue, Stuarts Draft, VA 24477. Release Date: 01/06/2004. Status: Closed.
- PC#20086057, Hoecker Property, 319 Wayne Avenue, Stuarts Draft, VA 24477. Release Date: 12/21/2007. Status: Closed.
- PC#20116075, Mckee Foods-Stuarts Draft, 272 Patton Farms Road, Stuarts Draft, VA 24477. Release Date: 01/28/2011. Status: Closed.
- PC#20126014, Deno's Food Mart 9, 383 White Hill Road, Mint Spring, VA 24463. Release Date: 08/18/2011. Status: Closed.
- PC#20126045, Starkey Residence, 2120 Tinkling Spring Road, Stuarts Draft, VA 24477. Release Date: 11/03/2011. Status: Closed
- PC#20136014, Gladys Washington Residence, 370 Mill Creek Lane, Stuarts Draft, VA 24477. Release Date: 08/30/2012. Status: Closed.

Staunton City

- PC#19995181, Days Inn – Staunton, 372 White Hill Road, Staunton, VA 24401. Release Date: 02/24/1999. Status: Closed.
- PC#20006125, Forsythe Rental Property, Route 10 Box 466C, Staunton, VA 24401. Release Date: 03/15/2000. Status: Closed.
- PC#20006138, Tuttle Property, Route 10, Staunton, VA 24401. Release Date: 04/03/2000. Status: Closed.

Nelson County

- PC#20036137, Graves Grocery, 1779 Rockfish Valley Highway, Nellysford, VA 22958. Release Date: 06/02/2003. Status: Closed.
- PC#20086081, Graves Grocery, 1779 Rockfish Valley Highway, Nellysford, VA 22958. Release Date: 02/22/2008. Status: Closed.
- PC#20156110, Graves Grocery, 1779 Rockfish Valley Highway, Nellysford, VA 22958. Release Date: 03/10/2015. Status: Closed.
- PC#20056068, Janice Hopkins Residence, 165 Fitchfield Lane, Nellysford, VA 22958. Release Date: 11/29/2004. Status: Closed.
- PC#20066006, Woodson's Grocery, 2920 James River Road, Wingina, VA 24599. Release Date: 07/20/2005. Status: Closed.
- PC#20086078, Ridge Crest Baptist Church, 14654 Thomas Nelson Highway, Lovingston, VA 22949. Release Date: 02/19/2008. Status: Closed.
- PC#20126116. Wintergreen Grocers, 2184 Rockfish Valley Highway, Nellysford, VA 22958. Release Date: 04/04/2012. Status: Closed

Buckingham County

- PC#19984358, VDOT Andersonville Area HQ, Route 640 and 638, Andersonville, VA 23911. Release Date: 04/28/1998. Status: Closed.

SA8-151 (cont'd)

- PC#20097151, Betty Brown Property, 5943 South James Madison Highway, Buckingham, VA 23901. Release Date: 06/25/2009. Status: Closed.
- PC#20132011, Charles Fernandez, 1105 Old Curdsville Road, Farmville, VA 23901. Release Date: 07/17/2012. Status: Closed.

Cumberland County

- PC#20097091, Jimmie Morris Property, 83 Raines Tavern Road, Farmville, VA 23901. Release Date: 12/11/2008. Status: Closed.
- PC#20102251, George Snead Property, 1240 Plank Road, Farmville, VA 23901. Release Date: 05/25/2010. Status: Closed.
- PC#20132255, Larry Skweres Residence, 74 Raines Tavern Road, Farmville, VA 23901. Release Date: 02/26/2013. Status: Closed.

Nottoway County

- PC#20102162, Childress Property, 2733 Indian Oak Road, Crewe, VA 23930. Release Date: 02/24/2010. Status: Closed.
- PC#20132029, Arthur Werner Property, 3668 Indian Oak Road, Crewe, VA 23930. 07/25/2012. Status: Closed.
- PC#20142349, Irving J. Arnold Property, 2095 West Creek Road, Crewe, VA 23930. Release Date: 03/20/2014. Status: Closed.
- PC#20152351, Walter D. Martin Residence, 1946 Cellar Creek Road, Blackstone, VA 23824. Release Date: 03/23/2015. Status: Closed.
- PC#20162162, Lanwood Lynch Residence, 1933 Mountain Hall Road, Crewe, VA 23930. Release Date: 07/30/2015. Status: Closed.
- PC#20162398, Jerry Myers Residence, 491 Green Gable Road, Blackstone, VA 23824. Release Date: 06/28/2016. Status: Closed.

Dinwiddie County

- PC#20084130, Marion Hays Coburn Estate Property, 10622 West Ziles Road, Blackstone, VA 23824. Release Date: 08/28/2007. Status: Closed.
- PC#20084129, Wallace Mary Lee Residence, 10620 West Ziles Road, Blackstone, VA 23824. Release Date: 08/28/2007. Status: Closed.

Brunswick County

- PC#19953094, Abell Lumber Corporation, Highway 634, Lawrenceville, VA. Release Date: 12/15/1994. Status: Closed.
- PC#19953094, Transferred to Library of VA, Highway 634, Lawrenceville, VA 23868. Release Date: 12/15/1994. Status: Closed.
- PC#20024465, Daniel Russell Residence, 4453 Reedy Creek Road, Freeman, VA 23856. Release Date: 06/20/2002. Status: Closed.

SA8-151 (cont'd)

Greensville County

- PC#19880505, TWS Grocery, 5234 Skippers Road, Skippers, VA 23879. Release Date: 12/16/1987. Status: Closed.
- PC#20094373, Robinson James E. Property, 8319 Skippers Road, Skippers, VA 23879. Release Date: 03/17/2009. Status: Closed.

Southampton County

- PC#20005145, Cooke Betty M. Residence, 28229 Grays Shop Road, Newsoms, VA 23874. Release Date: 12/20/1999. Status: Closed.

City of Suffolk

- PC#19992300, Holland Volunteer Fire Department, 6666 O'Kelly Drive, Suffolk, VA 23437. Release Date: 12/09/1998. Status: Closed.
- PC#20035090, Williamson Callie Residence, 7508 South Quay Road, Suffolk, VA 23437. Release Date: 02/20/2003. Status: Closed.
- PC#20165090, Williamson Callie Residence, 7508 South Quay Road, Suffolk, VA 23437. Release Date: 11/12/2015. Status: Closed.
- PC#20135074, Holland Food Mart, 5703 Holland Road, Suffolk, VA 23437. Release Date: 01/28/2013. Status: Closed
- PC#20145170, Knight Residence, 7628 S. Quay Road, Suffolk, VA23437. Release Date: 04/04/2014. Status: Closed.

City of Chesapeake

- PC#19901588, Deep Creek Pharmacy, 622 N. George Washington Highway, Chesapeake, VA 23323. Release Date: 05/11/1990. Status: Closed.
- PC#19901809, Schwerman Trucking Co. of VA, 2956 S. Military Highway, 841 Canal Drive, Chesapeake, VA 23323. Release Date: 06/20/1990. Status: Closed.
- PC#19920240, Schwerman Trucking Co. of VA, 2956 S. Military Highway, 841 Canal Drive, Chesapeake, VA 23323. Release Date: 08/02/1991. Status: Closed.
- PC#19910846, Waste Management of Hampton Roads, 3016 Yadkin Road, Chesapeake, VA 23323. Release Date: 12/13/1990. Status: Closed.
- PC#19911464, Alum Plant, 1312 McCloud Road, Chesapeake, VA 23320. Release Date: 04/04/1991. Status: Closed.
- PC#19911804, IMTT – Chesapeake Terminal, 2801 S. Military Highway, Chesapeake, VA 23323. Release Date: 04/22/1991. Status: Closed.
- PC#19931500, IMTT – Chesapeake Terminal, 2801 S. Military Highway, Chesapeake, VA 23323. Release Date: 02/04/1993. Status: Closed.
- PC#20065038, IMTT – Chesapeake Terminal, 2801 S. Military Highway, Chesapeake, VA 23323. Release Date: 09/19/2005. Status: Closed.
- PC#19921198, Chesapeake Liquid Natural Gas Station, Vepco Street, Chesapeake, VA 23323. Release Date: 11/15/1991. Status: Closed.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

SA8-151 (cont'd)

- PC#19921184, Mid Atlantic Repair Inc., 2601 Trade Street, Chesapeake, VA 23323. Release Date: 01/03/1992. Status: Closed.
- PC#19921741, Chesapeake Energy Center, 2701 Vepco Street, Chesapeake, VA 23323. Release Date: 03/20/1992. Status: Closed.
- PC#19931091, Chesapeake Energy Center, 2701 Vepco Street, Chesapeake, VA 23323. Release Date: 12/01/1992. Status: Closed.
- PC#19931477, Chesapeake Energy Center, 2701 Vepco Street, Chesapeake, VA 23323. Release Date: 02/03/1993. Status: Closed.
- PC#19931476, Chesapeake Energy Center, 2701 Vepco Street, Chesapeake, VA 23323. Release Date: 02/03/1993. Status: Closed.
- PC#19940611, Chesapeake Energy Center, 2701 Vepco Street, Chesapeake, VA 23323. Release Date: 10/11/1993. Status: Closed.
- PC#19944554, Chesapeake Energy Center, 2701 Vepco Street, Chesapeake, VA 23323. Release Date: 06/28/1994. Status: Closed.
- PC#20015047, Chesapeake Energy Center, 2701 Vepco Street, Chesapeake, VA 23323. Release Date: 10/27/2000. Status: Open.
- PC#19930307, Crown VA 520, 4317 Bainbridge Boulevard, Chesapeake, VA 23324. Release Date: 08/14/1992. Status: Closed.
- PC#19940447, Crown VA 520, 4317 Bainbridge Boulevard, Chesapeake, VA 23324. Release Date: 09/13/1993. Status: Closed.
- PC#20005235, Crown VA 520, 4317 Bainbridge Boulevard, Chesapeake, VA 23324. Release Date: 05/24/2000. Status: Closed.
- PC#20035035, Crown VA 520, 4317 Bainbridge Boulevard, Chesapeake, VA 23324. Release Date: 10/12/2002. Status: Closed.
- PC#19932101, Rennie's Shell #633, 3013 S. Military Highway, 841 Canal Drive, Chesapeake, VA 23323. Release Date: 04/22/1993. Status: Closed.
- PC#19943196, Short Property, 2952Military Highway, Chesapeake, VA 23323. Release Date: 03/30/1994. Status: Closed.
- PC#19930539, 7-Eleven Store 1016-20291, 841 Canal Drive, Chesapeake, VA 23323. Release Date: 08/25/1994. Status: Closed.
- PC#20055130, 7 Eleven 20291, 841 Canal Drive, Chesapeake, VA 23323. Release Date: 02/10/2005. Status: Closed.
- PC#19940630, Deep Creek Pumping Station, 1221 Shell Road, 841 Canal Drive, Chesapeake, VA 23323. Release Date: 10/13/1993. Status: Closed.
- PC#19940817, Cundiff Residence, 620 Rock Drive, Chesapeake, VA 23323. Release Date: 11/12/1993. Status: Closed.
- PC#19943378, Murry Residence, 217 Jarvis Road, Chesapeake, VA 23323. Release Date: 04/12/1994. Status: Closed.
- PC#19952259, Miller Residence, 3455 Gallberry Road, Chesapeake, VA 23323. Release Date: 10/11/1994. Status: Closed.
- PC#19962217, Box USA Group, 723 Fenway Avenue, Chesapeake, VA 23323. Release Date: 08/02/1995. Status: Closed.
- PC#19962333, Sentry Food Mart #4, 5191 West Military Highway, Chesapeake, VA 23321. Release Date: 02/01/1996. Status: Closed.
- PC#20125058, Pantry Site 3698 dba Kangaroo, 5191 West Military Highway, Chesapeake, VA 23321. Release Date: 10/11/2011. Status: Closed.

SA8-151 (cont'd)

- PC#19982408, Smith Douglas Plant Former, 1316 Smith Douglas Road, Chesapeake, VA 23324. Release Date: 06/17/1998. Status: Closed.
- PC#19992240, Tri-Port Terminals, 1324 McCloud Road, Chesapeake, VA 23320. Release Date: 11/05/1997. Status: Open. (this is the southern portion of property, not addressed by PC#20165149)
- PC#20165149, Tri-Port Terminals – North of McCloud Road, 1324 McCloud Road, Chesapeake, VA 23320. Release Date: 11/05/1997. Status: Closed.
- PC#19982273, Watkins Motor Lines, Inc. 2701 Trade Street, Chesapeake, VA 23323. Release Date: 11/17/1997. Status: Closed.
- PC#20005211, GSB Auto Auctions, 3064 Yadkin Road, Chesapeake, VA 23323. Release Date: 05/03/2000. Status: Closed.
- PC#20025093, Chesapeake City – Sewage Pump Station 22, 1241 Saul Drive, Chesapeake, VA 23320. Release Date: 05/22/2002. Status: Closed.
- PC#20025103, Hampton Roads Airport, 5172 W. Military Highway, Chesapeake, VA 23321. Release Date: 06/26/2002. Status: Closed.
- PC#20045038, Quest Transport LLC, 4419 Bainbridge Boulevard, Chesapeake, VA 23320. Release Date: 09/10/2003. Status: Closed.
- PC#20045044, Sexton Shirley Property – Hurricane Isabell, 4745 Sunray Avenue, Chesapeake, VA 23321. Release Date: 09/22/2003. Status: Closed.
- PC#20045056, Everett Express Incorporated, 3153 S. Military Highway, Chesapeake, VA 23323. Release Date: 09/26/2003. Status: Closed.
- PC#20045160, Mcmillan Mobile Home Park, 4535 Bainbridge Boulevard, Chesapeake, VA 23320. Release Date: 03/16/2004. Status: Closed.
- PC#20065144, Falcon Avenue Property, SE Intersection Falcon Avenue and Rte. 460, Chesapeake, VA 23320. Release Date: 04/18/2006. Status: Closed.
- PC#20065445, Eva Gardens Property – Stoney Mobile Home Park, 4425 Bainbridge Boulevard, Chesapeake, VA 23320. Release Date: 04/28/2006. Status: Closed.
- PC#20075007, Old Dominion Container Repair Incorporated, 3004 Yadkin Road, Chesapeake, VA 23323. Release Date: 07/25/2006. Status: Closed.
- PC#20135004, Khol Property, 501 Hopewell Drive, Chesapeake, VA 23323. Release Date: 0723/2012. Status: Closed.
- PC#20145152, OneSteel Recycling Inc., 2649 S. Military Highway, Chesapeake, VA 23323. Release Date: 02/03/2014. Status: Closed.
- PC#20145151, Chesapeake Public Works Operations Complex, 3316 S. Military Highway, Chesapeake, VA 23323. Release Date: 03/10/2014. Status: Closed.
- PC#20175199, Bluebird Homes Property, 114 Lake Street, Chesapeake, VA 23322. Release Date: 01/27/2017. Status: Open.

Recommendations:

SA8-152

- **Section 4.8, Volume 1** - Land Use, Special Interests Area, and Visual Resources, 4.8.1.1 Forest Land, Timber Removal Plan - It is recommended that all slash, chips and debris shall be managed in accordance with all applicable Federal, State, and local laws and regulations. Additionally, open burning in Virginia is only allowed in accordance with 9VAC20-81-95 of the Virginia Solid Waste Management Regulations (VSWMR). Localities may have additional open burning restrictions that should be consulted.

SA8-152 The final EIS has been updated to reflect the VDEQ's recommended additions to the Timber Removal Plan.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

SA8-153
- **Section 5.0, Volume 1** - Conclusions and Recommendations & 5.1.8 Land Use, Special Interests Area, and Visual Resources - It is recommended to include a waste and debris management implementation plan (to be developed by Atlantic/DTI) alongside with other plans listed in this section.

SA8-154
- **Section 5.0 of the Contaminated Media Plan** lists the Environmental Inspectors (EIs) roles and responsibilities as defined by the Federal Energy Regulatory Commission's (FERCs) Upland and Erosion Control, Revegetation, and Maintenance Plan (Plan). In addition to the roles and responsibilities described in FERCs Plan, it is recommended that EIs includes a more specific training and proper field equipment for analyses of soil, sediment and groundwater contamination. If soil, sediment or groundwater contamination is found, Atlantic and/or DTI should contact the appropriate regulating agency.
- **Section 6.0 of the Contaminated Media Plan**: It is recommended that all potentially contaminated soil is managed in accordance with all applicable Federal, State, and local laws and regulations. Additional recommendations for managing contaminated media would be to initially test representative soil and groundwater samples for the expected contaminant class based on the current or previous source. A phase I assessment of past land use of the contaminated area discovered would allow testing for the appropriate analysts.
- **Section 7.0 of the Contaminated Media Plan**: it is recommended to address situations where contamination found to be a health or safety hazard. The area shall be evacuated until trained personal are on-site in addition to specifically identifying the appropriate Federal, State or local agency (ies) to contact.
- In addition to the Contaminated Media Plan, it is recommended for Atlantic/DTI to develop a waste and debris management plan for utilizing all excess material and debris in accordance with all applicable Federal, State, and local laws and regulations.

SA8-155
- ***Draft Open Burning Plan*** -Localities may have open burning restrictions, permits, etc. that should be consulted.

SA8-156
- **Section 3.0, *Timber Removal Plan*-** Training states that training to be conducted as listed in the FERCs Plan. It is recommended that the training be more detailed and related to each location in accordance with all applicable Federal, State and local laws and regulations pertaining to the removal of timber.
- **Section 9.1 General Requirements** under Planned Timber Removal Operations references management of timber, slash, and stumps. It is recommended that all timber, slash, and stumps are managed in accordance with all applicable Federal, State, and local laws and regulations. Localities should be consulted as they have open burning restrictions.

SA8-157
- **Volume 2 part 5 Appendix G (page/38/G48) of the Construction, Operations, and Maintenance Plan** applying to the national forest service lands references "Atlantic's Waste Management Plan." This Waste Management Plan has not yet been filed with FERC as informed by a DTI representative.

SA8-158
- **Section 3.6.10** - It is recommended that the EIs have more specific training and proper field equipment for contamination analyses of soil, sediment and groundwater than currently listed in FERCs Plan. If soil, sediment or groundwater contamination is found, Atlantic and/or DTI should contact the appropriate regulating agency(ies).

SA8-153 See the response to comment SA8-3.

SA8-154 See the response to comment SA8-104.

SA8-155 The final EIS has been updated to reflect the VDEQ's recommended additions to the Timber Removal Plan.

SA8-156 The final EIS has been updated to reflect the VDEQ's recommended additions to the Timber Removal Plan.

SA8-157 Comment noted.

SA8-158 See the response to comment SA8-104.

Corrections

SA8-159
- **Section 6.0, C. of the Contaminated Media Plan**, The Virginia Department of Emergency Management reporting numbers for the 24-hour in-state calls is 1-804-674-2400 and the 24 hours, out-of-state calls is 1-800-642-3074.

SA8-160
- **Volume 1 Section 4.0 Environmental Analysis**, 4.3 Water Resources, 4.3.1.6 Contaminated Groundwater: In addition to the summary of sites on Table 4.3.1-3 (the Table) lists Contaminated Site, Landfills, and Leaking Underground Storage Tanks Near the ACP, Section 4.8 Land Use, Special Interests Area, and Visual Resources, 4.8.7 Contaminated Sites, Section 5.0 Conclusions and Recommendations, 5.1.3.1

Spill Prevention, Control, and Countermeasure Plan

SA8-161
- Comment: SPCC Plan p.2 – Section 4.0.A. See text below. The statutory requirements for making notifications in the event of an oil spill are "immediately upon learning of the discharge". The language below suggests a process that may result in a delay in reporting.
- On page 7 Section 5.0.C it says "Concrete coating activities and washout activities will not be performed within 100 feet of wetlands, waterbodies, or springs, or within 300 feet of karst features unless the location is an existing industrial site designated for such use." Additionally, when close to a waterbody, containment structures should be placed around the area in order to minimize potential for runoff
- **Spill Coordinator** – Each Contractor will appoint a Spill Coordinator who will be responsible for coordinating Contractor Work Crews for spill cleanup, conducting site investigations, and completing spill reports. The Spill Coordinator will report spills to an Environmental Inspector (EI) 2, who will initiate the spill reporting process (see Section 7.0). The Spill Coordinator will be responsible for completing a Spill Report Form (Attachment A) **within 24 hours of the occurrence of a spill, regardless of the size of the spill.**
- The Preventive Measures in section 5.0 are textbook comprehensive and likely will be hard to achieve consistently in the field.
- Section 5.0.A.1.g., page 3- The 300 foot distance from karst areas for hazardous materials will require extensive subsurface geologic data to maintain compliance in all instances.
- Section 5.0.A.1.j., page 4 - This should state immediate reporting to DEQ, EPA and others. The language below suggests a process that may result in a delay in reporting.
- Section 7.C.3.a and b., page 8. These oil spill reporting requirement do not specify a timeframe for reporting. These reporting requirements should clearly indicate that spills should be reported "immediately upon learning of the discharge". The cited sections of Virginia water control law specify that spillers must notify the *"director or coordinator of emergency services….for the political subdivision in which the discharge occurs and any other political subdivision reasonably expected to the affected by the discharge, and the appropriate federal authorities…"*. This is not addressed in the spill reporting section of the plan.

Air

SA8-162
- **Construction:** Construction activities associated with the ACP project in Virginia are subject to the Air Pollution Control Regulations regarding such activities including open burning (9 VAC 5-130 et seq.) and fugitive dust (9 VAC 5 -50-60 et seq.). The project sponsor should ensure that

26

SA8-159 See the response to comment SA8-104.

SA8-160 Comment noted.

SA8-161 The comments related to Atlantic's SPCC Plan are noted.

SA8-162 See the response to comment SA8-80.

SA8-162 (cont'd)

construction activities comply with these and any other applicable state regulations. While not required, additional mitigation of construction related air pollutants could be achieved through the use of cleaner construction and related equipment.

- **Permitting:** A new stationary source compressor station in Buckingham County is included in this project. As such an air quality permit will be required for this source. DEQ air permitting staff have met with the project sponsor and it appears that a minor new source review permit will be needed for this facility.
- **Operations:** A portion of this project goes through Suffolk and Chesapeake Cities which are part of a VOC and NOx emissions control area and therefore would be subject to any applicable existing source regulations related to its control area status.
- **GHG Considerations:** Concerns have been expressed regarding the GHG implications of this project, especially in terms of methane emissions from extraction, transmission, and combustion of the natural gas involved. Since the natural gas that will be transported by this pipeline is not being produced in Virginia, the Commonwealth has no control over this aspect of the project. However, the EPA has recently promulgated federal regulations that cover the extraction and transmission activities of the natural gas industry to reduce methane emissions. Furthermore, the project sponsor will implement a pipeline management and monitoring program that should limit the methane emissions from leakage. Finally, the end use of natural gas in the power generation sector is now subject to state and federal GHG permitting requirements, and to pending NSPS/ESPS for electric generation facilities. A prime example of this is the recent permit issued by DEQ to the Dominion Greensville Power Station that contained the most stringent CO2 emission rate limitation in the Country.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

May 16, 2016

Ms. Elizabeth Hester
Environmental Specialist
Dominion Transmission Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060-3308

Subject: Dominion Transmission Inc. (DTI) - Atlantic Coast Pipeline Project

Dear Ms. Hester:

The Virginia Department of Environmental Quality (DEQ) is reviewing DTI's 2016 Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management. As you know, the proposed Atlantic Coast Pipeline project that will transect the Commonwealth will be covered under these Annual Standards and Specifications. Due to the scope of this project, DEQ is requiring a number of conditions in addition to those established under your Annual Standards and Specifications.

SA8-163

The specific requirements for this project are as follows:

1. In addition to DTI's internal review process, an individual project-specific plan is required to be submitted for DEQ review and approval,
2. The project-specific plan, DEQ approval, and supporting documents must be posted on DTI's website for public view,
3. Inspection reports conducted by DTI as well as complaint logs and complaint responses must be submitted to DEQ, and
4. As authorized under the Virginia Erosion and Sediment Control Law and the Stormwater Management Act, DTI is required to pay DEQ to cover the costs incurred from hiring additional technical expertise to assist DEQ in plan review and compliance activities.

SA8-163 The comments related to the VDEQ, Office of Water Permits permitting requirements are noted. See also the response to SA6-1.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

Should you have any questions or would like to discuss further, please contact me at (804) 698-4285 or frederick.cunningham@deq.virginia.gov.

Sincerely,

Frederick K. Cunningham
Director, Office of Water Permits

c: Melanie Davenport, DEQ
Benjamin Leach, DEQ
Larry Gavan, DEQ
Hannah Zegler, DEQ

This letter is intended to provide information on what information DEQ believes is needed in order to fully evaluate your Annual Standards and Specifications and is not a final determination or case decision under the Administrative Process Act. In the event that discussions with staff do not lead to a satisfactory resolution of the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. For further information on the Process for Early Dispute Resolution, please see Agency Policy Statement No. 8-2005 posted on the Department's website under "Programs", "Water", "Permitting & Compliance" at the following address:

http://www.deq.virginia.gov/Portals/0/DEQ/Enforcement/Guidance/process%20for%20early%20dispute%20resolution%20no8_2005.pdf.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

MEMORANDUM

To: Julia Wellman, DEQ Office of Environmental Impact Review

From: Meghann Quinn, DEQ Office of Pollution Prevention

Date: February 28, 2017

Subject: DEQ #16-248F, Atlantic Coast Pipeline

DEQ advocates that principles of pollution prevention and sustainability be used in all projects as well as during operations. Effective siting, planning, and on-site Best Management Practices (BMPs) will help to ensure that environmental impacts are minimized. Pollution prevention and sustainability techniques can be included in decisions related to materials, design and operational procedures that will facilitate the reduction of environmental wastes at the source.

SA8-164

We have several recommendations that may be helpful:

- Consider the development of an effective Environmental Management System (EMS). An effective EMS will ensure that the proposed project is committed to complying with environmental regulations, reducing risk, minimizing environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program (VEEP). VEEP provides recognition, annual permit fee discounts and the possibility for alternative compliance methods.
- Consider reuse and recycling opportunities when evaluating waste handling, including mulching of brush and timber and water reuse opportunities.
- Consider contractors' commitment to the environment when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for construction and design, including the use of native species and pollinators when re-establishing vegetation.
- Integrate pollution prevention techniques into maintenance and operation.

SA8-164 The comments related to the VDEQ, Office of Pollution Prevention permitting requirements are noted. See also the responses to comments SA6-1 and SA8-49.

SA8-164 (cont'd)

- Encourage supply chain partners to implement pollution prevention, sustainability, and environmental management systems.

DEQ's Office of Pollution Prevention provides information and technical assistance relating to pollution prevention techniques and EMS. If interested, please contact Meghann Quinn, (804) 698-4021.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

20170406-5489 FERC PDF (Unofficial) 4/6/2017 3:02:35 PM

Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director

Rochelle Altholz
Deputy Director of Administration and Finance

David C. Dowling
Deputy Director of Soil and Water Conservation and Dam Safety

Thomas L. Smith
Deputy Director of Operations

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

MEMORANDUM

DATE: March 31, 2017

TO: Julia Wellman, DEQ

FROM: Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT: DEQ 16-248F, ATLANTIC COAST PIPELINE DRAFT EIS

Division of Planning and Recreation Resources

The Department of Conservation and Recreation (DCR), Division of Planning and Recreational Resources (PRR), develops the *Virginia Outdoors Plan* (VOP) and coordinates a broad range of recreational and environmental programs throughout Virginia. These include the Virginia Scenic Rivers program; Trails, Greenways, and Blueways; Virginia State Park Master Planning and State Park Design and Construction.

We have reviewed the proposed project and the latest proposed alignment. Section 4 addresses most concerns regarding the resources previously submitted FERC in a letter dated June 2016. We have the following comments regarding potential impacts to the LWCF property known as Nottoway Lake.

SA8-165 According to the information currently in our files, Nottoway Lake (51-00232) is protected in perpetuity by section 6(f) (3) of the Land and Water Conservation Fund Act. Section 6 (f) (3) of the Land & Water Conservation Fund Act states that: "No property acquired or developed with assistance under this section shall without approval of the Secretary [of the Interior] be converted to other than public outdoor recreation uses". The LWCF program takes into account that in certain instances there is no alternative to converting a portion of a LWCF property. In those extreme cases where there is no feasible alternative, a conversion of use process must be initiated with DCR for approval from the National Park Service. In short, the conversion of use process requires that a suitable piece of replacement property be found before a conversion occurs at a LWCF protected site. "Suitable" means equivalent in fair market value and can serve as a viable public outdoor recreation area without reliance upon adjoining or additional areas. Information about the conversion of use process is outlined on the DCR website at http://www.dcr.virginia.gov/recreational_planning/lwcfconuse.shtml. Conversion of use processes must be initiated with DCR by the governmental body that owns the property. In this case, Nottoway County and Synthia Waymack of DCR, synthia.waymack@dcr.virgini.gov.

SA8-166 Additionally, the project will be impacting the following statewide trails (reference VA code 10.1-204): The Great Eastern Trail, the Appalachian National Scenic Trail, the James River Heritage Trail, the East Coast Greenway and the Beaches to Bluegrass Trail. Potential mitigation projects could address gaps in the four developing trail systems; please contact Jennifer Wampler for more information at Jennifer.wampler@dcr.virginia.gov. We recommend coordination with the National Park Service and the U.S. Forest Service regarding impacts to the Appalachian National Scenic Trail.

600 East Main Street, 24th Floor | Richmond, Virginia 23219 | 804-786-6124

State Parks • Soil and Water Conservation • Outdoor Recreation Planning
Natural Heritage • Dam Safety and Floodplain Management • Land Conservation

SA8-165 Based on consultations with and a map provided by the VDCR's LWCF and RTP Administrator, ACP would be over 1.5 miles from lands funded by the Land and Water Conservation Fund Act at Nottoway Lake.

SA8-166 Section 4.8.5 has been updated to include discussions of planned state trails identified by the commentor.

SA8-167 We have done a desk top gap analysis of known water access sites along three established water trails that the proposed pipeline crosses: the Meherrin River, Nottoway River, and the James River. Water access is a key feature to create a vibrant recreation experience and a top need according to the 2013 VOP. Therefore, we suggest that the project proponent coordinate with local governments to explore the possibility of creating water access sites at water crossings that correspond with established water trails.
We also recommend that native plant species be used to restore areas cleared along the proposed route.

Division of Soil & Water Conservation

SA8-168 We recommend that any BMPs impacted by the pipeline be reinstalled or relocated, e.g. livestock fences and stream crossings re-erected, watering systems relocated, cover crops reimbursed to the farmers, disturbed areas re-vegetated, etc. One impact that cannot be fully mitigated for will be the loss of trees in planted buffers, which if cost shared would be from combined federal/state contributions. Since these cannot be replanted near a buried pipeline, there will be some degree of permanent impact. Ground cover vegetation however should be reestablished.

Division of Dam Safety and Floodplain Management

SA8-168a A project in a community's special flood hazard area (SFHA), as determined by the flood insurance rate map (FIRM) that is provided by FEMA, must comply with the community's floodplain ordinance. If the pipeline will be underground in the SFHA, the original contours restored, and all structures associated with the pipeline are outside of the SFHA, the project should have no effect on the floodplains in these communities. If the floodplain will be modified, coordination with the locality is advised.

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage's (DCR-DNH) mission is conserving Virginia's biodiversity through inventory, protection, and stewardship. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

DCR-DNH previously provided comments on the Atlantic Coast Pipeline Project under FERC Docket PF15-6-000 on June 5, 2015 (Accession number 20150605-5037) and September 4, 2015 (Accession number 20150904-5192); and under FERC Docket CP15-554-000 on October 9, 2015 (Accession number 20151009-5088), December 15, 2015 (Accession number 20151215-5207), June 9, 2016 (Accession number 20160609-5237), July 27, 2016 (Accession number 20160727-5064), and January 30, 2017 (Accession number 20170130-5221).

DCR-DNH offers the following comments on the Atlantic Coast Pipeline Draft Environmental Impact Statement (DEIS), associated documents and the updated pipeline footprint. DCR-DNH considers the pipeline footprint to include the construction right-of -way, access roads, and associated infrastructure.

Section 4.0 Environmental Analysis

4.1 Geology
From DEIS, Page 4-6, paragraph 1, bullet 3- "*Contact landowners to determine the location of private water wells and water supply springs within 150 feet (500 feet in karst terrain) of approved construction workspaces, including near locations where blasting may be required. Pending landowner permission, preconstruction well testing would be conducted to evaluate water quality and yield. In the event that construction has adversely affected the water quality and/or yield of a well, Atlantic and DTI would conduct post-construction testing and provide an alternative water source or a mutually agreeable solution.*"

SA8-167 See the response to comment SA8-3.

SA8-168 Restoration and revegetation procedures are discussed throughout sections 2 and 4 of the EIS.

SA8-168a See the response to comment SA8-3.

SA8-169 Dye traces within the general project area have shown connections of karst features to springs and wells as far as 7 miles away. For areas northwest of the Staunton/Pulaski/North Mountain Fault system (e.g. the Ridge and Valley), dye tracing studies should be performed wherever both 1) the ACP crosses karst terrain AND 2) prior dye tracing information does not exist or is insufficient. Fortunately, extensive dye tracing has been done along several areas crossed by the ACP. Dye tracing southeast of the Staunton-Pulaski-North Mountain fault system (in the Great Valley) is difficult to perform and can produce misleading results. Professional discretion on the part of ACP's consultants, in consultation with agency expertise from DCR-DNH , VDEQ, VDMME and the USGS, should be used to determine which areas in the Great Valley are appropriate for dye trace studies (e.g. Cochran's Cave area in Augusta County). Further discussion on this is under comment on **Appendix-Karst Terrain Assessment Construction, Monitoring, and Mitigation Plan, filed 1/27/2017, FERC Accession number 20170127-5202** below.

SA8-170 **4.1.2.3 Karst Geology**
Page 4-10, paragraph (item) 2 - Should note that globally significant cave systems are located in the "Folded Appalachian Subsection of the Valley and Ridge province". Most significantly, these include the caves of Burnsville Cove, with ~ 100km of mapped subterranean passages. Items 1 and 3 provide more description than item 2, making it appear that item 2 (the Ridge and Valley) is less significant in terms of caves and karst development.

SA8-171 Page 4-14, Highland County - Please note that DCR-DNH did not comment on the Valley Center area (Dever Spring, et cetera) because we do not currently have designated significant caves or documented cave biota in the area; however it is sensitive from a karst perspective. DCR-DNH's involvement in the area to date has been performance of dye trace studies showing the recharge area of several springs. DCR-DNH recommends avoidance of karst features to the maximum extent practicable and monitoring of resurgence springs.

SA8-172 Page 4-15, Cochran's Cave - There was a miscommunication in regards to the Biodiversity Rank (B-Rank) of Cochran's Cave. Only the state-listed tricolored bat (*Perimyotis subflavus,* G2G3/S1S3/NL/LE*)* is known to be associated with this cave. The B-rank is 4th order globally, not first order, placing it as moderately significant from a biodiversity perspective. However, additional recent biological inventory resulted in collection of cave obligate pseudoscorpions that are likely to be very rare globally, increasing the sites B-rank. Although the cave stream is fed by upwelling water in the rear of the cave, the federally threatened Madison Cave isopod (*Antrolana lira,* G2G4/S2/LT/LT*)* has not been documented from the cave. A relatively common species, Price's cave isopod (*Caecidotea pricei,* G5/S3/NL/NL) has been collected from the cave stream. Cochran's cave is a state designated significant cave under the Virginia Cave Protection Act of 1979.

SA8-173 Page 4–17, DCR-DNH recommends the addition of dye trace studies, after final approval but prior to construction, as necessary to determine the subterranean flow of water entering karst features proximal to the project ROW or construction roads. In the case of a release (i.e. discharge of sediment or contaminant to a karst feature), potentially impacted stakeholders can be informed in a timely manner and spill recovery equipment can be deployed at appropriate location(s.) At the time of the DEIS preparation, all springs and wells potentially impacted by the ACP in karst had not been identified.

3

SA8-169 Comment noted. Section 4.1.2.3 has been revised to recommend that Atlantic provide the results of a fracture trace/lineament analysis, along with evaluation of existing dye trace study results, prior to construction.

SA8-170 Comment noted. Section 4.1.2.3 has been revised to add emphasis to the significance of caves within the Folded Appalachian Subsection of the Valley and Ridge Province.

SA8-171 Comment noted.

SA8-172 Comment noted. The referenced text has been revised accordingly.

SA8-173 Recommendation noted. Dye trace studies would be considered after completion of the fracture trace/lineament analysis and evaluation of existing dye trace study results. See also the response to comment SA8-169.

SA8-174

Appendix-Karst Terrain Assessment Construction, Monitoring, and Mitigation Plan, filed 1/27/2017, FERC Accession number 20170127-5202

DCR-DNH makes the following recommendations to address the impacts of mitigation if a failure occurs and there is a discharge to karst waters, potentially impacting subsurface habitat, drinking water, and surface streams fed by karst springs.

In Karst Survey Report Revision 1, prepared by Geoconcepts Engineering for ACP and dated February 21, 2017, Geoconcepts staff presents the result of karst surveys of the 71.3 miles of the proposed ACP alignment at the time crossing karst terrain. Of the 71.3 miles, 62.3 miles were reviewed in the field. The other 9 miles had not been covered yet due to denial of property access. Part of the field review included designation of **high risk karst features** within or inferred to receive drainage from the 300' wide construction corridor.

High risk features associated with temporary construction facilities such as access roads and layout yards should also be identified and treated in the same manner, as these areas are just as likely to cause problems during construction. High risk features identified during the field survey of the remaining 9 miles, or in any subsequent adjustments to the preferred corridor, should also be included and treated in the same manner.

DCR believes it is imperative that the **watershed identity** – the spring or springs to which these features drain – be determined so that in the event of a contaminant release during construction or operation, appropriate notification of stakeholders and deployment of recovery and mitigation apparatus may occur in a timely manner. While the avoidance and mitigation measures proposed by Dominion ACP should drastically reduce the likelihood of any such release, mistakes happen, especially on a project of this scale. Too many times on other projects in karst areas around the world, the watershed identity of sensitive features has only been discovered when contaminants arrive at a spring or well. By that point, it is very late in the game to start recovery and notification procedures.

It should be noted that the results of these hydrological delineations should not affect routing of the pipeline corridor, but rather are performed for the purpose of determining features potentially impacted by the selected corridor. Delineation of subterranean flows is necessary if the countermeasures portion of the SPCC Plan, cited page 19 of the Karst Mitigation Plan, is to be effective in karst areas.

The primary way the watershed identity of karst features is determined is through dye tracing methods connecting features to downstream waters, mainly springs and cave streams. It is recommended that this technique be used, where applicable, to establish the watershed identity of the sensitive (high risk) karst features identified by Geoconcepts. For several areas along the ACP, this work has been done previously and VA DCR will provide existing dye trace information to Dominion and to Geoconcepts Engineering so that receptors of any potential contaminant releases in those areas can be identified. Geoconcepts has already performed successful dye trace studies pursuant to the ACP in the Cochrans Cave area of Augusta County, VA.

DCR is willing to work with Dominion, Geoconcepts Engineering, and representatives of VA-DEQ to design the dye tracing study appropriate for the portions of karst crossed by the ACP in Virginia. DEQ and DCR staff recognize that dye tracing will not work in some areas, and for these areas other criteria for determining potentially impacted waters will be used, as outlined in the next paragraph.

4

SA8-174 See response to comment SA8-173. We expect that issues regarding spring monitoring for determining compliance with the SPCC Plan would be reviewed and conditioned in the appropriate state permit.

SA8-174 (cont'd)

At risk springs are those likely to be impacted by a release from a section of the ACP project construction area. These will be identified by dye tracing methods where appropriate. In karst areas characterized by more diffuse flow systems, such as portions of the Shenandoah Valley, such springs can be identified by a combination of proximity to the construction area, the local geological setting, and most importantly hydrochemical and hydrophysical characteristics from synoptic sampling. The most important of these characteristics are temperature response and electrical conductivity response to precipitation events. In particular, low conductivity springs (<~400 microsiemens per centimeter) that show a pronounced reduction in conductivity after precipitation events are at the most at risk. Springs that do not show either temperature or electrical conductivity responses to precipitation are deep circulating features producing water from a wide recharge area that has been underground for years to decades, and are as such are unlikely to be impacted significantly by any discharge from the project area. Responsive springs in proximity to the project construction area and with a clear geological connection are those most likely to be at risk in areas where dye tracing is impractical.

Virginia DEQ has already provided Geoconcepts Engineering with access to its spring database in areas crossed by the ACP corridor.

Spring monitoring is recommended for **high risk springs,** the subset of at risk springs that serve as water supplies for human consumption, or that serve as significant inputs to surface streams and water bodies that support rare, threatened, or endangered species or healthy waters. DCR recommends monitoring **high risk springs** prior to and during construction. In discussion with DEQ staff, DCR-DNH karst protection staff concurs that these **high risk springs** should ideally be monitored continuously for turbidity, conductance, and temperature in addition to periodically sampled for hydrocarbons before and during pipeline construction. Establishing the normal range of spring responses for these parameters will be key to determining if E&SC and Spill Prevention, Control, and Countermeasures (SPCC) Plan measures employed during and after pipeline construction are protective of groundwater and the surface waters to which it discharges.

Karst Survey Report, Revision 1, filed 2-24-2017

SA8-175

DCR recommends analysis of the karst hydrology of the area in the report. Karst hydrological delineations are necessary in order to identify karst waters at risk were a release or discharge to occur from the pipeline work area to karst features. See discussion above regarding the **Karst Terrain Assessment Construction, Monitoring, and Mitigation Plan.**

- DCR concurs with the risk assessment methodology outlined in the Karst Resource Report.
- Karst field review needs to be completed for the remaining 9 miles of the 300' wide project corridor, as well as for layout yards and temporary construction roads, areas where erosion, sedimentation, and contaminant releases are equally likely to occur.
- DCR recommends also citing Holsinger, J. R., 1975, Descriptions of Virginia Caves: Virginia Division of Mineral Resources Bulletin 85, 450 p. as a source included in the review of existing karst features locations within a ½ mile wide KRA. The Virginia Speleological Survey (VSS) database contains most of this information.
- On page 5, DCR recommends that rather than specifying parallel and/or perpendicular fractures, it is more accurate to say that enlarged joints occur in every orientation from parallel to

5

SA8-175 Comments noted.

SA8-175 (cont'd)

perpendicular to strike, with a preponderance of fractures occurring either subparallel or nearly perpendicular to strike.

- On page 5, DCR recommends adding that cover collapse sinkholes are the type most likely to occur in response to land disturbance such as grading, stormwater discharge, discharge of hydrostatic test water, et cetera to this section.
- DCR recommends changing the title of "The Folded Appalachians" to "The Allegheny Highlands Section" or "Ridge and Valley Section" throughout the report.

Appendix – Cochran's Cave Conservation Area and Moffett Lake Investigation Update, filed 1/27/2017, FERC Accession number 20170127-5202

SA8-176 DCR-DNH supports the ongoing efforts by GeoConcepts to characterize the karst geology and hydrology within the Cochran's Conservation Site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Cochran's Conservation Site has been given a biodiversity significance ranking of B4, which represents a site of moderate significance. DCR-DNH continues to recommend the avoidance of the Cochran's Conservation Site entirely, the investigations underway and ongoing adjustments to the details of the alignment have severely reduced the likelihood of a significant impact to the cave or its associated biological and hydrological resources. The presence of onsite, authorized karst specialists during the construction phase of the pipeline through this very sensitive area is absolutely essential to ensure safe construction.

4.4 Vegetation

From DEIS, Page 4-131 – "*The proposed pipeline crosses the Spruce Creek Tributary Conservation site between AP-1 MPs 162.1 and 162.6. The conservation site was established by the DCR-DNH to protect a central Appalachian low-elevation acidic seepage swamp. While the currently proposed route does not cross the seepage swamp, the route crosses the protection buffer, or conservation site, around the swamp.*"

SA8-177 DCR continues to recommend avoidance of the Spruce Creek Tributary Conservation Site. On page 4-135, it is stated that of the 13 conservation sites crossed by the pipeline, DCR-DNH recommended that only 3 sites be avoided: Handsom-Gum Powerline, Branchville Powerline, and Emporia Powerline Bog Conservation Sites. According to the Rev 11a alignment and subsequent centerline modifications filed with FERC (Rev11b) on January 19, 2017, 18 Conservations Sites and 4 Stream Conservation Units (SCUs) are intersected by the pipeline footprint. This discrepancy is due to multiple pipeline route adjustments since FERC began compiling information for the DEIS and the creation of 2 new conservation sites (NFS Road Site and Gum) and 1 new SCU (Cowpasture River-Rt. 678) in 2016 by DCR-DNH due to updated information about natural heritage resources. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach.

The statement on page 4-135 that 13 sites are crossed and DCR-DNH recommends avoidance of only three is incorrect. DCR-DNH continues to recommend avoidance of all conservation sites and SCUs.

SA8-176 Comments noted.

SA8-177 The referenced text in section 4.4.2.2 has been revised.

SA8-177 (cont'd)

In regards to the Handsom-Gum Powerline, Branchville Powerline, and Emporia Powerline Bog Conservation Sites, DCR-DNH continues to coordinate with Atlantic in regards to potential impacts to these conservation sites and has not provided concurrence with the proposed minimization measures at these three conservation sites.

A hydrology study is proposed for the Handsom-Gum Powerline and Emporia Powerline Bog conservations sites to determine if the construction of the proposed pipeline will impact the wetland systems which support the rare plant species at these sites. It is stated that habitat for these rare plant species will be created by co-locations at both the Handsom-Gum Powerline and Branchville Powerline conservation sites. While the expansion of mowed area of the existing right of way may be expanded slightly, the pipeline construction may also be adversely impactful due to soil compaction from construction staging or other needs necessitating the use of heavy machinery in the existing rare plant habitats at both Branchville Powerline and Handsom-Gum Powerline conservation sites.

At the Emporia Powerline Bog conservation site, based on the alignment modifications filed with FERC on January 19, 2017 the pipeline has been moved to the north of the wetland bog. While this re-route may lessen the impacts to the rare plants and a hydrology study is proposed to determine the impacts to the wetland system from the construction of the pipeline, DCR-DNH continues to recommend avoidance of Emporia Bog Powerline Conservation Site. DCR-DNH requests coordination with Atlantic prior to construction at the Handsom-Gum Powerline, Emporia Powerline Bog, and Branchville Powerline Conservation Sites. As discussions are currently on-going about avoidance and minimization of impacts at these sites, DCR-DNH recommends any additional comments and recommendations be included by Atlantic as part of the FERC certification. During construction, a DCR-DNH botanist is available for consultation on site to ensure recommendations are implemented by the contractor.

SA8-178

4.4.4 Noxious Weeds and Other Invasive Plants
On 4-143 Wavyleaf grass is mentioned, but no specifics are given of its location. Also, lists of invasive species encountered, including designated federal noxious weeds, does not include Wavyleaf grass. For clarification purposes, DCR-DNH requests the Wavyleaf grass location via shapefile if possible as well as details of population. The subsequent conflicting information indicates the plants may have been found either in North Carolina or in southeastern Virginia.

SA8-179

4.7.4 State-Sensitive Species
On page 4-261 -Surveys were conducted for the Allegheny woodrat (*Neotoma magister*), southern rock vole (*Microtus chrotorrhinus carolinensis*), southern water shrew (*Sorex palustris punctulatus*), and American water shrew *(Sorex palustris*) (refer to table S-2 in appendix S). Surveys are pending at 9.6 miles of survey corridor on both the GWNF and private lands, and are anticipated to be completed in June 2017. DCR-DNH requests surveys upon completion.

4.7.4.2 Virginia
On page 4-260- As of November 2016, approximately 55.9 miles have not been surveyed for biological resources in Virginia; these surveys are expected to be completed in 2017. DCR-DNH requests copies of the 2017 surveys upon completion.

Cave Invertebrates
On page 4-264, the DEIS states "discussions regarding potential impacts to karst and species habitat are ongoing with the FERC, FWS, FS, WVDNR, and VDGIF". DCR-DNH appreciates the continued coordination of karst information and requests to be added as one of the agencies reviewing and commenting on karst related issues.

7

SA8-178 Based on the Attachment A to Atlantic's Non-Native Invasive Species Management Plan (see table 2.3.1-1), wavyleaf basketgrass was observed in Johnston County, North Carolina. The VDCR-DNH may request shapefiles of the invasive plants directly from Atlantic.

SA8-179 The VDCR-DNH may request 2017 survey reports on Virginia species directly from the applicant. The discussion on cave invertebrates in sections 4.5.2.4 and 4.7.4.2 has been updated to include correspondence from the VDCR-DNH regarding karst terrain.

Section 5.0 Conclusions and Recommendations

5.1 Conclusions of Environmental Analysis

SA8-180

5.1.1 Geologic Resources

DCR-DNH strongly recommends addition of a provision to perform, where absent or insufficient, dye trace studies to delineate contributing areas to karst waters potentially impacted by ACP construction and operation. This should be performed in close coordination with DCR-DNH's karst protection staff.

SA8-181

5.1.3.3 Wetlands

On page 5-6, "Additionally, the Atlantic and DTI would mow and maintain a 10-foot-wide corridor centered over the pipeline within wetlands in an herbaceous state." **DCR-DNH requests additional information on how the 10 foot wide permanent right-of-way centered over the pipeline would be maintained in an herbaceous state due to the potential for impacts to DCR powerline bog conservation sites: Handsom-Gum Powerline, Emporia Powerline Bog and Branchville Powerline. DCR-DNH recommends the same management style be applied to the pipeline right-of-way as with other Dominion transmission line right-of-ways for rare plants. DCR-DNH also recommends the adjacent pipeline right-of -way and existing transmission right-of-way should be managed as one unit within the three "bog" conservation sites.**

SA8-182

5.1.4 Vegetation

On page 5-7, the DEIS states *"ACP and SHP would also impact vegetation communities of special concern…13 Virginia Natural Heritage Conservation Sites; 2 Virginia SCUs…Of the Virginia Natural Heritage Conservation Sites crossed, the VDCR recommended that Atlantic avoid the Handsom-Gum, Branchville, and Emporia Powerline Bog Conservation Sites to conserve documented natural heritage resources. Complete avoidance was not considered practicable due to the orientation and size of the Conservation Sites, but Atlantic proposed avoiding direct impacts to the element occurrences. Further correspondence with the VDCR is pending and, as such, we have recommended that Atlantic continue to consult with VDCR on Atlantic's proposed avoidance and minimization measures at the Handsom-Gum, Branchville, and Emporia Powerline Bog Conservation Sites, and file correspondence from the VDCR demonstrating concurrence and/or additional recommendations from the VDCR."* **As mentioned above, DCR-DNH reiterates that we recommend avoidance of all conservation sites intersected by the pipeline, not just the 3 powerline bog conservation sites crossed by the current ACP route.**

SA8-183

5.1.5 Wildlife

"In addition, Atlantic has the potential to have significant adverse impacts on subterranean habitat and the species associated with this habitat type. The development of karst features could be initiated by the physical disturbance associated with trenching, blasting, or grading, or by diverting or discharging water into otherwise stable karst features. In addition, the development of karst features along the ground surface greatly increases the susceptibility of underlying aquifers to contamination sources originating at the ground surface. Atlantic's and DTI's Karst Mitigation Plan (appendix I) outlines the measures that would be taken to avoid or minimize these potential impacts; however, subterranean obligate species are often endemic to only a few known locations, and are vulnerable to changes in hydrological pattern or water quality; therefore, it is possible that impacts associated with construction activities could have population level effects on these species. Discussions regarding karst impacts and impacts to wildlife that inhabit these features are ongoing between the FERC, FWS, FS, WVDNR, and VDGIF." **DCR-DNH appreciates the continued coordination of karst information and documents and requests to be added as one of the agencies reviewing and commenting on karst related issues.**

8

SA8-180 Comment noted.

SA8-181 Comment noted. We expect that any site-specific construction and restoration measures on conservation easements would be included in easement agreements. See also the response to comment SA8-3.

SA8-182 The referenced text has been revised.

SA8-183 The discussion on cave invertebrates in sections 4.5.2.4 and 4.7.4.2 has been updated to include correspondence from the VDCR-DNH on karst terrain.

SA8-184

5.1.6 Aquatic Resources

"Atlantic and DTI would ensure that hydrostatic test water appropriations and discharges would not result in a significant entrainment of fish, loss of habitat, or an adverse impact on water quality. Discharge would comply with regulatory permit conditions and be controlled to prevent scour and sedimentation, flooding, or the introduction of foreign or toxic substances into the aquatic system. Atlantic and DTI would minimize the potential for spills to impact aquatic resources by implementing the measures contained in their SPCC Plan." **DCR-DNH supports best management practices to ensure hydrostatic tests do not impact natural heritage resources.**

"FERC requests Atlantic and DTI file an analysis that identifies alternative water sources and discharge locations considered for waterbodies with documented or assumed presence of ESA-listed or under review species. Atlantic and DTI should also detail why the alternatives cannot be utilized, and define FWS-approved conservation measures that would be implemented to protect ESA-listed and under review species. Also, Atlantic and DTI should file a list of waterbodies supporting ESA-listed or under review species (survey-documented and assumed) that would be crossed by or adjacent to proposed access roads, along with a detailed description of the conservation measures that Atlantic and DTI would implement to reduce impacts on ESA-listed and under review species from access road construction and use." **DCR-DNH supports avoiding and reducing impacts to RTE species from water withdrawal and discharge locations through identification of alternatives and implementation of conservation measures.**

"The Forest Service requested that Atlantic complete a baseline benthic macroinvertebrate survey at waterbodies crossed by ACP on the GWNF. Two of the streams to be sampled were not surveyed, including Laurel Run. Therefore, we have recommended that Atlantic perform and file the results of baseline benthic macroinvertebrate surveys at Laurel Run, as well as comments on the results from the GWNF." **DCR-DNH requests copies of this survey report upon completion.**

SA8-185

5.1.7 Special Status Species

"While Atlantic and DTI conducted surveys for several federally listed species or species under review, survey access was not available in all cases. In addition, Atlantic and DTI have not provided conservation measures to address potential impacts to these species in all cases. Therefore, we have recommended that Atlantic and DTI should not begin construction of the proposed facilities until all outstanding biological surveys are completed, the FERC staff have completed any necessary Section 7 consultation with the FWS, and Atlantic and DTI have received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin." **DCR-DNH supports construction not beginning until all biological surveys have been completed, reviewed and consultation carried out with the appropriate agencies and if appropriate implementation of conservation measures.**

"The Virginia Endangered Species Act designates the VDGIF as the agency responsible for managing Commonwealth fish and wildlife species, and the VDCR-DNH as managing Commonwealth plant and insect species. Based on survey data provided by Atlantic through November 22, 2016, there are 13 Virginia listed or sensitive fish or wildlife species, and 26 plant species that occur within ACP project area and may be adversely impacted by project activities. Atlantic and DTI are currently working with the VDGIF and VDCR-DNH to identify conservation measures for these species." **Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR-DNH, DCR-DNH represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. DCR-DNH supports continued coordination with agencies to avoid and minimize impacts to rare, threatened and endangered resources.**

9

SA8-184 Comment noted. The VDCR-DNH may request 2017 survey reports directly from Atlantic.

SA8-185 Section 4.7.1 includes our recommendation that Atlantic and DETI complete all outstanding biological surveys (and that FERC finalizes any necessary section 7 consultation with the FWS) prior to beginning construction. Each Applicant would have to receive written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) could begin.

SA8-185 (cont'd)

"Due to pending survey results, conservation measures, and consultations with the appropriate state agencies, in particular with regard to bat species and bat hibernacula, subterranean obligate species, and aquatic species, our determination regarding the overall impacts on state-listed and sensitive species is Conclusions and Recommendations 5-16 pending. Therefore, we have recommended that Atlantic file an evaluation of the impacts and species specific conservation measures, developed in coordination with the applicable federal and state agencies (WVDNR; VDGIF and/or VDCR-DNH; and NCWRC and/or NDEQ), for several species listed in the EIS where Atlantic has identified potential impacts and/or where the appropriate agency has requested additional analysis or conservation measures. Where survey data is still pending, Atlantic should work with the appropriate agencies to identify the conservation measures that would be implemented if the species and/or suitable habitat are identified during preconstruction surveys, or where presence has been assumed." **DCR-DNH supports FERC's recommendation for Atlantic's continued coordination with state agencies in regards to potential impacts state-listed and sensitive species.**

5.2 FERC Staff's Recommended Mitigation

SA8-186

37. (5-34 and 5-35) ***Prior to the close of the draft EIS comment period****, Atlantic and DTI shall file with the Secretary a revised fragmentation analysis that includes the following:*

a. Analysis based on applicable state and federal agency datasets, including:

i. West Virginia state forest fragmentation data produced by the NRAC at West Virginia University;

ii. VDCR VaNLA project; and

iii. Consult with the FS, NCWRC, and NCDEQ to determine the appropriate data sets to use in the MNF, GWNF, and North Carolina, respectively.

b. If GIS databases are not available for the project location, then manual interpretation of interior forest blocks greater than or equal to 35 acres shall be identified and evaluated for project impacts;

c. Edge habitat is considered to be 300-foot forested buffer from a corridor/disturbance with interior forest starting at the point beyond the 300-foot edge buffer;

d. Develop a table for each state and for NFS lands with the following data for each forested interior tract: type of interior forest (e.g., edge, patch, small core, large core, or ecological integrity category), county, enter and exit milepost, length crossed (feet), and area affected directly (interior forest cutting) and indirectly (buffer zone areas of remaining forest immediately adjacent to one or both sides of the new corridor that would no longer be classified as interior forest due to the new, project-related disturbances) for both construction and operation; and

e. Discuss how the creation of forest edge or fragmentation would affect habitat and wildlife, including potential impacts on federally listed threatened and endangered species and migratory birds. Describe measures that Atlantic and DTI will implement to avoid, minimize, or mitigate impacts on interior/core forest habitat. (Section 4.5.6)

DCR-DNH considers a buffer of the proposed footprint to be an underestimate of the indirect impacts of this landscape level disturbance to interior forests and the ecological

10

SA8-186 Comment noted.

SA8-186 (cont'd)

functions and services those forested cores provide DCR, working with other Virginia state agencies, has developed an analysis of forest fragmentation for the ACP, and recommended mitigation activities. These activities would more adequately compensate for the degradation of interior forest and decreased forest values that are not accounted for via other regulatory requirements (e.g. wetland impacts, impacts to threatened & endangered species). This analysis will be provided to Atlantic and FERC within the DEIS comment period to address forest fragmentation included in the following sections of the DEIS:

- **Appendix H- Forest Fragmentation Analysis-Supplemental Filing January 10, 2017**
- **Executive Summary (ES) pages 10 and 11**
- **4.5.6 Habitat Fragmentation and Edge Effects, Page 4-164 to 4-166**
- **5.1.4 Vegetation, Page 5-7**
- **5.1.5 Wildlife, Page 5-9**
- **5.2 FERC Staff's Recommended Mitigation page 5-34 to 5-35**

DCR-DNH supports the following FERC recommendations:

SA8-187

5. (Page 5-28) Atlantic and DTI shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations; staging areas; pipe storage yards; new access roads; and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally-listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area**. Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

a. implementation of cultural resources mitigation measures;
b. *implementation of endangered, threatened, or special concern species mitigation measures*
c. recommendations by state regulatory authorities; and
d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

SA8-188

15. (5-32) ***Prior to the close of the draft EIS comment period***, Atlantic shall consult with the VDCR to determine if the route alignment and construction activities would impact the Cochran's Cave Conservation Site or Cochran's Cave No. 2. Atlantic shall file with the Secretary the result of its consultations with the VDCR along with any project design change proposals to avoid impacts to these sites. (Section 4.1.2.3)

21. (5-32) ***Prior to construction***, Atlantic shall complete the remaining field surveys for wells and springs within 150 feet of the construction workspace, and within 500 feet of the construction workspace in karst terrain, and file the results, including type and location, with the Secretary. (Section 4.3.1.5)

11

SA8-187 Comment noted.

SA8-188 Comment noted.

SA8-188 (cont'd)

22. (5-33) ***Prior to construction***, Atlantic shall consult the appropriate state agencies to identify additional mitigation procedures to be implemented in the event construction activities intercept a saturated karst conduit and file with the Secretary the measures that it will implement to minimize these impacts, for review and written approval of the Director of OEP. (Section 4.3.1.7)

23. (5-33) For water supply wells and springs wells within 500 feet of identified contaminated soil or groundwater site, Atlantic and DTI shall complete **preconstruction** and **post-construction** water quality tests, and analyze for contaminants of concern from the potential source. (Section 4.3.1.7)

30. (5-33) ***Prior to construction***, Atlantic shall continue to consult with the VDCR on Atlantic's proposed avoidance and minimization measures at the Handsom-Gum, Branchville, and Emporia Powerline Bog Conservation Sites, and file with the Secretary any correspondence demonstrating concurrence and/or additional recommendations from the VDCR. (Section 4.4.2.2)

34. (5-34) ***Prior to the close of the draft EIS comment period***, Atlantic shall file with the Secretary, and provide to the FWS, FS, WVDNR, and VDGIF, a revised *Karst Mitigation Plan*, developed in coordination with the appropriate agencies that takes into account unknown underground features, porosity, and connectivity of these subterranean systems, and the potential implications to subterranean obligate species. Conservation measures included in the revised *Karst Mitigation Plan* shall be designed to appropriately address these potential impacts. (Section 4.5.2.4)

45. (5-36) Atlantic and DTI shall not begin construction of the proposed facilities **until**:
a. all outstanding biological surveys are completed;
b. the FERC staff complete any necessary Section 7 consultation with the FWS;
c. Atlantic and DTI have received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin.

Draft Biological Assessment, January 2017

SA8-189

Indiana and Northern Long-eared bats
- DCR supports the USFWS recommendation of adhering to a TOYR (Time of Year Restriction) for the removal of potential roost trees for the Indiana bat (p. 120) and the Northern Long-eared bat (p. 144).

Roanoke Logperch
- DCR supports the use of HDD method to cross the Nottoway River at milepost 32.6. For other stream crossings including Nottoway River at MP 260.7, Waqua Creek at MP 267.4, and Sturgeon Creek at MP 272.0, DCR supports the VDGIF TOYR for construction in waters that contain the Roanoke logperch (p. 154).

Atlantic Pigtoe
- DCR requests a copy of the Atlantic pigtoe survey that documented the Atlantic pigtoe at Nottoway River (MP 260.7) and at Sturgeon Creek (MP 272.0) according to the information contained on page 171.

12

SA8-189 Section 4.7.1 includes these measures for Indiana bat, northern long-eared bat, Roanoke logperch, and freshwater mussels.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

SA8-189 (cont'd)

- DCR supports the HDD method for the crossing of the James River to be protective of freshwater mussels.

Plant Surveys

SA8-190

- DCR-DNH requests shapefiles for rare plant locations from 2016 plant surveys. Plant locations are currently plotted on aerial photos and are difficult to locate on a map due to differences in aerial photo year, quality, resolution, etc. (e.g. the new location for *Ludwigia ravenii*) DCR-DNH requests the results of any 2017 plant surveys.
- There is a Valley Doll's-daisy (*Boltonia montana*, G1G2/S1/NL/LE) occurrence within 80 meters of the impact footprint and other rare species within 200-400m. This conservation site is intersected by Rev 11b which was re-routed to avoid the Lyndhurst Pond Conservation Site. According to ACP correspondence dated March 28, 2017, a survey was conducted in the Campbell and Grove Farm Ponds Conservation Site in August 2016 to search for *Boltonia montana*, as well as other target species including *Helenium virginicum* and state-listed plants; no sensitive species were identified during survey.
- Please note for rarity ranks for plant species, Atlantic referenced the February 2016 Rare Plant List. The Rare Plant List was updated in November 2016 and is on the DCR-DNH website at http://www.dcr.virginia.gov/natural-heritage/document/plantlist17.pdf

Wildlife Surveys

SA8-191

- Loggerhead Shrike Survey - Negative survey results at all potentially suitable habitat sites. DCR-DNH supports tree removal occurring outside the Time of Year Restrictions. VDCR-DNH recommends continued coordination with VDGIF to ensure compliance with protected species legislation.
- Fish and Mussel Survey [on GWNF section of pipeline] - DCR-DNH recommends continued coordination with USFWS and VDGIF to ensure compliance with protected species legislation.
- Virginia Fish Relocation Plan [Roanoke logperch (*Percina rex*, G1G2/S1S2/LE/LE) plus all fish of any species occupying barricaded stream crossing areas]. DCR-DNH recommends adherence to the relocation protocols provided by VDGIF and USFWS and recommends continued coordination with these agencies to ensure compliance with protected species legislation.
- Small Mammal Survey – Four stream crossing in Highland County were identified as suitable habitat for Southern water shrew (*Sorex palustris punctulatus*, G5T3/S1S2/NL/LE), and DCR recommends continued coordination with VDGIF. According to ACP correspondence dated March 28, 2017, Small Mammal Surveys are still ongoing and an updated survey report will be provided in the summer of 2017. DCR requests copies of the survey report.
- Insect Survey in GWNF October 2016 – Due to multiple factual errors in species accounts and misspellings of scientific names, DCR recommends comparing species names and information to the "Atlas of rare butterflies, skippers, moths, dragonflies & damselflies of Virginia", available at http://www.vararespecies.org/list . DCR supports the mitigation measures planned to minimize impacts for Maureen's shale stream beetle (*Hydraena maureenae*, G2?/S2?/NL/NL) including erosion and sediment control measures, minimizing disturbance to gravel bars along streams, and using dry stream crossing techniques for construction.

SA8-190 The VDCR-DNH may request shapefiles and 2017 survey reports directly from the Applicant. The rare plants listed in appendix S-2 have been updated based on the November 2016 Rare Plant List, and we have noted the Valley Doll's-daisy's proximity to the proposed ACP construction workspace.

SA8-191 Section 4.7.1 includes our recommendation that Atlantic complete all outstanding biological surveys (and that FERC finalizes any necessary section 7 consultation with the FWS) prior to beginning construction. The VDCR-DNH may request 2017 survey reports directly from the Applicant. Section 4.7.1.10 discusses the implementation of the Virginia Fish Relocation Plan and adherence to relocation protocols as approved by the FWS and VDGIF. Appendices R and S describe insects occurring both on and off the GWNF in Virginia, and the Atlas of Rare Butterflies, Skippers, Moths, Dragonflies & Damselflies of Virginia was used to develop these species accounts. Section 4.5.3 includes a condition requesting a final Migratory Bird Plan prior to construction that includes TOYR and additional conservation measures developed in coordination with the FWS, FS, and other appropriate agencies. Section 4.7.1.3 discusses tree clearing in relation to maternity roost trees. No tree clearing would be conducted within 150 feet of active maternity roost trees at any time, if maternity roosts are identified in 2017 surveys.

SA8-191 (cont'd)

- Myriapod and Gastropod Report, February 2017- Hoffman's Cleidognid Millipede (*Cleidogona hoffmani*, G3/S2S3/NL/NL), a natural heritage resource tracked by DCR, was documented at 9 sites during the surveys conducted on the GWNF. These findings may indicate that this species is more common than previously thought by DCR.

- State-Listed Salamander Surveys-

  Mabee's Salamander (*Ambystoma mabeei*, G4/S1S2/NL/LT) – Negative surveys at 3 potentially suitable sites (of 118 total wetlands assessed). As stated in the report, 20 more sites merit surveys in 2017 pending landowner permission. DCR-DNH requests copies of these surveys upon completion.

  Tiger Salamander (*Ambystoma tigrinum*, G5/S1/NL/LE) – Positive survey at 1 of 5 sites with potentially suitable habitat (of 59 total wetlands assessed). As stated in the report, 4 more sites merit surveys in 2017 pending landowner permission. DCR-DNH requests copies of these surveys upon completion. One tiger salamander larva was captured at a new site SW of Sherando. The breeding pond (1.3 acres; not shown on USGS topo map but visible in aerial photos) is within 20 meters of the ROW and less than 40 meters from the centerline. The pipeline route was previously relocated in this general area to avoid the Lyndhurst Ponds Conservation Site to the northeast. It appears the line was also moved a short distance to the west (see map 1 in the report) in the vicinity of this pond to create a larger buffer. Although the pipeline avoids a direct hit of the pond, terrestrial habitat of adult and juvenile tiger salamanders will be impacted and fragmented. Tiger salamanders are known to move up to 286 meters from their breeding ponds (average distance in one study was 60 meters; see summary in R. D. Semlitsch. 1998. Biological delineation of terrestrial buffer zones for pond-breeding salamanders. Conservation Biology 12: 1113-1119), thus the pipeline will likely adversely affect the terrestrial habitat of some unknown portion of this newly documented population.

  In addition on Page 9 of the Rare Salamander report – under Section 5.1.1.1 Site wauc103f, it was stated: "A large pond where Tiger Salamanders have been previously observed (waua056e/waua056f) occurs approximately 66 meters (216 ft) toward the north end of the site." According to ACP correspondence dated March 28, 2017, larval tiger salamanders were identified at the site indicated above (waua056e/waua056f) during ACP salamander surveys in 2015. Larval salamanders were also found at site waua054f in 2015, which is nearby in Augusta County.

  DCR-DNH recommends Atlantic continue coordination with DGIF regarding possible mitigation, such as a TOYR (perhaps January-July) to avoid impacting the breeding migration of adult tiger salamanders and dispersal movements of recently metamorphosed juveniles during the year of construction. The long-term presence of the pipeline ROW after construction may disrupt future migrations of this population.

  DCR-DNH also recommends re-routing the pipeline so that it is at least 300 meters from these ponds. Reducing the construction width to 75' in the vicinity of these ponds and the permanent ROW width to 50' would increase the buffer distance slightly and perhaps reduce impacts some. DCR-DNH recommends limiting woody stump removal to areas directly above the trenchline to facilitate the re-establishment of woody species by existing root structures. Restricting grading within the ROW in the vicinity of these ponds to the area directly over the trenchline will also reduce impacts to tiger salamander terrestrial habitat, including underground burrows.

14

SA8-191 (cont'd)

- In addition, due to a potential new record of tiger salamander larva in Augusta County at the ponds located south of milepost 153, DCR-DNH recommends a survey for tiger salamander larva at these ponds in spring of 2017.
- Cow Knob Salamander Survey [on GWNF section of latest pipeline route] – Negative survey (some potential habitat was found but no Cow Knob Salamanders); DCR-DNH has no additional comments. The pipeline route was previously altered to avoid the range of this species (which it initially crossed on Shenandoah Mountain).
- Protected Snake Conservation Plan - DCR-DNH recommends Atlantic adhere to all of the mitigation measures recommended by VDGIF.
- Updated Migratory Bird Plan August 2016 - Forest fragmentation will occur and new edge habitat will be created in some areas, impacting forest interior species. DCR-DNH recommends adherence to all mitigation measures recommended by federal and state agencies. Bald Eagle nests were documented near the pipeline route. DCR-DNH recommends coordination with USFWS to ensure compliance with the Bald and Golden Eagle Protection Act.
- Virginia Bat Survey Data - If a known maternity or roost site is documented within the ROW or in the immediate vicinity of the pipeline footprint, DCR-DNH recommends reducing the temporary construction ROW to 75' and permanent ROW to 50'.
- George Washington/Monongahela National Forest – Management Indicator Species Report - VDCR-DNH recommends reducing habitat fragmentation and the creation of new edge habitat impacting forest interior species.
- Virginia Species of Greatest Conservation Need Report –

  Table 1, page 3, the "Conservation Measures" listed for Tiger Salamander at the newly documented site are similar to those in the previous report but also mention possible route adjustment (boldface added below):

  "Surveys completed, species found in one location in Augusta County. **Consideration of route adjustment to avoid impact.** Other measures could include Project Procedures; Reduced temporary construction width (75 feet); ATWS wetland/waterbody buffer (50 feet); Wetland habitat mitigation-Clean Water Act (CWA) Section 404 Permitting through the U.S. Army Corps of Engineers (USACE); General Measures" (see **Map 1** in the state-rare salamander report) The appendix labeled "Conservation Measures for Virginia State-Listed Species" also mentions "Consideration of route adjustment to avoid impact. DCR-DNH recommends a route adjustment to avoid impacts to the documented occurrence of the Tiger salamander.

  Table 1, page 6 for Green Floater: "Habitat assessment completed and presence/absence survey ongoing." DCR-DNH requests the survey report when available and any other on-going freshwater mussel surveys. The appendix labeled "Conservation Measures for Virginia State-Listed Species" also mentions ongoing surveys for the Atlantic Pigtoe, another rare mussel.

ef 20170406-5489 FERC PDF (Unofficial) 4/6/2017 3:02:35 PM

SA8-192

Appendix - Restoration and Rehabilitation Plan, Rev 4, FERC Accession Number 20170110-5142, filed 1-10-2017

DCR-DNH would like to offer the following recommendations for the restoration and rehabilitation plan including proposed seed mixes.

DCR-DNH supports not using cool-season grasses to restore ground cover unless on slopes over 15%. This excludes our coastal plain bogs.

DCR-DNH recommends avoiding soil compaction in adjacent transmission rights of way at the Handsom Gum Powerline, Branchville Powerline and Emporia Bog Powerline Conservation Sites. Any work in these areas could eliminate species and habitat entirely, particularly given issues of soil compaction in these sensitive bog sites.

Topsoil should be stockpiled outside of transmission lines where rare plants occur including in forested areas at Handsom-Gum Powerline and Branchville Powerline Conservation Sites, if clearing adjacent to the line, Atlantic needs to segregate topsoil when removing trees. That would increase the chances of creating habitat for rare species in the adjacent pipeline right-of-way.

DCR-DNH recommends mowing of the pipeline corridor as the preferred right-of-way maintenance method over the use of herbicide in these sensitive areas.

DCR-DNH supports not using lime or fertilizer within 100' of wetlands as stated in document.

DCR-DNH requests detailed plans for monitoring of restoration success in areas that are allowed to naturally revegetate and areas where plantings or seed mixes are used for restoration. If plans deviate from the proposed revegetation and monitoring plans included in the draft EIS, DCR-DNH recommends re-coordination with this office.

Seed Mix Recommendations

- Remove *Eryngium yuccifolium* from all seed mix lists
- In Table 5.7.5-1, page 15, remove *Sporobolus compositus*, rare in WV and not viable on most substrates
- In Table 5.7.5-2, page 15-16, remove *Coreopsis lanceolate*, questionably native to WV
- In Table 5.7.5-3, remove *Andropogon ternarius* rare in mountain region and probably not viable. DCR-DNH recommends *Andropogon virginicus* or *Sorghastrum nutans* as a substitute. DCR-DNH recommends doubling the proposed seeding rate and suggests adding *Tridens flavus* to the seed mix.
- In Table 5.7.5-4, page 16, remove *Coreopsis tinctoria*, not native to WV; Remove *Coreopsis lanceolate*, questionably native to WV; Remove *Helianthus maximiliani*, not native to WV; Remove *Echinacea purpurea*, not native to WV; The seeding rate is adequate for flat topography; however, DCR-DNH recommends increasing the seeding rate within the mountain physiographic region due to steeper terrain and increasing the mass of *Monarda fistulosa* within the seed mix. DCR-DNH also recommends adding *Symphytrichum novae-angliae* to the seed mix.

16

SA8-192 The VDCR's comments related to Atlantic's and DETI's construction plans are noted.

SA8-192 (cont'd)

- In Table 5.7.5-6, page 17, remove *Asclepias tuberosa*, cannot tolerate poorly drained sites; remove *Pycnanthemum incanum*, cannot tolerate poorly drained sites; remove *Bidens aristosa*, questionably native to WV; remove *Lupinus perennis*, cannot tolerate poorly drained sites
- In Table 5.7.5-7 and 5.7.5-8, DCR-DNH recommends increasing the seeding rate 50-100%; however, the amount of *Chamaecrista fasciculata* should not be increased. DCR-DNH recommends adding *Juncus tenuis* to these seed mixes. *Juncus tenuis* grows in full sun to partial shade, dry rocky soils to wet saturated soils, has a pH tolerance of 4.5-7.0, tolerates compaction and is easily grown.
- In Table 5.7.5-8, page 18, Remove *Coreopsis tinctoria*, not native to VA; Remove *Eryngium yuccifolium*, rare in VA and probably not viable in poorly-drained soils; Remove *Helianthus angustifolius,* rare in mountain region and probably not viable
- In Table 5.7.5-10, page 20, Remove *Coreopsis tinctoria*, not native to VA; Remove *Coreopsis lanceolata*, questionably native to VA; Remove *Helianthus maximiliani*, not native to VA; Remove *Echinacea purpurea*, not native to VA; Remove *Gaillardia pulchella*, not native to VA
- In Table 5.7.5-11, page 20, Remove *Sporobolus compositus*, rare in VA and not viable on most substrates
- In Table 5.7.5-14, page 21, Remove *Coreopsis tinctoria*, not native to VA; Remove *Eryngium yuccifolium*, rare in VA and probably not viable in poorly-drained soils

Recommended Seed Mixes by Milepost, Rev 3

- In table 2.3.1-1, page 21, remove Sericea lespedeza *(Lespedeza cuneata)*
- In Table 2.2.1-2, specify which species of Sorghum. *Sorghum halepense* is an invasive species.
- In table 2.2.1-10, page 17, *Panicum virgatum* is mentioned. *Panicum virgatum* is a tallgrass prairie and is not ideal for Virginia. There are Southeast varieties available from seed sellers that would be more appropriate for Virginia.
- In Table 2.2.1-1, page 9, Use all native species mixes 8, 10, and 11 if possible
- In Table 2.2.1-2, pages 10-13, Use all native species mixes 103,105,106,109 if possible,
- In Table 2.2.1-6, page 15, Remove *Andropogon ternarius*, rare in mountain region and probably not viable (*Andropgon virginicus* or *Sorghastrum nutans* would be a substitute)
- In Table 2.2.1-7, page 15, Remove *Coreopsis tinctoria*, not native to VA; Remove *Coreopsis lanceolate*, questionably native to VA; Remove *Helianthus maximiliani*, not native to VA; Remove *Echinacea purpurea*, not native to VA
- In Table 2.2.1-8, page 16, Remove *Coreopsis tinctoria*, not native to VA; Remove *Eryngium yuccifolium*: rare in VA and probably not viable in poorly-drained soils

17

SA8-192 (cont'd)

- In Table 2.2.1-9, page 17, Remove *Koeleria macrantha*, not native to VA
- In Table 2.2.1-10, page 17, Remove *Sporobolus compositus*, rare in VA and not viable on most substrates; Remove *Coreopsis tinctoria*, not native to VA; Remove *Dalea purpurea*, not native to VA; Remove *Desmanthus illinoensis*, not native to VA; Remove *Helianthus maximiliani*, not native to VA
- In Table 2.2.1-11, page 18, Remove *Bouteloua curtipendula*, not viable on most substrates; Remove *Lotus corniculatus*, not native to North America; Remove *Desmanthus illinoensis*, not native to VA; Remove *Helianthus maximiliani*, not native to VA; Remove *Coreopsis lanceolate*, questionably native to VA; Remove *Bidens aristosa*, questionably native to WV; Remove *Pycnanthemum pilosum*, not native to VA (DCR-DNH suggests *Pycanthemum incanum* instead, which is native to Virginia)

  (Supplementary species listed: Buckwheat, Millet, Korean Lespedeza, etc. -- DO NOT USE.)
- In Table 2.2.4-2, page 20, Remove *Coreopsis tinctoria*, not native to VA; Remove *Coreopsis lanceolate*, questionably native to VA; Remove *Helianthus maximiliani*, not native to VA; Remove *Echinacea purpurea*, not native to VA; Remove *Gaillardia pulchella*, not native to VA
- In Table 2.2.4-3, page 21, Remove *Coreopsis tinctoria*, not native to VA; Remove *Eryngium yuccifolium*, rare in region and probably not viable in poorly-drained soils

DCR-DNH continues to coordinate with Dominion on the re-vegetation of the right-of-way for the pipeline including the proposed seed mixtures as plans are updated and modified.

Appendix G, Non-Native Invasive Plant Species Management Plan, within Draft Construction, Operations, and Maintenance Plans

SA8-193

DCR-DNH supports the implementation of an Invasive Species Management Plan, and the use of the Virginia Department of Agriculture and Consumer Services (VDACS) Noxious Weed List.

However, DCR-DNH also recommends use of the Virginia Invasive Plant Species List (http://www.dcr.virginia.gov/natural-heritage/invsppdflist).The Virginia Invasive Plant Species List comprises species that are established or may become established in Virginia, cause economic and ecological harm, and present ongoing management issues. To be included on the list, there must be demonstrable evidence that a species poses a threat to Virginia's forests, native grasslands, wetlands or waterways. The Virginia Department of Conservation and Recreation's Invasive Species Assessment Protocol, approved by the Virginia Invasive Species Working Group, May 2015, was used to conduct a risk assessment for each listed species. Species were ranked as exhibiting high, medium or low levels of invasiveness based on their threat to natural communities and native species

The Virginia Invasive Plant Database Tool can be found at http://www.dcr.virginia.gov/natural-heritage/ip. The Virginia Invasive Plant Database Tool provides information about invasive species based on a variety of inputs, such as geographic region, soil moisture and light requirements, VA invasiveness rank, or common and scientific names.

Please note that special concern exists for the spread of Wavyleaf grass (*Oplismenus undulatifolius)* during construction and maintenance of the pipeline and the pipeline right-of-way. It is likely that Wavyleaf grass exists in the vicinity of the route crossing of the Blue Ridge Parkway and the adjacent George Washington National Forest lands. Wavyleaf grass has a VA Invasiveness rank of high, can be found in the mountain and

SA8-193 Section 4.4.4 has been updated to reflect the VDCR-DNH's concerns regarding non-native invasive plant species, including wavyleaf basketgrass.

SA8-193 (cont'd) piedmont regions, and prefers shade and mesic soils. It produces an abundance of small, sticky seeds which are readily carried on clothes, shoes, and construction equipment, thus aiding its spread to new sites. Considering the anticipated soil disturbance and vegetation structure alterations along the long, linear project footprint which would span mountains to piedmont to coastal plain, this project has great potential to promote a range expansion of this aggressive invasive species, invading forests, to dominate and permanently change understory forest composition and habitat, therefore impacting forest regeneration throughout the project area. The capability of this species to have this drastic impact is evidenced in parts of Virginia and Maryland where Wavyleaf grass has invaded in recent years.

DCR-DNH supports sanitization of all construction equipment daily to prevent the spread and introduction of invasive species. DCR-DNH suggests pre- construction, during construction, and post-construction monitoring for invasive species with the post-construction monitoring completed after the end of the first complete growing season following the completion of a project. DCR-DNH recommends that disturbed areas be inspected for invasive species twice during each growing season for a period of not less than five years after project completion, and that when observed, invasive species be eradicated as appropriate for species and setting, per coordination with the DCR-DNH.

Appendix S - State Species Table S-2

SA8-194 DCR-DNH provides the following comments on Table S-2 "Virginia Listed and Species of Greatest Conservation Need With Potential to Occur in the Atlantic Coast Pipeline Project Area" from Appendix S of the Draft EIS:

- Page S-30 Southeastern myotis should also be listed as documented in the Great Dismal Swamp Conservation Site
- Page S-31 Eastern small-footed bat should be listed as potential to occur at the Big Levels-Maple Flats Conservation Site
- Page S-31 Little brown bat should be listed as potential to occur at the Burnsville Cove Conservation Site
- Page S-32 Tri-colored bat should be listed as potential to occur at Burnsville Cove Conservation Site
- Page S-32 Dismal swamp southeastern shrew is missing from Table S-2 and should be listed as documented at the Great Dismal Swamp Conservation Site
- Page S-48 Atlantic pigtoe-should say "documented at Nottoway River-Ft. Pickett SCU and Nottoway River-Sturgeon Creek-Hardwood Creek SCU' and the following language- "potential for at Appomattox River crossing south of Stoddert, potential for at Nottoway River and Sycamore Bend swamps, potential for at Wingina crossing". DCR-DNH recommends language be updated to include all documented and potential locations.
- In October of 2016, the working draft of the table was reviewed and edited by DCR-DNH for Merjent, a subcontractor for FERC, and was titled "Virginia Listed and **Rare** Species and Species of Greatest Conservation Need With Potential to Occur in the Atlantic Coast Pipeline Project Area." The title for Table S-2 in the Draft EIS has been changed to "Virginia Listed and Species of Greatest Conservation Need With Potential to Occur in the Atlantic Coast Pipeline Project Area" removing the following rare species listed below:
- Barratt's sedge (*Carex barrattii*, G4/S2/NL/NL)

19

SA8-194 Appendix S has been revised; note that Dismal swamp southeastern shrew was not added because it is a State Watch species. Rare plant species that were not detected during field surveys within the ACP survey corridor were removed from the list as impacts on these species would not be anticipated. The VDCR-DNH may request survey shapefile data and reports directly from Atlantic. Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the VDCR-DNH. The VDCR-DNH would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

SA8-194 (cont'd)

- Crowfoot sedge (*Carex crus-corvi*, G5/S1S2/NL/NL)
- Lake-shore sedge (*Carex lacustris*, G5/S1/NL/NL)
- Inflated sedge (*Carex vesicaria*, G5/S1S2/NL/NL)
- Velvet sedge (*Carex vestita*, G5/S2/NL/NL)
- Millboro leatherflower (*Clematis viticaulis*, G1/S1S2/SOC/NL)
- Hazel dodder (*Cuscuta coryli*, G5?/S2?/NL/NL)
- Plunkett's flatsedge (*Cyperus plukenetii*, G5/S2/NL/NL)
- Pineland tick-trefoil (*Desmodium strictum*, G4/S2/NL/NL)
- Tall cinquefoil (*Drymocallis arguta*, G5/S1/NL/NL)
- Dwarf burhead (*Echinodorus tenellus*, G5?/S1/NL/NL)
- Baldwin's spikerush (*Eleocharis baldwinii*, G4G5/S2/NL/NL)
- Black-fruit spikerush (*Eleocharis melanocarpa*, G4/S2/NL/NL)
- Water horsetail (*Equisetum fluviatile*, G5/S1/NL/NL)
- Northern St. John's-wort (*Hypericum boreale*, G5/S2/ NL/NL)
- Lesser marsh St. John's-wort (*Hypericum tubulosum*, G4?/S2/NL/NL)
- Marsh muhly (*Muhlenbergia glomerata*, G5/S2/NL/NL)
- Sword-leaf phlox (*Phlox buckleyi*, G2/S2/SOC/NL)
- Torrey's Mountain-mint (*Pycnanthemum torreyi*, G2/S2?/SOC/NL)
- Yellow pitcher plant (*Sarracenia flava*, G5?/S1/NL/NL)
- Reclining bulrush (*Scirpus flaccidifolius*, G2/S1/NL/NL)
- Elliott's goldenrod (*Solidago latissimifolia*, G5/S2/NL/NL)
- Freshwater cordgrass (*Spartina pectinata*, G5/S2/NL/NL)
- Dense-flowered camas (*Stenanthium densum*, G5/S1/NL/NL)
- Large cranberry (*Vaccinium macrocarpon*, G4/S2/NL/NL)

DCR-DNH would like to know the reason for the title change mentioned above, and the rationale for no longer considering impacts to these Globally and State rare plants DCR-DNH tracks as natural heritage resources.

The comments made under *Asclepias rubra* are repeated as boilerplate language throughout the Species Table S-2. Potential for impacts are varied in the nature of the conflicts and the species and sites involved and therefore using this general boilerplate language for many species is not appropriate. DCR-DNH's overall recommendation is avoidance of impacts to the different natural heritage resources documented within the pipeline footprint, including associated infrastructure. Below are DCR-DNH's recommendations providing additional detail for what is documented at each site and then recommendations for avoiding impacts to each Natural Heritage resource occurrence.

Please note, for the powerline bog species listed in Table S-2, DCR-DNH coordination with Atlantic is on-going and we continue to recommend avoidance of the conservation sites at Handsom-Gum Powerline, Branchville Powerline, and Emporia Powerline Bog Conservation Sites. In regard to some additional species associated with power line wetlands, such as those near Dismal Swamp (*Ludwigia pilosa, Xyris fimbriata*, etc), specific comments are made on where they occur within the line and avoidance recommendations. Several new resources near the Dismal Swamp will be either directly or indirectly impacted by the current pipeline alignment.

- Red milkweed (*Asclepias rubra*, G4G5/S2/NL/NL) – Statements regarding impacts due to construction "within or adjacent to the right of way" are pertinent for this species at Handsom-Gum as well as for all species near the pipe trench at other sites. Staging and other activities are taking place in adjacent acreage may impact documented natural heritage resources. Therefore DCR-DNH recommends impacts be minimized to the fullest extent possible and all staging of equipment and

SA8-194 (cont'd)

materials be targeted in areas away from the mapped resources. The staging and other use of construction equipment has potential to impact Handsom-Gum directly despite location of the pipeline outside of the transmission line corridor.

- Pine barren sandreed (*Calamovilfa brevipilis*, G4/S1/NL/NL) – As stated in the Table S-2 avoiding now per line shift by Atlantic.
- America willow-herb *(Epilobium ciliatum,* G5T5/S1/NL/NL*)* – no data provided (no rare plant survey form).
- Virginia sneezeweed (*Helenium virginicum*, G3/S2/LT/LE)–2015 Rare Species Sighting Forms and shapefile to indicate relocated these species at the Lyndhurst Conservation Site. Same for Valley Doll's-daisy (*Boltonia montana,* G1G2/S1/NL/LE*).* According to ACP correspondence dated March 28, 2017, a survey was conducted in the Campbell and Grove Farm Ponds Conservation Site in August 2016 to search for *Boltonia montana*, as well as other target species including *Helenium virginicum* and state-listed plants; no sensitive species were identified during survey.
- Fraser's Marsh St. John's-wort *(Hypericum fraseri,* G5/S2/NL/NL*)* –two occurrences (both in Bath County) One population is found in the corridor on the north side (**Map 17**), but not on the line itself. DCR-DNH recommends avoiding the population to eliminate incidental impacts from the staging of equipment and materials.
- Big Gallberry *(Ilex coriacea,* G5/S1/NL/NL*)* – DCR-DNH recommends staging of equipment/materials and clearing of the right-of-way avoid the newly discovered population of *Ilex coriacea* located barely south of the actual pipeline (**Map 86**). DCR-DNH staff botanist requests further information in regards to the logistics of clearing over a 30ft area rather than the standard width of impact.
- Hairy Seedbox *(Ludwigia pilosa,* G5/S1/NL/NL*)* – **On Map 95**, some re-finds of known populations but also new occurrences for this species, some of which are actually in the path of the pipeline. This species is also found elsewhere on this map quite close to the pipeline within the corridor. DCR-DNH staff botanist requests further coordination in regards to avoidance of impacts to the documented populations within the pipeline corridor and impacts associated with staging of equipment, materials, etc Due to these issues (particularly on Map 95), DCR-DNH concurs with part of the language in their standard "Red Milkweed" language: there may be serious, direct impacts to these resources.
- Raven's Seedbox *(Ludwigia ravenii,* G1G2/S1/NL/NL)– This natural heritage resource is a globally rare species (G1G2), and therefore one of the most significant discoveries of the plant surveys conducted for this project. The population is small, and as with the other extant Virginia populations, is found in an artificial habitat (ditch). The road the ditch runs along is access road 26-060-A020.AR2 near MP 53.55. As reported in the rare plant form, "Because the population is located within a drainage ditch alongside a dirt road, this population could be at risk if upgrades to the road or drainage system occurs." DCR-DNH emphasizes the need to avoid impacts to this population during construction due to road improvements, drainage changes, staging associated with the construction of the pipeline.
- Walter's Paspalum (*Paspalum dissectum,* G4?/S2/NL/NL*)* – **On Map 95**, DCR-DNH recommends avoiding impacts within the corridor, close to the actual line. *Ludwigia pilosa* could receive direct impacts at this site as well (see above). **On Map 99**, several colonies of this species are known

21

SA8-194 (cont'd)

within the corridor, close by and barely south of the actual pipeline route. Impacts due to pipeline-related activities must be avoided. On **Map 100**, the same applies as on **Map 99**.

- Purple Fringeless Orchid *(Platanthera peramoena,* G5/S1/NL/NL*)* – The single plant found was located along a road that apparently will not be used as an access road for pipeline work and is over 0.5 mile outside of the pipeline corridor therefore DCR-DNH has no comments based on the information provided.

- Water-plantain Crowfoot (*Ranunculus ambigens,* G4/S1/NL/NL*)* – population is located within pipeline corridor on its north side. Impacts associated with pipeline construction should be avoided in this area.

- Yellow Nodding Ladies-tresses *(Spiranthes ochroleuca,* G4/S2/NL/NL*)* – **On Map 5**, the location of this new discovery is within the path of the pipeline. Avoidance of this occurrence is recommended and DCR-DNH does not support the transplanting of this sensitive orchid species as it will not survive. DCR-DNH would like clarification of the statement "Pending GWNF and DCR-DNH review of survey reports and mitigation procedures", mainly because their mitigation procedures are not spelled out specifically. The boilerplate language use for *Asclepias rubra* supposedly applies to this species, but the list of possible impacts, consequences, and lack of specifics that they provide for cases of direct impacts means that we don't know what we could "concur" with at this point. I assume that specific discussions will be had for sites with direct impacts to plants.

- Fringed Yellow-eyed Grass *(Xyris fimbriata,* G5/S1/NL/NL) **–On Map 99**, plants are in the corridor DCR-DNH recommends avoiding impacts related to pipeline construction including staging of equipment, etc.

- Tall Yellow-eyed Grass (*Xyris platylepis,* G5/S2/NL/NL) - **On Map 99**, plants are in the corridor and some quite close to the actual pipeline. DCR-DNH recommends avoiding impacts to rare plants related to pipeline construction and operations.

- DCR-DNH recommends rare plant populations clearly be identified and flagged with orange fencing in the field prior to construction using GPS based coordinates and shapefiles. For all of documented natural heritage resources, populations should be closely monitored during construction to avoid impacts.

- Eastern big-eared bat (*Corynorhinus rafinesquii macrotis*, G3G4T3/S2/NL/LE) –82 bats were documented at a bridge roost within the construction workspace in Southampton County. These bats are sensitive to disturbance, noise, etc. DCR recommends continued coordination with VDGIF to ensure compliance with protected species legislation.

- Tiger Salamander – According to the table, DGIF recommends avoidance of wetlands and a 300 meter buffer for this species. The newly discovered population near Sherando is much closer to the pipeline route (20 m from ROW margin) than this, thus suggesting the need to identity an alternate route to avoid impacts. Also, sedimentation during construction could fill underground burrows used as habitat by tiger salamanders. DCR-DNH recommends re-routing the pipeline to avoid this population.

- Barking Treefrog (*Hyla gratiosa*, G5/S2/NL/LT) – Survey/Agency Data – the first sentence says "Reports for this species in Greensville and Southampton counties are unconfirmed." DCR-DNH has confirmed records for this species in both counties.

SA8-194 (cont'd)

- Mabee's Salamander – Please note this species doesn't occur on the GWNF (right column includes GWNF and DGIF as reviewers of their survey data)
- According to ACP correspondence dated March 28, 2017, no Dwarf waterdog (*Necturus punctatus*, G5/S2S3/NL/NL) surveys were conducted in Virginia. DCR-DNH continues to recommend surveys for the Dwarf waterdog especially in the Nottoway and Meherrin River drainages.
- Chestnut clearwing moth (*Synanthedon castaneae*, G3G5/SH/NL/NL) – in the Agency data part of the table it is stated that the only VA record is from Falls Church (historic). Atlantic didn't conduct any surveys for this species, but on page 98 of the ACP Preliminary Draft Biological Evaluation Report [= Appendix D Biological Evaluation] they state "Use of pheromone baits has confirmed that the species occurs in several areas in Virginia." According to ACP correspondence dated March 28, 2017, Virginia should be removed from the sentence and the statement should be revised to read, "In addition, use of pheromone baits has revealed its occurrence in several areas in Connecticut (Anagnostakis et al., 1994) and the southeast (Snow and Eichlin, 1986), including Florida, North Carolina, South Carolina, and Georgia." Citations for the listed studies are provided below.

Anagnostakis S. L., Welch K. M., Snow J. W., Scarborough K., Eichlin. T. D. 1994. The rediscovery of the clearwing chestnut moth, *Synanthedon castaneae* (Busck) (Lepidoptera: Sesiidae) in Connecticut. *Journal of the New York Entomological Society*, 102: 111-112.

Snow J. W. and Eichlin T. D. 1986. The Rediscovery and Distribution of the Clearwing Moth, *Synanthedon castaneae* (Busck) in the Southeastern United States. *Journal of Agricultural Entomology*, 3(1): 66-67.

Appendix Q-Vegetation Communities

SA8-195 To determine if impacts will occur to significant communities as identified by DCR-DNH, DCR ecologist attempted to classify the National Land Cover Database (NLCD) classification units listed in Table Q-1 into Virginia ecological community types using "The Natural Communities of Virginia Classification of Ecological Community Groups" (http://www.dcr.virginia.gov/natural-heritage/natural-communities/ncintro). The NLCD is a much broader and coarser system than Virginia ecological groups which includes the community types. DCR-DNH classified some of NLCD communities to Virginia community types with high confidence; however there are several units that cannot be classified based on the information provided. In Table 1 DCR-DNH included a column called "Crosswalk Confidence" (High-Medium-Low) and requests Atlantic classify the NLCD communities with medium and low confidence using The Natural Communities of Virginia Classification of Ecological Community Groups document.

SA8-195 As described in section 4.4.3, impacts on vegetation communities were first calculated by state vegetation community type, and then crosswalked to the corresponding NLCD cover type using the Northeast Terrestrial Wildlife Habitat Classification crosswalk table found in appendix D of Gawler, 2008. For Virginia, the Terrestrial Habitat Map for Northeast U.S. and Atlantic Canada (Nature Conservancy, 2015) was used to calculate the state vegetation impacts, consistent with what is used in the Virginia State Wildlife Action Plan (2015). Refer to section 4.5.6 for an updated discussion and revised impacts on interior forest fragmentation.

SA8-195 (cont'd)

Table 1 Vegetation Communities Crossed by the Atlantic Coast Pipeline (DCR-DNH Vegetation Types and NLCD State Vegetation Community Type)

DCR-DNH VEGETATION TYPE	NLCD VEGETATION COMMUNITY	NLCD STATE VEGETATION COMMUNITY TYPE	CROSSWALK CONFIDENCE
Acidic Oak – Hickory Woodland/Savanna	Deciduous Forest	Northeastern Interior Dry-Mesic Oak Forest	Low
Bald Cypress – Water Tupelo Brownwater Swamp	Woody Wetland	Atlantic Coastal Plain Blackwater / Brownwater Stream Floodplain Forest	High
Bald Cypress-Tupelo Swamp (old-age stands)	Woody Wetland	Atlantic Coastal Plain Blackwater / Brownwater Stream Floodplain Forest	High
Basic Oak – Hickory Woodland/Savanna	Deciduous Forest	Northeastern Interior Dry-Mesic Oak Forest	Low
Central Appalachian Basic Ash – Hickory Woodland	Grassland / Herbaceous	Central Appalachian Alkaline Glade and Woodland	High
Central Appalachian Low-Elevation Acidic Seepage Swamp	Woody Wetland	North-Central Appalachian Acidic Swamp	High
Central Appalachian Mountain Pond (Threeway Sedge – Buttonbush Type)	Herbaceous Emergent Wetlands	Laurentian - Acadian Freshwater Marsh	Medium
Central Appalachian Shale Barren (Southern Type)	Mixed Forest	Central Appalachian Pine-Oak Rocky Woodland	Low
Central Appalachian Shale Barrens	Mixed Forest	Central Appalachian Pine-Oak Rocky Woodland	Low
Coastal Plain / Outer Piedmont Acidic Seepage Swamp	[no crosswalk]	[no crosswalk]	
Coastal Plain Bottomland Forest (Brownwater Low Terrace Type)	Woody Wetland	Atlantic Coastal Plain Blackwater / Brownwater Stream Floodplain Forest	High
Coastal Plain Depression Wetlands	Woody Wetland	Central Atlantic Coastal Plain Non-riverine Swamp and Wet Hardwood Forest	Medium
Coastal Plain/Outer Piedmont Seepage Bog	Herbaceous Emergent Wetlands	Piedmont - Coastal Plain Shrub Swamp	Medium
Coastal Plain/Piedmont Bottomland Forest	Woody Wetland	Piedmont - Coastal Plain Large River Floodplain	High
Granitic Flatrock	[no crosswalk]	[no crosswalk]	
Little Bluestem – Indian-Grass Piedmont Prairie	[no crosswalk]	[no crosswalk]	
Loblolly Pine/Little Bluestem Woodland/Savanna	[no crosswalk]	[no crosswalk]	
Non-Riverine Wet Hardwood Forest (Embayed Region Type)	Woody Wetland	Central Atlantic Coastal Plain Non-riverine Swamp and Wet Hardwood Forest	High
Piedmont Upland Depression Swamp (Pin Oak-Swamp White Oak Type)	Woody Wetland	Piedmont Upland Depression Swamp	High
Piedmont/Coastal Plain Hemlock – Hardwood Forest	Mixed Forest	Appalachian (Hemlock) - Northern Hardwood Forest	Medium
Ridge and Valley Calcareous Spring Marsh (Arrow-arum – Water Smartweed Type)	Herbaceous Emergent Wetlands	Laurentian - Acadian Freshwater Marsh	High
Shenandoah Valley Sinkhole Pond (Typic Type)	Herbaceous Emergent Wetlands	Laurentian - Acadian Freshwater Marsh	Medium

DCR-DNH supports FERC's recommendation on Page ES 11 "*that Atlantic and DTI file an updated fragmentation analysis; consider a 300-foot forested buffer as the impact area; discuss how the creation of forest edge or fragmentation would affect habitat and wildlife; and identify the measures that would be implemented to avoid, minimize, or mitigate impacts on interior/core forest habitat*".

In order to provide the most accurate and up-to-date comments on the Atlantic Coast Pipeline project, DCR-DNH requests shapefiles as changes occur to the project containing updated project footprint (construction right-or-way, access roads, and associated infrastructure including proposed cellular towers referenced on page 4-342).

An explanation of species rarity ranks and legal status abbreviations can be found at http://www.dcr.virginia.gov/natural-heritage/help. Thank you for the opportunity to comment on this draft environmental impact statement for the Atlantic Coast Pipeline.

CC: Wil Orndorff, DCR-DNH-Karst
Amy Ewing, VDGIF
Troy Andersen, USFWS

24

Literature Cited

Landenberger, R.E., N.L. Kota, and J.B. McGraw. 2007. Seed dispersal of the non-native invasive tree Ailanthus altissima into contrasting environments. Plant Ecology 192: 55-70.

Mortensen, D.A., E.S.J. Rauschert, A.N. Nord, and B.P. Jones. 2009. Forest roads facilitate the spread of invasive species. Invasive Plant Science and Management 2: 191-199.

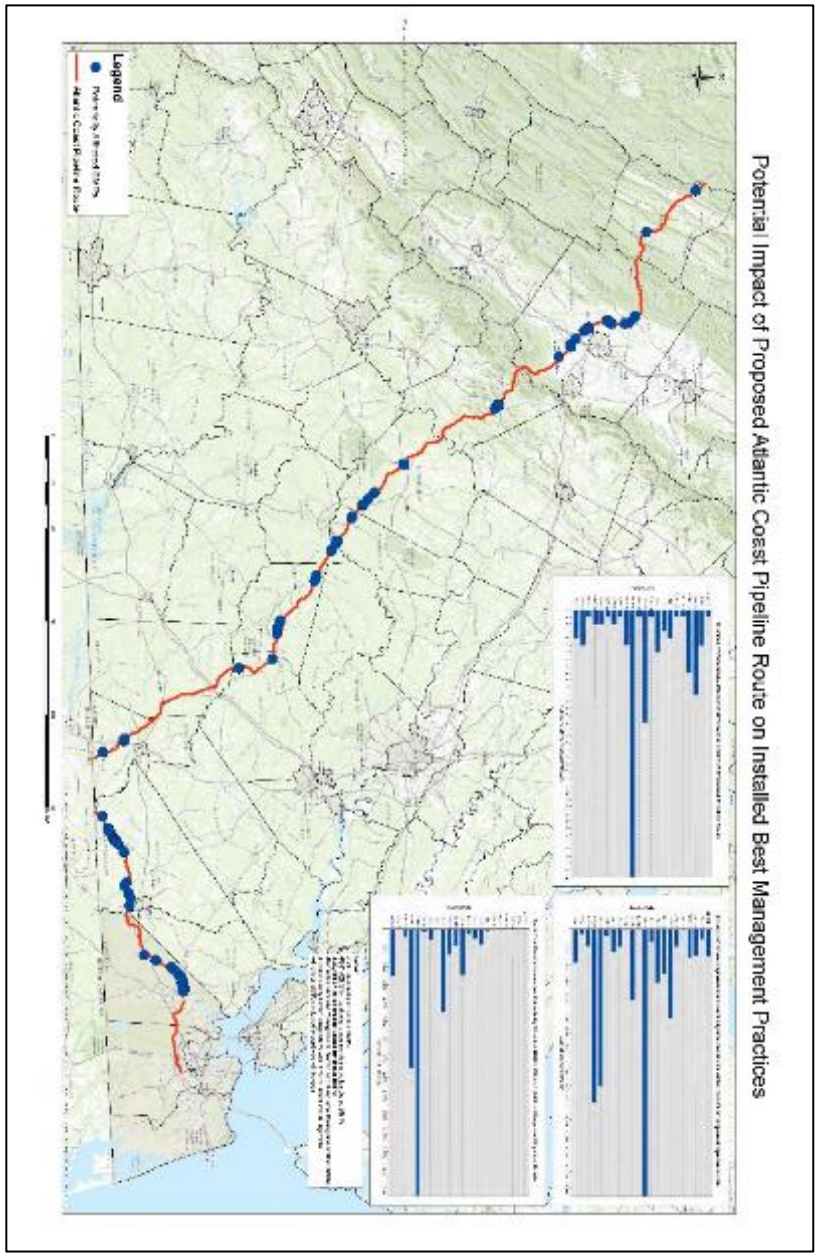
The Nature Conservancy. 2015. Reducing ecological impacts of shale development: recommended practices for the Appalachians. http://www.nature.org/media/centralapps/recommended-shale-practices-ecological-buffers.pdf

Thorell, M. and F. Gotmark. 2005. Reinforcement capacity of potential buffer zones: forest structure and conservation values around forest reserves in southern Sweden. Forest Ecology and Management 212: 333-345.

With, K.A. 2002. The landscape ecology of invasive spread. Conservation Biology 16: 1192-1203.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)



Molly J. Ward
Secretary of Natural Resources

COMMONWEALTH of VIRGINIA
Department of Game and Inland Fisheries

Robert W. Duncan
Executive Director

February 24, 2017

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E. Main Street
Richmond, VA 23219

RE: Atlantic Coast Pipeline
Rev 11b Corridor Review
and Draft EIS Review;
ESSLog# 34825

Ms. Wellman,

In response to your request for comments on the Draft Environmental Impact Statement (DEIS) for the Atlantic Coast Pipeline Project, we offer the following new information and updates to our previous comments. Atlantic Coast Pipeline, LLC (Atlantic) proposes to construct and operate a natural gas transmission pipeline, and associated lateral pipelines, in Virginia. As proposed, the project crosses three of VDGIF's four administrative regions, crosses one of our Wildlife Management Areas (James River WMA), and borders another WMA (Horsepen). We recently submitted a letter (enclosed, 7 February 2017), to Dominion that included our review of project corridor Rev 11a, and of survey reports, habitat assessments, and other recent information submitted to us by Atlantic regarding this project; much of it based on our recommendations and following our guidelines.

The Virginia Department of Game and Inland Fisheries (VDGIF), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over those resources, inclusive of state or federally endangered or threatened species, but excluding listed insects. We are a consulting agency under the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), and we provide environmental analysis of projects or permit applications coordinated through the Virginia Department of Environmental Quality (DEQ), the Virginia Marine Resources Commission (MRC), the Virginia Department of Transportation (DOT), the Army Corps of Engineers (ACOE), the Federal Energy Regulatory Commission (FERC), and other state or federal agencies. Our role in these procedures is to determine likely impacts upon fish and wildlife resources and habitat, and to recommend appropriate measures to avoid, reduce or compensate for those impacts.

7870 VILLA PARK DRIVE, P.O. BOX 90778, HENRICO, VA 23228-0778
(804) 367-1000 (V/TDD) *Equal Opportunity Employment, Programs and Facilities* FAX (804) 367-9147

Rev 11b Review:

We received a shapefile depicting Rev 11b on February 6, 2017. We note that the DEIS periodically references a Rev 12, which we have not received. Review of the Rev 11b corridor confirmed that there are few significant deviations from the corridor alignment that was proposed in Rev 11a. However, the Rev 11b shapefile that we received only included the project centerline and mileposts. We were not provided a new coverage depicting proposed access roads, staging areas, metering stations, or other facilities. If any changes to the location or alignment of such features have been made since Rev 11a, we recommend that those changes be provided to us for review. The comments herein address only the Rev11b centerline.

Based on the few changes offered in this route revision, no additional listed species or designated resources under our jurisdiction were identified as in need of additional consideration. In fact, in most instances, the new alignment appears to reduce impacts upon streams, wetlands, and other natural features. However, the new alignment does result in impacts upon natural or semi-natural areas which have not yet been assessed for suitability to support the listed species for which we have previously recommended consideration.

SA8-196

Of particular note is the newly proposed location for the Cowpasture River crossing. The Cowpasture River has been designated a Threatened and Endangered Species Water due to the presence of federally Endangered James spinymussels. Therefore, to ensure protection of James spinymussels, we recommend that a mussel survey and relocation be performed from 100 meters upstream through 400 meters downstream of impact areas in the Cowpasture River. This survey should be performed by a qualified, permitted biologist, preferably no more than six months prior to the start of construction. All survey and relocation activities should adhere to the attached draft guidance. Any relocations should be coordinated with Brian Watson, VDGIF Region II Aquatic Resources Biologist (434-525-7522), and no federally listed species should be relocated without first coordinating with the USFWS (804-693-6694). In addition, we recommend a time of year restriction (TOYR) on all instream work of May 15 through July 31 of any year. Survey results should be made available to Amy Ewing in VDGIF's Headquarters office in Henrico, and to Brian Watson in VDGIF's Forest Office. Upon review of the results, we will make final recommendations regarding the protection of listed species known from the area. All survey reports should reference ESSLog#34825, included in the header of this letter.

If the applicant prefers, they may provide us with good, representative photographs of the impact area(s) for our review. The photos should clearly depict the size of the stream, the substrate type, and the banks upstream and downstream of the site. Upon review of the photos, we may be able to dismiss the need for a mussel survey based on the habitat available on site. Further, we recommend coordination with the USFWS regarding federally listed species in the area.

To ensure protection of listed species and designated resources under our jurisdiction, we recommend that all newly proposed areas of disturbance be assessed for their suitability to support any of the listed species known from the area, per our previous comments.

SA8-196 As discussed in section 4.7.15, Atlantic has assumed presence of the James spinymussel in the Cowpasture River and would implement the conservation measures for ESA sensitive waterbodies described in section 4.7.1, including mussel relocations prior to in-stream construction activities per the Freshwater Mussel Guidelines (FWS and VDGIF, 2015), and the VDGIF TOYR from May 15 through July 31.

SA8-196 (cont'd) Once such habitat and suitability assessments have been performed and we have had the opportunity to review those assessments, we will make additional comments regarding the need for further assessments, surveys, or protective measures to ensure protection of wildlife resources under our jurisdiction.

DEIS Review Regarding Sensitive Wildlife Species and Resources:

Over the past few months, we have received many survey reports, habitat assessments, and other documents resulting from biological data collection along the proposed pipeline corridor; many of them based on our recommendations and following our guidelines. We provided our comments, recommendations, and guidance regarding these studies in the enclosed letter to Dominion dated February 7, 2017.

We support FERC's determination in the DEIS that construction and operation of the ACP may affect or be likely to adversely affect Indiana bats, northern long-eared bats, Roanoke logperch, and Madison Cave isopods. We are not the jurisdictional Virginia agency for management and protection of plants, so we defer to VDACS and VDCR-DNH regarding the determination for running buffalo clover. We recommend continued coordination with the USFWS regarding impacts upon these species. We support FERC's recommendations to Atlantic that they provide the information we and other agencies and organizations have requested prior to the end of the DEIS comment period. We note that we still are awaiting the results of some surveys and habitat assessments performed late in 2016, the results of biological data collection proposed for 2017, and results of surveys or assessments covering newly proposed areas of disturbance depicted in Rev 11b. Until we have been provided this information for review, we cannot make final determinations regarding likely impacts upon affected species and resources under our jurisdiction. Based on our review of the DEIS and recent submittals, however, we offer the following additional information, including updates to our earlier comments.

Atlantic sturgeon (federal endangered; state endangered):

SA8-197 We currently are finalizing Threatened and Endangered Species Water designations and protective recommendations for Atlantic sturgeon in Virginia. Until resource designations and guidance are finalized, we defer to NOAA Fisheries Service regarding protection of Atlantic sturgeon. We recommend continued coordination with them, particularly regarding the determination in section 4.6.2.2 of the DEIS that adherence to the anadromous fish use area time of year restriction for water withdrawals from the Elizabeth River is protective of Atlantic sturgeon. We note that there is evidence of Atlantic sturgeon fall-spawning activity that may warrant an additional TOYR during that season.

SA8-198 Roanoke logperch (federal endangered; state endangered):

We provided specific guidance regarding recently performed and ongoing habitat assessments for Roanoke logperch in the Nottoway River drainage in our February 7, 2017 letter to Dominion (enclosed). We recommend adherence to our guidance and that the clarity and confirmations we requested be provided. As stated in that earlier letter, we support assumption of presence in the Nottoway River, Waqua Creek, Butterwood Creek, and White Oak Creek. We recommend adherence to an instream work TOYR from March 15 through June 30 of any year in

SA8-197 FERC is consulting with NOAA Fisheries regarding the Atlantic sturgeon

SA8-198 Section 4.7.1 includes our recommendation that Atlantic complete all outstanding biological surveys (and that FERC finalizes any necessary section 7 consultation with the FWS) prior to Atlantic beginning construction. Section 4.7.1.10 discusses the waterbodies where presence of the Roanoke logperch is assumed, the TOYR for the species, the implementation of the Virginia Fish Relocation Plan, and adherence to relocation protocols as approved by the FWS and VDGIF.

SA8-198 (cont'd) these waters and at the site of any instream work within 1 mile upstream of these waters (tributaries). We recommend adherence to the Fish Relocation Plan, developed cooperatively between USFWS, VDGIF, and Atlantic. We recommend that the results of the on-site assessments performed in 2016 at UNT Nottoway River 1 Access Road (AR), UNT Nottoway 2, and UNT Nottoway 2 (AR) be provided to us for review. We recommend that all sites determined to provide suitable habitat but which were not accessible during 2016 be assessed for suitability as soon as they become accessible and that the results of that suitability analysis be provided to us for review. We recommend that any newly proposed areas of instream work in the Nottoway drainage be assessed for suitability to support Roanoke logperch and that the assessment be provided to us for review. Upon review of additional reports and information, we will make additional recommendations regarding protection of Roanoke logperch and the resources that support them. We recommend coordination with the USFWS regarding potential impacts upon this species associated with development and operation of the ACP.

SA8-199 Orangefin madtom (state threatened):

This species is native to Virginia's Roanoke River watershed, but it has been introduced into the James River drainage. Neither do we document this species, which often co-occurs with Roanoke logperch, to be native to the Nottoway River drainage. Hence, we agree with the finding in the DEIS that construction and operation of the ACP are likely to adversely impact only the introduced population of this species in the James River watershed. Therefore, we do not recommend any protective measures for this fish other than adherence to typical instream work best management practices (BMPs), including adherence to erosion and sediment controls and the Fish Relocation Plan.

SA8-200 Madison Cave isopod (federal threatened; state threatened):

We do not document this species from the project area, but we recognize that our data may not include all known or suitable sites that support this species. Therefore, we support coordination with us, the USFWS, and VDCR-DNH regarding survey and protective recommendations for this species. Upon review of any new information regarding this species, we will make additional comments and recommendations regarding the protection of Madison Cave isopods.

SA8-201 Freshwater mussels:

We received a report in late September 2016 that details the habitat assessments and surveys performed, per our recommendations and following our guidance, to address concerns related to the protection of listed freshwater mussels and the resources that support them. Specifically, we recommended consideration of James spinymussels (federal endangered; state endangered), yellow lance mussels (federal species of concern), Atlantic pigtoe mussels (state threatened), and green floater mussels (state threatened); all which have been documented from the project area. Our comments on the surveys and habitat assessments reviewed to date are included in our enclosed letter to Dominion dated February 7, 2017. We continue to support the recommendations in that letter regarding Threatened and Endangered Species Waters.

We support assumption of listed mussel presence at the crossings of the Cowpasture River, James River, Appomattox River, Nottoway River, Sturgeon Creek, Meherrin River and

SA8-199 Comment noted.

SA8-200 FERC is consulting with the FWS regarding the Madison Cave isopod.

SA8-201 Appendix K identifies the waterbodies where in-stream or blasting within 1,000 feet of a waterbody may be required. In these waterbodies, the need for blasting would be determined on a site-specific basis shortly ahead of construction at that waterbody. For all ESA sensitive waterbodies identified in appendix K determined to require blasting, a site-specific blasting plan would be prepared and submitted to the FWS and the appropriate state agency in accordance with the notification requirements prior to blasting. Atlantic has committed to conducting blasting within the dry-ditch crossing area and utilizing matting to minimize noise and vibration. Appendix K also identifies where Atlantic has committed to TOYR for various mussel species. Pending survey results, we have recommended in appendix K that Atlantic assume presence of James spinymussel in Jackson River and apply the VDGIF TOYR in this waterbody, in addition to the FWS' enhanced conservation measures outlined in section 4.7.1.

SA8-201 (cont'd)

their perennial tributaries, as stated in the DEIS. We reiterate that mussel surveys and relocations at the sites of instream work within any of these waters is recommended and that work should be performed by a permitted, qualified biologist and in adherence to our guidance (enclosed). We support efforts proposed for 2017 to perform assessments and/or surveys at the stream crossing sites that were not accessible during the 2016 survey season or that need to be considered based on the newly-proposed project alignment depicted in Rev 11b. We note that mussel survey and relocation lengths are partially determined by the crossing method. If blasting is required to cross any stream known or expected to support listed mussels, we may require more extensive surveys than are typically recommended for trenched stream crossings. We recommend that the applicant provide us with the location of any proposed instream blasting so that we may review each site for potential impacts upon freshwater mussels. We recommend that the results of any surveys and assessments be provided to us for further review, including the remaining late-2016 survey reports for proposed crossings of Winningham Creek, Nottoway River 1, and Cohoon Creek. Upon receipt and review of these surveys and assessments, we will offer additional comments and recommendations regarding the protection of freshwater mussels under our jurisdiction.

In our February 7, 2017 letter, we recommended consideration of impacts upon James spinymussels in Back Creek and the Jackson River, Bath County. Although we have not designated these streams as Threatened and Endangered Species Waters, our Malacologist, Brian Watson, has reason to believe that James spinymussels may occupy these streams based on their adjacency to occupied sub-watersheds (Bullpasture River/Cowpasture River). It appears, based on the information included in Appendix K1, that a mussel survey is being proposed for the crossing of the Jackson River, and that no mussels were found during a survey performed at Back Creek. We appreciate these efforts and recommend continued coordination with us and the USFWS regarding the survey of the Jackson River.

We continue to recommend that instream work in designated Threatened and Endangered Species Waters (waters known to support listed aquatic species) and instream work at sites within 1 mile upstream of such waters (tributaries) adhere to the previously-recommended time of year restrictions (TOYR) protective of mussels known from that water, whether listed mussels were found during surveys at such sites or not. It is important that listed mussels known from downstream of the work site also be protected from harm, achieved through adherence to TOYR and typical instream work BMPs. We recommend the table in Appendix K1 of the DEIS be updated to reflect commitment from Atlantic to adhere to TOYR for instream as described above. Crossings being performed via Horizontal Directional Drill (HDD) that do not include any instream work in these waters may not need to adhere to TOYR or mussel surveys and relocations.

As described in earlier correspondence with the applicant, negative surveys are only valid for two years. If the crossing sites surveyed in 2016 do not commence construction before 2018 (two years post-survey), we may recommend additional survey activities at those sites to ensure colonization of mussels has not occurred in the interim. We recommend coordination with the USFWS regarding potential impacts upon federally-listed species associated with the development and operation of the ACP.

SA8-202

Listed salamanders:

As described in earlier correspondence with the project applicant, both state Endangered eastern tiger salamanders and state Threatened Mabee's salamanders are documented from the project area. To ensure protection of these species and the habitats upon which they depend, we recommended that wetlands proposed to be impacted by pipeline construction, operation, or maintenance and within the documented range of these species be evaluated for habitat suitability for these species. Wetlands deemed suitable should be surveyed for the species, and occupied wetlands/ponds and an upland buffer of 300 meters around the wetland/pond should be protected from project impacts. The listed salamander report that we were provided for review details habitat assessment and salamander survey activities that occurred during the 2016 season.

Habitat assessments and surveys for eastern tiger salamanders were performed, per our recommendations, at wetlands along the pipeline corridor in Augusta and Nelson counties. Only one of the four wetlands that were identified as suitable eastern tiger salamander habitat and accessible for surveys was found to be occupied by eastern tiger salamanders (waua050f). Because eastern tiger salamanders must have access to wetlands/ponds/vernal pools to breed, and to the associated uplands in which they live the rest of the year, we recommended that waua050f and an at-least 300 meter upland buffer be avoided. After a site visit to the occupied wetland with our Herpetologist, John (J.D.) Kleopfer, and as reflected in Rev 11b, the project corridor was shifted to the west of pond waua050f and outside of its drainage area. By protecting the water source for waua050f from impacts and by moving the corridor farther from the ponded area, as shown in Rev 11b, we are satisfied that significant adverse impacts upon waua050f and the eastern tiger salamanders that inhabit it have been avoided.

We recommend that any wetlands located in Augusta or Nelson county that are newly proposed for impacts (based on the Rev 11b alignment) or that were not accessible during 2016, be assessed for suitable eastern tiger salamander habitat and that any suitable wetlands be surveyed following the previously-provided protocols. The survey protocols we provided to Atlantic and their environmental consultants stipulate that two years of surveys are necessary to confirm lack of ambystomid salamander presence in any given wetland/pond. We recommend that the wetlands that were determined to provide suitable eastern tiger salamander habitat and that were surveyed during 2016, but that were not occupied in 2016 (wauc103f, waub103f, and wnep001f), be surveyed again in 2017 to confirm lack of presence.

Habitat assessments and surveys for Mabee's salamanders were performed, per our recommendations, in wetlands along the pipeline corridor in the City of Suffolk in 2016. No Mabee's salamanders were documented at the two wetland features (ponds) determined suitable habitat and accessible for surveys in 2016.

Because two years of surveys are necessary to confirm lack of ambystomid salamander presence in any given wetland/pond, we recommend that the wetlands determined to be suitable Mabee's salamander habitat that were available for surveys in 2016 but were not occupied (wsuc101e and wsuc007e) be surveyed again during in 2017 to confirm lack of presence. In addition, we recommend that any wetlands located in the City of Suffolk that are newly proposed for impacts (based on the Rev 11b alignment) or that were not accessible during 2016 be

SA8-202 Comments noted.

SA8-202 (cont'd) assessed for suitable Mabee's salamander habitat and that any suitable wetlands be surveyed following the previously-provided protocols.

We recently received Atlantic's 2017 Listed Salamander Study Plan for review. We will coordinate directly with Atlantic and their environmental consultants regarding the suitability of this plan. Upon review of upcoming surveys and assessments, we will make additional comments and recommendations regarding the protection of eastern tiger salamanders, Mabee's salamanders, and the habitats that support them, with regard to development and operation of the ACP.

SA8-203 Listed Bats:

Based on guidance from VDGIF and the USFWS, Atlantic and their consultants performed acoustic and mist-net surveys during 2015 and 2016 to inform our concerns for the protection of federally Endangered Indiana bats, federally Endangered Virginia big-eared bats, federally Threatened northern long-eared bats, and state Endangered Rafinesque's eastern big-eared bats, all of which are documented from the project area. All surveys followed federal protocols and were approved and permitted, as necessary. Specific comments regarding these surveys and assessments are included in our enclosed February 7, 2017 letter to Dominion.

We recommend avoidance of impacts upon all previously-known and newly documented hibernacula, roost sites, and roost trees and adherence to federal guidelines for their protection. We recommend coordination with us regarding any unavoidable impacts located within 0.5 mile of such resources for state-only listed bats. We recommend that any new lands and habitats now within the project scope, based on the Rev 11b corridor, be assessed following the protocols previously used. We continue to recommend adherence to VDGIF's "Best Management Practices for Conservation of Little Brown Bats and Tri-colored Bats" and coordination with us and the USFWS regarding potential impacts upon Virginia's bats as surveys continue into 2017.

SA8-204 Listed Small Mammals:

During previous coordination with Atlantic and its environmental consultants, we recommended consideration of impacts upon state Endangered rock voles, state Endangered American water shrews, and Wildlife Action Plan (WAP) Species of Greatest Conservation Need (SGCN) Tier IVa Allegheny woodrats. Accordingly, Atlantic and its environmental consultants performed habitat assessments and small mammal surveys along the currently proposed pipeline corridor. Our comments regarding those surveys and habitat assessments are included in the enclosed letter to Dominion dated February 7, 2017.

We recommend avoidance of impacts upon areas already identified as suitable listed small mammal habitat and at which there is evidence to support their presence, including latrine sites. We recommend that the applicant provide us with information regarding the four crossing sites on streams identified as suitable water shrew habitat and any proposed conservation measures to ensure avoidance of impacts upon this species. We also recommend continued coordination with us regarding small mammals as surveys and assessments continue into 2017 and onto lands not accessible during 2016 or which are newly within the project scope.

SA8-203 Section 4.7.1 includes our recommendation that Atlantic complete all outstanding biological surveys and FERC completes any necessary section 7 consultation with the FWS prior to Atlantic beginning construction. Sections 4.7.1.1, 4.7.1.2, 4.7.1.3, and 4.7.1.4 discuss avoidance and mitigation measures for federally listed bat species.

SA8-204 Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the VDGIF. The VDGIF would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

SA8-205

Listed Birds:

Based on their occurrence within the ACP project area, we recommended protection of state Threatened loggerhead shrikes and recommended adherence to a TOYR for ground clearing and tree removal from April 1 through July 31 of any year for work performed in Highland County, Bath County, or Augusta County; or within the Rockfish Valley Region of Nelson County. In their response to our recommendations, Atlantic and their environmental consultants agreed to adhere to the TOYR in Bath, Highland, and Augusta counties except for the area in Augusta from project mile point (MP) 114.8 – 126. Per our recommendation, surveys for loggerhead shrikes were performed throughout this area during 2016. Specific comments about these survey areas and results are included in the February 7th letter to Dominion.

SA8-206

The DEIS does not include any information regarding loggerhead shrikes, our recommendations regarding their protection, or the results of surveys performed for the species; nor any indication of Atlantic's commitment to adhere to the TOYR protective of nesting loggerhead shrikes. We recommend the DEIS be updated to include this information.

State Threatened peregrine falcons also have been documented from the eastern portion of the project area, primarily from nest boxes located on bridges. Although we do not document natural peregrine falcon nests (eyries) or nesting habitat along the proposed pipeline corridor, we did ask Atlantic to assess habitat along the pipeline route for such features during already-planned aerial surveys. No significant cliff habitat suitable for nesting peregrine falcons was documented along the pipeline corridor during aerial investigations. Thus, we do not anticipate this project to result in significant adverse impacts upon peregrine falcons or resources that support them. If significant bridge or near-bridge disturbance in eastern Virginia becomes part of the project, we recommend additional coordination with us regarding protection of nesting peregrine falcons on such structures.

Based on known presence of federally Endangered red-cockaded woodpeckers in southeastern Virginia and North Carolina, habitat assessments and subsequent cavity searches were performed along the proposed pipeline corridor within areas of known habitat, per USFWS guidelines. No red-cockaded woodpeckers or suitable cavities were documented from Virginia. Therefore, we do not anticipate the construction and operation of the ACP to result in adverse impacts upon red-cockaded woodpeckers. However, we recommend continued coordination with the USFWS regarding potential impacts upon this species.

Bald and Golden Eagles:

Bald and golden eagles are known from Virginia. Atlantic and its environmental consultants performed, at the request of the USFWS, aerial surveys for bald eagles and golden eagles along the proposed pipeline corridor. Both species of eagle were documented in multiple locations along the corridor. We recommend continue coordination with the USFWS regarding potential impacts upon bald and golden eagles, protected by the Bald and Golden Eagle Protection Act, as well as continued adherence to Virginia's bald eagle management guidelines.

SA8-205 Comments noted. Table S-2 of appendix S has been updated with additional information on the loggerhead shrike.

SA8-206 Comments noted.

SA8-207

Listed and other snakes:

Timber rattlesnakes, state Endangered canebrake rattlesnakes, and scarlet kingsnakes have been documented from the project area. We continue to recommend that the pipeline be routed to avoid impacts upon suitable habitats for these species, particularly canebrake rattlesnake habitats in southeastern Virginia. We also recommend that long-term vegetation management along the corridor in areas known to support canebrake rattlesnakes be consistent with conservation measures for the species (previously provided).

We are glad to see that the DEIS includes a commitment from Atlantic to educate construction workers engaging in pipeline construction, operation, or maintenance about snakes, including being trained in the identification, basic natural history, and legal status of canebrake rattlesnakes. We support this training and adherence to the Snake Conservation Plan during construction, operation and maintenance of the ACP.

SA8-208

Trout Streams:

In the DEIS, trout streams in Virginia are either identified as "wild brook" streams or "stockable" streams. We define wild trout streams (Class I – IV) as those which naturally support trout; whether brook, brown, or rainbow trout. Stockable trout streams (Class V – VIII) are those streams included in our stocking program. Stocking of brook, brown, or rainbow trout may occur in these streams. Trout and the streams that support them are ecologically and economically significant resources in Virginia.

To best protect valuable wild trout resources, we recommend that all instream work occurring in the waters listed in our February 7, 2017 letter to Dominion and/or their tributaries (within 1 mile upstream) adhere to a time of year restriction from October 1 through March 31 of any year in waters known to support brook trout and/or brown trout, and from March 15 through May 15 of any year in waters known to support rainbow trout. We recommend confirmation of Atlantic's commitment to adhere to the above recommended TOYR and an updated Appendix K1 to reflect this commitment. We note that water crossings being accomplished via Horizontal Directional Drilling (HDD) that do not include instream work may not need to adhere to the TOYR.

To ensure avoidance or minimization of conflicts with stocking and angling activities in the stocked streams listed in our February 7, 2017 letter, we understand that Atlantic is coordinating with Paul Bugas, VDGIF Region IV Aquatic Resources Manager. We support coordination with him and adherence to his recommendations regarding these resources.

SA8-209

Anadromous Fish Use Areas:

As stated in the DEIS, we recommend that instream work in designated Confirmed and Potential Anadromous Fish Use Areas or instream work within 1 mile upstream of Confirmed Anadromous Fish Use Areas adhere to TOYR protective of fish migration and spawning. In the DEIS, it is stated that Atlantic has committed to adhere to the TOYR from February 15 through June 30 of any year for all instream work in Anadromous Fish Use Areas and their tributaries except for the James River. However, Appendix K1 of the DEIS (ACP waterbody crossings), depicts adherence to a TOYR protective of Anadromous Fish Use Areas, shifted slightly based

SA8-207 Comments noted.

SA8-208 Appendix K has been updated to include Atlantic's commitment to implement VDGIF recommended TOYR for wild trout and stockable trout streams, or FERC recommendations for Atlantic to implement these TOYRs by waterbody crossing.

SA8-209 Appendix K has been updated to include Atlantic's commitment to implement VDGIF recommended TOYR for anadromous fish use areas, or FERC recommendations for Atlantic to implement these TOYRs by waterbody crossing.

SA8-209 (cont'd) on the location of the impacts within the watershed. We request clarification about Atlantic's commitment to adhere to TOYR protective of the above resources.

We reiterate that to best protect the important fisheries, all instream work in Confirmed Anadromous Fish Use Areas and their tributaries and/or within Potential Anadromous Fish Use Areas (all listed in the July 7, 2017 letter) should adhere to a time of year restriction (TOYR) from February 15 through June 30 of any year. Crossings being performed via Horizontal Directional Drill (HDD) that do not include any instream work in these waters may not need to adhere to the TOYR.

SA8-210 **Crossing of James River Wildlife Management Area:**

The ACP is proposed to cross the Department's James River Wildlife Management Area, a public resource that was purchased with federal grant funds from the U.S. Fish and Wildlife Service, located in Nelson County. If the project interferes even temporarily (e.g., during construction) with uses of the land which were established as purposes of those grants, pipeline construction will jeopardize the Department's future access to these grants. While we are working closely with Atlantic to resolve this issue to our mutual satisfaction, please be aware that this issue remains unresolved at this time, and we cannot support the project crossing of our Wildlife Management Area until this issue is resolved. We support FERC's recommendation to continue coordination with us regarding this issue.

SA8-211 **Migratory Bird Plan:**

We have reviewed the Migratory Bird Plan, developed to satisfy requirements under the Migratory Bird Treaty Act and as requested by the USFWS. We appreciate efforts to schedule tree removal and ground clearing to avoid impacts upon nesting migratory birds. We continue to recommend adherence to a TOYR for these activities from March 15 through August 31 of any year. In addition, we recommend minimization of forest fragmentation across the Commonwealth. Specific recommendations regarding our review of the Migratory Bird Plan are included in our February 7, 2017 letter to Dominion. Based on review of the DEIS and recent conversations with Atlantic's environmental consultants, we offer the following updates to relevant sections of our comments on the Migratory Bird Plan.

- Colonial Waterbird Colonies: We document colonial waterbird colonies containing great blue herons and great egrets from the project area; some confirmed and new ones observed during aerial surveys performed along the project route. We recommend that the applicant provide to us for review a map of the great blue heron colony documented from Suffolk (ROOK-ACT-02), and any other colonies located within 0.25 mile of the project areas. Upon review of this information, we will provide guidance regarding protection of any active waterbird colonies that may be impacted by construction, operation, or maintenance of the ACP.

Proposed Water Withdrawals:

SA8-212 Water withdrawals from Virginia's waters are proposed for use during pipeline construction for a number of purposes included hydrostatic testing, dust suppression, and HDD activities. We have not had an opportunity to review all of the specific water withdrawals and

SA8-210 Comment noted.

SA8-211 Comment noted.

SA8-212 Refer to section 4.6.4 for a discussion of impacts of water appropriation and discharge on aquatic resources, and for a discussion on aquatic invasive species. We expect that any additional withdrawal requirements would be included in the appropriate state permits.

SA8-212 (cont'd) associated instream flow data, but offer the following general comments regarding water withdrawal and use associated with development of the ACP.

We support the USFWS recommendation that withdrawals not be made from waters known to support sensitive aquatic species. To best protect resident aquatic species from impingement and entrainment associated with water withdrawals, we typically recommend that all intakes be fitted with a 1mm mesh screen and that intake velocities not exceed 0.25 fps. In addition, we recommend that no more than 10% instantaneous flow be withdrawn. We see reference to a restriction on withdrawals to no more than 25% of stream inputs. Based on the information included in the DEIS, it is difficult for us to determine what, if any, impacts upon aquatic species the proposed withdrawals may have. We recommend continued coordination with us and the USFWS regarding proposed water use during pipeline construction to ensure avoidance or minimization of impacts upon the native systems.

The DEIS makes note of the need to avoid introduction of non-native aquatic invasive species during water withdrawal and use. We support efforts to avoid introductions and recommend, as indicated in our February 7, 2017 letter to Dominion (and below), that an Aquatic Invasive Species Management Plan be developed for the project.

SA8-213 **Forest Fragmentation:**

As depicted in the DEIS, significant linear footage of forested habitat will be lost to early successional habitat. Although conversion from forested habitat to early successional habitat is not inherently harmful to wildlife, it does require perpetual maintenance and is likely to result in significant forest fragmentation across the Commonwealth. It is clearly understood that forest fragmentation results in loss of interior forested habitat, allows invasive species to colonize, and introduces new predator/prey relationships along the corridor and within adjacent habitats. As such, forest fragmentation and habitat conversion may well represent the largest impacts of this project upon wildlife resources across Virginia. We urge FERC to consider these long-term impacts, and urge the applicant minimize them to the greatest extent possible by collocating the pipeline within already-disturbed utility corridors and early successional habitats. VDGIF is represented on the inter-organizational Virginia Forest Conservation Partnership (VFCP), a group of topic experts who collaborate on large utility projects to ensure consideration of significant forest loss across the landscape. The VFCP developed a novel approach to quantifying fragmentation impacts upon core forests in the Commonwealth. We support the results of this analysis and recommendations made by the VFCP regarding ways to avoid, minimize, and mitigate for forest loss across the Commonwealth.

SA8-214 **Karst Plan:**

We reviewed the plan and do not have any significant concerns. It describes the methodology proposed for identifying the location of and describing the type of karst resources located along the pipeline corridor. Karst habitat is unique and often fragile. We recommend protection of karst structures, the wildlife species they support, and the waters

SA8-213 Comments noted. See section 4.5.6 for an updated discussion of interior forest fragmentation.

SA8-214 Comment noted.

SA8-214 (cont'd) they contain. We recommend continued coordination with VDCR-DNH and other karst experts, as needed, to ensure identification and protection of these resources.

SA8-215 **Invasive Plant Species Management Plan:**
We reiterate the comments we provided in our February 7, 2017 letter to Dominion regarding our review of the subject plan.

SA8-216 **Soil and Slope Stabilization:**
We reiterate the comments we provided in our February 7, 2017 letter to Dominion regarding our review of the subject plan.

SA8-217 **General Information:**
We recommend coordination with VDCR-DNH regarding protection of resources that they track and for which they recommend protection. We also recommend continued coordination with the U.S. Fish and Wildlife Service and with NOAA Fisheries Service to ensure protection of federally-listed species known from the project area.

We reiterate the comments we made in our February 7, 2017 letter regarding instream work BMPs and ways to minimize the impacts of linear utility development on wildlife and their habitats.

Thank you for the opportunity to provide input on the Draft Environmental Impact Statement for the proposed Atlantic Coast Pipeline. Please contact me or Amy Ewing at 804-367-0509 if you have any questions or need additional information.

Sincerely,

Raymond T. Fernald, Manager
Environmental Programs

RTF/AME
CC: Angela Navarro, Deputy Secretary of Natural Resources
Kevin Bowman, FERC
David Whitehurst, VDGIF
Greg Evans, VDOF
S. René Hypes, VDCR-DNH
Nikki Rovner, The Nature Conservancy
Sara Throndson, Natural Resources Group
Kristen Lentz, Merjent

SA8-215 Comment noted.

SA8-216 Comment noted.

SA8-217 Comments noted.

Molly J. Ward
Secretary of Natural Resources

COMMONWEALTH of VIRGINIA
Department of Game and Inland Fisheries

Robert W. Duncan
Executive Director

February 7, 2017

Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

RE: Atlantic Coast Pipeline
Rev 11a Corridor Review
ESSLog# 34825

Dear Mr. Gangle,

SA8-218

We have reviewed the most recently proposed Atlantic Coast Pipeline project corridor (Rev11a; received July 19, 2016) and offer the following updates to earlier comments and recommendations, as well as additional information regarding this project. Atlantic Coast Pipeline, LLC (Atlantic) proposes to construct and operate a natural gas transmission pipeline, and associated lateral pipelines, in Virginia. As proposed, the project crosses three of VDGIF's four administrative regions, crosses one of our Wildlife Management Areas (James River WMA), and borders another WMA (Horsepen).

The Virginia Department of Game and Inland Fisheries (VDGIF), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over those resources, inclusive of state or federally endangered or threatened species, but excluding listed insects. We are a consulting agency under the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), and we provide environmental analysis of projects or permit applications coordinated through the Virginia Department of Environmental Quality (DEQ), the Virginia Marine Resources Commission (MRC), the Virginia Department of Transportation (DOT), the Army Corps of Engineers (ACOE), the Federal Energy Regulatory Commission (FERC), and other state or federal agencies. Our role in these procedures is to determine likely impacts upon fish and wildlife resources and habitat, and to recommend appropriate measures to avoid, reduce or compensate for those impacts.

Rev 11a Review:

We received a shapefile depicting Rev 11a, the most recently proposed ACP corridor, in July 2016. Review of the shapefile confirmed that there are few significant deviations from the corridor alignment that was proposed in Rev 10a, about which we provided

7870 VILLA PARK DRIVE, P.O. BOX 90778, HENRICO, VA 23228-0778
(804) 367-1000 (V/TDD) *Equal Opportunity Employment, Programs and Facilities* FAX (804) 367-9147

SA8-218 The VDGIF's comments to Dominion (Atlantic) are noted.

SA8-218 (cont'd)

comments dated June 1, 2016. Based on the few changes offered in this route revision, no additional listed species and only a few additional designated resources (see Trout Streams) under our jurisdiction were identified as in need of additional consideration. However, the new alignment does result in impacts upon natural or semi-natural areas which have not yet been assessed for suitability to support the listed species for which we have previously recommended consideration. To ensure protection of listed species and designated resources under our jurisdiction, we recommend that all newly proposed areas of disturbance be assessed for their suitability to support any of the listed species known from the area, per our previous comments. Once such habitat and suitability assessments have been performed and we have had the opportunity to review those assessments, we will make additional comments regarding the need for further assessments, surveys, or protective measures to ensure protection of wildlife resources under our jurisdiction.

Habitat Assessments and Species Surveys:

Over the past few months, we have received survey reports, habitat assessments and other information regarding biological data collection that has occurred along the proposed pipeline corridor; much of it based on our recommendations and following our guidelines. We have reviewed that information and offer the following comments:

Listed salamanders:

During review of earlier iterations of the ACP, we made recommendations regarding protection of state Endangered eastern tiger salamanders and state Threatened Mabee's salamanders, both documented from the project area. To ensure protection of these species and the habitats upon which they depend, we recommended that wetlands proposed to be impacted by pipeline construction, operation, or maintenance and within the documented range of these species be evaluated for habitat suitability for these species. Wetlands deemed suitable should be surveyed for the species, and occupied wetlands/ponds and an upland buffer of 300 meters around the wetland/pond should be protected from project impacts. The listed salamander report that we were provided for review details habitat assessment and salamander survey activities that occurred during the 2016 season.

Habitat assessments and surveys for eastern tiger salamanders were performed, per our recommendations, at wetlands along the pipeline corridor in Augusta and Nelson counties. Only one of the four wetlands identified as suitable eastern tiger salamander habitat, and accessible for surveys, was found to be occupied by eastern tiger salamanders (waua050f). Because eastern tiger salamanders must have access to suitable wetlands/ponds to breed, and to the associated uplands in which they live the rest of the year, we recommended that waua050f and an at-least 300 meter upland buffer be avoided. In response to our recommendation and the applicant's concerns, Atlantic and their environmental consultants met with J.D. Kleopfer, DGIF Herpetologist, on site at wetland feature waua050f to determine how best to align the project corridor to protect this pond and the resident eastern tiger salamanders. As reflected in Rev 11a, the project corridor was shifted to the west of pond waua050f and outside of its drainage area. We are confident that, by protecting the water source for waua050f from impacts and by moving the corridor farther from the ponded area, as shown in Rev 11a, significant adverse impacts upon waua050f and eastern tiger salamanders inhabiting this area have been avoided.

SA8-218 (cont'd)

We note that the survey protocols we provided to Atlantic and their environmental consultants stipulate that two years of surveys are necessary to confirm lack of ambystomid salamander presence in any given wetland/pond. Accordingly, we recommend that the wetlands surveyed in 2016 but not found occupied by ambystomid salamanders (wauc103f, waub103f, and wnep001f), be resurveyed in 2017. In addition, we recommend that any wetlands in Augusta or Nelson counties that are newly proposed for impacts (based on the Rev 11a alignment) or that were not accessible during 2016 be assessed for suitable eastern tiger salamander habitat, and that any suitable wetlands be surveyed following the previously-provided protocols. Upon review of those surveys and assessments, we will update our recommendations regarding protection of eastern tiger salamanders associated with development and operation of the ACP.

Habitat assessments and surveys for Mabee's salamanders were performed, per our recommendations, in wetlands along the pipeline corridor in the City of Suffolk during the 2016 survey season. No Mabee's salamanders were documented at the 2 wetland features (ponds) that were determined suitable habitat and that were accessible for surveys during 2016.

As noted above, 2 years of survey activity are necessary to confirm lack of ambystomid salamander presence in any given wetland/pond. We recommend that the wetlands surveyed in 2016 but not found to be occupied by Mabee's salamanders (wsuc101e and wsuc007e) be resurveyed in 2017. In addition, we recommend that any wetlands in the City of Suffolk that are newly proposed for impacts (based on the Rev 11a alignment) or that were not accessible during 2016 be assessed for suitable Mabee's salamander habitat, and that any suitable wetlands be surveyed following the previously-provided protocols. Upon review of those surveys and assessments, we will update our recommendations regarding protection of Mabee's salamanders associated with development and operation of the ACP.

Fish and Mussels, George Washington National Forest (GWNF):

In response to a request by the U.S. Forest Service (USFS), habitat assessments for roughhead shiners, orangefin madtoms, Potomac sculpins, and yellow lance mussels were performed in streams within the GWNF that were proposed for crossing by the ACP. The July 2016 habitat assessments indicated that none of the ten perennial streams to be crossed by the ACP within GWNF provide suitable habitat for these species. We will update these comments as necessary regarding any reported occurrences of listed species within the GWNF that may be affected by construction, operation, or maintenance of the ACP.

We note that Stream #9 is described as both a "perennial UNT of Jennings Branch" and as an "UNT of Cowpasture River." We recommend clarifying which of these designations accurately represents this stream.

Listed Freshwater Mussels:

We received a report in late September 2016 that details the habitat assessments and surveys performed, per our recommendations and following our guidance, to address concerns related to protection of listed freshwater mussels and their habitats. Specifically, we recommended consideration of federally Endangered James spinymussels, federal species of

SA8-218 (cont'd)

concern yellow lance mussels, state Threatened Atlantic pigtoe mussels, and state Threatened green floater mussels; all which have been documented from the project area.

Based on recommendations from VDGIF and the US Fish and Wildlife Service (USFWS), Atlantic's environmental consultants evaluated all streams proposed to be crossed by the ACP for freshwater mussel habitat suitability. Where suitable habitat was identified, site assessments and then abbreviated or full surveys were performed, per our guidelines. USFWS and VDGIF agreed that sites proposed for crossing via horizontal direction drill (HDD) did not need further evaluation, as instream impacts would not be incurred at those sites.

There are forty-five proposed crossings of streams with a greater than five mile upstream drainage, including any resulting from the realignment depicted in Rev 11a. Of these streams, six are proposed as HDD crossings (James River, Nottoway River 2, Blackwater River, West Branch Nansemond River, Nansemond River, and South Branch Elizabeth River) and were, therefore, not further considered. Of the remaining thirty-nine streams, nineteen were not accessible during 2016; site assessments were performed at six sites; abbreviated surveys were performed at ten sites; three streams only became accessible late in 2016 (survey results not in yet); and one stream has undergone an incomplete assessment.

The abbreviated surveys performed in 2016 documented presence of live triangle floaters, eastern elliptios, and/or creepers at the following four crossing sites, all of which will undergo mussel relocation efforts in 2017: South River 1, North River, North River Access Road, and Willis River. We support the proposed mussel relocation efforts proposed in these waters in 2017, assuming they are performed by permitted biologists and follow the previously-provided mussel survey and relocation guidance. Dead shell material was documented at the Christians Creek crossing. No relocation efforts are currently proposed within Christians Creek for 2017. No listed mussels were documented at any of the ten sites that were surveyed in 2016 for which we have survey results.

We agree that sites determined to not provide suitable habitat, and sites where surveys were performed but no mussels were found, require no further assessment or surveys to protect listed mussels from impacts associated with instream work. We continue to recommend that any instream work in designated Threatened and Endangered Species Waters (waters known to support listed aquatic species) and instream work at sites within 1 mile upstream of such waters (tributaries) adhere to the previously-recommended time of year restrictions (TOYR) protective of mussels known from that water. Per our June 1, 2016 letter, the following streams and rivers are located in the project area and have been designated as Threatened and Endangered Species Waters due to the presence of one or more listed species, as noted in parentheses:

- Nottoway River (Atlantic pigtoe mussels, FESE dwarf wedgemussels)
- Sturgeon Creek (Atlantic pigtoe mussels)
- Three Creek (Atlantic pigtoe mussels)
- Meherrin River (ST green floater mussels, Atlantic pigtoe mussels)
- Appomattox River (Atlantic pigtoe mussels)
- James River (green floater mussels)

SA8-218 (cont'd)

- Cowpasture River (James spinymussels)

We support efforts proposed for 2017 to perform assessments and/or surveys at the nineteen stream crossing sites that were not accessible during the 2016 survey season or that need to be considered based on the newly-proposed project alignment depicted in Rev 11a. We recommend that the results of these surveys and assessments be provided to us for further review, along with the remaining 2016 reports from surveys performed late in the season at Winningham Creek, Nottoway River 1, and Cohoon Creek.. We note that negative surveys are only valid for two years. If the crossing sites surveyed in 2016 do not commence construction before 2018 (two years post-survey), we may recommend additional surveys at those sites to ensure colonization of mussels has not occurred in the interim. We recommend coordination with the USFWS regarding potential impacts upon federally-listed species associated with the development and operation of the ACP.

Roanoke Logperch:

Based on presence of federally Endangered Roanoke logperch in waters proposed to be crossed by the ACP, VDGIF and the USFWS recommended protection of this species and the resources that support it within the Nottoway drainage. In response, Atlantic and its environmental consultants performed desktop habitat assessments of proposed crossings in the Nottoway drainage, revealing eleven streams that warranted further investigation. Of these eleven streams, logperch presence is assumed at three sites: Nottoway River 1, Nottoway River 2, and Waqua Creek. Of the eight other crossing sites determined suitable for Roanoke logperch, three streams were accessible during 2016 for on-site assessment.

According to the report, of the three accessible sites, only one was determined to provide suitable Roanoke logperch habitat. We believe this site to be the crossing of Sturgeon Creek; however, the report is difficult to understand. Table 2, for example, lists Nottoway River 1 and Waqua Creek as "suitable" per the in-situ habitat assessment, but at other places in the report these same crossings were depicted as not assessed on-site because presence would be assumed at these sites. Also based on Table 2, it appears that in-situ site assessments were performed at four sites (Nottoway River 1, Waqua Creek, Big Branch, and Sturgeon Creek) even though the narrative describes only having access to three sites. Atlantic should clarify which streams were assessed, the outcome of eacj assessment, and which streams are assumed to support Roanoke logperch. Atlantic also needs to clearly describe the stream crossing method proposed for each site. For example, other project documents including the freshwater mussel habitat assessment and survey report depict the Nottoway River 2 crossing as an HDD. If true, then further site assessment and adherence to certain protective measures may not be necessary at that site.

Based on documentations of Roanoke logperch and designation as Threatened and Endangered Species Waters, we support assumption of presence in the Nottoway River, Waqua Creek, Butterwood Creek, and White Oak Creek. We recommend adherence to an instream work TOYR from March 15 through June 30 of any year in these waters and at the site of any instream work within 1 mile upstream of these waters (tributaries). We recommend adherence to the Fish Relocation Plan. We recommend that the results of the on-site assessments performed in 2016 at UNT Nottoway River 1 Access Road (AR), UNT Nottoway 2, and UNT Nottoway 2

SA8-218 (cont'd)

(AR) be provided to us for review. We recommend that all sites determined to provide suitable habitat but which were not accessible during 2016 be assessed for suitability as soon as they become accessible and that the results of that suitability analysis also be provided to us for review. Upon review of those reports and information, we will update our recommendations regarding protection of Roanoke logperch and the resources that support them. We recommend coordination with the USFWS regarding potential impacts upon this species associated with development and operation of the ACP.

Listed Bats:

Based on guidance from VDGIF and the USFWS, Atlantic and their consultants performed acoustic and mist-net surveys during 2015 and 2016 to inform our concerns for the protection of federally Endangered Indiana bats, federally Endangered Virginia big-eared bats, federally Threatened northern long-eared bats, and state Endangered Rafinesque's eastern big-eared bats, all of which are documented from the project area. All surveys followed federal protocols and were approved and permitted, as necessary.

These surveys documented presence of Rafinesque's eastern big-eared bats, northern long-eared bats, Indiana bats, federally Endangered gray bats, eastern small-footed myotis, tri-colored bats, and little brown bats within the project study area. However, only Rafinesque's eastern big-eared bats were tagged and followed, allowing for documentation of a roost site on a bridge over the Meherrin River, and six associated roost trees located in Southampton and Greensville counties. J.D. Kleopfer, VDGIF Herpetologist and Region 1 nongame biologist, and Susan Watson, VDGIF Terrestrial Biologist, visited the bridge during Summer 2016 to verify the species as state Endangered Rafinesque's eastern-big-eared bats. In addition, twenty-one potential hibernacula were identified along the pipeline corridor; however, only three of these karst features were identified as "suitable" to support bats. These sites were acoustically surveyed and no bats were documented.

We recommend avoidance of impacts upon all previously-known and newly documented hibernacula for listed bats. We recommend avoidance of impacts upon all known listed bat roost sites and roost trees, and adherence to federal guidelines for their protection. We recommend that any new lands and habitats now within project scope, based on the Rev 11a corridor, be assessed following the protocols previously used. We recommend that Atlantic and their environmental consultants consider impacts upon bats recently included as Virginia Wildlife Action Plan (WAP) Species of Greatest Conservation Need (SGCN) in addition to listed species. This includes eastern red bats, hoary bats, and silver-haired bats. We recommend adherence to VDGIF's "Best Management Practices for Conservation of Little Brown Bats and Tri-colored Bats" and continued coordination with us and the USFWS regarding potential impacts upon Virginia's bats as surveys continue into 2017. Assuming adherence to these recommendations and based on the project information we currently have, we have not identified any areas along the pipeline where we anticipate significant adverse impacts upon bats to occur.

Listed Small Mammals:

During previous coordination with Atlantic and its environmental consultants, we recommended consideration of impacts upon sate Endangered rock voles, state Endangered

SA8-218 (cont'd)

American water shrews and WAP Species of Greatest Conservation Need (SGCN) Tier IVa Allegheny woodrats. Accordingly, Atlantic and its environmental consultants performed habitat assessments and small mammal surveys along the currently proposed pipeline corridor.

Habitat and latrine sites for Allegheny woodrats were found at two sites: Outcrop at milepost (MP) 84.0 and Rock Feature at MP 158.1. In addition, four unnamed tributaries of Warwick Run in Highland County around MP 85 were determined suitable for water shrews. It appears additional survey work will continue in 2017. We recommend avoidance of impacts upon areas already identified as suitable listed small mammal habitat and at which there is evidence to support their presence. We recommend continued coordination with us as surveys and assessments continue into 2017 and onto lands not accessible during 2016, or which are newly within the project scope.

Listed Birds:

Based on their occurrence within the ACP project area, we recommended protection of state Threatened loggerhead shrikes and recommended adherence to a TOYR for ground clearing and tree removal from April 1 through July 31 of any year for work performed in Highland County, Bath County, Augusta County, or within the Rockfish Valley Region of Nelson County. In their response to our recommendations, Atlantic and their environmental consultants agreed to adhere to the TOYR in Bath, Highland, and Augusta counties except for the area in Augusta from project mile point (MP) 114.8 – 126. Per our recommendation, surveys for loggerhead shrikes were performed throughout this area during 2016.

No shrikes were documented from the area in Augusta County where the applicant cannot adhere to the TOYR (MP 114.8 – 126). A single loggerhead shrike was documented by project land surveyors, and verified by a knowledgeable biologist, around MP 88. This is within the area where the applicant is able to adhere to the protective TOYR, resulting in avoidance of impacts upon loggerhead shrikes documented from the MP 88 area. There is no mention in the report of surveys or adherence to the time of year restriction in Rockfish Valley, which we previously recommended. We recommend follow-up with us regarding protection of loggerhead shrikes in that region.

We are agreeable to ground clearing and tree removal occurring in Augusta County from MP 114.8 – 126 during the time of year restriction. We note that negative avian surveys are only valid for 2 years. If ground clearing and tree removal in this area does not commence prior to the breeding season 2018 (2 years post-survey), we may recommend additional survey efforts for loggerhead shrikes in this area. We recommend adherence to the time of year restriction from April 1 through July 31 of any year for ground clearing and tree removal in Bath County, Highland County, Augusta County (outside of MP 11408-126), and within the Rockfish Valley Region of Nelson County.

State Threatened peregrine falcons also have been documented from the eastern portion of the project area, typically in association with falcons breeding in nest boxes on bridges in eastern Virginia. These nest boxes were erected as part of a recovery effort for peregrine falcons in Virginia and are monitored by staff from the Center for Conservation Biology in close

SA8-218 (cont'd)

coordination with VDGIF. Although we do not document natural peregrine falcon nests (eyries) or nesting habitat along the proposed pipeline corridor, we did ask Atlantic to assess habitat along the pipeline route for such features during already-planned aerial surveys.

No significant cliff habitat suitable for nesting peregrine falcons was documented from the pipeline corridor during aerial investigations. As such, we do not anticipate this project to result in significant adverse impacts upon peregrine falcons or resources that support them, assuming no significant deviations from the Rev 11a corridor. If new natural habitats are proposed for impacts associated with pipeline construction or operation, we may recommend that such areas be assessed for suitable peregrine falcon nesting habitat. If significant bridge or near-bridge disturbance in eastern Virginia becomes part of the project, we recommend additional coordination with us regarding protection of nesting peregrine falcons on such structures.

Based on known presence of federally Endangered red-cockaded woodpeckers in southeastern Virginia and North Carolina, habitat assessments and subsequent cavity searches were performed along the proposed pipeline corridor within areas of known habitat, per USFWS guidelines. One suitable cavity was detected in North Carolina, but it was determined not to be active. No red-cockaded woodpeckers or suitable cavities were documented from Virginia. Based on this information, we do not anticipate the construction and operation of the ACP to result in adverse impacts upon red-cockaded woodpeckers. We recommend continued coordination with the USFWS regarding potential impacts upon this species.

Bald and Golden Eagles:

Bald and golden eagles are known from Virginia. Atlantic and its environmental consultants performed, at the request of the USFWS, aerial surveys for bald eagles and golden eagles along the proposed pipeline corridor. Both species of eagle were documented in multiple locations along the corridor. Atlantic is able to avoid impacts upon documented bald eagle nests in all locations except at two sites; one in the City of Chesapeake, and one in Nottoway County. It is our understanding that Atlantic will, if they have not already, apply for eagle take permits with the USFWS and in compliance with Virginia's bald eagle management guidelines. We support continued coordination with the USFWS regarding potential take of bald eagles.

We understand that Atlantic and its environmental consultants have been working with Dr. Katzner and other golden eagle experts in the region. We recommend continued coordination with Dr. Katzner and with VDGIF's eagle expert, Jeff Cooper, regarding the best ways to avoid and minimize impacts upon golden eagles, their wintering habitats, and migratory pathways from disturbance during construction and operation of the ACP.

We note that, in multiple documents, bald eagles are described as being listed in Virginia or protected by Virginia's Endangered Species Act. In truth, bald eagles were delisted in Virginia a number of years ago and only retain protection in Virginia under general wildlife laws and regulations. However, we recommend continued coordination with the USFWS regarding potential impacts upon bald and golden eagles, protected by the federal Bald and Golden Eagle Protection Act, as well as continued adherence to Virginia's bald eagle management guidelines.

SA8-218 (cont'd)

Timber Rattlesnakes:

Timber rattlesnakes have been documented from the project area. We understand that areas of suitable denning habitat along the pipeline in GWNF in Highland, Bath and Augusta counties were evaluated and that no rattlesnakes, or evidence of them, were found. During earlier correspondence with Atlantic and its environmental consultants, we had recommended that: "construction workers be educated about this snake, how to avoid encounters with it and how to address accidental encounters when they occur. These snakes should not purposefully be harmed during any encounters. We recommend coordination with John (JD) Kleopfer, VDGIF Herpetologist, at 804-829-6703 or John.Kleopfer@dgif.virginia.gov regarding such education." We continue to support contractor education and coordination with JD regarding protection of timber rattlesnakes.

Other Significant Species and Resources:

Canebrake Rattlesnakes:

State Endangered canebrake rattlesnakes have been documented from the cities of Suffolk, Chesapeake, and Virginia Beach, in addition to areas north of the James River. To best protect this species, we continue to recommend that the pipeline be routed to avoid impacts upon suitable canebrake rattlesnake habitats in this region. We also recommend that long-term vegetation management along the corridor in areas known to support canebrake rattlesnakes be consistent with conservation measures for the species. Atlantic's environmental consultants have been provided a copy of our currently approved conservation plan for canebrake rattlesnakes along with the guidance DGIF's Environmental Services Section staff use when evaluating potential impacts upon the species. Although the latter discusses "mitigation", we do not mean to imply the need for such at this time.

In addition, we recommend that construction workers engaging in pipeline construction, operation, or maintenance be provided with education about this species including being trained in the identification, basic natural history, and legal status of canebrake rattlesnakes. This could be accomplished via an appropriate information sheet distributed to those working on the project (enclosed). Information also can be found on our website at: http://www.dgif.virginia.gov/wildlife/species/display.asp?id=030013. If a canebrake rattlesnake is observed at any time during development or construction of this project, the applicant should contact VDGIF Terrestrial Biologist/Herpetologist John (JD) Kleopfer (804-829-6580) or our Headquarters office in Henrico (804-367-8999) so that we may safely capture and relocate the animal to a suitable site.

Scarlet Kingsnakes:

We recently documented Virginia's second and most northern population of scarlet kingsnakes from Nelson County. We recommended consideration of impacts upon this species and its habitat in Nelson County. In response to our request, Atlantic has agreed to implement an educational program for construction crews to assist them in identifying the species, teach them how to deal with an unintentional encounter, and inform them regarding how to minimize disturbance within suitable habitats for the species. In addition, Atlantic has agreed to notify VDGIF of any reported occurrences of the species. We appreciate Atlantic's efforts to conserve this species and its habitat.

SA8-218 (cont'd)

Anadromous Fish Use Areas:

We reiterate our earlier recommendations regarding identification and protection of Anadromous Fish Resources. As presented in our June 1, 2016 letter, the following streams are located within the project area and have been designated as confirmed or potential Anadromous Fish Use Areas. Anadromous Fishes and the waters that support them are both ecologically and economically significant resources in Virginia.

Confirmed:

- Elizabeth River
- Fountains Creek
- Meherrin River
- Nottoway River
- Blackwater River

Potential:

- Nansemond River
- Western Branch Elizabeth River
- James River
- Burnett's Mill Creek

To best protect these important fisheries, we recommend that all instream work in the above-listed confirmed Anadromous Fish Use Areas or their tributaries, or within the above-listed potential Anadromous Fish Use Areas, adhere to a time of year restriction from February 15 through June 30 of any year.

Trout Streams:

We reiterate our earlier recommendations regarding identification and protection of Trout Streams in Virginia. We have updated the list of trout streams included in our recommendations, based on review of the newest alignment, Rev 11a*:

The following streams are located within the project area and have been designated as either "stockable" trout streams, indicating their inclusion within our trout stocking program, or as "wild" trout streams that support naturally reproducing trout populations (species indicated in parenthesis below). Trout, and the streams that support them, are both ecologically and economically significant resources in Virginia.

Wild:

- Townsend Draft (brook trout)*
- Lick Draft (brook trout)*
- Bear Hollow (brook trout)*
- Erwin Draft (brook trout)*
- East Fork Back Creek (brook trout)
- North Fork Back Creek (brook trout)

SA8-218 (cont'd)

- South Fork Back Creek (brook trout)
- Jennings Branch (brook trout)
- Mills Creek and its tributary (brook trout)
- Orebank Creek (brook trout)
- White Oak Draft (brook trout)
- Bolar Run (brook trout)
- Campbell Creek (brook trout)
- Cub Creek (brook trout and brown trout)
- Chestnut Lick Hollow (brook trout)
- Clayton Mill Creek (brook trout)
- Dry Run (brook trout)
- Hodges Draft (brook trout)
- Jerkemtight Branch (brook trout)
- Jackson River (rainbow trout, possibly brook trout)
- Laurel Run (brook trout)
- Little Mill Creek (brook trout)
- Little Stony Creek (brook trout)
- Pheasanty Run (rainbow trout)
- Ramsey's Draft (brook trout)
- Reuben's Draft (brook trout)
- South Fork Rockfish River (brook trout)
- Stony Run (brook trout)
- Spruce Creek (brook trout)
- Still Run (brook trout)
- Stony Creek (brook trout)
- Little Valley Run (brook trout)

To best protect these valuable wild trout resources, we recommend that all instream work within these waters and/or their tributaries adhere to a time of year restriction from October 1 through March 31 of any year in waters known to support brook trout and/or brown trout, and from March 15 through May 15 of any year in waters known to support rainbow trout.

Stockable:

- Barterbrook Branch
- Back Creek
- North Fork Back Creek
- Folly Mills Creek
- Mills Creek
- Tributary to Tom's Branch
- Tributary to Mills Creek
- Mill Creek
- South Fork Rockfish River

SA8-218 (cont'd)

- Stony Creek
- Bolshers Run

To ensure avoidance of stocking and/or angling activities during project construction and long-term operation, we recommend coordination with Paul Bugas, VDGIF Region IV Aquatics Resources Manager, at 540-248-9360 or Paul.Bugas@dgif.virginia.gov.

Other Resources:

In earlier correspondence with Atlantic and their environmental consultants, we offered a number of comments regarding other species and resources for which we are responsible. We request additional follow-up on those listed below, about which we have received no response:

- Back Creek and Jackson River: Although we have not designated these streams as Threatened and Endangered Species Waters, our Malacologist, Brian Watson, believes that James spinymussels may occupy these streams based on their adjacency to occupied sub-watersheds (Bullpasture River / Cowpasture River). Therefore, we recommend that mussel surveys and relocations be performed, in adherence to our protocols (previously provided), at crossing sited proposed within these waters. Further we recommend adherence to an instream work TOYR in these waters from May 15 through July 31 of any year. We recommend coordination with the USFWS regarding potential impacts upon this federally-endangered species.

- Wildlife Action Plan Species of Greatest Conservation Need: In addition to the listed species and wildlife resources mentioned above, a number of species included as Species of Greatest Conservation Need are likely to occur, if suitable habitat exists, in and around the project area. We recommend that the Virginia Wildlife Action Plan (available through www.bewildvirginia.org) be reviewed to determine what threats are known to these species, what constitutes suitable habitat for these species, and how to best protect them and their habitats from harm. In particular, we have discussed with Atlantic and their agents the need to consider impacts upon the following WAP tiered species: golden-winged warblers, cerulean warblers, Bachman's sparrows, and Henslow's sparrows. In addition to those species, we recommend consideration of saw-whet owls, black-billed cuckoos, and Wayne's warblers.

- Bradley Pond, Augusta County: Bradley Pond is a stocked trout pond that receives significant use by anglers. It appears the pipeline route crosses the only entrance road to this pond. We recommend avoidance or minimization of impacts upon public access to Bradley Pond, particularly during fishing season.

Crossing of James River Wildlife Management Area:

The ACP is proposed to cross the Department's James River Wildlife Management Area in Nelson County, a public resource that was purchased with federal grant funds from the U.S. Fish and Wildlife Service. If the project interferes even temporarily (e.g., during construction) with uses of the land that were established as purposes of those grants, pipeline

SA8-218 (cont'd)

construction will jeopardize the Department's future access to these grants. While we are working closely with Atlantic to resolve this issue to our mutual satisfaction, please be aware that this issue remains unresolved at this time, and we cannot support the project crossing of our Wildlife Management Area until this issue is resolved.

Migratory Bird Plan:

We have reviewed the Migratory Bird Plan developed to satisfy requirements under the Migratory Bird Treaty Act and as requested by the USFWS. We appreciate efforts to schedule tree removal and ground clearing to avoid impacts upon nesting migratory birds. We continue to recommend adherence to a TOYR for these activities from March 15 through August 31 of any year. In addition, we recommend minimization of forest fragmentation across the Commonwealth. We call special attention below to avian species and resources discussed in the Migratory Bird Plan that have not already been mentioned above:

- Colonial Waterbird Colonies: We document colonial waterbird colonies containing great blue herons and great egrets from the project area; some confirmed and new ones observed during aerial surveys performed along the project route. We recommend that all colonial waterbird colonies located within the project area be identified and mapped, and that the colony and a 500-foot, naturally vegetated buffer around each colony be left undisturbed. Further, we recommend that any construction activities within 0.25 mile of a colony adhere to a time of year restriction from February 1 through July of any year. Please note that this time of year restriction is an update from previous recommendations, based on recent information from Ruth Boettcher, VDGIF Nongame Biologist.

- Golden-winged warblers (WAP SGCN Tier Ia) – We previously recommended consideration of impacts upon this species along the pipeline route in Bath and Highland counties. We have not seen any information specific to protection of this species or habitats that support it. We did not recommend surveys for this species, but it appears that surveys for this species were performed in West Virginia. We recommend that habitat assessments, if not surveys, be performed along the pipeline route in Bath and Highland counties and that such assessments be provided to us for further review. We offer the following information again to assist with decision-making: Their breeding season in Virginia is May 1– July 31. The best survey window is mid-May to mid-June and a playback sequence is highly recommended to increase detectability. Breeding habitat description: across their breeding range, golden-wings are associated with a number of open, early-successional habitats with herbaceous cover (grasses and forbs), patchy shrub cover, and scattered trees. In Virginia these may include old fields, lightly-grazed pastures, regenerating clearcuts or cut-overs, young forests, and shrubby wetlands. A 2010 study in Highland and Bath counties demonstrated that the birds prefer sites where >50% of woody cover is spatially clustered or clumped. This woody cover often includes a low shrub layer such as blackberry. Contributing to the uniqueness of golden-wing habitat in Virginia is that these shrubby open patches are embedded within a forested landscape, at elevations >1500 ft. Breeding habitat occurs within a largely forested landscape context.

SA8-218 (cont'd)

- Cerulean warblers (WAP SGCN Tier Ia) – We previously recommended consideration of impacts upon this species along the pipeline route in Bath, Highland, Augusta, and Nelson counties. We have not received any information from Atlantic regarding protection of this species or habitats that support it. We request description of actions to be taken to protect this species. We offer the following information again to assist with decision-making: Their breeding season in Virginia is May – July. The best survey window is mid-May to end of June. Breeding habitat includes mature deciduous forests of eastern North America (from http://amjv.org/documents/cerulean_guide_1-pg_layout.pdf). Cerulean warblers require heavily forested landscapes for nesting and, within Appalachian forests, they primarily occur on ridge tops and steep, upper slopes; though they may also occur in forested riparian habitats. They are generally associated with oak dominated stands that contain gaps in the forest canopy, that have large diameter trees (>16 inches dbh), and that have well-developed understory and canopy layers.

- Additional WAP SGCN avian species we recommend consideration of impacts upon include: Northern Saw-whet Owl, Black-billed Cuckoo, and Black-throated Green Warbler (Wayne's Warbler in vicinity of Great Dismal Swamp / Suffolk / Chesapeake). We recommend coordination with us, as needed, regarding protection of these species and their habitats.

- The following species are not known to breed in or along the proposed pipeline corridor in Virginia, and are not likely to be incidentally encountered along the corridor. Thus, we recommend removing them from consideration in the Migratory Bird Plan for Virginia: American oystercatcher, black rail, black skimmer, gull-billed tern, least tern, Hudsonian godwit, and marbled godwit.

Invasive Plant Species Management Plan:

Atlantic has developed an invasive plant species management plan for the pipeline corridor that generally describes the equipment washing and decontamination, herbicide use, soil segregation, and other measures to be implemented. The plan, however, focuses on plants designated by USDA or the states' Departments of Agriculture as noxious weeds: it does not significantly address the many other invasive plants recognized by regional (e.g., MAPAIS: the Mid-Atlantic Panel on Aquatic Invasive Species, and MAIPC: the Mid-Atlantic Invasive Plant Council) or state (Virginia Invasive Species Workgroup / Department of Conservation and Recreation / Division of Natural Heritage) authorities. We urge Atlantic to review other appropriate agency lists and resources to assemble a more complete list of invasive plant species of concern that may occur in the ACP corridor. The invasive species plan also must address animal invasive species such as zebra mussels, found near the pipeline corridor in West Virginia, that potentially could be spread into Virginia on construction equipment, personal vehicles, personal equipment, or in water used for construction or hydrostatic testing. Atlantic should consult with the USGS Nonindigenous Aquatic Species resources, MAPAIS, MAIPC, the Virginia Invasive Species Work Group Advisory Committee, VDGIF, and VDCR-DNH to

SA8-218 (cont'd)

construct the appropriate list of invasive species of concern in Virginia. Atlantic should carefully review BMPs and standards established by the USFWS, BOR, NOAA Fisheries, and ACOE (to name just a few federal agencies with such guidelines), and adopt an appropriate set of construction, maintenance, monitoring, and inspection/decontamination standards for the entire pipeline project. When Atlantic adopts a specific set of standards for implementation project-wide, whether by choosing an appropriate agency standard or standards of Atlantic's development, those standards and operational practices should be submitted for public review as part of the NEPA/FERC project review process. We also note that USFS has stated to FERC that Atlantic will be responsible for invasive species management on the pipeline corridor across Forest Service properties for the life of the project; a standard that should also be considered for JRWMA and all other public or recreational lands, if not for the entire project corridor. We recognize that specific treatment measures may be determined in the field, or after future surveys are conducted, but we must feel confident in the foundations of the ACP protocols and BMPs to presume their acceptability.

Soil and Slope Stabilization:

While we recognize the applicant's experience with pipeline construction and attendant sediment and erosion controls, and we recognize that some site-specific construction details are best resolved during post-NEPA permit review, we are nonetheless concerned regarding potential for serious events including slope failures, instream sedimentation, washout of fill materials, and compromise or contamination of sensitive biological or hydrogeological features such as trout streams, Endangered or Threatened Species Waters, major stream crossings, publically-owned conservation lands, or sensitive karst resources. Construction accidents, unanticipated geological conditions, or severe weather can, and have, precipitated catastrophic impacts upon sensitive fish and wildlife resources in the past: it is the applicant's responsibility to ensure that they not only are prepared to minimize adverse environmental impacts under anticipated construction conditions, but that they have seriously considered and prepared for "unanticipated" severe weather or other project conditions that may be encountered. These contingency plans should be submitted for public review as part of the NEPA/FERC project review process.

We understand the necessity to quickly and effectively revegetate the pipeline corridor post-ground disturbance. In consideration of that and our comments above, we recommend use of native plant species, preferably those that are beneficial to pollinators. We understand such species are being considered for areas south and east of the James River and with slopes of less than 15%. We recommend consideration of using such plant species for revegetation of the corridor wherever appropriate, not only along the corridor south and east of the James River.

General Recommendations:

This project is located within 2 miles of a documented occurrence of a state or federal threatened or endangered plant or insect species and/or other Natural Heritage coordination species. Therefore, we recommend coordination with VDCR-DNH regarding protection of these resources. Further, we recommend coordination with the U.S. Fish and Wildlife Service to ensure protection of federally-listed species known from the project area.

SA8-218 (cont'd)

We recommend conducting any in-stream activities, whether resulting in permanent or temporary impacts, during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. To minimize harm to the aquatic environment and its residents resulting from use of the Tremie method to install concrete, installation of grout bags, and traditional pouring of concrete, we recommend that such activities occur only in the dry, allowing all concrete to harden and cure prior to contact with open water. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitats, we prefer that stream crossings be constructed via clear-span bridges. However, if this is not possible, we recommend countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. We also recommend the installation of floodplain culverts to carry bankfull discharges.

In many instances, we support use of directional drill, aerial crossing, or other methods that avoid impacts upon streams, wetlands, and other unique natural resources. We understand, however, that such methods are not practicable in every situation. Due to recent examples of frac-outs leading to bentonite mud spills resulting from the directional drill method, we recommend that geotechnical analysis of all proposed sites for directional drills be performed and closely reviewed to ensure that the sites are suited for such a crossing method. Depending on the sensitivity of any given stream, we may prefer trenched crossings that adhere to our instream work recommendations or any recommendations made for the protection of listed species and/or designated wildlife resources. If a directional drill is the chosen method, we recommend that a contingency/clean-up plan be developed to address frac-outs and/or spills that may occur.

We also recommend that the applicant: avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable; maintain naturally vegetated buffers of at least 100 feet in width around wetlands and on both sides of perennial and intermittent streams, where practicable; and, implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration. We emphasize that maintaining effective erosion and sediment control during construction, and achieving soil stability after construction, will be particularly difficult in areas along the route that have steep slopes and significant topography. We are happy to work with the applicant to develop project-specific measures as necessary to minimize project impacts upon the Commonwealth's wildlife resources.

It is clear, simply based on the project scope, that significant linear footage of forested habitat will be lost to early successional habitat. Although conversion from forested habitat to early successional habitat is not always harmful to wildlife, it does require perpetual maintenance and is likely to result in significant forest fragmentation across the Commonwealth. Forest fragmentation results in loss of interior forested habitat, allows invasive species to colonize, and introduces new predator/prey relationships along the corridor and within adjacent habitats. We urge the applicant to consider these long-term

SA8-218 (cont'd)

impacts and to minimize them to the greatest extent possible by collocating the pipeline within already-disturbed utility corridors and early successional habitats. VDGIF is represented on the inter-organizational Virginia Forest Conservation Partnership (VFCP), a group of specialists collaborating on review of large utility projects to ensure consideration of significant forest losses across the landscape. We support recommendations made by the VFCP regarding ways to avoid, minimize, and mitigate for forest loss across the Commonwealth.

Thank you for the opportunity to provide input on this proposed natural gas pipeline. We look forward to receiving updated project maps, project documents, and permit applications as they become available. Upon receipt of such information, we will provide additional comments and recommendations as appropriate. Please contact me or Amy Ewing at 804-367-0509 if you have any questions or need additional information.

Sincerely,

Raymond T. Fernald, Manager
Environmental Programs

RTF/AME
CC: Angela Navarro, Deputy Secretary of Natural Resources
Kimberly Bose, Secretary, FERC
David Whitehurst, VDGIF
Greg Evans, VDOF
S. René Hypes, VDCR-DNH
Nikki Rovner, The Nature Conservancy
Sara Throndson, Natural Resources Group
Kristen Lentz, Merjent

FRESHWATER MUSSEL GUIDELINES FOR VIRGINIA

Virginia Field Office
U.S. Fish and Wildlife Service
6669 Short Lane
Gloucester, VA 23061
804-693-6694

Virginia Dept. of Game and Inland Fisheries
4010 West Broad Street
P.O. Box 11104
Richmond, VA 23230
804-367-1000

Last Updated: 6-22-15

DRAFT

LIST OF ENCLOSURES

1 - Federal and State-Listed Species in Virginia
2 - Mussel Survey and Relocation Guidelines in Virginia
3 - Surveyor List for Atlantic Slope Mussels in Virginia
4 - Surveyor List for Upper Tennessee River Basin Mussels in Virginia
5 - Time of Year Restrictions (See Freshwater Mollusks)
6 - Map of Federally-Designated Critical Habitat for Mussels in Virginia

INTRODUCTION

These guidelines are for project applicants and consultants planning certain activities that will impact rivers, streams, creeks, or other waterways in Virginia. The guidelines provide recommendations for conducting freshwater mussel surveys and relocations for small construction projects of short duration involving non-point pollution sources and affecting no more than 100 linear feet of waterway. Larger projects that impact waters containing State or federally listed mussels may require additional coordination or permits from the Virginia Department of Game and Inland Fisheries (VDGIF) and/or the U.S. Fish and Wildlife Service (FWS). Coordination with these agencies should always be initiated to ensure compliance with Federal and State laws.

FWS is responsible for the conservation and management of *federally* listed freshwater mussel species. VDGIF is responsible for the conservation and management of *all* freshwater mussel species throughout Virginia. If it is known that federally listed species or critical habitat (Enclosure 6) are not present within a two-mile radius of a given site, coordination with VDGIF, but not FWS, is still necessary.

GENERAL LIFE HISTORY

Freshwater mussels are often prominent in benthic stream communities where, for the most part, they are sedentary filter-feeders consuming a major portion of the suspended particulate matter. Therefore, mussel beds act as biological filters by removing inorganic and organic material from

the water column while improving water quality downstream. Individuals are typically long-lived, with particular species living for more than 50 years, while some individuals may live for more than 130 years. Because these mussels are long-lived, sedentary filter-feeders, they are prominent indicators of water quality. Freshwater mussels also serve as an important dietary component to a variety of animals, including muskrats, otters, raccoons, and some fishes.

During spawning, male mussels release sperm into the water column that females take in through their gills. The resulting larvae (known as glochidia) may be released by the female into the water column or packaged to attract fish. These larvae must attach to a fish host to survive. While attached to the gills of the fish host, development of the glochidia begins. Once metamorphosis is complete, the juvenile mussel drops off the fish host and continues to develop on the stream bottom.

Freshwater mussels are generally divided into two reproductive categories known as short-term (tachytictic) or long-term brooders (bradytictic). Short-term brooders usually spawn and release glochidia during May through July in Virginia. Long-term brooders usually spawn from August through September and release glochidia the following April through June.

SURVEYS AND RELOCATIONS

Enclosure 1 is a list of federally endangered, threatened, and candidate mussels and State endangered and threatened mussels. If a project occurs in an area that may contain suitable habitat for one of these species, FWS and/or VDGIF may recommend a survey. To determine which waterways may contain suitable habitat for State or federally-listed species, contact VDGIF for guidance (804-367-2211 or 2733). Applicants should contact FWS and VDGIF early in the planning process to determine whether federally or State-listed species or critical habitat may be impacted by the project. The effects of a project may include direct impacts from construction activities as well as downstream impacts from sedimentation and effluent discharges. If mussels were found during any previous survey/s, however old, coordination with VDGIF and FWS (where applicable) will be required. Surveys where mussels are not found (negative surveys) are typically valid for two years, after which another survey should be performed. Guidelines for freshwater mussel surveys and relocations are found in Enclosure 2. Surveyor lists are included in Enclosures 3 and 4. If listed mussels are found in or downstream of a project area, VDGIF and/or FWS are likely to recommend time of year or other restrictions to reduce impact to the mussels. Time of year restrictions are listed in Enclosure 5. If FWS determines that the project "may affect" a federally listed species or critical habitat, consultation with FWS will be required.

LAWS AND REGULATIONS PROTECTING MUSSELS

Federal Endangered Species Act (ESA) (87 Stat. 884; 16 U.S.C. 1531 et seq.; 50 CFR Part 17) Section 7(a)(2) requires Federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any federally listed threatened or endangered species, or result in the destruction or adverse modification of critical habitat. The regulations implementing this Act (50 CFR 402) require the Federal agency to review its actions

at the earliest possible time to determine whether its actions may affect listed species or critical habitat. If a Federal agency determines that its action "may affect" a listed threatened or endangered species or critical habitat, the agency is required to consult with FWS regarding the degree of impact and measures available to avoid or minimize the adverse effects.

Section 9 of the ESA makes it illegal for any person subject to the jurisdiction of the United States to "take" any federally listed endangered or threatened species of fish or wildlife without a special exemption. "Person" is defined under the ESA to include individuals, corporations, partnerships, trusts, associations, or any other private entity; local, State, and Federal agencies; or any other entity subject to the jurisdiction of the United States. Under the ESA, "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns such as breeding, feeding, or sheltering. Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering.

Section 10 establishes an incidental take permit provision for private entities that includes the development of habitat conservation plans. This provision authorizes FWS, under some circumstances, to permit the taking of federally listed fish and wildlife if such taking is "incidental to, and not the purpose of carrying out otherwise lawful activities." This process is also intended to be used to reduce conflicts between listed species and private development and to provide a framework that would encourage "creative partnerships" between the private sector and local, state, and Federal agencies in the interest of endangered and threatened species and habitat conservation. When approved by FWS, this regulatory procedure results in the issuance of a permit authorizing incidental take, provided such take is mitigated by appropriate conservation measures for habitat maintenance, enhancement, and protection, coincident with development.

Virginia Endangered Species Act (29.1-563 - 29.1-570) - This law provides that VDGIF is the state regulatory authority over federally or state listed endangered or threatened fish and wildlife in the Commonwealth, defining *fish or wildlife* as "*. . . any member of the animal kingdom, vertebrate or invertebrate, except for the class Insecta, and includes any part, products, egg, or the dead body or parts thereof.*" It prohibits the taking, transportation, processing, sale, or offer for sale within the Commonwealth of any fish or wildlife listed as a federally endangered or threatened species, except as permitted by the Board of Game and Inland Fisheries for zoological, educational, scientific, or captive propagation for preservation purposes. State-listed species are provided the same protection per VDGIF Regulation 4 VAC 15-20-130.

The law further authorizes the Board of the Virginia Department of Game and Inland Fisheries to adopt the Federal list of endangered and threatened species, to declare by regulation that species not listed by the Federal government are endangered or threatened in Virginia, and to prohibit by regulation the taking, transportation, processing, sale, or offer for sale of those species. Implementing regulations pursuant to this authority (4 VAC 15-20-130 through 140) further

define "take" and other terms similarly to the Federal ESA.

Federal Endangered Species Act Cooperative Agreement - Federally listed species are also protected under VDGIF jurisdiction via a cooperative agreement signed in 1976 with FWS pursuant to Section 6 of the ESA. This Cooperative Agreement recognizes VDGIF as the Virginia agency with regulatory and management authority in Virginia over federally listed or threatened animals, excluding insects, and provides for Federal/State cooperation regarding the protection and management of those species.

Enclosure 1: Federal and State Listed Mussel Species in Virginia

U.S. Fish and Wildlife Service: Environmental Conservation Online System (ECOS) (http://ecos.fws.gov/ecp/)

Virginia Department of Game and Inland Fisheries: Special Legal Status Faunal Species in Virginia (https://www.dgif.virginia.gov/wp-content/uploads/virginia-threatened-endangered-species.pdf)

Enclosure 2: Mussel Survey and Relocation Guidelines in Virginia

There are four general assessment/survey types including:

A. **Land-based review** - land-based site visit used to determine whether a water-based survey (site assessment, abbreviated, or full survey) is warranted. During a land-based review, the surveyor should look for obvious signs that would negate the need for additional, water-based surveys. For example, if it can be determined that the water body is non-perennial and/or contains no potential mussel habitat, it is unlikely that additional surveys would be needed or recommended by VDGIF or FWS. If it is determined that suitable habitat is present, the appropriate survey will be recommended. Photographs of the project site clearly showing instream habitat conditions, as well as a thorough site description, should be sent to VDGIF and FWS for review in lieu of the site assessment. If it is determined that suitable habitat is present, the appropriate survey will be recommended.

B. **Site assessment** - 20 m upstream / 80 m downstream. A site assessment is recommended to determine if suitable habitat is present at a project location and may be recommended if the presence of a listed species is questionable. If suitable habitat is present, the appropriate survey will be recommended even in the absence of mussels, since the site assessment does not serve as a substitute for a mussel survey; however, the presence of freshwater mussels should be documented during the assessment.

C. **Abbreviated survey** - 100 m upstream / 400 m downstream of project footprint.

D. **Full survey** - 200 m upstream / 800 m downstream of project footprint.

The assessment/survey type is based on the scope of the project, potential impacts, and known species distributions. Survey lengths are measured from the project footprint. *Survey distances have primarily been developed for projects where physical alteration/disturbance of the stream is the primary impact (e.g., bridge repair/replacement, utility line crossings, etc.). Potential impacts from projects involving activities such as point and non-point source discharges, water intakes, and mining may require greater survey lengths and different methods.*

Project applicants should contract with a qualified mussel surveyor. Enclosures 3 and 4 provide a list of pre-approved mussel surveyors. If a pre-approved surveyor is not selected, please provide the proposed surveyor's qualifications and proposed survey design to FWS and VDGIF a minimum of 30 days prior to survey initiation. Individuals who take federally listed threatened

and endangered animals must obtain a permit from VDGIF, prior to surveying. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Contact information follows:

Ms. Shirl Dressler
Virginia Department of Game and Inland Fisheries
4010 W. Broad Street
P.O. Box 11104
Richmond, Virginia 23230-1104
Phone: (804) 367-6913
CollectionPermits@dgif.virginia.gov

A plan for mussel relocations, including initial surveys, must be presented to VDGIF and FWS (where applicable) for comment and approval prior to initiation of construction. Failure to provide a mussel relocation and/or survey plan may affect review and permitting of the project by VDGIF and FWS.

The recommended time of year to conduct mussel surveys and relocations is April 1 through October 31. Surveying during the cooler months is discouraged because mussels tend to be located deeper in the substrate and a greater percentage of the population is subsurface, therefore making them more difficult to find, particularly rare species. A more specific time frame may be recommended depending on the target species. A survey conducted outside this time frame requires VDGIF and Service (where applicable) approval.

Guidelines if federally-listed mussels are not present

During the initial survey, mussel species within the direct project footprint or within imminent danger from project impacts may be relocated to suitable habitat unless otherwise directed by VDGIF. Suitable habitat typically includes an area upstream of project impacts and which also harbors freshwater mussels. If such an area cannot be found, the surveyor should determine the location of most suitable habitat. The direct project footprint shall be defined as the area of potentially disturbed substrate, any zone of heavy equipment operation, plus the distance downstream that may experience significant sedimentation from construction. If not determined prior to the relocation, the surveyor is responsible for determining the most suitable relocation area. All relocated mussels must be at least partially placed in the substrate, anterior end down. Project applicants may be required to monitor relocated mussels to determine relocation success/failure.

Standard mussel relocation protocols are outlined below. These protocols may vary based on factors such as the scope of the project and the results of the initial mussel survey. If the relocation protocols vary, VDGIF will clearly outline the appropriate protocols with the project applicant. It is the project applicant's responsibility to ensure that the proper relocation protocols are used and that the contracted mussel surveyor is aware of any modifications to the standard protocols.

The reach from which mussels are to be relocated will be at least 100 m long including the

project footprint. The standard protocol is as follows:

- The 1st relocation survey must occur within 30-45 days of instream construction activities and at least 7 days prior to the 2nd relocation survey.
- The 2nd relocation survey must occur within 30 days of instream construction activities and at least 7 days after the 1st relocation survey.
- All relocation surveys must include at a minimum, two passes. The target relocation percentage of the initial number of mussels collected is 80%. If on the 2nd pass, more than 20% of the initial number of mussels is collected, continued passes must be conducted until no more than 20% of the initial number of mussels is collected on the final pass. The target relocation percentage may be adjusted higher or lower depending on the species and numbers collected during the initial survey.
- If a state-listed species is found, continued passes must be conducted until no listed species are found on the final pass. If repeated passes result in continual collection of state-listed species, modification of the survey techniques may be required.

If relocation surveys are not possible due to natural conditions such as high water, contact VDGIF to arrange contingency plans.

The location of all relocated mussels must be accurately documented (preferably with geographic coordinates) and reported to VDGIF. All state-listed mussel species must be tagged and measured for potential future monitoring.

Project applicants may be required to adhere to time of year restrictions for mussel relocations as directed by VDGIF. If this is the case, for the long-term brooders, relocations can occur from June 16 though August 14 and October 1 through October 31. For short-term brooders, relocations can occur from April 1 through May 14 and August 1 through October 31.

All mussel survey and relocation results, including tag and measurement data, must be submitted to VDGIF for review, prior to instream construction activities. Reviews will be expedited due to the potential short timeframe between surveys and/or relocations and the start of instream work. Reports must contain, at a minimum, number of species found, number of individuals per species and their sizes, and number of individuals tagged.

Guidelines if federally-listed mussel species are present

Federally-listed mussels must *not* be relocated during the initial survey. If federally-listed mussels are found, they must remain exactly where found and all specimens should be photo documented, if possible. Coordination with FWS and VDGIF must occur to determine future actions.

If it is determined that a project may affect a federally-listed species, FWS will complete a consultation with the Federal action agency and prepare a biological opinion in accordance with the Federal Endangered Species Act. The relocation procedures for federally listed mussels will be specified in FWS's biological opinion and will be determined on a project-specific basis.

If relocation surveys are not possible due to conditions such as high water, contact FWS and VDGIF to arrange contingency plans. All listed mussels must be moved to suitable habitat upstream of any potential project impacts. Mussels may be relocated downstream if habitat upstream is determined unsuitable by VDGIF and FWS. If not determined prior to the relocation, the surveyor is responsible for determining the most suitable relocation area. All relocated mussels must be at least partially placed in the substrate, anterior end down. Project applicants may be required to monitor relocated mussels to determine relocation success/failure.

The location of all relocated federally-listed mussels must be accurately documented (preferably with geographic coordinates) and reported to FWS and VDGIF. All federally-listed mussel species also must be tagged and measured for potential future monitoring.

All mussel survey and relocation results must be submitted to FWS and VDGIF for review, prior to instream construction activities. Reviews will be expedited due to the potential short timeframe between surveys and/or relocations and the start of instream work. Reports must contain, at a minimum; number of species found, number of individuals per species and their sizes, number of individuals tagged, etc.

Project applicants may be required to adhere to time of year restrictions (Enclosure 5) for mussel relocations as recommended by FWS and VDGIF. Time of year restrictions will be specified in a letter or in FWS's biological opinion.

Enclosure 3: Surveyor List for Atlantic Slope Mussels in Virginia

Approved Surveyors in Virginia for Atlantic Slope Freshwater Mussels (http://www.fws.gov/northeast/virginiafield/pdf/endspecies/Surveyor_Lists/PDF%20Format/SURVEYOR%20LIST%20-%20Atlantic%20Slope%20Mussels.pdf)

Enclosure 4: Surveyor List for Upper Tennessee River Basin Mussels in Virginia

Approved Surveyors in Virginia for Tennessee River Drainage Freshwater Mussels (http://www.fws.gov/northeast/virginiafield/pdf/endspecies/Surveyor_Lists/PDF%20Format/SURVEYOR%20LIST%20-%20TN%20Drainage%20Mussels.pdf)

Enclosure 5: Time of Year Restrictions

Virginia Department of Game and Inland Fisheries Time of Year Restrictions (TOYR) Table (https://www.dgif.virginia.gov/wp-content/uploads/VDGIF-Time-of-Year-Restrictions-Table.pdf)

Enclosure 6 - Federally-Designated Critical Habitat for Mussels in Virginia

Map of Federally-Designated Critical Habitat in Virginia (http://fws.maps.arcgis.com/apps/Viewer/index.html?appid=f6e84e675ba1461b8ae6a351adea1429)

20170406-5489 FERC PDF (Unofficial) 4/6/2017 3:02:35 PM

Wellman, Julia (DEQ)

From: Kirchen, Roger (DHR)
Sent: Tuesday, February 28, 2017 1:45 PM
To: Wellman, Julia (DEQ)
Subject: RE: NEW PROJECT FERC Atlantic Coast Pipeline DEQ 16-248F

SA8-219 | It is DHR's intention to consult directly with FERC pursuant to Section 106 of the National Historic Preservation Act.

Roger W. Kirchen, Director
Review and Compliance Division
Department of Historic Resources
2801 Kensington Avenue
Richmond, VA 23221
phone: 804-482-6091
fax: 804-367-2391
roger.kirchen@dhr.virginia.gov

From: Wellman, Julia (DEQ)
Sent: Tuesday, February 28, 2017 11:55 AM
To: Kirchen, Roger (DHR); Jordan, Elizabeth (VDOT); Sterling, Bruce (VDEM); Flaherty, W. Steven (VSP); Mitchell, Jennifer (DRPT); hcboard@htcnet.org; harrison@bathcountyva.org; coadmin@co.augusta.va.us; scarter@nelsoncounty.org; Carter, Rebecca S.; vgiles@cumberlandcounty.virginia.gov; Bartlett, W. W. (Wade); Roark, Ron; burkeville1@embarqmail.com; philipv@townofblackstoneva.com; Massengill, kevin k w; bthrower@ci.emporia.va.us; citymanager@ci.waynesboro.va.us; Woolridge, Charlette T.; cmorris@farmvilleva.com; dwhittington@greensvillecountyva.gov; Johnson, Michael W.; thowlett@cityofchesapeake.net; lreed@suffolkva.us; rpace@franklinva.com; Riedesel, Bonnie S.; cboyles@tjpdc.org; MHickman@virginiasheartland.org; bmcfarlane@hrpdcva.gov; jmcbride@hrpdcva.gov; gmoody@southsidepdc.org; Ware, Tim; Deem, Angel N. (VDOT)
Cc: Sullivan, Bettina (DEQ)
Subject: RE: NEW PROJECT FERC Atlantic Coast Pipeline DEQ 16-248F

Please note that comments on the above-referenced project were due on February 23. If you plan to comment, please email the comments to me by close of business today.

From: Wellman, Julia (DEQ)
Sent: Tuesday, January 03, 2017 3:57 PM
To: dgif-ESS Projects (DGIF); Tignor, Keith (VDACS); Rhur, Robbie (DCR); odwreview (VDH); Kirchen, Roger (DHR); Spears, David (DMME); Evans, Gregory (DOF); Watkinson, Tony (MRC); Owen, Randy (MRC); Cromwell, James R. (VDOT); Jordan, Elizabeth (VDOT); Denny, S. Scott (DOAV); Harrington, Rusty N. (DOAV); impactreview@vofonline.org; Sterling, Bruce (VDEM); Flaherty, W. Steven (VSP); Mitchell, Jennifer (DRPT); Fowler, Keith (DEQ); Winter, Kyle (DEQ); Weyland, Janet (DEQ); Weld, Robert (DEQ); Hill, Jason (DEQ); Jones, Emma (DEQ); Ballou, Thomas (DEQ); Breeding, Robert (DEQ); Cario, Anthony (DEQ); Cunningham, Frederick (DEQ); Dacey, Katy (DEQ); Davis, Dave (DEQ); Hardwick, Steven (DEQ); Isenberg, William (DEQ); Kleiner, Joseph (DEQ); Kudlas, Scott (DEQ); Lackey, Kari (DEQ); Leach, Benjamin (DEQ); Maynard, Joel (DEQ); Mckercher, Elizabeth (DEQ); Mueller, Sandra (DEQ); OMalley, Nina (DEQ); Quinn, Meghann (DEQ); Schul, Hannah (DEQ); Thompson, Tamera (DEQ); White, Bradley (DEQ); Zegler, Hannah (DEQ); Zahradka, Neil (DEQ); 'hcboard@htcnet.org'; 'harrison@bathcountyva.org'; 'coadmin@co.augusta.va.us'; 'scarter@nelsoncounty.org'; 'bcarter@buckinghamcounty.virginia.gov'; 'vgiles@cumberlandcounty.virginia.gov'; Bartlett, W. W. (Wade); Roark, Ron; 'burkeville1@earthlink.net'; 'philipv@townofblackstoneva.com'; Massengill, kevin k w; 'bthrower@ci.emporia.va.us'; 'citymanager@ci.waynesboro.va.us'; Owen, Stephen F.; Woolridge, Charlette T.; 'cmorris@farmvilleva.com'; 'dwhittington@greensvillecountyva.gov'; Johnson, Michael W.; 'thowlett@cityofchesapeake.net'; 'lreed@suffolkva.us'; 'rpace@franklinva.com'; 'bonnie@cspdc.org'; 'cboyles@tjpdc.org'; 'MHickman@virginiasheartland.org'; 'bmcfarlane@hrpdcva.gov'; 'jmcbride@hrpdcva.gov'; 'gmoody@southsidepdc.org'; Ware, Tim

1

SA8-219 Comment noted.

DIVISIONS
ENERGY
GAS AND OIL
MINED LAND RECLAMATION
MINERAL MINING
GEOLOGY AND MINERAL RESOURCES
MINES
ADMINISTRATION

COMMONWEALTH OF VIRGINIA
Department of Mines, Minerals and Energy
Division of Geology and Mineral Resources
Fontaine Research Park
900 Natural Resources Drive, Suite 500
Charlottesville, Virginia 22903
(434) 951-6341
www.dmme.virginia.gov

February 22, 2017

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E Main Street
Richmond, VA 23219

Dear Julia,
The Department of Mines, Minerals and Energy DMME) has reviewed the Draft Environmental Impact Statement for the Atlantic Coast Pipeline and has the following comments:

Bedrock and Surficial Geology

SA8-220 The applicant recognizes that karst, landslides, seismicity, and acid forming soil are potential geologic hazards in the project area. The portions of the route and the geologic formations that are identified in the report as being at a higher risk for these hazards appear to coincide with available geologic data reviewed by DMME. Our staff agrees that these are the most important geologic conditions associated with this project and believes that having hazard-specific plans in place as proposed will help mitigate impacts related to these conditions.

The applicant has relied on the state geologic map at 1:500,000-scale to a large extent for the geological analysis of this project, and larger scale maps are not discussed in the geology section of the report. There is a considerable amount of 1:24,000-scale geologic mapping available along the proposed route in Virginia, including: Deerfield, Craigsville, Elliott Knob, Stokesville, Churchville, Greenville, Stuarts Draft, Waynesboro West, Sherando, Howardsville (draft), Andersonville, Willis Mountain, Farmville (draft), Windsor, Chuckatuck, Bowers Hill, and Norfolk South 7.5-minute quadrangles. Most of these maps show bedrock geology and surficial geology to lesser or greater extent, and would be helpful in understanding local geologic conditions and minimizing impacts during the project. The published 1:100,000-scale map of the Staunton 30- x 60-minute quadrangle would also be helpful in assessing karst and acid-forming soil potential in the western part of the Virginia project area where more detailed mapping is not available. In addition, the U.S. Geological Survey (Carter and others, 2016) has a geologic map database available for the Blue Ridge Parkway that may be useful for that portion of the project.

SA8-220 Comment noted.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

SA8-220 (cont'd) The geologic description of the area near Wintergreen (157.8 to 158.7) where sub-surface drilling is proposed agrees with published mapping. There are two mapped faults that cross in this area, including a fault that separates basement and cover rocks. Both structures are inferred to be Paleozoic in age, but could result in more complicated sub-surface conditions in the area to be drilled.

Mineral Resources

SA8-221 The applicant correctly identifies two active non-fuel mineral resource facilities *in the project area* yet states that no active mineral resource facilities are *crossed* by the ACP. DMME's records show two sand and gravel sites in Southampton County within a quarter mile of the ACP:
a) Milepost 31.8: Hunter Darden III Pit (DMME Permit #13792AA)
b) Milepost 12.2: Rogers Quarter Pit (DMME Permit # 13772AA), which has permitted acreage in VA but influenced area is in NC.

SA8-222 The applicant does not identify twenty abandoned non-fuel mineral resource sites within a quarter mile of the proposed route of the ACP, including: 7 carbonate (limestone or dolostone) sites, 3 manganese prospects, 4 clay sample sites, 5 sand and gravel pits, and 1 sandstone prospect.

The proposal fails to identify abandoned mine sites near the proposed ACP route and unmined but documented prospects within the ACP route in the significant Andersonville Mining District (high-grade zones of base metal sulfides) in Buckingham County, VA.).

The applicant does not identify one abandoned fuel mineral resource within a quarter mile of the proposed route of the ACP, a coal mine adit near Farmville, VA.

Mine Subsidence

SA8-223 The applicant's proposal includes a thorough discussion of mine subsidence with an appropriate focus on subsurface coal mines. The potential for subsidence of other mineral resource sites within Virginia is not identified. The two areas of possible impact being the aforementioned coal adit near Farmville and abandoned pits and shafts in the Andersonville Mining District between mileposts 200-210.

Acid Producing Rock and Soils

SA8-224 The applicant correctly identifies several rock units in Virginia as formations that have the potential to generate acid drainage during construction and demonstrates a good understanding of the impact of acid-producing materials in pipeline construction. However, the applicant does not identify the significant potential for encountering acid-producing minerals such as pyrite in the Andersonville Mining District in Buckingham County, through which the proposed route directly passes.

Seismic Related Hazards

SA8-225 The applicant recognizes that portion of the project area is in an area of increased earthquake frequency that corresponds with the southwestern part of the Central Virginia Seismic Zone. A review of our database indicates that approximately 25 historic earthquake epicenters have been recorded within 10 km or the proposed centerline. The highest estimated magnitude of these events is 4.3 and the highest reported intensity was VI.

SA8-221 The referenced mines have been incorporated into our analysis in section 4.1.3.

SA8-222 Section 4.1.3 has been revised to include abandoned mines within 0.25 mile of the project.

SA8-223 Section 4.1.4.5 has been revised to include potential areas of mine subsidence in Virginia.

SA8-224 Comment noted.

SA8-225 Section 4.1.4.1 has been revised to recognize the maximum intensity of the 2011 Mineral earthquake.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

SA8-225 (cont'd) The applicant states that the 2011 Mineral, Virginia earthquake had a maximum intensity of VII, but some workers (including DMME staff; see Heller and Carter, 2015) have assigned a maximum intensity of VIII to this event.

SA8-226 **Karst Terrain, Landslides, Slope Stability, and Steep Slopes**
The applicant's identification of karst hazards and proposed mitigation measures as described in the *Karst Mitigation Plan* appear adequate.

Debris flows are mentioned in the landslide section of the report as a potential hazard, but it was not clear in the draft EIS if potential debris flow runout zones, which may be in areas where the slope is not steep, are being considered as potential landslide hazards. DMME reviewed a referenced report (Geosyntec, 2016) completed for this project and it does appear that debris-flow potential was considered as a factor in assessing "hydrotechnical" hazards. This assessment was ongoing at the time that the report was written. Coarse, unconsolidated colluvium consisting of large blocks of loose material may pose an additional challenge in areas of steep slopes.

SA8-227 **Paleontological Resources**
The applicant identifies the possibility of encountering Paleozoic and Mesozoic fossils but provides no discussion of the possibility of discovering Tertiary or Quaternary vertebrate and plant fossils in unconsolidated (non-bedrock) deposits west of the Blue Ridge in Virginia. Such sites exist in the Valley and Ridge province at Saltville, Virginia and the Gray Site in Tennessee, and have the potential for being discovered during the course of land excavation. The final EIS should contain a *Plan for Discovery of Unanticipated Paleontological Resources* that would consider the potential for encountering such fossils and include steps for their preservation.

Please let me know if you need additional information from DMME.

Sincerely,

David B. Spears
State Geologist and Director
Division of Geology and Mineral Resources

SA8-226 Comment noted.

SA8-227 Section 4.1.5 has been revised to include a recommendation that Atlantic and DETI file a Plan for Discovery of Unanticipated Paleontological Resources.

COMMONWEALTH of VIRGINIA

Randall P. Burdette
Executive Director

Department of Aviation
5702 Gulfstream Road
Richmond, Virginia 23250-2422

V/TDD • (804) 236-3624
FAX • (804) 236-3635

ISO 9001:2008 Certified
IS-BAO Registered

January 16, 2017

Ms. Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E. Main Street
Richmond, Virginia 23219

RE: FERC Atlantic Coast Pipeline, DEQ 16-248F

Dear Ms. Wellman:

SA8-228

The Virginia Department of Aviation has reviewed the Draft EIS received in your January 3, 2017 e-mail. The project sponsor should note that a 7460 form must be submitted to the Federal Aviation Administration for any portion of the proposed project that is proposed to be constructed within 20,000 linear feet of a public-use or military airport. The 7460 form is submitted in order to determine the potential impacts to the airport and determine if the proposed project constitutes a hazard to air navigation.

Additionally the Department recommends the project sponsor coordinate the proposed project with any private airfield land owner that may be impacted by the proposed project route.

If you have any questions regarding this matter, please contact me at (804) 236-3638.

Sincerely,

S. Scott Denny
Senior Aviation Planner
Virginia Department of Aviation

100 DOAVAS 20170112 DEQ Project # 16-248F Atlantic Coast Pipeline Coordination Letter

SA8-228 See the responses to comments SA6-1, SA8-50, and SA8-81.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

Wellman, Julia (DEQ)

From: Denny, S. Scott (DOAV)
Sent: Friday, February 03, 2017 8:58 AM
To: Wellman, Julia (DEQ)
Subject: RE: DEQ 16-248F: Atlantic Coast Pipeline New Supplemental Information

Julia:

SA8-228 (cont'd) The Department has reviewed the supplemental information provided. Staff has no changes to our original comments. Please let us know if any additional revisions or supplemental information becomes available. Thank you.

S. Scott Denny
Senior Aviation Planner
Virginia Department of Aviation

From: Wellman, Julia (DEQ)
Sent: Wednesday, February 01, 2017 3:20 PM
To: dgif-ESS Projects (DGIF); Tignor, Keith (VDACS); Rhur, Robbie (DCR); odwreview (VDH); Kirchen, Roger (DHR); Spears, David (DMME); Evans, Gregory (DOF); Watkinson, Tony (MRC); Owen, Randy (MRC); Cromwell, James R. (VDOT); Jordan, Elizabeth (VDOT); Denny, S. Scott (DOAV); Harrington, Rusty N. (DOAV); impactreview@vofonline.org; Sterling, Bruce (VDEM); Flaherty, W. Steven (VSP); Mitchell, Jennifer (DRPT); hcboard@htcnet.org; Harrison, Ashton; coadmin@co.augusta.va.us; scarter@nelsoncounty.org; Carter, Rebecca S.; vgiles@cumberlandcounty.virginia.gov; Bartlett, W. W. (Wade); Roark, Ron; burkeville1@embarqmail.com; philipv@townofblackstoneva.com; Massengill, kevin k w; bthrower@ci.emporia.va.us; citymanager@ci.waynesboro.va.us; Owen, Stephen F.; Woolridge, Charlette T.; cmorris@farmvilleva.com; dwhittington@greensvillecountyva.gov; Johnson, Michael W.; thowlett@cityofchesapeake.net; lreed@suffolkva.us; rpace@franklinva.com; Riedesel, Bonnie S.; cboyles@tjpdc.org; MHickman@virginiasheartland.org; bmcfarlane@hrpdcva.gov; jmcbride@hrpdcva.gov; gmoody@southsidepdc.org; Ware, Tim
Cc: Sullivan, Bettina (DEQ)
Subject: DEQ 16-248F: Atlantic Coast Pipeline New Supplemental Information

Dominion has submitted supplemental information on the following topics to the Federal Energy Regulatory Commission:

- Supplemental Information – January 27, 2017
- Appendix A – Cochran's Cave Conservation Area Investigation Update
- Appendix B – Karst Terrain Assessment, Construction, Monitoring and Mitigation Plan
- Appendix C – Second Draft of the Construction, Operations, and Maintenance Plan
- Appendix D – Updated Draft Biological Assessment
- Appendix E – Update to the Migratory Bird Plan
- Appendix F – Wetland and Waterbody Delineation Reports
- Appendix G – Archaeological Site Testing Reports
- Appendix H – Agency Correspondence for the Atlantic Coast Pipeline – Public
- Appendix I – Agency Correspondence for the Atlantic Coast Pipeline – Privileged
- Appendix J – Agency Correspondence for the Supply Header Project – Public

The documents are available on the FERC docket at http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20170127-5202.

1

Bettina K. Ring
State Forester

COMMONWEALTH of VIRGINIA

Department of Forestry

900 Natural Resources Drive, Suite 800 • Charlottesville, Virginia 22903
(434) 977-6555 • Fax: (434) 296-2369 • www.dof.virginia.gov

February 23, 2017

Memorandum for: Julia Wellman, Environmental Impact Review Office, Department of Environmental Quality

From: Greg Evans, Mitigation Program Manager

Subject: Virginia Department of Forestry Comments Pertaining to the Federal Energy Regulatory Commission's (FERC) Atlantic Coast Pipeline (ACP) Draft Environmental Impact (DEIS) Findings and Recommendations

BACKGROUND

The Virginia Department of Forestry (VDOF) appreciates the opportunity to provide comments pertaining to the above subject project as a participating agency in the Virginia Department of Environmental Quality's Environmental Impact Review Process. VDOF is charged with conserving the Commonwealth's forest resources for the use and enjoyment of current and future generations of Virginia citizens and its recommendations to the Federal Energy Regulatory Commission (FERC) reflect that charge. VDOF is responsible for assuring that Virginia's forest resources are managed in a sustainable manner so they remain viable as healthy ecosystems. Key elements of its mission include: improving forest health, sustaining an adequate supply of raw materials for Virginia's forest products industry, and protecting water quality and water supply sources while providing recreational opportunities to the public. Land conversion activities that impact the forest landscape impact these values.

VDOF protects Virginia's 15.8 million acres of forest land from degradation due to land use practices, fire, insects and disease. It manages state lands totaling over 70,000 acres for timber, recreation, water, research, wildlife and biodiversity and provides assistance to non-industrial private forest landowners through professional forestry advice and technical management programs.

VDOF supports the Virginia Department of Environmental Quality (VDEQ) as a participating state agency in the VDEQ environmental impact review (EIR) process. The VDOF's responsibility in evaluating proposed projects brought before regulatory bodies is to identify the forest resources that may be impacted; provide assessments; and provide recommendations and comments pertaining to forest health, conservation, management and mitigation needs aimed at conserving Virginia's forest resources in keeping with state executive policy and/or as part of the federal consistency determination/certification process. The VDOF does not represent or advocate for private landowners, or developers before governmental bodies that approve, permit, license, or construct projects.

Virginia has been losing approximately 16,000 acres of forestland annually based on a 10 year average of Forest Inventory Analysis (FIA) data. Urbanization and long, linear infrastructure project development represent the two biggest factors in the loss of this forestland acreage. The ACP qualifies as a long, linear

infrastructure project having a landscape level impact for which a comprehensive mitigation plan is needed.

VDOF will collaborate with VDEQ and Virginia's other natural resource agencies working in association with FERC and other federal agencies such as USFS and USFWS to mitigate this loss. Our goal is to use a mitigation plan to minimize impacts and/or compensate for unavoidable disturbances or impacts to forests of the Commonwealth.

In designing and implementing a mitigation program, Virginia adheres to CEQ NEPA guidelines (40 Code of Federal Regulations (CFR) 1508.20). These establish four classes of mitigation: preservation, avoidance, restoration/afforestation, and enhancement/creation. The intent is to generally avoid forest conversion through planning, restoration of the forest resource, creating new forests, and/or providing an in-lieu of payment with the funding used to carry out a mitigation response to compensate for unavoidable forest loss. Understanding what the forest loss will be therefore, and how and where it will occur if the preferred route is followed, and what mitigation is planned is very important.

DOF RESPONSE AND REQUESTS PERTAINING TO INDIVIDUAL FERC FINDINGS

SA8-229

1. DOF concurs with the following FERC findings and recommendations noted in Section 5.1 CONCLUSIONS OF THE ENVIRONMENTAL ANALYSIS

5.1.4 Vegetation

Impacts on vegetation from ACP and SHP would range from short-term to permanent due to the varied amount of time required to reestablish certain community types, as well as the maintenance of herbaceous and shrub vegetation within the permanent right-of-way and the conversion of aboveground facility locations and new permanent access roads to non-vegetated areas.

Construction of ACP and SHP would affect about 7,490 acres of vegetation, including about 6,103 acres of upland forest vegetation (deciduous, coniferous, and mixed). Operation of ACP and SHP would affect about 4,208 acres of vegetation, including about 3,424 acres of upland forest vegetation (deciduous, coniferous, and mixed).

ACP and SHP would also impact vegetation communities of special concern, including areas of red spruce forest of West Virginia and Virginia; longleaf pine forest and peatland pocosin and canebrake communities of North Carolina; 13 Virginia Natural Heritage Conservation Sites; 2 Virginia SCUs; and 13 North Carolina NHNAs.

DOF also supports the FERC staff's recommendation that the ACP partnership sponsors continue to consult with the Virginia Department of Conservation (VDCR) and Recreation on the project's proposed avoidance and minimization measures at the Handsom-Gum, Branchville, and Emporia Powerline Bog Conservation Sites, and file correspondence from the VDCR demonstrating concurrence and/or additional recommendations from the VDCR.

DOF further agrees with and supports FERC's findings that:

- The greatest impact on vegetation would be on forested vegetation due to the removal of approximately 6,800 acres of forested vegetation (includes 3,800 acres of permanent impacts), fragmentation of interior forest blocks, and contribution to the introduction and/or spread of invasive species.
- Construction in forest lands would remove the tree canopy over the width of the construction right-of-way, which would change the structure and local setting of the forest area.

SA8-229 See the response to comment SA8-3.

SA8-229 (cont'd)

- The regrowth of trees in the temporary workspaces would take years and possibly decades. Moreover, the forest land on the permanent right-of-way would be affected by ongoing vegetation maintenance during operations, which would preclude the re-establishment of trees on the right-of-way.
- Construction of the proposed pipeline facilities would have a long-term to permanent impact on forest vegetation communities within the construction right-of-way. Maintenance activities would result in permanent conversion of some areas of existing upland forested vegetation to herbaceous or scrub-shrub vegetation.

VDOF agrees with FERC's findings that ACP and SHP would also contribute to forest fragmentation however because forest fragmentation would occur on such a large, landscape scale, DOF, as the Virginia state agency having forest management responsibilities for the Commonwealth's forests, affirms that even though the projects are collocated for 14 percent of their routes along existing rights-of-way and in areas prescriptively altered by harvesting practices as noted by FERC, the fragmentation impact is still extensive and needs to be further mitigated.

VDOF further requests that the FERC staff recommendation that the ACP Restoration and Rehabilitation Plan be revised to incorporate WVDOF recommended mitigation measures and seed mixes be extended as well to Virginia and that the ACP sponsors be asked to incorporate VDOF recommended measures where appropriate.

SA8-230

5.1.5 Wildlife

FERC concludes that ACP and SHP would impact wildlife species and their habitats. Construction of ACP and SHP facilities would affect about 7,490 acres of wildlife habitat. Of this, about 3,424 acres of upland forested habitat and 416 acres of woody wetland habitat would be permanently converted and maintained in an early successional stage by mowing and periodic tree removal during operations.

VDOF defers to the Virginia Department of Game and Inland Fisheries with regard to whether the FERC staff conclusion that cutting, clearing, and/or removal of existing vegetation within the construction work area could also adversely impact wildlife but only on a short-term basis. However, it can concur with the FERC conclusion that the re-establishment of forested habitats is a long-term problem that could take decades to happen.

FERC further concludes that the primary impact from construction and operation would be on forested habitats crossed by ACP and SHP, including the removal of approximately 6,800 acres of forested vegetation (includes 3,800 acres of permanent impacts), fragmentation of interior forest blocks (see section 4.5.6 of the FERC comments), and contribution to the introduction and/or spread of invasive species. Fragmentation of forested habitat would make the right-of-way permanently unsuitable for interior forest species, but may create new habitat for species that prefer ecological edges.

The FERC report also notes that several state and federal agencies expressed concerns regarding forest fragmentation and the impacts on interior forest and their associated wildlife species. FERC findings conclude the following:

- Assuming that 31.0 miles of interior forest habitat would be impacted, there could be indirect impacts on about 2,255 acres of interior forest.
- Although the creation of edge habitat could favor some species, it could also increase the risk of establishment of invasive species, modify microclimate, change vegetation species composition, or increase risk of nest parasitism.
- While impacts on species inhabiting interior forest blocks 35 acres or greater were analyzed, other species have minimum interior forest patch areas greater than 35 acres.

SA8-230 Comment noted.

SA8-230 (cont'd)

These findings led FERC staff to make the following recommendations which VDOF concurs with:

- [Although] Atlantic and DTI would attempt to minimize these impacts through the implementation of their construction and restoration plans, in addition to our recommendations; … due to the length of time required to recover forested habitat, these impacts would be considered long-term to permanent.
- We have recommended that Atlantic [ACP] and DTI file submit a revised fragmentation analysis that is based on West Virginia state forest fragmentation data produced by the NRAC at West Virginia University, VDCR VaNLA project, and data sets recommended from consultations with the FS, NCWRC, and NCDEQ.
- We have also recommended that edge habitat be considered a 300-foot forested buffer from a corridor/disturbance with interior forest starting at the point beyond the 300-foot edge buffer; and that Atlantic [ACP] and DTI discuss how the creation of forest edge or fragmentation would affect habitat and wildlife, including potential impacts on federally listed threatened and endangered species and migratory birds, and the measures that would be implemented to avoid, minimize, or mitigate impacts on interior/core forest habitat.

VDOF strongly endorses these recommendations. The impact of forest fragmentation on its forest resources is a major concern to the Commonwealth of Virginia. Forest products represent Virginia's third largest industry and its forests are major contributors of recreational and ecosystem services. VDOF has been collaborating with its sister natural resource agencies in using the VDCR VaNLA methodology to assess and quantify the impact of fragmentation across the entire proposed ACP route. This methodology is being shared with the adjacent state natural resource agencies and federal agencies such as USFS, USFWS and BLM. It is very important to Virginia that the ACP fragmentation analysis incorporate the VaNLA findings.

SA8-231

VDOF also requests that it be included for reporting purposes where appropriate and concurs with the following FERC staff recommended mitigation measures to be included as specific conditions in the Commission's Order if the Commission authorizes ACP and SHP as noted in Section 5.2 of the staff report. The stated rationale for making these recommendations was the staff's belief that these "measures would further mitigate the environmental impact associated with construction and operation of the proposed ACP and SHP." VDOF has restricted its comments to only those recommendations pertaining to non-Federal lands in Virginia unless otherwise noted.

1. Atlantic and DTI shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EIS, unless modified by the Order. Atlantic and DTI must:
    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;
    b. justify each modification relative to site-specific conditions;
    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
    d. receive approval in writing from the Director of OEP **before using that modification**.

2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of ACP and SHP. This authority shall allow:
    a. the modification of conditions of the Order; and
    b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as

SA8-231 Comment noted.

well as the avoidance or mitigation of adverse environmental impact resulting from project construction (and operation).

6. Within 60 days of the acceptance of the Certificate and before construction begins, Atlantic and DTI shall file their respective Implementation Plans with the Secretary for review and written approval by the Director of OEP. Atlantic and DTI must file revisions to their plans as schedules change. The plans shall identify:

a. how Atlantic and DTI would implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EIS, and required by the Order;
b. how Atlantic and DTI would incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to on-site construction and inspection personnel;
c. the number of EIs assigned per spread and how the company would ensure that sufficient personnel are available to implement the environmental mitigation;
d. the number of company personnel, including EIs and contractors, who would receive copies of the appropriate material;
e. the location and dates of the environmental compliance training and instructions Atlantic and DTI would give to all personnel involved with construction and restoration (initial and refresher training as the projects progress and personnel change), with the opportunity for OEP staff to participate in the training session(s);
f. the company personnel (if known) and specific portion of Atlantic's and DTI's organizations having responsibility for compliance;
g. the procedures (including use of contract penalties) Atlantic and DTI would follow if noncompliance occurs; and
h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram) and dates for:
    i. the completion of all required surveys and reports;
    ii. the environmental compliance training of on-site personnel;
    iii. the start of construction; and
    iv. the start and completion of restoration.

7. Atlantic and DTI shall employ a team of EIs (i.e., two or more or as may be established by the Director of OEP) per construction spread. The EI(s) shall be:

a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;
b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
d. a full-time position, separate from all other activity inspectors;
e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
f. responsible for maintaining status reports.

8. Beginning with the filing of the Implementation Plans, Atlantic and DTI shall each file updated status reports with the Secretary on a weekly basis until all construction and restoration activities are complete. On request, these status reports would also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

a. an update on Atlantic's and DTI's efforts to obtain the necessary federal authorizations;
b. the construction status of each spread, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
c. a listing of all problems encountered and each instance of noncompliance observed by the EIs during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
d. a description of the corrective actions implemented in response to all instances of noncompliance, and their cost;
e. the effectiveness of all corrective actions implemented;
f. a description of any landowner/resident complaints that may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
g. copies of any correspondence received by Atlantic and DTI from other federal, state, or local permitting agencies concerning instances of noncompliance, and Atlantic's and DTI's responses

13. Atlantic shall not exercise eminent domain authority granted under section 7(h) of the NGA to acquire a permanent pipeline right-of-way exceeding 50 feet in width. In addition, where Atlantic has obtained a larger permanent right-of-way width through landowner negotiations, routine vegetation mowing and clearing over the permanent right-of-way shall not exceed 50 feet in width. (Section 2.2.1.1)

20. Prior to the close of the draft EIS comment period, Atlantic shall file with the Secretary, the plans and typical drawings, as well as, site-specific designs of representative construction segments to display the magnitude of the proposed slope modifications (cuts and fills) for the MNF and GWNF as requested by the FS. (Sections 4.1.6.1 and 4.1.6.2)

SA8-232

28. Prior to construction, Atlantic shall file with the Secretary and the WVDOF a revised Restoration and Rehabilitation Plan that incorporates recommended mitigation measures and seed mixes for Seneca State Forest based on consultation with the WVDOF. (Section 4.4.2.1) **VDOF requests that Atlantic also be directed to consult with VDOF regarding recommended mitigation measures and seed measures for any forested areas that may be adjacent to or near VDOF state forest and/or easement properties.**

35. Prior to construction, Atlantic shall file with the Secretary, and provide to the FWS for approval, a revised Migratory Bird Plan, and provide to the FS for approval, a revised COM Plan that identify areas where Atlantic will construct during the migratory bird season, and identify the additional conservation measures developed in coordination with the FWS and/or FS, and other appropriate agencies, that it will implement to minimize impacts on nesting migratory birds in areas where construction during the active season cannot be avoided. (Sections 4.5.3.5 and 4.3.9)

36. Prior to construction, Atlantic and DTI shall file with the Secretary a revised Migratory Bird Plan that includes appropriate conservation measures developed in coordination with the FWS and the appropriate state/commonwealth agencies for the following active rookeries with disturbance buffers that overlap ACP workspace: ROOK-ACT-02 (VA), ROOK-01 (WV), WBC 01 (NC), WBC 02 (NC), WBC 04 (NC), WBC 05 (NC), WBC 07 (NC), WBC 12 (NC), and WBC 15 (NC). Atlantic shall also coordinate with VDGIF, WVDNR, and NCWRC to verify that no additional conservation measures would be required for the NHI and CCB rookeries, and provide copies of agency correspondence related to these discussions. (Section 4.5.3.5)

SA8-232 Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the VDOF. The VDOF would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

37. Prior to the close of the draft EIS comment period, Atlantic and DTI shall file with the Secretary a revised fragmentation analysis that includes the following:

a. Analysis based on applicable state and federal agency datasets, including:
   i. West Virginia state forest fragmentation data produced by the NRAC at West Virginia University;
   ii. VDCR VaNLA project; and
   iii. Consult with the FS, NCWRC, and NCDEQ to determine the appropriate data sets to use in the MNF, GWNF, and North Carolina, respectively.
b. If GIS databases are not available for the project location, then manual interpretation of interior forest blocks greater than or equal to 35 acres shall be identified and evaluated for project impacts;
c. Edge habitat is considered to be 300-foot forested buffer from a corridor/disturbance with interior forest starting at the point beyond the 300-foot edge buffer;
d. Develop a table for each state and for NFS lands with the following data for each forested interior tract: type of interior forest (e.g., edge, patch, small core, large core, or ecological integrity category), county, enter and exit milepost, length crossed (feet), and area affected directly (interior forest cutting) and indirectly (buffer zone areas of remaining forest immediately adjacent to one or both sides of the new corridor that would no longer be classified as interior forest due to the new, project-related disturbances) for both construction and operation; and
e. Discuss how the creation of forest edge or fragmentation would affect habitat and wildlife, including potential impacts on federally listed threatened and endangered species and migratory birds. Describe measures that Atlantic and DTI will implement to avoid, minimize, or mitigate impacts on interior/core forest habitat. (Section 4.5.6)

59. Prior to the close of the draft EIS comment period, Atlantic and DTI shall consult with the FWS and appropriate agencies to identify the conservation measures that would be implemented to avoid or minimize impacts on listed plant populations that were documented in 2016, and that may be documented in the 2017 surveys. Atlantic and DTI shall also file with the Secretary, and provide to the FWS and appropriate agencies the final avoidance and minimization plan for these listed plant species. (Section 4.7.1.15).

60. Prior to the close of the draft EIS comment period, Atlantic shall file with the Secretary and FS a revised BE that:

d. provides start and end milepost and acreage of impacts on old growth forests according to the MNF and GWNF old growth forest definition;

65. Prior to the close of the draft EIS comment period, Atlantic shall file with the Secretary a description of the impacts and species-specific conservation measures, developed in coordination with the applicable federal and state agencies (WVDNR; VDGIF and/or VDCR; and NCWRC and/or NCDEQ), for the species listed in table 4.7.4-4 where Atlantic has identified potential impacts, and/or where the appropriate agency has requested additional analysis or conservation measures. Where survey data is still pending, Atlantic shall work with the appropriate agencies to identify the conservation measures that it will implement if the species and/or suitable habitat are identified during preconstruction surveys, or where presence has been assumed. (Section 4.7.4.6)

67. Prior to construction, Atlantic and DTI shall file with the Secretary, for the review and written approval of the Director of OEP, finalized Timber Extraction Plans. (Section 4.8.1.1)

DOF RECOMMENDED ADDITIONAL MITIGATION ACTIONS

DOF concurs with FERC that specific additional mitigation measures are required as conditions to any authorization issued by the Commission and supports the mitigation measures proposed. However, DOF observes that the FERC proposed mitigation actions are focused primarily on preservation and avoidance and to a lesser extent, restoration/afforestation. No specific enhancement/creation mitigation actions are proposed as envisioned in the CEQ NEPA mitigation framework guidelines (40 Code of Federal Regulations (CFR) 1508.20).

SA8-233

Given the adverse, landscape level impact to forestland that has been documented and recognized by FERC as significant, long term and therefore permanent in its analysis, DOF requests that FERC direct ACP sponsors as a condition of it project permit approval to negotiate with the Commonwealth of Virginia through the Office of the Secretary of Natural Resources an acceptable enhancement/creation mitigation plan to offset and compensate for the significant impact to forestland that will result if the ACP goes forward.

In addition, DOF offers the following technical advice, comments and recommendations to FERC to consider in its on-going review of the ACP project plan:

SA8-234

1. **Construction Activities:** When a new pipeline is built, there can be temporary impacts from construction access by cranes and other heavy equipment, construction traffic on unpaved access roads, and boring for pipeline installation activities. Different machines and techniques are used to remove trees depending on whether the forests consist of mature trees, have large quantities of understory trees, or are in sensitive environments such as a wooded wetland. These machines can range from large whole tree processors which can cause rutting and compaction of the forest floor to hand clearing with chainsaws in more sensitive environments. Compacted soil restricts root penetration and nutrient cycling. Compaction also restricts water movement into soil, resulting in less water available for plant growth and increased runoff, erosion, and nutrient loss. This can result not only in diminished forest health but also reduced ability of the forest to fulfill its water quality improvement functions. DOF recommends activities to minimize construction impacts including:
    - Restoring contours to pre-construction conditions and controlling erosion until re-vegetation stabilizes the disturbed areas.
    - Restoring vegetation to native species and protecting the natural functions of the pre-construction ecosystem.
    - Using machinery where feasible, that when combined (example: earth mover and cart) weigh less than 10 tons per axle. Research has shown that this will help alleviate compaction to the top 6-8 inches of soil where it can be more easily addressed. Combination vehicles weighing more than 10 tons can create compaction as deep as 3 feet which is very difficult to mitigate.
    - Minimizing traffic lanes for transporting cleared timber from the site.
    - Following Forestry Best Management Practices (BMPs) for water quality as outlined by the Virginia Department of Forestry's Voluntary BMP Guidelines publication for all harvesting operations.
    - Stock piling soil away from trees that are to remain standing. Piling soil at a tree stem can kill the root system of the tree. Soil stockpiles should be covered, as well, to prevent soil erosion and fugitive dust.
    - Retain existing groupings and/or clusters of trees and natural vegetation on the sites of the support facilities, where feasible, to provide aesthetic and environmental benefits, as well as reducing future open space maintenance costs.

SA8-233 See response to comment SA8-232.

SA8-234 Refer to section 4.4.3 and the FERC's Plan and Procedures, and Atlantic's and DETI's Restoration and Rehabilitation Plan (appendix F), Timber Removal Plan, and Fugitive Dust Control and Mitigation Plan (see table 2.3.1-1), which already include a number of the mitigation measures recommended by the VDOF, including restoring contours to pre-construction conditions, temporary and permanent erosion control measures until the site is restored, inclusion of native species in seed mixes, and measures to reduce soil compaction. In addition, Atlantic has committed to adhering to Virginia's Erosion and Sediment Control Handbook (VDEQ, 1992). Revegetation measures would be implemented in accordance with the construction and restoration plans and as required by landowners and land managing agencies.

SA8-235

2. **Invasive Species Management:** While the width of the area of the removed forest within the ROW may not be great, there may be severe consequences for the species that depend on the existing non-fragmented habitat. Fragmentation makes interior forest species more vulnerable to predators, parasites, competition from edge species, and catastrophic events. Invasive plants can grow prolifically in the cleared-edge habitats of pipeline ROWs and can spread into the forest interior, limiting the growth of native species. Careful vegetation management in the ROW can mitigate some of these effects. DOF recommends:
    - Considering the likely response of invasive species or target species when prescribing activities that result in soil disturbance or increased sunlight.
    - During construction and follow-on maintenance activities, take steps to guard against construction vehicles inadvertently bringing into forest interiors invasive and/or non-native plant species from other locations. Weed seed and fungal spores can be transported in the mud or dirt on vehicles. Prior to moving equipment onto and off of an activity area, scrape or brush soil and debris from exterior surfaces, to the extent practical, to minimize the movement of invasive plants, pests and diseases to non-infested areas. Another option is to wash vehicles before they enter a weed-free area or when they leave an infested area. The emphasis of the cleaning should be in the wheels, wheel wells, bumpers, and undercarriage of the vehicle where most mud and dirt collects.
    - If seeding or planting is necessary to minimize the threat of highly damaging invasive species from spreading, use native seed or non-invasive cover plants for revegetation.

SA8-236

3. **Biodiversity Planning:** A pipeline ROW can fragment a larger forest block into smaller tracts that diminish their ability to function as integrated habitat units. As a result, the continued fragmentation of a forest can cause a permanent reduction in species and suitable habitat as noted in FERC's findings. The linear nature of pipeline right-of-ways can impact the predator-prey relationship. Right-of-way vegetation removal or modification methods before pipeline construction may also affect vegetation in areas adjacent to the ROW. Plant communities may be damaged by the removal of tall-growing vegetation. Physical changes in the habitat caused by ROW vegetation control may adversely affect non-target vegetation. The growth or viability of plant species within or adjacent to the right-of-way may be reduced. DOF recommends adopting management practices that mitigate these potential impacts including:
    - Avoiding routes that fragment major forest blocks.
    - Keeping ROW clearing to the minimum width necessary to prevent interference from trees and other vegetation.
    - Establishing herbaceous species and shrubs or some low-growing trees that are considered desirable ground cover and valuable wildlife habitat along the right-of-way in the project's vegetation management and revegetation plan.
    - Maintaining a scrub habitat, dominated by low growing, bushy vegetation and young trees is preferable to mowing in forest habitats. It can provide quality habitat for wildlife species that are dependent on early successional habitat (birds, reptiles, and amphibians).

This concludes the Virginia Department of Forestry's comments and recommendations. The DOF is available to discuss any of the points made in these comments with FERC if that would be helpful.

SA8-235 Comments noted. Refer to section 4.4.4 and Atlantic's and DETI's Non-Native Invasive Species Management Plan (see table 2.3.1-1) for additional information on the measures that would be implemented to avoid and control the spread of invasive species during construction and operation of ACP and SHP.

SA8-236 See section 4.5.6 for a revised discussion of interior forest fragmentation and the mitigation measures that would be implemented.

GE/ge

cc: B. Ring, DOF
R. Farrell, DOF
E. Zimmer, DOF
A. Navarro, SNR
J. Bulluck, DCR
J. Weber, DCR
A. Ewing, DGIF

CAROLYN W. DULL
MAYOR

DIRECT DIAL 540.332.3810
FACSIMILE 540.851.4001

116 W. BEVERLEY STREET
P.O. BOX 58
STAUNTON, VA 24402

February 21, 2017

VIA EMAIL IN PDF AND EXPRESS DELIVERY

Ms. Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E. Main Street
Richmond, VA 23219

Re: Atlantic Coast Pipeline Project
DEQ #16-248F
Docket Nos. CP15-554-000, CP15-554-001, and CP15-555-000
FERC/EIS-0274D

Dear Ms. Wellman:

SA8-237

As the Mayor of the City of Staunton, located in the beautiful Shenandoah Valley of Virginia where we treasure our natural resources, I write to affirm the Staunton City Council's objection overall to the Atlantic Coast Pipeline project and lodge a specific objection based upon the threat to a critical water source for our citizens and for Augusta County. We submit that both Dominion and the Federal Energy Regulatory Commission, as evidenced in the Draft Environmental Impact Statement (DEIS), have utterly failed to account yet for the potentially catastrophic consequences of the project as to the route of the line that would be unacceptably within the ambit of our water source known as Gardner Spring. We believe the huge gas pipeline would cut through the recharge area that is an integral aspect of the Gardner Spring resource that serves both our City and our neighbors in the County, putting all those who rely upon the water in jeopardy.

Please understand that I do not intend this letter to be exhaustive or even comprehensive and certainly not a formal brief in support of the City's position. I simply highlight aspects that even without a highly sophisticated submission beg for immediate pause and fundamental reconsideration of the DEIS and certainly against any approval. Actually, we ask that the Virginia Department of Environmental Quality (VDEQ) demonstrate the

SA8-237 See the responses to letter LA5.

SA8-237 (cont'd)

exercise of independent judgment, even against what may be political pressures on your agency otherwise, and we request the DEQ itself lodge with the Federal Energy Regulatory Commission strong objection to the project at least as it relates to our water supply. Will you?

Our citizens are fortunate that our predecessor leaders of our City had the foresight to secure for them a vitally important water source referred to as Gardner Spring, which actually is located in neighboring Augusta County. Gardner Spring benefits residents both of our City and of Augusta County. The City initially acquired the rights to Gardner Spring in the 1930s. The precious water from Gardner Spring is processed at our City's water plant and then redistributed through pipelines in our City and into Augusta County to those who depend on it, including individuals and those in important Shenandoah Valley commerce. Our City has invested millions in not only our water plant but also more recently in new water lines that help to serve Augusta County users as well. Gardner Spring provides a majority of the water for our City residents, being capable of offering as much as or more than 5 million gallons of raw water per day for treatment by the City of Staunton, again both for the ultimate benefit of the City and of Augusta County.

The Gardner Spring resource is incontrovertibly priceless and any chance of it being put in jeopardy by the Atlantic Coast Pipeline project is actually putting the safety and the welfare of the City of Staunton and Augusta County and their users at risk. From what we can discern (and we are not engineers), nothing in Dominion's submission and nothing in the DEIS begins to address this critical resource in any meaningful way even though the DEIS acknowledges generally in section 4.1.2.3 potential underground damage because of Karst geology that prevails in our region. As the DEIS states, "Karst terrain is characterized by the presence of sinkholes, caverns, an irregular 'pinnacled' bedrock surface, and springs." Despite seemingly glibly admitting that "[t]hese features could present a hazard to the pipeline both pre- and post-construction due to cave or sinkhole collapse, and can also provide direct conduits from the ground surface to the groundwater, increasing the potential for groundwater contamination," nowhere is it obvious that Dominion has been required to have done and submitted to you or the Federal Energy Regulatory Commission an independent, detailed study and analysis of the potentially momentous adverse consequences for Gardner Spring, a major and critical water supply. It is not obvious to us that anything in the "Construction Impacts and Mitigation" aspects of the DEIS addresses Gardner Spring or, without specific reference by name, even anything similar to this uniquely vital water resource for so many who depend on it daily. If the DEIS includes such a discussion, would you or the Federal Energy Regulatory Commission point it out for us and our citizens in order that we may assess it?

We would anticipate that Dominion may attempt to assert that its proposed, huge pipeline does not go directly into the center of Gardner Spring; however, that contention would be illusory at best, because the proposed route is sufficiently near Gardner Spring that the recharge area of Gardner Spring is implicated and quite possibly directly jeopardized.

SA8-237 (cont'd)

That recharge area is vital, because the bulk of the water that feeds Gardner Spring comes from an extensive underground aquifer system and network of karst channels that the DEIS has wholly failed to acknowledge, much less analyze. Gardner Spring's underground paths provide a fairly constant flow, allowing the spring to discharge a steady, reliable resource of critical water. The water, drawing from a large recharge area, is fed by precipitation, which enters the ground, and the water is discharged from Gardner Spring approximately 28 to 45 days later. The recharge contribution area for Gardner Spring may extend as many as five or more miles from Gardner Spring. **Where is that explicitly mentioned at all in the DEIS?**

Based on what we know about a spring water source generally and our own Gardner Spring, we believe that it is essential that any meaningful analysis of the environmental impact must be based on a careful, thorough consideration of the recharge area. Spring recharge areas are, without doubt, recognized to be as vital to the quality of groundwater resources as the center of the spring itself, perhaps more so in ways that are particularly pivotal in this instance. The water quality, without a spring recharge area "can be adversely affected by land uses that allow groundwater contamination to migrate into underlying aquifers." *Emery & Gardner Groundwater, Inc., Hydrogeologic Investigation of Gardner Spring* (July 2002). Even distant spills can reach Gardner Spring through the Karst aquifer system. As such, the Gardner Spring recharge area is highly susceptible to a wide variety of potential contaminants, and the area should continue to be protected from land uses that even might threaten the quality of the water.

Let me mention another consideration that is revealing about Dominion and this project that Dominion is trying to impose, selfishly for profits, on us and others. Several months ago, a City representative invited Dominion to visit with us and sit down just with our City Council and discuss the project, being mindful of the potentially calamitous implications for Gardner Spring. We could not have really imagined that Dominion would not join us around the table in our Caucus Room. To our surprise and dismay, Dominion arrogantly refused even the courtesy of a meeting discussion, rebuffing our request and invitation. That speaks volumes to us and to our City citizens—and should speak volumes to VDEQ and to the Federal Energy Regulatory Commission.

VDEQ declares that its mission "is to protect and improve the environment for the well-being of all Virginians." You also promise that "DEQ collaborates . . . to enhance the quality of our environment and to strengthen the role everyone plays in environmental protection." Will you collaborate with us and our citizens to protect Gardner Spring?

We hope and trust you are listening, even though we realize that some of Virginia's elected officials appear quite a while ago to have been advocating for the Atlantic Coast Pipeline project even well before the issuance of the DEIS. Despite the political muscle visited by Dominion and the pressure, will both VDEQ and the Federal Energy Regulatory Commission truly act independently and protect our environment, including our Gardner Spring?

SA8-237 (cont'd)

So that you will appreciate perhaps even more the sincerity and consistency of our objection and advocacy now, I also enclose a copy of our City Council's resolution adopted October 23, 2014. As you and the Federal Energy Regulatory Commission know, many others also have objected to or taken issue with the project, which will cut through some of the priceless natural resource treasures in our region and state. We also are keenly mindful, as you should be, that the water coming from Staunton and Augusta County is the headwaters of both the James and Shenandoah rivers and eventually flows into our state's capital as well as into our nation's capital. Our City, beyond the reasons stated by many others for objection, objects strongly because its critical water resource now apparently is directly and indirectly implicated by the proposed route reflected in the DEIS.

We ask you to honor that promise and refuse to permit this pipeline project to proceed, advocating similarly with the Federal Energy Regulatory Commission. At the very least, we urge DEQ and the Federal Energy Regulatory Commission to insist that Dominion have independent outside professional engineers and other professionals, undertake and complete and publish for comment a detailed study regarding the potential implications for our Gardner Spring water source. Both VDEQ and the Federal Energy Regulatory Commission should mandate that Dominion complete and submit its study for public exposure and comment before the process proceeds further. **Will you or the Federal Energy Regulatory Commission insist that Dominion do so?**

We thank you for your time and consideration. We look forward to your and the Federal Energy Regulatory Commission's response in the near future. Please provide us with specific responses to our questions and, to use VDEQ's own words, honor the commitment to "protect and improve the environment for the well-being of all Virginians." **Will you, please do so—through action, not just words, forcing Dominion to respect your mission and the critical interests of Staunton and Augusta County citizens?**

Sincerely,

Carolyn W. Dull

Carolyn W. Dull
Mayor

cc: Federal Energy Regulatory Commission
Members of the Staunton City Council
Members of the Augusta County Board of Supervisors
Members of the Board of Directors of the Augusta County Service Authority

Enclosure

Atlantic Coast Pipeline Project
DEQ #16-248F
Docket Nos. CP15-554-000, CP15-554-001, and CP15-555-000
FERC/EIS-0274D

RESOLUTION OF THE
COUNCIL OF THE CITY OF STAUNTON, VIRGINIA
IN OPPOSITION TO ATLANTIC COAST PIPELINE

SA8-237 (cont'd)

WHEREAS, Dominion Virginia Power has entered into what the company describes as a joint venture with three other major U.S. energy companies—Duke Energy, Piedmont Natural Gas and AGL Resources—to build and own a natural gas pipeline which will traverse portions of three states, including 11 counties and two cities in the Commonwealth of Virginia; and

WHEREAS, the proposed project will pass in close proximity to a public water source and boundary of the City; and

WHEREAS, representatives of Dominion Virginia Power, upon the invitation of City Council of the City of Staunton, Virginia, made a presentation about the project to Council at its meeting on August 28, 2014, held at Robert E. Lee High School to accommodate an overflow audience; and

WHEREAS, reflective of the considerable public interest in the project, dozens of individuals at the meeting, through questions submitted to City Council and comments made during the public comment period, registered their strong opposition to the project, as proposed; and

WHEREAS, members of City Council share many of the concerns expressed by citizens of the City and desire, as a body, to express their opposition to the project.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Staunton, Virginia, that:

1. Council joins with other localities in the Commonwealth of Virginia, including the counties of Augusta and Nelson, in their expressions of concern about and opposition to the Atlantic Coast Pipeline.

2. Council opposes the construction of the Atlantic Coast Pipeline and urges Dominion Virginia Power and all others involved to reduce reliance on natural gas and to seek solutions for the 21st century, including conservation and renewable energy such as solar and wind power, that will satisfy future energy needs without imperiling the natural bounty and beauty of our region and the health and safety of our citizens.

3. In the event Dominion Virginia Power and its partners submit an application for construction of the Atlantic Coast Pipeline to the Federal Energy Regulatory Commission ("FERC"), Council, in the strongest possible terms, urges FERC to withhold approval of the project, on the basis that the natural gas to be transported is not believed to be required to serve the energy needs of Virginia or North Carolina (a significant portion of which can be satisfied by conservation and renewable energy

SA8-237 (cont'd)

sources) and, therefore, the pipeline will neither serve the public interest nor satisfy the legal standard of "public convenience and necessity."

4. Council respectfully requests that the Governor of Virginia reconsider his public endorsement of the Atlantic Coast Pipeline, and, after consultation with the City of Staunton and other localities that would be impacted by the project and consideration of risks to the environment (including threats to karst environments and water supplies locally in the Shenandoah Valley, elsewhere in the Commonwealth of Virginia and in the District of Columbia and the State of Maryland) and the state's economy (including its agricultural and tourism sectors), oppose the project.

5. Council respectfully requests that Senator Mark Warner, Senator Tim Kaine and Congressman Bob Goodlatte join publicly in opposition to the project, communicate their opposition to FERC and take appropriate action to encourage FERC to withhold approval of the project.

6. In the event Dominion Virginia Power and its partners elect to proceed with the construction of the Atlantic Coast Pipeline, and the project is approved by FERC, Council implores Dominion Virginia Power and its partners to give full consideration to the use of existing utility and highway corridors for the project, so as to minimize, to the greatest extent possible, the impacts of construction, maintenance and operation of the project.

7. Council directs that the Clerk of Council send a copy of this resolution to Dominion Virginia Power, Senator Mark Warner, Senator Tim Kaine, Congressman Bob Goodlatte, Governor Terry McAuliffe and Cheryl A. LaFleur, Chairman of FERC.

Adopted this 23th day of October, 2014.

Carolyn W. Dull
Carolyn W. Dull, Mayor

Attest: Linda Little
Linda Little, Clerk of Council

2

CAROLYN W. DULL
MAYOR

DIRECT DIAL 540.332.3810
FACSIMILE 540.851.4001

CITY OF STAUNTON VIRGINIA

116 W. BEVERLEY STREET
P.O. BOX 58
STAUNTON, VA 24402

February 21, 2017

VIA EXPRESS DELIVERY

Mr. Nathaniel J. Davis, Sr.
Deputy Secretary
Federal Energy Regulatory Commission
888 First Street N.E., Room 1A
Washington, D.C. 20426

Re: Atlantic Coast Pipeline Project
Docket Nos. CP15-554-000, CP15-554-001, and CP15-555-000
FERC/EIS-0274D

Dear Mr. Davis:

SA8-237 (cont'd)

Enclosed please find a letter (with enclosure) sent this date on behalf of the City of Staunton, Virginia, to Ms. Julia Wellman, Environmental Impact Review Coordinator of the Virginia Department of Environmental Quality (VDEQ), with comments made on behalf of the city concerning the draft environmental impact statement for the Atlantic Coast Pipeline Project. I call particular attention to the city's request that Atlantic Coast Pipeline, LLC and Dominion Transmission, Inc. be required to complete and submit to the Federal Energy Regulatory Commission or VDEQ an independent, detailed study and analysis of the potentially momentous adverse consequences of the project for Gardner Spring, a major and critical water supply of the city.

Sincerely,

Carolyn W. Dull

Carolyn W. Dull
Mayor

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

Enclosure

cc: Members of the Staunton City Council (w/o enclosure)
Members of the Augusta County Board of Supervisors (w/o enclosure)
Members of the Board of Directors of the Augusta County Service Authority (w/o enclosure)
Julia Wellman, Virginia Department of Environmental Quality (w/o enclosure)

20170406-5489 FERC PDF (Unofficial) 4/6/2017 3:02:35 PM

Wellman, Julia (DEQ)

From:	Green, Charles (VDACS)
Sent:	Thursday, January 12, 2017 11:15 AM
To:	Wellman, Julia (DEQ)
Cc:	Tignor, Keith (VDACS)
Subject:	RE: NEW PROJECT FERC Atlantic Coast Pipeline DEQ 16-248F
Follow Up Flag:	Follow up
Flag Status:	Flagged

Julia,

SA8-238 Thank you. In looking over the draft EIS, I am comfortable with the stated impact to prime farmland. As I believe is highlighted in the draft, the permanent impact on prime farmland is de minimis. While the areas of prime farmland impacted during construction would be greater, these areas of prime farmland or farmland of statewide importance that are temporarily impacted and currently in agriculture could return to that use after construction. Construction of aboveground facilities and permanent access roads would permanently impact 228.2 acres of prime farmland and 213.2 acres of farmland of statewide importance.

Charles Green
Deputy Commissioner
Virginia Department of Agriculture & Consumer Services

From: Wellman, Julia (DEQ)
Sent: Thursday, January 12, 2017 10:47 AM
To: Green, Charles (VDACS)
Cc: Tignor, Keith (VDACS)
Subject: FW: NEW PROJECT FERC Atlantic Coast Pipeline DEQ 16-248F

Mr. Green,

I believe you were on the Secretary's conference call this morning regarding the pipelines. I'm forwarding you the request to review the draft EIS and the proposed route shapefiles (which were provided by Dominion). (Keith is our contact, so I have copied him.) If you need anything regarding the draft EIS, please feel free to reach out.

Thank you.

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E Main Street
Richmond, VA 23219
(804) 698-4326
Julia.Wellman@deq.virginia.gov
www.deq.virginia.gov

**** For program updates and public notices, please subscribe to the OEIR News Feed.****

1

SA8-238 Comment noted.

20170406-5489 FERC PDF (Unofficial) 4/6/2017 3:02:35 PM

Virginia Department of Health Review Comments

DEQ #16-248F
Atlantic Coast Pipeline Project

Office of Drinking Water

SA8-239

The Office of Drinking Water has reviewed the Atlantic Coast Pipeline project. Below are our comments as they relate to proximity to public drinking water sources (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems must be verified by the local utility.

The following public groundwater wells are located within a 1 mile radius of the project site (wells within a 1,000 foot radius are formatted in **bold**):

PWSID	City/County	Waterworks Name	Facility Name
2015200	AUGUSTA	DEERFIELD - ACSA	DEERFIELD SPRING
2015200	AUGUSTA	DEERFIELD - ACSA	DEERFIELD WELL
2015821	AUGUSTA	WHITES WAYSIDE DINER	WELL
2125020	NELSON	WINTERGREEN GROCERS	WELL
2125026	**NELSON**	**BOLD ROCK CIDERY**	**DRILLED WELL**
2125056	NELSON	DEVILS BACKBONE BREWING COMPANY	WELL #1 (EMERGENCY ONLY)
2125398	NELSON	WILD WOLF BREWING COMPANY	WELL 1
2125910	NELSON	NCSA - WINTERGREEN	WELL 12
2125910	NELSON	NCSA - WINTERGREEN	WELL 16
2125920	**NELSON**	**WINTERGREEN - RECEPTION CENTER**	**DRILLED WELL**
3081730	**GREENSVILLE**	**ROLLING ACRES - FOX RUN**	**WELL 1**
3175100	SOUTHAMPTON	BOYKINS_BRANCHVILLE SYSTEM	WELL NO. 3 (BRANCHVILLE)
3175100	SOUTHAMPTON	BOYKINS_BRANCHVILLE SYSTEM	WELL NO. 2 (BOYKINS)
3175100	SOUTHAMPTON	BOYKINS_BRANCHVILLE SYSTEM	WELL NO. 1 (BOYKINS)
3175460	**SOUTHAMPTON**	**KINGSDALE ARTIS**	**DRILLED WELL**
3175461	SOUTHAMPTON	KINGSDALE MOSELEY	DRILLED WELL
3175500	SOUTHAMPTON	TOWN OF NEWSOMS	DRILLED WELL NO. 1
3175500	SOUTHAMPTON	TOWN OF NEWSOMS	DRILLED WELL NO. 2
3175720	SOUTHAMPTON	TURNER TRACT WATER SYSTEM	WELL #1
3175720	SOUTHAMPTON	TURNER TRACT WATER SYSTEM	WELL #2
3550051	CHESAPEAKE	CITY OF CHESAPEAKE - NORTHWEST RIVER SYS	WESTERN BRANCH WELL NO. 1
3550051	CHESAPEAKE	CITY OF CHESAPEAKE _ NORTHWEST RIVER SYS	WB #3
3550705	CHESAPEAKE	PLANTATION MOBILE HOME PARK	WELL NO. 2
3550800	CHESAPEAKE	SUNRAY WATER CO., INC.	DRILLED WELL #2
3710100	NORFOLK	NORFOLK, CITY OF	WELL NO. 1
3710100	NORFOLK	NORFOLK, CITY OF	WELL NO. 4
3710100	NORFOLK	NORFOLK, CITY OF	WELL NO. 2

SA8-239 Comment noted.

Virginia Department of Health Review Comments

DEQ #16-248F
Atlantic Coast Pipeline Project

SA8-239 (cont'd)

3800629	SUFFOLK	FARMER FRANKS	DRILLED WELL
3800694	SUFFOLK	PRUDEN CENTER FOR INDUSTRY & TECHNOLOGY	WELL
3800800	SUFFOLK	SPSA REGIONAL LANDFILL-SUFFOLK	DRILLED WELL
3800830	SUFFOLK	TIDEWATER AGRI RESEARCH & EXT CTR	DRILLED WELL
5025550	BRUNSWICK	NOTTOWAY ACRES SUBDIVISION	WELL NO.3

The following surface water intakes are located within a 5 mile radius of the project site:

PWSID	Waterworks Name	Facility Name
2015575	SOUTH RIVER SANITARY DISTRICT	COLES RUN RESER
2125650	NCSA - SCHUYLER	JOHNSONS BRANCH
2125910	NCSA - WINTERGREEN	LAKE MONACAN (ALLEN CREEK) INTAKE
2125910	NCSA - WINTERGREEN	STONEY CREEK (PEGGY'S PINCH) INTAKE
2125910	NCSA - WINTERGREEN	VALLEY POND INTAKE
2790600	STAUNTON, CITY OF	NORTH RIVER DAM
2790600	STAUNTON, CITY OF	MIDDLE RIVER
3595250	EMPORIA, CITY OF	MEHERRIN RIVER
3710100	NORFOLK, CITY OF	WESTERN BRANCH
3710100	NORFOLK, CITY OF	LAKE PRINCE
3740600	PORTSMOUTH, CITY OF	LAKE MEADE
3740600	PORTSMOUTH, CITY OF	PITCHKETTLE RAW WATER
3740600	PORTSMOUTH, CITY OF	LAKE KILBY
3800805	SUFFOLK, CITY OF	LONE STAR LAKE
3800805	SUFFOLK, CITY OF	CRUMPS MILL POND
5029085	BUCKINGHAM CO WATER SYSTEM	TROUBLESOME CRK
5135160	CREWE, TOWN OF	CRYSTAL LAKE
5147170	FARMVILLE, TOWN OF	APPOMATTOX RIVER

Virginia Department of Health Review Comments

DEQ #16-248F
Atlantic Coast Pipeline Project

SA8-239 (cont'd)

The project is located within the watershed of the following public surface water sources (intakes where the project falls within 5 miles into their watershed are formatted in **bold**):

PWSID	Waterworks Name	Facility Name
2043125	TOWN OF BERRYVILLE	SHENANDOAH RIVER
2043634	MOUNT WEATHER	SHENANDOAH RIVER
2163550	MAURY SERVICE AUTHORITY	MAURY RIVER
2187406	FRONT ROYAL, TOWN OF	SOUTH FORK SHENANDOAH RIVER
2580100	COVINGTON, CITY OF	JACKSON RIVER
2790600	**STAUNTON, CITY OF**	**MIDDLE RIVER**
3081550	GCWSA - JARRATT	NOTTOWAY RIVER INTAKE
3595250	**EMPORIA, CITY OF**	**MEHERRIN RIVER**
3670800	VIRGINIA-AMERICAN WATER CO	APPOMATTOX RIVER
3710100	NORFOLK, CITY OF	NOTTOWAY RIVER
3710100	**NORFOLK, CITY OF**	**WESTERN BRANCH**
3710100	**NORFOLK, CITY OF**	**LAKE PRINCE**
3740600	PORTSMOUTH, CITY OF	LAKE KILBY
3740600	PORTSMOUTH, CITY OF	LAKE MEADE
3740600	PORTSMOUTH, CITY OF	PITCHKETTLE RAW WATER
4041035	APPOMATTOX RIVER WATER AUTHORITY	LAKE CHESDIN RAW WATER INTAKE
4075735	JAMES RIVER CORRECTIONAL CTR	JAMES RIVER INTAKE
4087125	HENRICO COUNTY WATER SYSTEM	HENRICO RAW WATER INTAKE
4760100	RICHMOND, CITY OF	RAW WATER INTAKE
5680200	LYNCHBURG, CITY OF	JAMES RIVER-COLLEGE HILL
5680200	LYNCHBURG, CITY OF	JAMES RIVER-ABERT
6059501	FAIRFAX COUNTY WATER AUTHORITY	INTAKE (POTOMAC RIVER)
6107300	LEESBURG, TOWN OF	POTOMAC INTAKE

Best Management Practices (BMPs) should be employed on the project site, including Erosion & Sediment Controls as well as Spill Prevention Controls & Countermeasures.

Care should be taken while transporting materials in and out of the project site, as to prevent impacts to surface water intakes within 5 miles.

There may be impacts to public drinking water sources due to this project if the mitigation efforts outlined above are not implemented.

Office of Environmental Health Services, Division of Onsite Sewage and Water Services

See attached memo from Dwayne Roadcap, Division Director, dated January 27, 2017.

Virginia Department of Health Review Comments

DEQ #16-248F
Atlantic Coast Pipeline Project

SA8-239 (cont'd)

Office of Environmental Health Services, Division of Shellfish Sanitation

See attached memo from B. Keith Skiles, Division Director, dated February 3, 2017.

Office of Epidemiology, Division of Environmental Epidemiology

No comments.

Office of Radiological Health

No comments.

January 27, 2017

Memorandum on Atlantic Coast Pipeline Project

To: Drew Hammond, Acting Director, ODW
Arlene Warren, Policy and Planning Specialist

Through: Allen Knapp, Director, OEHS

From: Dwayne Roadcap, Division Director

RE: Comments regarding the Atlantic Coast Pipeline from OEHS

This is in reply to your request for additional comments on the Atlantic Coast Pipeline project as requested by the Department of Environmental Quality.

Our understanding is that the pipeline's path and exact location may change and is not finalized at this time. Once the pipeline's path and exact location is known, then records at each local county health department can be reviewed to determine what records are available with respect to wells and onsite sewage systems.

In 1990, the Board of Health promulgated the Private Well Regulations (12VAC5-630-10 et. seq.), which establish requirements for the location and construction of private wells in the Commonwealth. These requirements include minimum separation distances from contaminant sources and other features contained in section 380 and Table 3.1. You can find a copy of the Private Well Regulations here. Homeowners in the counties associated with the pipeline could be using springs, cisterns, hand-dug wells, and drilled wells near the pipeline's path. These water systems would likely have varying types of construction and not meet today's construction standards or regulations.

SA8-240

Protecting water quality for these property owners is a paramount concern so once the pipeline's location is confirmed, OEHS would recommend that a complete sanitary survey along the pipeline's path be performed by a team of persons with expertise in geology, hydro-geology, epidemiology, and public health. OEHS recommends that a sanitary survey within 1,000 feet on either side of the pipeline be performed at a minimum to ensure people and properties using local and regional groundwater and surface water for recreational use or human consumption are identified and protected. Keep in mind that some wells may be located below the ground surface and not visible to the eye, which might require a door-by-door assessment in some cases.

In November, 2014, OEHS provided Natural Resources Group (NRG), working on behalf of ACP, with available electronic information regarding the location of private wells constructed in the proposed project area. Please note, only wells permitted since 2003 are included in the information provided to NRG. Records for private wells constructed prior to 2003 may be available in hard copy, but many owners are likely to be using water sources that pre-date 2003. VDH recommends that the project team performing the sanitary survey contact each local health department in the project area to obtain additional hard copy records to assure appropriate

SA8-240 Comment noted.

SA8-240 (cont'd) separation distances will be maintained between the proposed pipeline and private wells, springs, or cisterns serving nearby properties. You can find contact information for local health departments at http://www.vdh.virginia.gov/home/local-health-districts .

SA8-241 In additional to private well records, each local health department has records regarding the location of onsite sewage (septic) systems. In addition to making sure the pipeline does not impact groundwater and drinking water systems, the project team leading the sanitary survey project should identify onsite sewage systems near the pipeline's final path. Property owners must submit an application to the local health department in which the property is located to relocate any onsite sewage system impacted by the pipeline's construction.

The pipeline permitting and approval process should provide numerous options and safeguards to protect local and regional surface water and aquifers. The pipeline goes pass through karst topography, which presents specialized concerns. The Atlantic Coast Pipeline will likely have a 42-inch diameter piping system. Burying the pipeline, if necessary, would likely require clearing wide swaths of brush, digging, boring, drilling, blasting and use of fuels and lubricants for heavy equipment. These activities can adversely affect karst landscapes or possibly create new sinkholes depending on site grading and landscaping.

SA8-242 The pipeline project needs to protect public health as follows:

- FERC and/or the Atlantic Coast Pipeline project owners should provide VDH with copies of permits, plans, and studies performed throughout the project so VDH can stay informed, review material, and provide informal comments as necessary throughout the process.

- FERC should provide a mechanism to keep the public and local property owners informed through public notice and solicitation of public comments (i.e., 30-day comment period). Holding informational meetings to gather public input on the issues of water supply and recreational water to assess the impact of the project would be valuable. VDH should be invited to participate and offer formal comments though the permitting and application process. Specifically, VDH recommends receiving public comments related to the following questions:

  1. What are the public's concerns related to the impact of the project on water quality and quantity of private wells?
  2. What are the public's concerns related to the impact of the project on recreational use of surface water?
  3. What role should VDH play in assuring that public health is protected in regard to private wells and recreational water use in regard to the project?
  4. What safeguards should be in place to protect private wells and recreational water?
  5. Are additional legislative safeguards desired to protect human health, drinking water, or recreational water?

SA8-241 Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, and as mentioned in the comment, the VDCR would have the opportunity to review Atlantic's proposed crossings during the permitting process.

SA8-242 Comments noted.

SA8-242 (cont'd)

- FERC should acknowledge and address public comments received and defend any decision to issue an approval for the pipeline. VDH stands ready to help ensure VDH's comments are adequately addressed.
- The public should be allowed to request a public hearing on the project so that questions and information can be provided.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

20170406-5489 FERC PDF (Unofficial) 4/6/2017 3:02:35 PM

COMMONWEALTH of VIRGINIA
Department of Health
DIVISION OF SHELLFISH SANITATION
109 Governor Street, Room 614-B
Richmond, VA 23219
Ph: 804-864-7487
Fax: 804-864-7481

MEMORANDUM

DATE: 2/3/2017

TO: Julia H. Wellman
Department of Environmental Quality

FROM: B. Keith Skiles, MPH, Director
Division of Shellfish Sanitation

SUBJECT: Atlantic Coast Pipeline

City / County: Cities of Suffolk and Chesapeake

Waterbody: Nansemond River (Mainsteam & West Branch), Southern Branch Elizabeth River

Type: ☐ VPDES ☐ VMRC ☐ VPA ☐ VWP ☐ JPA ☑ Other: Draft Environmental Impact Statement

Application / Permit Number: 16-248F

☐ The project will not affect shellfish growing waters.

☐ The project is located in or adjacent to approved shellfish growing waters, however, the activity as described will not require a change in classification.

☐ The project is located in or adjacent to condemned shellfish growing waters and the activity, as described, will not cause an increase in the size or type of the existing closure.

☐ The project will affect condemned shellfish waters and will not cause an increase in the size of the total condemnation. However, a prohibited area (an area from which shellfish relay to approved waters for self-purification is not allowed) will be required within a portion of the currently condemned area. See comments.

☐ A buffer zone (including a prohibited area) has been previously established in the vicinity of this discharge, however, the closure will have to be revised. Map attached.

☐ This project will affect approved shellfish waters. If this discharge is approved, a buffer zone (including a prohibited area) will be established in the vicinity of the discharge. Map attached.

SA8-243 ☑ Other. The December 2016 proposed route of the project will cross condemned shellfish growing waters in three locations: 1] Western Branch Nansemond River, 2] Nansemond River, and 3] Southern Branch Elizabeth River. The activity, as described, will not cause an increase in the size or type of these existing shellfish closures provided the pipeline infrastructure is installed and operated in a safe and prudent manner that is free from the release of any harmful materials into these watersheds.

ADDITIONAL COMMENTS:

Area #: 63, 65

eta

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment
www.vdh.virginia.gov/shellfish

SA8-243 Comment noted. The Western Branch Nansemond River, Nansemond River, and Southern Branch Elizabeth River are proposed to be crossed utilizing the HDD method; therefore, no in-stream construction activities are proposed.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219 2000

Charles A. Kilpatrick, P.E.
Commissioner

March 3, 2017

Julia Wellman
Department of Environmental Quality
Office of Environmental Impact Review
629 E. Main Street, 6th Floor
Richmond, VA 23219

RE: Atlantic Coast Pipeline (DEQ Project Number 16-248F)

Dear Ms. Wellman -

The Virginia Department of Transportation is providing comments on the Draft Environmental Impact Statement (DEIS) for the Atlantic Coast Pipeline (ACP) and Supply Header Project (SHP) as proposed by Atlantic Coast Pipeline, LLC (Atlantic) and Dominion Transmission, Inc. (DTI), respectively. The below represents the general comments of our agency.

General (Statewide) Comments

SA8-244

1. VDOT requests that FERC include in the Final EIS and the Record of Decision the following:
   a. a commitment for Atlantic and DTI to document the existing conditions of affected roadways, pavement conditions, and drainage structures in Virginia prior to construction and to provide this documentation to VDOT;
   b. a commitment for Atlantic and DTI to monitor and report conditions throughout construction and for a period of two years following construction completion ; and
   c. a clear commitment for Atlantic and DTI to restore roadway features to pre-construction conditions or better.

SA8-245

2. Any work that occurs within VDOT right-of-way or easements or impacts vehicular traffic operations on VDOT highways will be required to comply with the Land Use Permit Regulations (24VAC30-151) and all current VDOT specifications and standards, including the Virginia Work Area Protection Manual.

SA8-244 See the response to comment SA4-1.

SA8-245 See the response to comment SA4-2.

STATE AGENCIES/ELECTED OFFICIALS COMMENTS

SA8 – Virginia Department of Environmental Quality (cont'd)

SA8-245 (cont'd)

3. Detailed plans for all work within the right-of-way will need to be submitted and approved by VDOT prior to land use permit issuance.
4. A detailed traffic management plan, encompassing how traffic will be managed or detoured during highway improvements for handling construction traffic and during pipeline installation across highways should be provided as part of the FERC EIS or required to be provided prior or concurrently with detailed plans for work within the highway right-of-way.
5. Any parallel installations of pipeline in highway right-of-way should be located as close to the edge of the right-of-way as possible.
6. Experience in some districts with the movement of heavy loads has shown that construction traffic in the winter may have an inordinate destructive impact compared to such traffic in warmer seasons. Movement of heavy loads or equipment (construction traffic) should occur mostly in the normal construction season. If construction is on-going in the winter, such traffic should be limited as much as practicable during cold weather.
7. Entrances along roadways impacted by pipeline construction should remain open as much as practicable. If closures are necessary, negotiation with the entrance owners and provision of alternate access or other accommodations will have to be provided as part of the project.
8. Crossings of limited access highway right-of-way should be made as close as possible to perpendicular to the right-of-way and will require additional approvals.
9. Crossings of state highways should, when practicable, be made without open-cutting the pavement.

In addition to the above requests we are also providing the attached additional comments from VDOT districts impacted by the project. We trust you find these comments informative and ask that you reach out to Mr. Robert Hofrichter at 804-786-0780 should you have questions or need additional clarifications.

Regards,

Angel M. Deem
Environmental Division Director

Attachment

cc: Mr. Robert Hofrichter, VDOT

Attachment
Atlantic Coast Pipeline (DEQ Project Number 16-248F)
Summary of VDOT District-Specific Comments

SA8-246

Staunton District

1. The current pipeline route will impact Highland, Bath, and Augusta Counties within the district.

Lynchburg District

1. The current pipeline route will impact Nelson, Buckingham, Cumberland, and Prince Edward Counties within the district, for a length of approximately 68.7 miles.
2. The current plan shows a compressor station in Buckingham County near Route 56.
3. There is one active VDOT Secondary Six-Year Plan project that overlaps the planned ACP project in the district: Route 644 between Route 24 and Route 638 (UPC T18765).
4. Two active projects are relatively close to the ACP route and should be closely monitored during construction phase for potential conflicts: Route 737 between Route 664 and Route 601 (UPC T18770) and Route 151 at Route 664 (UPC 109528).
5. There are eight planned repaving and treatment jobs currently scheduled along or near the ACP route.
    a. Route 151 from 0.105 mile North of Route 664 to Route 612 (UPC 109694)
    b. Route 722 from Route 56 to Route 645 (UPC 109318)
    c. Route 646 from Route 56 to end of hard surface (UPC 109152)
    d. Route 626 from Route 56 to Route 743 (UPC 107453)
    e. Route 633 from Route 15 to Route 640 (UPC 109151)
    f. Route 609 from Route 636 to Route 15 (UPC 107498)
    g. Route 633 from Route 15 to Route 640 (UPC 109151)
    h. Route 15 from Route 636 to 0.92 mile North of Route 633 (UPC 107925)

Richmond District

1. ACP work may have an impact on the following major highways in Richmond District: I-85, I-95, Route 58, Route 360, and Route 460.
2. The ACP project may have an impact on an active VDOT project: Route 616 in Dinwiddie County (UPC 106204).

Hampton Roads District

1. The current pipeline route will impact Greensville and Southampton Counties and the Cities of Suffolk and Chesapeake within the district, for a length of approximately 75.7 miles.
2. The pipeline should coordinate plans with municipal authorities for construction of roadways in Chesapeake and Suffolk.

SA8-246 Section 4.13.2.5 has been updated to acknowledge the additional roadway projects identified by the VDOT.

COMMONWEALTH of VIRGINIA

Marine Resources Commission
2600 Washington Avenue
Third Floor
Newport News, Virginia 23607

Molly Joseph Ward
Secretary of Natural Resources

John M.R. Bull
Commissioner

February 22, 2017

Ms. Julia Wellman
Department of Environmental Quality
Office of Environmental Impact Review
629 E. Main Street, 6th Floor
Richmond, VA 23219

Re: Atlantic Coast Pipeline and
Supply Header Project
Draft Environmental Impact Statement
FERC/EIS-0274D

Dear Ms. Wellman:

This will respond to your agency's request for review of the above-referenced Draft Environmental Impact Statement (DEIS) prepared by the Federal Energy Regulatory Commission (FERC). Atlantic Coast Pipeline, LLC (Atlantic) and Dominion Transmission, Inc. (DTI), request authorization to construct and operate a total of 641.3 miles of an interstate natural gas transmission pipeline, known as the Atlantic Coast Pipeline (ACP) and Supply Header Project (SHP), in Docket Numbers CP15-554-000, CP15-554-001, and CP15-555-000. The two projects, when considered as one, propose work in Pennsylvania, West Virginia, Virginia and North Carolina. Together these projects would provide about 1.44 billion cubic feet per day of natural gas to electric generation, distribution, and end use markets in Virginia and North Carolina.

As proposed, all work associated with the SHP is restricted to West Virginia and Pennsylvania. As such, all comments to follow will be restricted to the ACP, which proposes work in West Virginia, Virginia and North Carolina. In Virginia, the ACP will be constructed within a right-of-way originating in Highland County and will pass through multiple Counties and beneath multiple waterways, exiting the Commonwealth in Greensville County.

The Virginia Marine Resources Commission (Commission), as the custodian of Virginia's submerged lands, has the proprietary authority and responsibility to issue permits for activities that take place over, under, through and on all submerged lands throughout the Commonwealth. This authority is based on the Commonwealth's ownership of submerged lands, as provided for in Chapter 12 of Title 28.2 of the Code of Virginia, and was clarified through an opinion by Gerald L. Baliles, Attorney General, on May 3, 1982. This opinion stated, in part, that "(t)he Commission should assume that all streams above some administratively determined minimum size...." are subject to its jurisdiction. The Commission has defined the minimum size of non-tidal waterways as those perennial streams with a drainage area of five (5) square miles or with a mean annual instream flow of five (5) cubic feet per second.

Given these thresholds, VMRC will exert jurisdiction over 92 of the project's 663 non-tidal stream crossings in Virginia, based on drainages areas currently identified in the DEIS, and three (3) tidal streams. The project will additionally impact approximately 67,954 square feet (1.56 acres) of tidal wetlands in the City of Chesapeake. The Commission is acting as the local wetlands board, pursuant to Chapter 13 of Title 28.2 of the Code of Virginia, for the proposed project since the City of Chesapeake has not adopted the model wetlands ordinance contained within the Virginia Wetlands Act.

Proposed activities within the non-tidal waterways identified in the DEIS with less than a five (5) square mile drainage basin, or in adjacent non-tidal wetlands and uplands, do not require authorization from this agency.

For the jurisdictional stream crossings, appropriate construction methodologies for buried utilities routinely permitted by the Commission include directional drill, cofferdam construction, dam and pump or flume-around technology. Since ACP proposes to install the Virginia portion of the proposed pipeline with the aforementioned construction methodologies and best management practices, the Commission currently views this component of the project as consistent with its Subaqueous Guidelines.

SA8-247 We also understand that the applicant has been working with the Department of Game and Inland Fisheries (DGIF) regarding project specific impacts to freshwater aquatic resources for all waterbody crossings. As such, the Commission recommends that the FEIS include a table citing the DGIF recommendations at each of the VMRC non-tidal jurisdictional stream crossings and the applicant's intention of following those recommendations.

SA8-248 We recommend that all proposed VMRC jurisdictional stream crossings adhere to the Commission's standard instream permit conditions listed below:

(1) A "frac-out" contingency plan must be provided for any crossings utilizing the directional drill method to address potential frac-outs or related spills associated with any directional drilling activities. In an effort to minimize adverse impacts to threatened and endangered fish and mussel species, instream surveys and species relocations may be required;
(2) No instream construction shall be conducted during any recommended time-of-year restrictions of any year unless waived by DGIF in writing;
(3) The instream construction activities shall be accomplished during low flow periods utilizing dam and pump, flume around or within cofferdams constructed of non-erodible materials in such a manner that no more than half the width of the waterway is obstructed at any point in time. All areas of State-owned bottom and adjacent lands disturbed by this activity shall be restored to their original contours and natural conditions within thirty (30) days from the date of completion of the authorized work. All excess materials shall be removed to an upland site and contained in such a manner to prevent its reentry into State waters;

SA8-247 The list of waterbodies crossed by ACP and SHP, including the referenced recommendations, is included in appendix K.

SA8-248 Atlantic's and DETI's HDD Contingency Plan is provided in appendix H. Atlantic has committed to implementing the VDGIF TOYR as described in appendix K; we have had made additional recommendations where applicable. Appendix K also describes the crossing methods that would be used, and FERC's Plan and Procedures describe these methods and procedures in more detail. Atlantic has committed to adhering to the Virginia Erosion and Sediment Control Handbook (VDEQ, 1992). Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, the VRMC would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

SA8-248 (cont'd)

(4) Erosion and sediment control measures shall be in conformance with the 1992 Third Edition of the Virginia Erosion and Sediment Control Handbook and shall be employed throughout construction;
(5) If it is determined that blasting is necessary at any of the crossings, DGIF shall be notified a minimum of 48 hours in advance of the blasting;
(6) The Department of Conservation and Recreation shall be contacted for any stream crossings where karst landscape features are encountered during installation;
(7) DGIF shall be contacted for any work in trout waters to avoid conflicts with trout stocking activities.

SA8-249

We also concur with FERC's recommendations that, prior to completing any geotechnical boring beneath streams in karst terrain, Atlantic should consult with VDCR karst protection personnel regarding each geotechnical boring and follow the Virginia Cave Board's "Karst Assessment Standard Practice" for land development when completing borings.

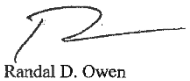
SA8-250

Lastly, for all proposed temporary and permanent tidal wetland impacts, VMRC recommends that the FEIS contain a copy of the final wetland mitigation plans for consideration by Commission staff. Additionally, Atlantic and DTI should implement the measures identified in their *Invasive Plant Species Management Plan* to minimize the potential introduction of the invasive common reed, *Phragmites australis*, for all wetland crossing sites except for site wChro002.

Please be advised that the Commission's final permit action and identification of specific permit conditions cannot be finalized until completion of the National Environmental Policy Act (NEPA) documentation and our public interest permit review process.

Should you have any questions regarding this letter, please feel free to contact me at (757) 247-2200.

Sincerely,



Randal D. Owen
Environmental Engineer

RDO/lra
HM
cc: John M. R. Bull, Commissioner
Tony Watkinson, Chief Habitat Management
Ray Fernald, Department of Game and Inland Fisheries
Dr. Mark Luckenbach, Virginia Institute of Marine Science

SA8-249 Comment noted.

SA8-250 Comment noted.

VIRGINIA OUTDOORS FOUNDATION

March 10, 2017

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

RE: **Atlantic Coast Pipeline, LLC**
Atlantic Coast Pipeline
Docket No. CP15-554-001
VOF comments on the DEIS

Dear Secretary Bose:

The Virginia Outdoors Foundation (VOF) would like to file comments with FERC on the Draft Environmental Impact Statement (DEIS) issued on December 30, 2016 and to provide an update on the VOF Board of Trustees meeting held on February 9th, 2017 where Atlantic Coast Pipeline (ACP) presented its applications for conversion of open space land on 10 VOF easements.

The DEIS issued by FERC on December 30th addressed the VOF open space easements potentially impacted by the ACP in several areas. In section 3.4.1 FERC addressed the Spruce Creek Variation, which would cross an 11th VOF open space easement in Nelson County. The VOF wrote a letter to FERC on September 6, 2016 stating that crossing this open space easement could impair the significant resources found on the property including historic sites, scenic protection, open farm land, riparian areas, deciduous woodlands and diverse wildlife habitat.

SA8-251 In the DEIS, after comprehensive analysis, your staff stated that, "based on the factors discussed above and information presented in the numerous comment letters filed for these routes, it does not appear that the Spruce Creek Route Variation would offer a significant environmental advantage when compared to Atlantic's proposed route and we do not recommend that it be incorporated as part of the project." VOF supports the FERC staff determination and hopes that this recommendation will be incorporated into the Final Environmental Impact Statement (FEIS).

SA8-252 Even without the inclusion of this 11th open space easement in Nelson County, the Commonwealth's protected conserved lands and VOF's open space program would be significantly impacted by this project. FERC staff made the following statement regarding the crossing of 10 open space easements: "based on a review of the regulations pertaining to VOF easements, it is believed that the project would not be precluded from establishing an easement for ACP on each VOF easement crossed. Atlantic submitted applications for each easement for minor conversions and, along with the VOF, agreed to defer VOF consideration of Atlantic's conversion applications until after publication of this EIS."

Executive Office | Northern Piedmont Region | 39 Garrett St. Ste. 200 | Warrenton, VA 20186 | P: 540.347.7727
www.virginiaoutdoorsfoundation.org

SA8-251 Comment noted.

SA8-252 The discussion of VOF conservation easements has been updated based on information from Atlantic, the VOF, and other appropriate permitting and regulatory authorities. Also see the responses to comments CO3-1 and CO10-3.

SA8-252 (cont'd)

The VOF has consistently taken the position that construction, maintenance and operation of the interstate gas transmission line is inconsistent with the open space protections afforded by the subject easements. Therefore, the construction, operation and maintenance of the ACP will constitute a conversion of the easement property as outlined in Va. Code § 10.1-1704. VOF has stated on many previous occasions that the impact is very significant and by no means "minor".

ACP presented its applications for conversion of open space on the 10 VOF easements in Highland, Bath, Augusta and Nelson Counties at the February 9, 2016 VOF Board of Trustees meeting. The VOF Board of Trustees (BOT) heard presentations by both the ACP and VOF staff on the applications and the proposed mitigation for converting open space land. The BOT also heard comments from many landowners, including landowners directly impacted by the project on VOF easement land. They also heard from various individuals and organizations opposed to and in support of the pipeline.

After listening to all the information presented during the public comment period and by the ACP and VOF staff, the Board voted to defer a decision on the Atlantic Coast Pipeline applications. However, to ensure that FERC has the benefit of the staff's conclusions and findings, the Board directed the Executive Director to provide FERC with the VOF staff reports on the ACP conversion applications.

Attached to this filing, you will find the 10 VOF staff reports for the ACP applications. These reports include a great deal of background information on the VOF easements, as well as the findings of the staff on the statutory requirements under §10.1-1704 of the Code of Virginia. The appendices of the reports include: ACP applications for Conversion of Open Space; Correspondences; VOF Baseline Documentation Reports; VOF Open Space Deeds of Easement; Staff Site Investigation and Analysis; Permanent Impact Profiles; Open Space Land Act, Section 10.1-1704 Language; County Statements; and reference to comprehensive Substitute Land Reports titled Hayfields Farm and Rockfish River Parcel.

The final conclusions for each application are found at the end of each staff report. These conclusions included a number of recommended conditions that should be imposed on any approval of the ACP applications. Specifically, the conclusions provide:

If the Board of Trustees finds that ACP applications meet the requirements of Section 10.1-1704, staff would recommend the following conditions:

- *Issuance of a Certificate of Public Convenience and Necessity (Certificate) by FERC and all other necessary state and federal permits for the proposed ACP route crossing this easement.*
- *VOF approval and sign off of final ROW easement permitting only a permanent 50-foot easement for one 42-inch diameter underground natural gas pipeline and the associated permanent access road easement. No above-ground structures are permitted within this permanent ROW except for above ground pipeline markers as required by law.*
- *ACP transfer of fee-simple interest to VOF of the proposed 1,034-acre Hayfields Farm Property and Rockfish River Parcel as Substitute Land for the converted areas of the open-space easement property.*
- *The acceptance of funds from ACP to: (i) serve as a Stewardship Fund to support VOF with the operation and management of the substitute properties, and (ii) partially offset VOF's unreimbursed costs associated with the ACP.*

SA8-252 (cont'd)

- *Written requests from both VOF and ACP to FERC to include the above stated requirements as conditions of the FERC approval.*

Additional site specific conditions may be developed with ACP representatives and the current landowner of the easement property such as minimizing the extent of the permanent easement and construction footprint where feasible, developing pollinator corridors and restoring other natural habitat areas to help preserve the purpose of the open-space deed of easement.

If a Final EIS is issued for this project, VOF respectfully requests these conditions be included in the Final EIS as requirements ACP must satisfy. Additionally, if a Certificate of Public Convenience and Necessity is issued for this project, VOF respectfully requests these conditions be included in the Certificate as requirements ACP must satisfy.

VOF appreciates the opportunity to provide comments on the DEIS and additional information on VOF's own review process. We hope that this will assist FERC in its analysis and preparation of the Final Environmental Impact Statement (FEIS). Please contact Martha Little at 804-577-3337 or via email at mlittle@vofonline.org with any questions, comments or concerns.

Respectfully,

Brett Glymph

Brett Glymph
Executive Director, VOF

CC [EMAIL ONLY]:

- Molly Plautz, External Affairs Manager, Federal Affairs, Dominion Resources Services, Inc.